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Nutrition support in hospitalised adults at nutritional risk (Review)

Feinberg J, Nielsen EE, Korang SK, Halberg Engell K, Nielsen MS, Zhang K, Didriksen M, Lund L, Lindahl N, Hallum S, Liang N, Xiong W, Yang X, Brunsgaard P, Garioud A, Safi S, Lindschou J, Kondrup J, Gluud C, Jakobsen JC

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[Intervention Review]

Nutrition support in hospitalised adults at nutritional risk

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ABSTRACT

Background

The prevalence of disease-related malnutrition in Western European hospitals is estimated to be about 30%. There is no consensus whether poor nutritional status causes poorer clinical outcome or if it is merely associated with it. The intention with all forms of nutrition support is to increase uptake of essential nutrients and improve clinical outcome. Previous reviews have shown conflicting results with regard to the effects of nutrition support.

Objectives

To assess the benefits and harms of nutrition support versus no intervention, treatment as usual, or placebo in hospitalised adults at nutritional risk.

Search methods

We searched Cochrane Central Register of Controlled Trials (CENTRAL) in the Cochrane Library, MEDLINE (Ovid SP), Embase (Ovid SP), LILACS (BIREME), and Science Citation Index Expanded (Web of Science). We also searched the World Health Organization International Clinical Trials Registry Platform (www.who.int/ictrp); ClinicalTrials.gov; Turning Research Into Practice (TRIP); Google Scholar; and BIOSIS, as well as relevant bibliographies of review articles and personal files. All searches are current to February 2016.

Selection criteria

We include randomised clinical trials, irrespective of publication type, publication date, and language, comparing nutrition support versus control in hospitalised adults at nutritional risk. We exclude trials assessing non-standard nutrition support.

Data collection and analysis

We used standard methodological procedures expected by Cochrane and the Cochrane Hepato-Biliary Group. We used trial domains to assess the risks of systematic error (bias). We conducted Trial Sequential Analyses to control for the risks of random errors. We considered

a P value of 0.025 or less as statistically significant. We used GRADE methodology. Our primary outcomes were all-cause mortality, serious adverse events, and health-related quality of life.

Main results

We included 244 randomised clinical trials with 28,619 participants that met our inclusion criteria. We considered all trials to be at high risk of bias. Two trials accounted for one-third of all included participants. The included participants were heterogenous with regard to disease (20 different medical specialties). The experimental interventions were parenteral nutrition (86 trials); enteral nutrition (tube-feeding) (80 trials); oral nutrition support (55 trials); mixed experimental intervention (12 trials); general nutrition support (9 trials); and fortified food (2 trials). The control interventions were treatment as usual (122 trials); no intervention (107 trials); and placebo (15 trials). In 204/244 trials, the intervention lasted three days or more.

We found no evidence of a difference between nutrition support and control for short-term mortality (end of intervention). The absolute risk was 8.3% across the control groups compared with 7.8% (7.1% to 8.5%) in the intervention groups, based on the risk ratio (RR) of 0.94 (95% confidence interval (CI) 0.86 to 1.03, P = 0.16, 21,758 participants, 114 trials, low quality of evidence). We found no evidence of a difference between nutrition support and control for long-term mortality (maximum follow-up). The absolute risk was 13.2% in the control group compared with 12.2% (11.6% to 13%) following nutritional interventions based on a RR of 0.93 (95% CI 0.88 to 0.99, P = 0.03, 23,170 participants, 127 trials, low quality of evidence). Trial Sequential Analysis showed we only had enough information to assess a risk ratio reduction of approximately 10% or more. A risk ratio reduction of 10% or more could be rejected.

We found no evidence of a difference between nutrition support and control for short-term serious adverse events. The absolute risk was 9.9% in the control groups versus 9.2% (8.5% to 10%), with nutrition based on the RR of 0.93 (95% CI 0.86 to 1.01, P = 0.07, 22,087 participants, 123 trials, low quality of evidence). At long-term follow-up, the reduction in the risk of serious adverse events was 1.5%, from 15.2% in control groups to 13.8% (12.9% to 14.7%) following nutritional support (RR 0.91, 95% CI 0.85 to 0.97, P = 0.004, 23,413 participants, 137 trials, low quality of evidence). However, the Trial Sequential Analysis showed we only had enough information to assess a risk ratio reduction of approximately 10% or more. A risk ratio reduction of 10% or more could be rejected.

Trial Sequential Analysis of enteral nutrition alone showed that enteral nutrition might reduce serious adverse events at maximum follow-up in people with different diseases. We could find no beneficial effect of oral nutrition support or parenteral nutrition support on all-cause mortality and serious adverse events in any subgroup.

Only 16 trials assessed health-related quality of life. We performed a meta-analysis of two trials reporting EuroQoL utility score at long-term follow-up and found very low quality of evidence for effects of nutritional support on quality of life (mean difference (MD) -0.01, 95% CI -0.03 to 0.01; 3961 participants, two trials). Trial Sequential Analyses showed that we did not have enough information to confirm or reject clinically relevant intervention effects on quality of life.

Nutrition support may increase weight at short-term follow-up (MD 1.32 kg, 95% CI 0.65 to 2.00, 5445 participants, 68 trials, very low quality of evidence).

Authors' conclusions

There is low-quality evidence for the effects of nutrition support on mortality and serious adverse events. Based on the results of our review, it does not appear to lead to a risk ratio reduction of approximately 10% or more in either all-cause mortality or serious adverse events at short-term and long-term follow-up.

There is very low-quality evidence for an increase in weight with nutrition support at the end of treatment in hospitalised adults determined to be at nutritional risk. The effects of nutrition support on all remaining outcomes are unclear.

Despite the clinically heterogenous population and the high risk of bias of all included trials, our analyses showed limited signs of statistical heterogeneity. Further trials may be warranted, assessing enteral nutrition (tube-feeding) for different patient groups. Future trials ought to be conducted with low risks of systematic errors and low risks of random errors, and they also ought to assess health-related quality of life.

PLAIN LANGUAGE SUMMARY

Feeding support in hospitalised adults at risk of undernourishment

Review question

We reviewed the benefits and harms of feeding support given to adults in hospital at risk of undernourishment based on different methods, ranging from the formally-validated to ‘according to the opinion' of the trial investigators.

Background

People who are malnourished when they are admitted to hospital might be at increased risk of death or are more likely to experience a serous complication. Delivering feeding support might help them, although being malnourished may be associated with a severe

underlying disease. In this case, specific interventions aimed at improving their nutritional status would not help, as it would not be the poor nutritional status in itself that caused the increased risk of death or of experiencing a serious harm.

Date of search
Feburary 2016.

Study characteristics

We included 244 trials, with 28,619 participants. The included trials assessed the effects of different kinds of nutrition support (i.e. dietary advice, enriching regular food with extra protein and calories, protein shakes, feeding through a catheter directly into a vein or through a tube directly into the stomach or gut). The nutrition support was provided to people in the trial who were ill with many different types of diseases and undergoing different procedures. What they all had in common was that they were at risk by at least one measure, including the trialists' clinical opinion.

Key results

We found no evidence of a difference between nutrition support and control for risk of death. We found that 8.3% people died at short-term follow-up in the control groups compared with 7.8% in those who had been given nutritional support (low quality of evidence). At the longest point of follow-up 13.2% people in the control groups died compared with 12.2% in those who had been given nutritional support (low quality of evidence). We found no evidence of a difference between nutrition support and control for risk of a serious complications in the short term. People in the control groups had a serious complication rate of 9.9% at short-term follow-up compared with 9.2% with nutrition (low quality of evidence). At long-term follow-up 15.2% of people in the control groups had a serious complication compared with 13.8% in the nutrition groups (low quality of evidence). These results are based on just over 21,000 participants. Nutrition may increase weight by about 1.32 kg compared with people in the control groups. The increase in weight of 1.32 kg on average is of uncertain benefit. We could not reliably assess the effects on quality of life due to the variation in the reporting of this information. When we looked at the different types of nutrition support, a secondary analysis suggested that tube-feeding might be beneficial, reducing serious complications at maximum follow-up, but the strength of this finding is low.

Quality of the evidence

The evidence for our conclusions is of low quality for death and serious complications, and very low quality for weight. All trials had a high risk of bias (i.e. the trials were all conducted in a way that may overestimate the benefits and underestimate the harms of nutrition support). The results were consistent for death and serious complications, but there was a high level of variation in the effects on weight across the studies.

Summary of findings for the main comparison. Nutrition support versus no intervention, placebo, or treatment as usual in hospitalised adults at nutritional risk

Nutrition support versus no intervention, placebo, or treatment as usual in hospitalised adults at nutritional risk

Patient or population: hospitalised adults at nutritional risk
Setting: hospital
Intervention: nutrition support
Comparison: no intervention, placebo, or treatment as usual

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	№ of participants (studies)	Quality of the evidence (GRADE)	Comments
	Risk with no intervention, placebo, or treatment-as-usual	Risk with nutrition support				
All-cause mortality						
- at end of intervention	Study population 83 per 1.000	78 per 1.000 (71 to 85)	RR 0.94 (0.86 to 1.03)	21,758 (114 RCTs)	⊕⊕⊖⊖ LOW [1]	Trial Sequential Analysis of all nutrition support trials shows that the futility area is reached. This leads us to conclude that the possible intervention effect, if any, is less than 11%. Multiple eligible treatments were used in 9 trials generating a further 13 comparisons (= 127 studies).
- at maximum follow-up	Study population 132 per 1.000	122 per 1.000 (116 to 130)	RR 0.93 (0.88 to 0.99)	23170 (127 RCTs)	⊕⊕⊖⊖ LOW [1]	Trial Sequential Analysis of all nutrition support trials shows that the futility area is reached. This leads us to conclude that any possible intervention effect, if any, is less than 10%. Multiple eligible treatments were used in 10 trials generating a further 14 comparisons (= 141 studies).
Serious adverse events						
- at end of intervention	Study population 99 per 1.000	92 per 1.000 (85 to 100)	RR 0.93 (0.86 to 1.01)	22,087 (123 RCTs)	⊕⊕⊖⊖ LOW [1]	Trial Sequential Analysis of all nutrition support trials shows that the futility area is reached. This leads us to conclude that any possible intervention effect, if

						any, is less than 11%. Multiple eligible treatments were used in 10 trials generating a further 14 comparisons (= 137 studies).
at maximum follow-up	Study population 152 per 1.000	138 per 1.000 (129 to 147)	RR 0.91 (0.85 to 0.97)	23,413 (137 RCTs)	⊕⊕⊖⊖ LOW [1]	Trial Sequential Analysis of all nutrition support trials shows that the futility area is reached. This leads us to conclude that any possible intervention effect, if any, is less than 10%. Multiple eligible treatments were used in 11 trials generating a further 15 comparisons (= 152 studies).
Health-related quality of life						
-at end of intervention	We found that nutrition support of any type for participants at nutritional risk (defined by our inclusion criteria, including as defined by the trial investigators) did not show any benefit or harm with regard to quality of life at end of intervention or at maximum follow-up. Few trials used similar quality-of-life questionnaires, and only data from EuroQoL utility score and SF-36 could be used in a meta-analysis. Whichever score was used, we found no beneficial or harmful effects. While most trials found no beneficial or harmful effect of nutrition support, only a few trials found a beneficial effect on specific parameters. All included trials assessing health-related quality of life were at high risk of bias.		-	(16 RCTs)	-	
at maximum follow-up ((EuroQol))	Control group mean quality of life scores were 0.486 and 0.175.	Quality of life was on average 0.01 units lower (0.03 lower to 0.01 higher)	-	3961 (2 RCTs)	⊕⊖⊖⊖ VERY LOW [2]	
Weight at the end of intervention	Control group weight ranged from 45.9 to 73.03 kg	MD 1.32 kg higher (0.65 higher to 2 higher)	-	5445 (68 RCTs)	⊕⊖⊖⊖ VERY LOW [3]	

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the __relative effect__ of the intervention (and its 95% CI).

__CI:__ Confidence interval; __RR:__ Risk ratio; __MD__: mean difference

GRADE Working Group grades of evidence
High quality: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate quality: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low quality: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low quality: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

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[1]Downgraded by 2 levels because of a very serious risk of bias.
[2]Downgraded by 4 levels because of a very serious risk of bias (2 levels), and serious inconsistency of the evidence (2 levels).
[3]Downgraded by 3 levels because of a very serious risk of bias and serious inconsistency.

BACKGROUND

Description of the condition

The prevalence of disease-related malnutrition in Western European hospitals is estimated to be about 30% (Norman 2008a). To date, there is no consensus whether poor nutritional status causes poorer clinical outcome or if it is merely associated with it. A poor nutritional status might be a consequence of the underlying disease rather than a cause of poor clinical outcome.

The aetiology of malnutrition may be divided into three entities:
1. insufficient delivery of nutrients that may be due to low consumption, low absorption of nutrients through the gastrointestinal tract, failure to use the absorbed nutrients, or an increase in excretion of nutrients which may be termed starvation-related malnutrition;
2. increased catabolism that may be due to an underlying chronic disease or a consequent treatment which may be termed chronic disease-related malnutrition;
3. acute disease or injury states with marked inflammatory response (such as major infections, burn, and trauma) (Jensen 2010).

It may be that provision of nutrition support may benefit people with starvation-related malnutrition and not benefit adults with chronic disease-related malnutrition. The many adverse outcomes associated with malnutrition include malfunctioning of the immune system, impaired wound healing, muscle wasting, longer lengths of hospital stay, higher treatment costs, and increased mortality (Barker 2011).

Many screening tools, anthropometric measurements, biomarkers, and conditions have been proposed to identify people at nutritional risk. Three of the main screening tools devised are the Nutritional Risk Screening 2002 (NRS 2002) (Kondrup 2003), the Malnutrition Universal Screening Tool (MUST) (Elia 2003), and the Mini Nutritional Assessment (MNA) (Vellas 1999). The Subjective Global Assessment (SGA) (Detsky 1987) is an assessment tool that aims at predicting clinical outcome (Van Bokhorst 2014). The NRS, MUST, and MNA screening tools do not distinguish between being at risk of malnutrition and being malnourished, whereas the SGA aims only at identifying people who are malnourished. Although not entirely similar, the screening tools, including the SGA, use many of the same questions and focus on identifying 'people at nutritional risk'.

The screening tools look at two aspects of being at nutritional risk. The first aspect is whether the person is currently malnourished, and the second is whether the person might become malnourished in the future. Body mass index (BMI), weight loss during the last three or six months, and food intake during the last week are all variables assessed when determining if a person is currently malnourished. The assumption that a person might become malnourished in the future is based on an association between certain conditions and nutritional requirements. The mechanism of action is thought to be a high rate of catabolism either directly associated with the condition or the consequent treatment leading to an increased protein requirement. A low intake of food might contribute. Examples of such conditions and interventions are open major abdominal surgery (Morlion 1998); stroke (Chalela 2004); severe infections, defined as sepsis with organ dysfunction (Shaw 1987); people in intensive care units with organ failure (Larsson 1990b); and sick elderly people (Hickson 2006; Norman 2008a). In these conditions, the protein requirement to maintain nitrogen balance, if possible at all, is approximately 1.2 g/kg a day or more.

Biomarkers and anthropometric measures have also been used to define nutritional risk (Van Bokhorst 2014). The biomarkers include low levels of albumin, low levels of other plasma proteins, and low lymphocyte counts (Van Bokhorst 2014). It is questionable if the biomarkers are directly related to being at nutritional risk (Van Bokhorst 2014). The anthropometric measures include, in addition to body weight and height or BMI, triceps skinfold and arm muscle circumference.

Description of the intervention

The intention with all forms of nutrition support is to increase uptake of essential nutrients. The nutrition support can come in many different forms.

The five main ways of administration may be classified as 'general nutrition support', 'fortified foods', 'oral nutrition supplements', 'enteral nutrition', and 'parenteral nutrition' (Lochs 2006). 'General nutrition support' aims at increasing normal food consumption. It includes, but is not limited to, dietary counselling and usually involves an estimation of the person's requirements and guidance of the person as to which food items might be suitable. 'Fortified foods' are normal food enriched with specific nutrients, in particular with energy and proteins with or without additional vitamins, minerals, and trace elements (Lochs 2006). 'Oral nutrition supplements' are supplementary oral intake of food for special medical purposes in addition to the normal food, but may replace normal oral intake entirely. Oral nutrition supplements are usually liquid, but they are also available in other forms such as powder, dessert-style, or bars (Lochs 2006). 'Enteral nutrition' is the infusion of a standard liquid formulation through a tube into either the stomach or the small intestine. 'Parenteral nutrition' is intravenous fluids containing both a source of nitrogen and a non-protein calorie source as well as all essential nutrients.

One special type of nutrition support is immuno-nutrition which contains nutrients believed to possess specific properties (e.g. immune-modulating). Examples of such nutrients are enhanced amounts of glutamine, arginine, fish oil, and branched chain amino acids-enriched formulas (Calder 2003; Tan 2014).

How the intervention might work

Being nutritionally at risk consists of two complex components (see Description of the condition). The result is that the cells and organs of the body are thought to function sub-optimally. The main focus of nutrition support is to provide essential nutrients in order to preserve or restore normal functions of a variety of cells and organs, which might improve clinical outcomes (i.e. fewer complications, fewer infections, earlier mobilisation), and improved quality of life (Stratton 2003).

Why it is important to do this review

The prevalence of disease-related malnutrition in hospitals is considerable. A substantial disease burden and healthcare cost can be alleviated by nutrition support if it is effective and, reciprocally, a considerable cost and a number of complications associated with nutrition support may occur if it is ineffective or even harmful.

One meta-analysis from 2003 analysing randomised clinical trials of enteral nutrition (tube-feeding or oral supplements) found a 50% reduction in complications when trials including diverse participant groups were aggregated in a single analysis (Stratton 2003). However, this analysis did not assess the risks of bias in the included trials. One systematic review assessing the effect of enteral or oral nutrition support versus untreated controls assessed risk of bias in the included trials in terms of allocation concealment and blinding (Koretz 2007). However, this review did not assess incomplete outcome data, selective outcome reporting, or for-profit bias (Chan 2004; Higgins 2011; Lundh 2017). In spite of these caveats, this systematic review showed that oral nutrition support did not seem to benefit any subgroup of people except geriatric participants (Koretz 2007). There was no aggregated analysis of all the trials (Higgins 2011). Another meta-analysis looked at adults having abdominal surgery (Stratton 2007). Despite the fact that both Koretz 2007 and Stratton 2007 included people having abdominal surgery they reached opposing conclusions. The first meta-analysis showed no benefit of enteral nutrition in people having abdominal surgery for total complications nor for mortality. The second meta-analysis showed benefit of both oral and enteral nutrition support. Yet another systematic review assessed the effects of parenteral nutrition support versus no nutrient intake (Koretz 2001). This review concluded that there were not enough data to assess whether parenteral nutrition had any effect in people being either severely malnourished or with a high rate of catabolism (i.e. in people at nutritional risk). The overall results showed no significant beneficial effect of parenteral nutrition, except in a subgroup assessing preoperative participants (Koretz 2001). One more recent systematic review and meta-analysis looking at enteral nutrition for people in intensive care units concluded that only trials with a high risk of bias showed reduced mortality (Koretz 2014). A meta-analysis including malnourished medical inpatients found no effect on clinical outcomes such as mortality or infection, but found that nutrition support increased weight (Bally 2016).

Nutrition support might have beneficial effects in adults at risk of malnutrition, but previous meta-analyses have shown conflicting results (Stratton 2003; Koretz 2007; Stratton 2007; Koretz 2014; Bally 2016) and they have not exclusively included participants with an indication for nutrition support (Koretz 2007). No prior systematic review has been conducted that fully takes into account the risk of systematic errors due to bias, the risks of design errors, and risks of random errors ('play of chance') (Keus 2010; Garattini 2016). We chose to focus on hospitalised adults with malnutrition or at risk of malnutrition because this population seemed to have the largest potential to benefit from nutrition support.

OBJECTIVES

To assess the benefits and harms of nutrition support versus no intervention, treatment as usual, or placebo in hospitalised adults at nutritional risk.

METHODS

Criteria for considering studies for this review

Types of studies

We included all randomised clinical trials, irrespective of publication type, publication status, publication date, and language. We excluded cluster-randomised and quasi-randomised studies. In line with our protocol, we plan to assess observational data of harms in a separate review.

Types of participants

Adult participants, defined as people of 18 or more years of age, hospitalised at the beginning of the intervention period, and fulfilling one or more of the following inclusion criteria and none of the exclusion criteria:

Inclusion criteria

- Participants characterised as at nutritional risk according to the NRS 2002, MUST, MNA, or SGA criteria (see Background).
- Participants characterised as at least moderately at risk of malnutrition according to the screening tool NRS 2002 (i.e. BMI less than 20.5 kg/m^2, weight loss of at least 5% during the last three months, weight loss of at least 10% during the last six months, or insufficient food intake during the last week (50% of requirement or less) (Kondrup 2003)).
- Participants theoretically known to be at nutritional risk either due to increased nutritional requirements or decreased food intake. We accepted the following conditions and procedures: major surgery such as open abdominal (liver, pancreas, gastro-oesophageal, small intestine, colorectal) surgery; stroke; adults in intensive care units; adults with severe infections, and frail elderly people (defined by trialists) with pulmonary disease, oncology, or minor surgery (e.g. hip fracture) (Shaw 1987; Larsson 1990b; Morlion 1998; Chalela 2004; Norman 2008a).
- Participants characterised as nutritionally at risk due to surrogate biomarkers such as low levels of albumin, low levels of other plasma proteins, or low lymphocyte counts or anthropometric markers (BMI, triceps skinfold, arm muscle circumference).
- Participants characterised by the trialists as malnourished, undernourished, at nutritional risk, or similar terms, using a classification not mentioned above.
- Participants characterised by the trialists as malnourished, undernourished, at nutritional risk, or similar terms, without specifying how this classification was made.

Exclusion criteria

- Children or adolescents.
- Pregnant or lactating women.
- People receiving dialysis.

Traditionally, trials with participants below 18 years old, pregnant and lactating women, and participants receiving dialysis are investigated in separate reviews. We therefore did not include trials with such participants in this systematic review. If trials contained a mix of participants planned by our protocol to be excluded and included, we contacted authors for specific data for the participants we planned to include. We excluded trials when we did not receive data on the relevant trial participants, noting the reason for our exclusion.

Types of interventions

Nutrition support (experimental group)

We accepted any intervention that the trialists defined as nutrition support or similar terms. As mentioned in the Description of

the intervention (Background), nutrition support may include general nutrition support, fortified foods, oral supplements, enteral nutrition, and parenteral nutrition.

We did not include the following interventions: immuno-nutrition, elemental diets, glutamine only as the primary intervention, micronutrients only, or similar non-standard nutrition support interventions (i.e. modified in a way intended to provide other properties than the purely nutritional).

Control group

We defined 'no intervention', placebo, or 'treatment as usual' as control interventions. We classified the control intervention as 'no intervention' if the control group received no intervention other than a co-intervention, planned to be delivered similarly to both the experimental and control groups. 'Treatment as usual' referred to any type of non-specific supportive intervention such as 'treatment as usual', 'standard care', or 'clinical management' as control interventions (Jakobsen 2011). We did not accept enteral nutrition and parenteral nutrition (unless the parenteral nutrition was standard fluids 5% to 10% glucose/dextrose) as control interventions.

Co-interventions

We allowed co-interventions, but only if a co-intervention was intended to be delivered similarly to both the experimental group and the control group (Jakobsen 2013).

Types of outcome measures

Primary outcomes

- All-cause mortality.
- Serious adverse events. We used the International Conference on Harmonisation (ICH) Guidelines for Good Clinical Practice's definition of a serious adverse event (ICH-GCP 1997), that is, any untoward medical occurrence that results in death, is life-threatening, requires hospitalisation or prolongation of existing hospitalisation, or results in persistent or significant disability or incapacity, or is a congenital anomaly or birth defect. In contrast to the term 'adverse reaction', the serious adverse events do not have to be related to the intervention.
- Health-related quality of life measured on any validated scale, such as the 36-item Short Form (SF-36) (Ware 1992) (continuous outcome).

Secondary outcomes

- Time to death (survival data).
- Morbidity (as defined by the trialists) (dichotomous outcome). If trial investigators did not use the term 'morbidity', we did not include these data within our analysis outcome.
- BMI (continuous outcome).
- Weight (continuous outcome).
- Hand-grip strength (continuous outcome).
- Six-minute walking distance (continuous outcome).

We estimated all continuous and dichotomous outcomes at two time points: at the end of the trial intervention period as defined by the trialists (the most important outcome measure time point in this review) and at maximum follow-up.

Search methods for identification of studies

Electronic searches

We searched Cochrane Central Register of Controlled Trials (CENTRAL) in the Cochrane Library, MEDLINE (Ovid SP), Embase (Ovid SP), LILACS (BIREME), BIOSIS (Web of Science) and Science Citation Index Expanded (Web of Science) (Royle 2003), from conception till February 2016, in order to identify relevant trials. The search strategies with the time spans of the searches are given in Appendix 1. We also searched the World Health Organization International Clinical Trials Registry Platform (www.who.int/ictrp); clinicaltrials.gov; Turning Research Into Practice (TRIP); and Google Scholar.

Searching other resources

We identified and included where relevant the bibliographies of review articles and identified trials by searching personal files. We also looked through conference proceedings from the American Society for Parenteral and Enteral Nutrition and the European Society for Parenteral and Enteral Nutrition meetings. We also contacted pharmaceutical companies (Abbott Nutrition, Nutricia Research, Fresenius Kabi, Bioscrip, Novartis, Nestlé, GlaxoSmithKline plc, Bristol-Meyer-Squibb, Ross Laboratories, ThriveRx, and New England Life Care) as well as national nutrition industry collaborations (please see Appendix 2).

Data collection and analysis

We performed the review following the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins 2011) and the Cochrane Hepato-Biliary Group Module (Gluud 2016). We performed the analyses using Review Manager 5 (RevMan 2014), STATA 13 (Stata 2013), and Trial Sequential Analysis (Thorlund 2011; TSA 2011).

Selection of studies

We divided the work of evaluating the identified trials among 16 review authors. Two independent review authors evaluated each trial. If one identified the trial as relevant but the other did not, the two review authors discussed the reasoning behind their decision. If they still disagreed, a third review author (JCJ) resolved the issue.

Data extraction and management

Two review authors independently extracted and validated data using data extraction forms that were designed for the purpose. The two review authors discussed any disagreement concerning the extracted data. If they still disagreed, a third review author (JCJ) resolved the issue. In case of relevant data not being available, we attempted to contact the trial authors. All articles were data-extracted by review authors who spoke the language fluently.

Assessment of risk of bias in included studies

Because of the risk of overestimation of beneficial intervention effects in randomised clinical trials with unclear or inadequate methodological quality (Schulz 1995; Moher 1998; Sutton 2000; Kjaergard 2001; Gluud 2006; Wood 2008; Hrobjartsson 2012; Lundh 2017; Savović 2012a; Savović 2012b; Hrobjartsson 2013; Hrobjartsson 2014a; Hrobjartsson 2014b), two review authors independently assessed the risks of bias for each trial and outcome. We used the following domains: allocation sequence generation, allocation concealment, blinding, incomplete outcome

data, selective outcome reporting, industry bias, and other apparent biases (Higgins 2011; Gluud 2015), using the following definitions:

Allocation sequence generation

- Low risk of bias: sequence generation was achieved using computer random-number generation or a random-number table. Drawing lots, tossing a coin, shuffling cards, and throwing dice were adequate if performed by an independent person not otherwise involved in the trial.
- Unclear risk of bias: the method of sequence generation was not specified.
- High risk of bias: the sequence generation method was not random or only quasi-randomised. We will only use these studies for the assessments of harms and not for benefits.

Allocation concealment

- Low risk of bias: the participant allocations could not have been foreseen in advance of, or during, enrolment. Allocation was controlled by a central and independent randomisation unit, on-site locked computer, identical-looking numbered sealed opaque envelopes, drug bottles or containers prepared by an independent pharmacist or investigator. The allocation sequence was unknown to the investigators.
- Unclear risk of bias: the method used to conceal the allocation was not described so that intervention allocations may have been foreseen in advance of or during enrolment.
- High risk of bias: the allocation sequence was likely to be known to the investigators who assigned the participants. We will only use these studies for the assessments of harms and not for benefits.

Blinding of participants and treatment providers

- Low risk of bias: it was mentioned that both participants and personnel providing the interventions were blinded and this was described.
- Uncertain risk of bias: it was not mentioned if the trial was blinded, or the extent of blinding was insufficiently described.
- High risk of bias: no blinding or incomplete blinding was performed.

Blinding of outcome assessment

- Low risk of bias: it was mentioned that outcome assessors were blinded and this was described.
- Uncertain risk of bias: it was not mentioned if the trial was blinded, or the extent of blinding was insufficiently described.
- High risk of bias: no blinding or incomplete blinding was performed.

Incomplete outcome data

- Low risk of bias: missing data were unlikely to make treatment effects depart from plausible values. This could either be that there were no dropouts or withdrawals for all outcomes, or the numbers and reasons for the withdrawals and dropouts for all outcomes were clearly stated, could be described as being similar in both groups, and the trial handled missing data appropriately in an intention-to-treat analysis using proper methods (e.g. multiple imputations)*. Generally, we judged the trial to be at a low risk of bias due to incomplete outcome data if dropouts are less than 5%. However, the 5% cut-off is not definitive.
- Unclear risk of bias: there was insufficient information to assess whether missing data were likely to introduce bias into the results.
- High risk of bias: the results were likely to be biased due to missing data, either because the pattern of dropouts could be described as being different in the two intervention groups or the trial used improper methods to deal with the missing data (e.g. last observation carried forward).

* "Multiple imputation is a general approach to the problem of missing data. It aims to allow for the uncertainty about the missing data by creating several different plausible imputed data sets and appropriately combining results obtained from each of them. The first stage is to create multiple copies of the data set, with the missing values replaced by imputed values. These are sampled from their predictive distribution based on the observed data - thus multiple imputation is based on a Bayesian approach. The imputation procedure must fully account for all uncertainty in predicting the missing values by injecting appropriate variability into the multiple imputed values. The second stage is to use standard statistical methods to fit the model of interest to each of the imputed data sets. The estimated associations from the imputed data sets will differ and are only useful when a mean is used to give overall estimated associations. Valid inferences are obtained because we obtain a mean over the distribution of the missing data given the observed data" (Sterne 2009).

Selective outcome reporting

- Low risk of bias: a protocol was published before or at the start of the trial, and the outcomes set out in the protocol were reported. If there is no protocol or the protocol was published after the trial had begun, reporting of all-cause mortality and serious adverse events gives the trial a grade of low risk of bias.
- Unclear risk of bias: no protocol was published and the outcomes all-cause mortality and serious adverse events were not reported.
- High risk of bias: the outcomes in the protocol were not reported.

For-profit bias

- Low risk of bias: the trial appeared to be free of industry sponsorship or other type of for-profit support that may lead to manipulation of the trial design, conduct, or results.
- Unclear risk of bias: it was unclear whether the trial was free of for-profit bias as no information on clinical trial support or sponsorship was provided.
- High risk of bias: the trial was sponsored by industry or received other type of for-profit support.

Other bias

- Low risk of bias: the trial appeared to be free of other bias domains (e.g. academic) that could put it at risk of bias.
- Unclear risk of bias: the trial may or may not have been free of other domains that could put it at risk of bias.
- High risk of bias: there were other factors in the trial that could put it at risk of bias (e.g. authors have conducted trials on the same topic).

Overall risk of bias

We judged trials to be at a low risk of bias if we rated them at a low risk of bias in all the above domains. We judged trials to be at a high risk of bias if we assessed them as having an unclear risk of bias or a high risk of bias in one or more of the above domains.

We assessed the domains 'blinding of outcome assessment' and 'incomplete outcome data' for each outcome. Thus, we were able to assess the bias risk for each outcome in addition to each trial.

We planned to consider outcome analysis of trials at low risk of bias as our primary analyses on which to base our review conclusions; however, we found no trials at low overall risk of bias.

Measures of treatment effect

Dichotomous outcomes

We calculated risk ratios (RRs) with 95% confidence intervals (CI) for dichotomous outcomes. We, however, considered 97.5% CI as the significance level for our primary outcomes, but this is not possible using the review manager software, see Data synthesis for details.

Continuous outcomes

We included both follow-up values and change values in the analyses. We used follow-up values in our analyses if both were reported. We calculated the mean difference (MD) and the standardised mean difference (SMD) with CI for continuous outcomes.

Survival data

We planned to analyse survival data using estimates of log hazard ratios and standard errors; however, no trials reported data suitable for survival analysis. We planned to calculate the log hazard ratios and standard error from any Kaplan-Meier graph if possible (Higgins 2011). We intended to use the generic inverse-variance method to meta-analyse survival data in Review Manager 5.

Unit of analysis issues

Where multiple trial arms were reported in a single trial, we only included the relevant arms. If two comparisons (e.g. parenteral nutrition and enteral nutrition versus standard care) were included in the same trial, we halved the control group to avoid double-counting.

We included trials with a factorial design. In case of, e.g. a 2 X 2 factorially-designed trial, we considered the two groups receiving nutrition support as experimental groups and the two groups receiving no nutrition support as control groups.

Dealing with missing data

Dichotomous outcomes

If the trialists used proper methodology (e.g. multiple imputation) to deal with missing data and we judged the dropouts in the groups to be equal, we conducted our primary analysis using these data. We only imputed data for outcomes in our sensitivity analyses.

Continuous outcomes

If trialists used proper methodology (e.g. multiple imputation) to deal with missing data and we judged the dropouts in the groups to be equal, we conducted our primary analysis using these data. We used follow-up values for all continuous outcomes. If only change values were reported, we analysed the results together with follow-up values (Higgins 2011). If standard deviations (SDs) were not reported, we calculated the SDs using data from the trial whenever possible. We only used imputed data in our sensitivity analyses.

Sensitivity analysis

To assess the potential impact of missing dichotomous outcomes data, we performed the following two sensitivity analyses (also see Effects of interventions):

- 'Best-worst-case' scenario: we assumed that all participants lost to follow-up in the experimental group survived and had no serious adverse event; and all those participants with missing outcomes in the control group did not survive and had a serious adverse event;
- 'Worst-best-case' scenario: we assumed that all participants lost to follow-up in the experimental group did not survive and had a serious adverse event; and that all those participants lost to follow-up in the control group survived and had no serious adverse event.

We present results from both scenarios in our review.

To assess the potential impact of missing SDs for continuous outcomes, we performed the following sensitivity analysis (also see Effects of interventions):

- Where SDs were missing and it was not possible to calculate them, we planned to impute SDs from trials with similar populations and low risk of bias. If we found no trials at low risk of bias, we imputed SDs from trials with a similar population. As the final option, we imputed SDs from all trials.

Assessment of heterogeneity

We assessed the presence of statistical heterogeneity using the Chi^2 test with significance set at P value < 0.10 and measured the quantities of heterogeneity using the I^2 statistic (Higgins 2002; Higgins 2003). We also produced a forest plot to illustrate any heterogeneity visually.

Assessment of reporting biases

We used a funnel plot to assess reporting bias if 10 or more trials were included in the analysis. Using the asymmetry of the funnel plot, we assessed the risk of bias. For dichotomous outcomes, we used Harbord's test (Harbord 2006) using STATA. For continuous outcomes, we planned to use the regression asymmetry test (Egger 1997) and the adjusted rank correlation (Begg 1994) using STATA (Stata 2013).

Data synthesis

We based our primary conclusions on the results of the primary outcomes with a low risk of bias at the end of intervention. As there are currently no such trials, we considered the results of our primary outcomes with high risk of bias, results of secondary outcomes, results of outcomes at maximum follow-up, sensitivity analyses, and subgroup analyses as hypothesis-generating analyses (Jakobsen 2014).

Meta-analysis

We undertook this meta-analysis according to the recommendations stated in the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins 2011) and the Cochrane Hepato-Biliary Group web site (hbg.cochrane.org). We used the statistical software Review Manager 5 provided by Cochrane to analyse data (RevMan 2014).

Where data were only available from one trial, we used Fisher's exact test for dichotomous data (Fisher 1922) and Student's t-test for continuous data (Student 1908).

Assessment of significance

We assessed our intervention effects with both random-effects model meta-analyses (DerSimonian 1986) and fixed-effect model meta-analyses (DeMets 1987). We used the more conservative point estimate of the two (Jakobsen 2014). We considered as 'the more conservative point estimate', the estimate closest to zero effect (Jakobsen 2014). If the two estimates were equal, we used the estimate with the widest CI (Jakobsen 2014). We used three primary outcomes, and therefore considered a P value of 0.025 or less as statistically significant (Jakobsen 2014). We used the eight-step procedure to assess whether the thresholds for significance were crossed (Jakobsen 2014).

Secondary outcomes were not adjusted, as we viewed these as hypothesis-generating.

Trial Sequential Analysis

Traditional meta-analysis runs the risk of random errors due to sparse data and repetitive testing of accumulating data when updating reviews. Therefore, we performed Trial Sequential Analyses on the primary outcomes in order to calculate the required information size and the breach of the cumulative Z-curve of the relevant trial sequential monitoring boundaries (www.ctu.dk/tsa/); (TSA 2011; Thorlund 2011; Brok 2008; Wetterslev 2008; Brok 2009; Thorlund 2009; Wetterslev 2009; Thorlund 2010). Hereby, we wished to control the risks of type I errors and type II errors (Thorlund 2011).

For dichotomous outcomes, we estimated the required information size based on the proportion of participants with an event in the control group, a risk ratio reduction of 20%, an alpha of 2.5% because of three primary outcomes (Jakobsen 2014), a beta of 20% (power of 80%), and the diversity calculated from the included trials in the meta-analysis. A 20% risk ratio reduction would yield a number needed to treat of 50 people at nutritional risk if the mortality in the control group is about 10%. As we could reject a risk ratio reduction of 20% we also performed a post-hoc TSA for a risk ratio reduction of 10%, to see how small a risk ratio reduction we could reject (see also Effects of interventions). For continuous outcomes, we planned to estimate the required information size, based on the SD observed in the control group of trials at low risk of bias and a minimal relevant difference of 50% of this SD, an alpha of 2.5%, a beta of 20%, and the diversity suggested by the trials in the meta-analysis.

Zero events were handled in all Trial Sequential Analyses by replacing any zeros with a value of 0.001.

Bayes factor

Bayes factor is the ratio between the probability of the meta-analysis result, given the null hypothesis (H0) is true, divided by the probability of the meta-analysis result, given the alternative hypothesis (HA) is true (Jakobsen 2014). We calculated Bayes factor using the Excel sheet provided at the website of the Copenhagen Trial Unit (ctu.dk/tools-and-links/bayes-factor-calculation.aspx). We calculated Bayes factor using an anticipated risk ratio of 80%. A further explanation of Bayes factor is given in Jakobsen 2014.

Subgroup analysis and investigation of heterogeneity

Below, we list our very large number of preplanned subgroup analyses. Such a large number creates risks for type I errors. Accordingly, we interpreted our subgroup findings conservatively (see 'Data synthesis' for details). We tested for subgroup differences using the formal test for subgroup differences in Review Manager 5 (Borenstein 2009; RevMan 2014).

- Outcomes at a low risk of bias compared with outcomes at a high risk of bias.
- Comparison of trials assessing the effects of the following interventions:
  - general nutrition support;
  - fortified foods;
  - oral nutrition support;
  - enteral nutrition;
  - parenteral nutrition.
- Comparison of trials assessing the effects of nutrition support in the following medical specialties:
  - cardiology;
  - medical gastroenterology and hepatology;
  - geriatrics;
  - pulmonary disease;
  - endocrinology;
  - infectious diseases;
  - rheumatology;
  - haematology;
  - nephrology;
  - gastro-enterological surgery;
  - trauma surgery;
  - orthopaedics;
  - plastic, reconstructive, and aesthetic surgery;
  - vascular surgery;
  - transplant surgery;
  - urology;
  - thoracic surgery;
  - neurological surgery;
  - oro-maxillo-facial surgery;
  - anaesthesiology;
  - emergency medicine (for intensive care unit (ICU) participants, see subgroup conditions known to increase nutritional demands);
  - psychiatry;
  - neurology;
  - oncology;
  - dermatology;

- gynaecology;
- mixed.

- Comparison of trials where the experimental and control groups received the following (see definitions of 'adequate' and 'inadequate' in the paragraphs below):
  - trials where the experimental group received clearly adequate nutrition and the control group received clearly inadequate nutrition;
  - trials where the experimental group did not receive an inadequate amount of nutrition or the control group received an adequate amount of nutrition, or both;
  - trials where the experimental group was overfed;
  - trials where the calorie and protein intake in the experimental and the control groups could not be obtained from the publications or the study authors.

We defined 'adequate intake' in experimental groups to be 80% to 140% of estimated energy expenditure (i.e. adequate range then is 20 to 35 kcal/kg a day in bedridden participants (including participants in intensive care units)).

We defined 'inadequate intake' as less than 80% of the resting energy expenditure (i.e. inadequate intake is less than 20 kcal/kg a day in bedridden participants).

We defined 'overfeeding' as intakes greater than 35 kcal/kg a day except in trials where participants have a known extraordinary energy requirement (e.g. participants with a temperature of 40 °C, participants with extensive burns, participants with unusually high physical activity, etc.).

The resting energy expenditure could either have been given in the trial or calculated by us, using the Harris-Benedict equation, based on data in the randomised clinical trial (height, weight, age, sex) (Harris 1918).

- Comparison of trials where the participants were characterised as 'at nutritional risk' by the following screening tools:
  - NRS 2002;
  - MUST;
  - MNA;
  - SGA;
  - participants characterised as 'at nutritional risk' by other means.
- Comparison of trials where the participants were characterised as 'at nutritional risk' due to the following conditions:
  - major surgery such as open abdominal (liver, pancreas, gastro-oesophageal, small intestine, colorectal) surgery;
  - stroke;
  - people in intensive care units including trauma;
  - people with severe infections;
  - frail elderly people (aged 65 years or over, as mean age of participants) with less severe conditions that were known to increase protein requirements moderately;
  - participants who do not fall into one of the above categories.
- Comparison of trials where the participants were characterised as 'at nutritional risk' due to the following criteria:
  - BMI less than 20.5 kg/m^2;
  - weight loss of at least 5% during the last three months;
  - weight loss of at least 10% during the last six months;
  - insufficient food intake during the last week (50% of requirement or less);
  - participants characterised as 'at nutritional risk' by other means.
- Comparison of trials where the participants were characterised as 'at nutritional risk' due to biomarkers or anthropometric measures:
  - biomarkers;
  - anthropometric measures;
  - participants characterised as 'at nutritional risk' by other means.
- Comparison of trials published in the following time periods (using the date when randomisation began if this was reported):
  - before 1960;
  - 1960 to 1979;
  - 1980 to 1999;
  - after 1999.
- Comparison of trials where the interventions lasted fewer than three days compared to trials where the interventions lasted three days or more.

'Summary of findings' table

We used the GRADE system (Guyatt 2008) to assess the quality of the body of evidence associated with each of the major outcomes in our review. GRADE may show the extent to which one can be confident that an estimate of effect or association reflects the outcome assessed in a systematic review. The quality measure of a body of evidence considers within-study risk of bias, indirectness of evidence, heterogeneity of data, imprecision of effect estimates, and risk of publication bias. We assessed the precision of the effect estimates according to Jakobsen 2014. We constructed a 'Summary of findings' table (tech.cochrane.org/revman/other-resources/gradepro/download) presenting the analysis results of the following outcomes: all-cause mortality, serious adverse events, quality of life, and weight .

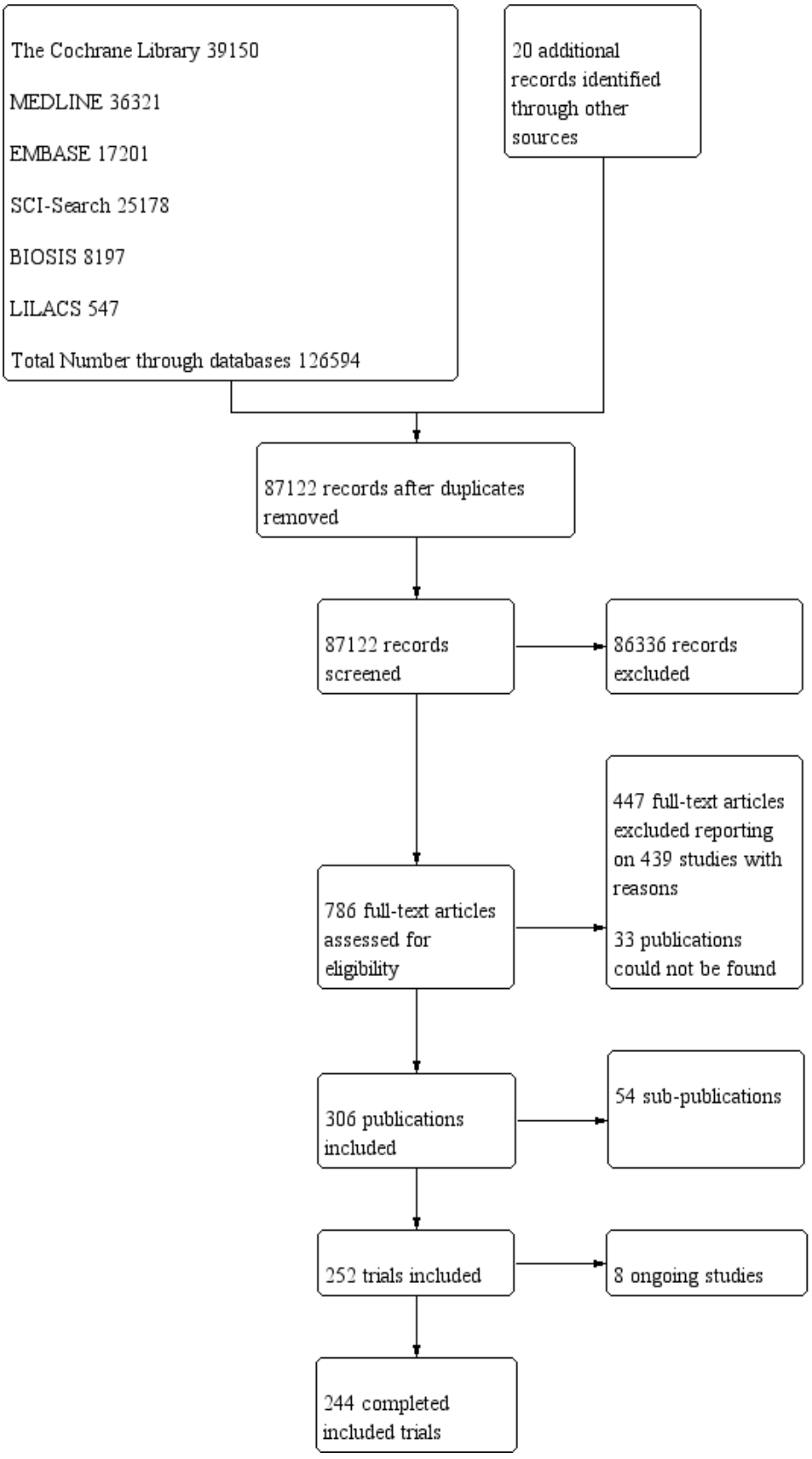
RESULTS

Description of studies

Results of the search

We identified 126,594 potentially relevant references through searching the Cochrane Central Register of Controlled Trials (CENTRAL) (n = 39,150), MEDLINE (n = 36,321), Embase (n = 17,201), LILACS (n = 547), BIOSIS (n = 8,197), and Science Citation Index Expanded (n = 25,178). We also found 20 trials by searching Google Scholar, clinicaltrials.gov, and references identified in previous meta-analyses. We excluded 39,492 reference duplicates. Accordingly, we screened 87,122 records, and excluded 86,36 references based on titles and abstracts. We assessed 786 full-text articles for eligibility. Of these, we excluded 447 references according to our inclusion and exclusion criteria. We could not find 33 publications, most of which were conducted in China, and it was not possible to access them. We list reasons for exclusion in the table 'Characteristics of excluded studies'. This resulted in 306 publications reporting results of 252 trials that could be included. Eight of these trials are ongoing. Accordingly, we have included 244 trials in our analyses. Figure 1 represents the study flow.

Figure 1. Study flow diagram.



Included studies

We included 306 references for 252 trials, of which eight are ongoing. The trials were conducted all over the world, with 49 from China, 39 from the USA, 31 from the UK, 10 from Germany, nine from Sweden, eight from Australia, seven each from Italy, Spain, Netherlands and Canada, six each from Denmark, France and India, four from Switzerland, three each from Belgium, Croatia, Japan and Turkey, two each from Norway, Taiwan, Hong Kong, South Korea, Ireland, Latvia and Thailand, and one each from New Zealand, Poland, Portugal, Iran, Finland, Greece, Wales, Israel, Russia, Uruguay and Chile. Eleven trials did not report the trial location. For further details on included trials, see 'Characteristics of included studies'.

Participants

The 244 trials randomised 28,619 participants. The number of participants in each trial ranged from eight to 4640. Two trials accounted for one-third of all included participants (Dennis 2005; Casaer 2011). The mean age was 64.2 years in the 184 trials reporting mean age. The mean proportion of women was 43.6% in the 173 trials reporting sex. We included participants from 20 medical specialties: emergency medicine (n = 12); endocrinology (n = 1); gastro-enterological surgery (n = 99); medical gastroenterology and hepatology (n = 19); general surgery (n = 2); geriatrics (n = 16); gynaecology (n = 1); infectious disease (n = 2); nephrology (n = 1); neurology (n = 10); neurological surgery (n = 1); oncology (n = 20); oro-maxillo-facial surgery (n = 2); orthopaedics (n = 14); pulmonary disease (n = 9); thoracic surgery (n = 4); trauma surgery (n = 11); transplant surgery (n = 4); vascular surgery (n = 4); haematology (n = 1); and mixed medical specialties (n = 11) (Table 1).

Experimental interventions

We included 86 trials where the experimental group received parenteral nutrition, 80 trials with enteral nutrition, 55 with oral nutrition support, 12 with a mixed experimental intervention(e.g. oral nutrition and parenteral nutrition were given together), nine trials with general nutrition support, and two trials with fortified food. Two hundred and three trials had an intervention that lasted three days or more and 25 trials had an intervention that lasted two days or less. The duration of the intervention was unknown in 16 trials. Most intervention periods were until hospital discharge, but in the 79 trials reporting a specific intervention length, the mean in-hospital intervention length was 10.4 days (range 1 to 32 days).

Table 1 gives a list of the experimental interventions according to medical specialty.

Control interventions

We include 122 trials with 'treatment as usual' as the control intervention, 107 trials with no intervention as control intervention, and 15 trials with placebo as intervention. It is important to note that the control group was often given a co-intervention consisting of standard care, and therefore often received a measure of nutrition support.

Table 1 gives a list of the control interventions according to medical specialty.

Co-interventions

Many trials had co-interventions. We included trials with co-interventions, but only if the co-interventions were intended to be delivered similarly to all experimental and control groups of a trial (Jakobsen 2014). The majority of trials with an intervention period longer than three days used 'standard hospital food' as a co-intervention. Co-interventions, whenever used, were in general disease-specific, such as anaesthetics and chemotherapy.

Excluded studies

We excluded 447 references after full-text assessment reporting on 439 studies. One hundred studies were not a randomised clinical trial (review, observational study, comment); 137 studies had a control group receiving an intervention not fulfilling our inclusion criteria; 93 studies included a mixture of outpatients and hospitalised patients, or only outpatients; 56 studies assessed the effects of interventions not fulfilling our inclusion criteria; 19 studies had multiple interventions; 14 studies did not randomise adults; 10 studies did not include participants at nutritional risk; three studies were cluster-randomised; three studies assessed pregnant women; three studies were retracted; and one study included participants who received dialysis. The reasons for the exclusion of studies are given in the table 'Characteristics of excluded studies'.

Risk of bias in included studies

Based on the information that we collected from the published reports and information from authors, we rated all 244 trials as being at high risk of bias. We judged many trials to have an unclear risk of bias in several domains, and we could not obtain additional information from the authors when we contacted them. Only one trial had a low risk of bias in six out of seven domains (Lidder 2013a). Additional information can be found in the 'Risk of bias' summary (Figure 2), and the 'Risk of bias' graph (Figure 3).

Figure 2. Risk of bias summary: review authors' judgements about each risk of bias item for each included study.

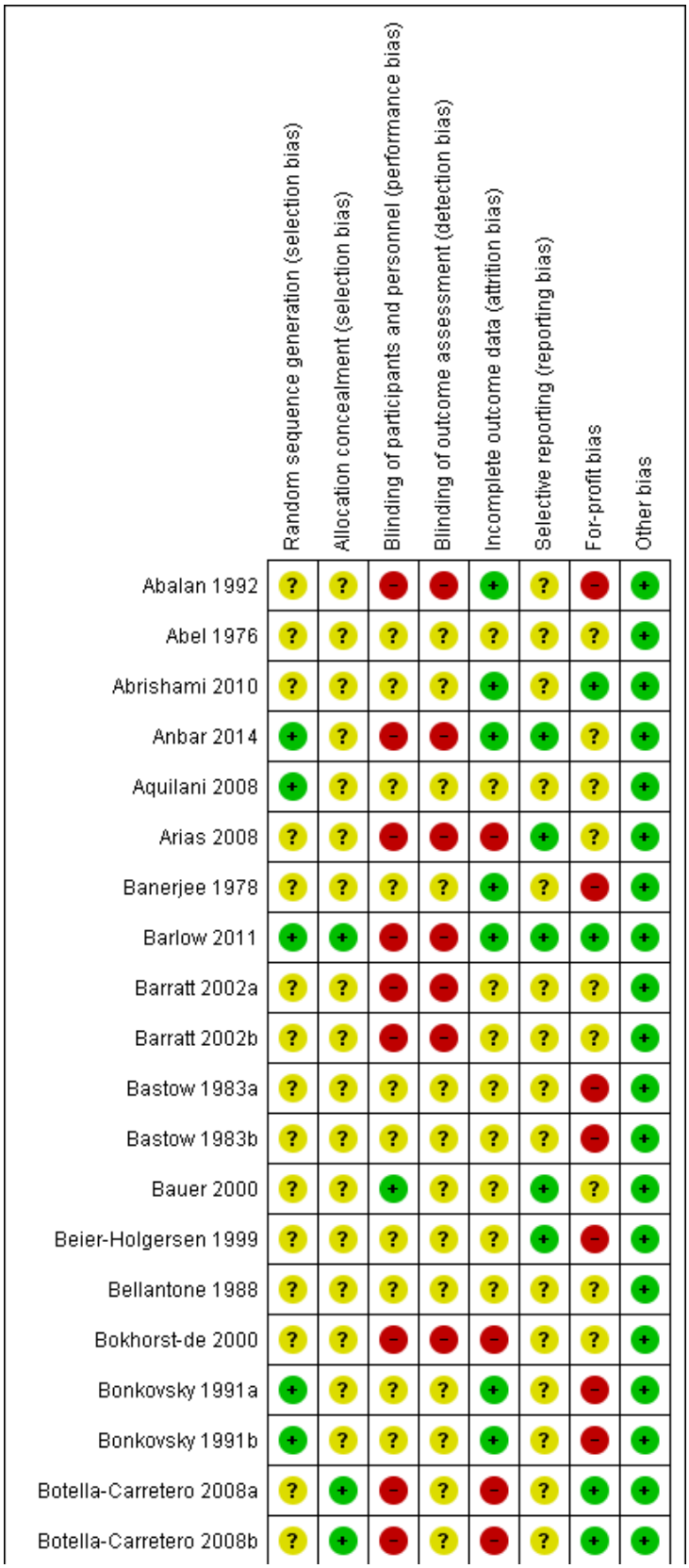


Figure 2. (Continued)

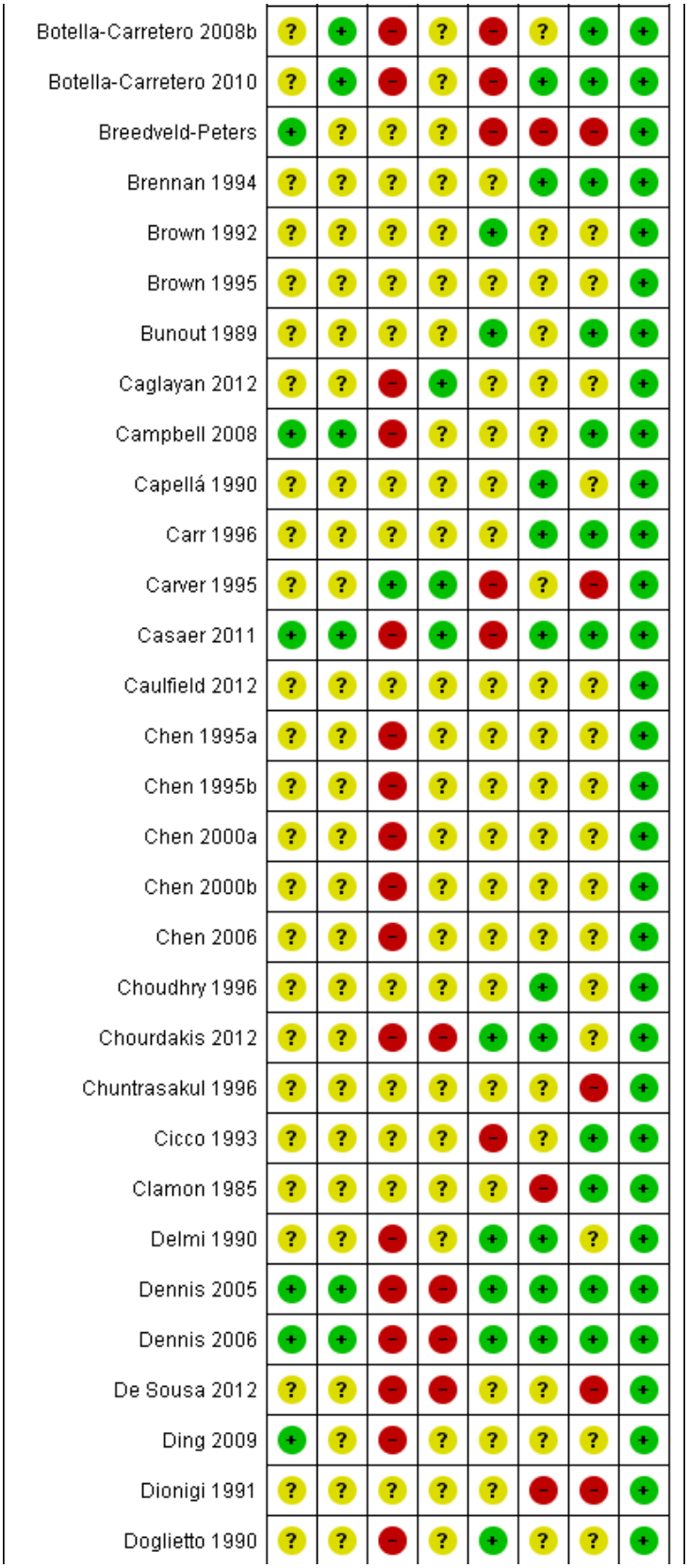


Figure 2. (Continued)

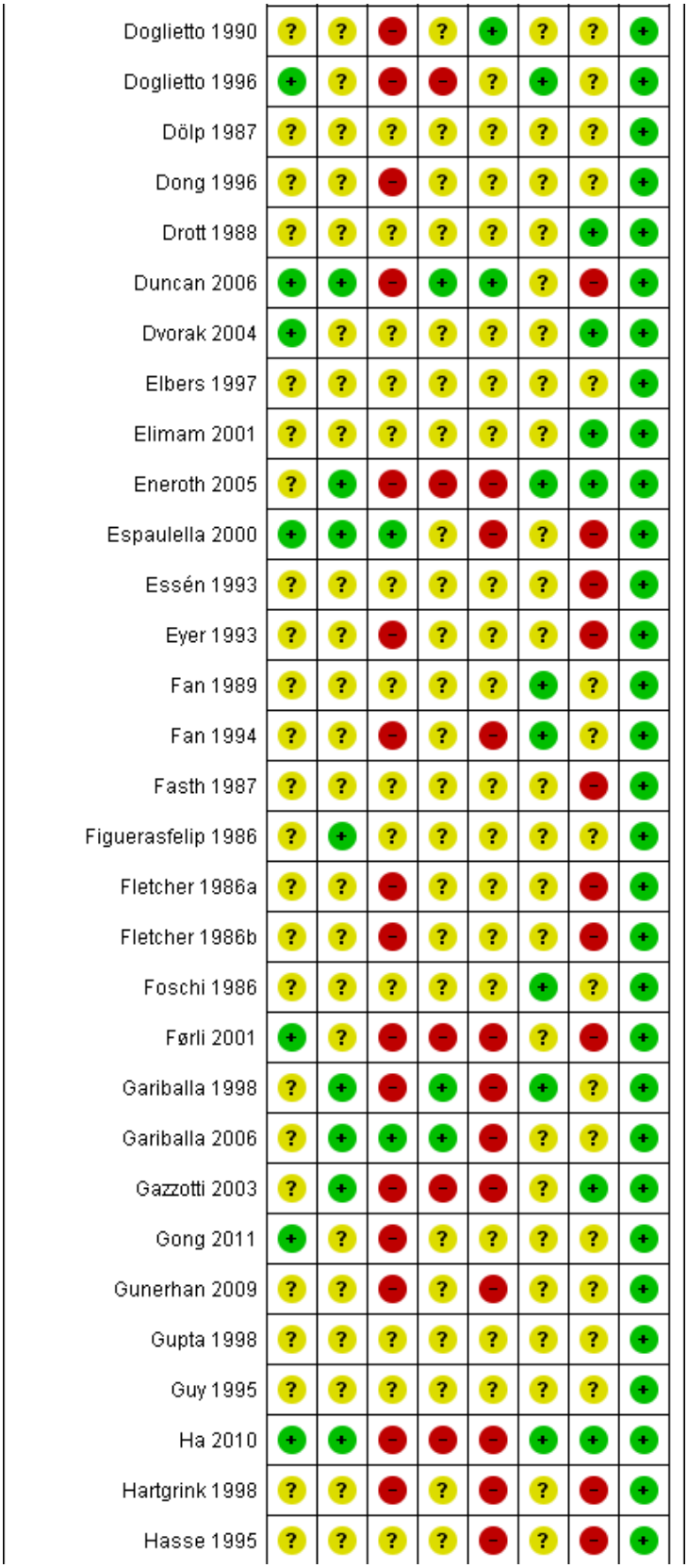


Figure 2. (Continued)

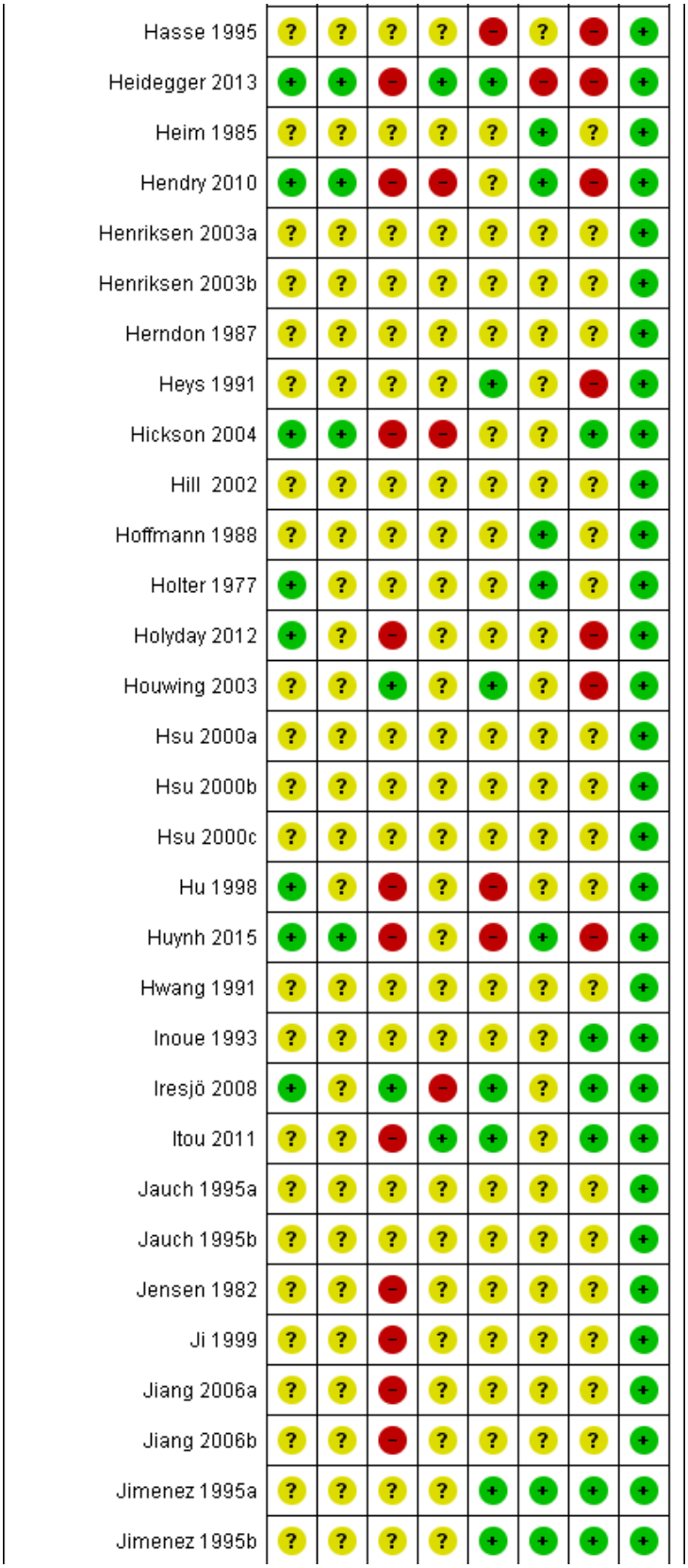


Figure 2. (Continued)

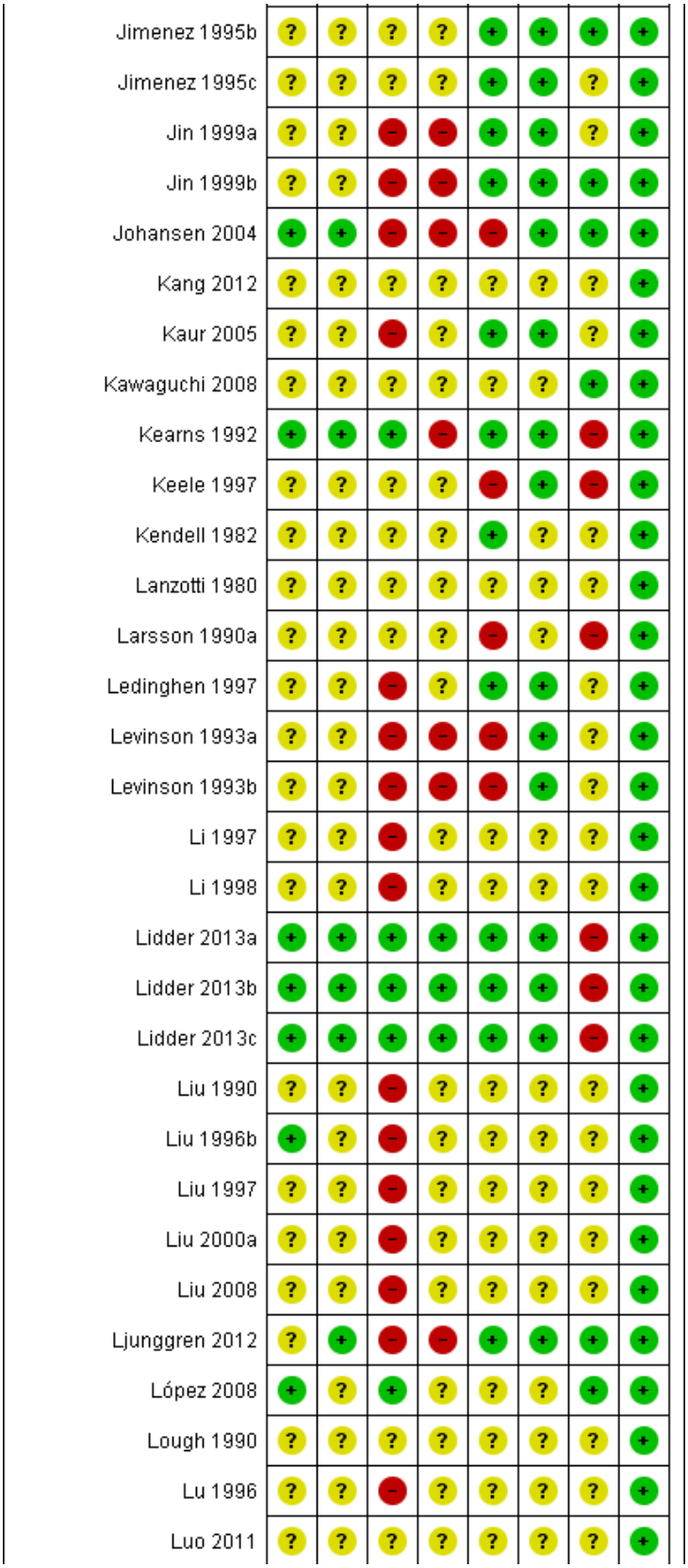


Figure 2. (Continued)

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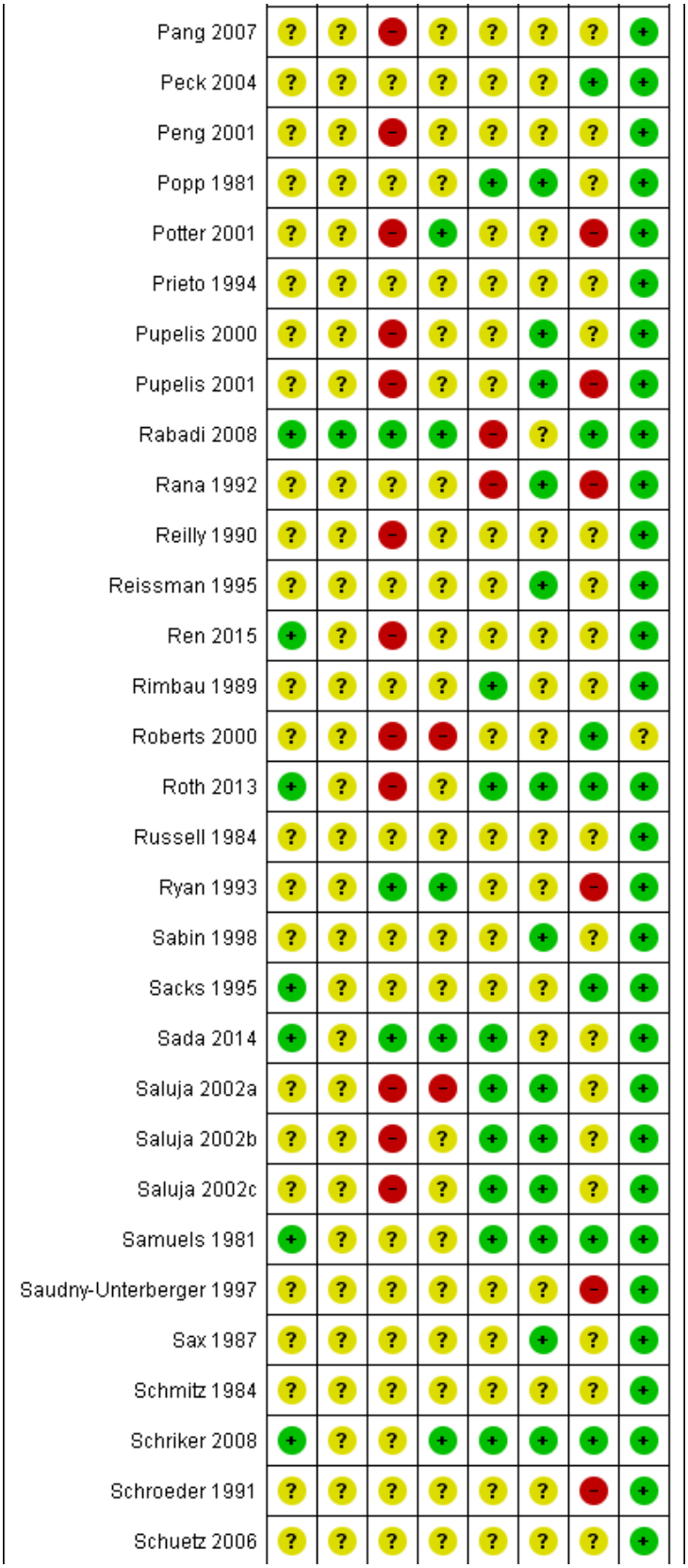


Figure 2. (Continued)

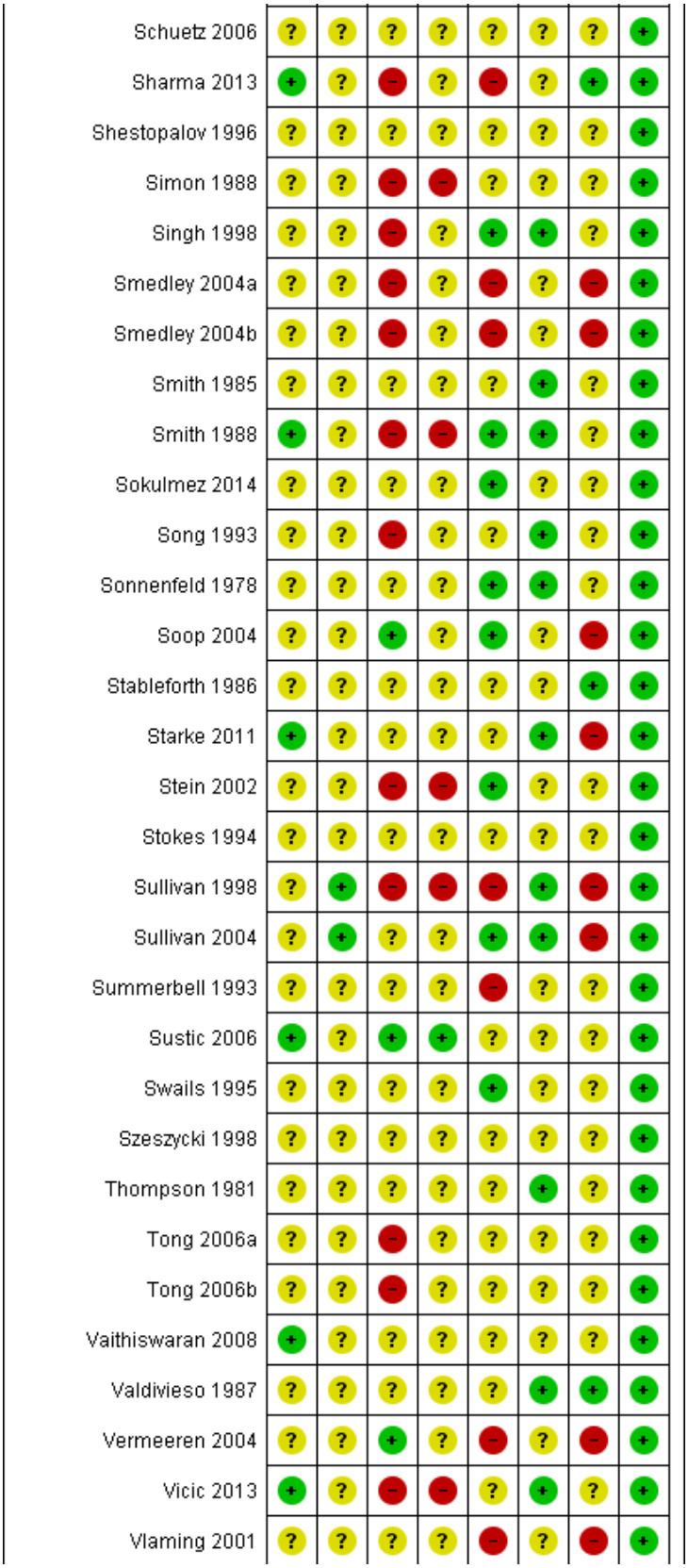


Figure 2. (Continued)

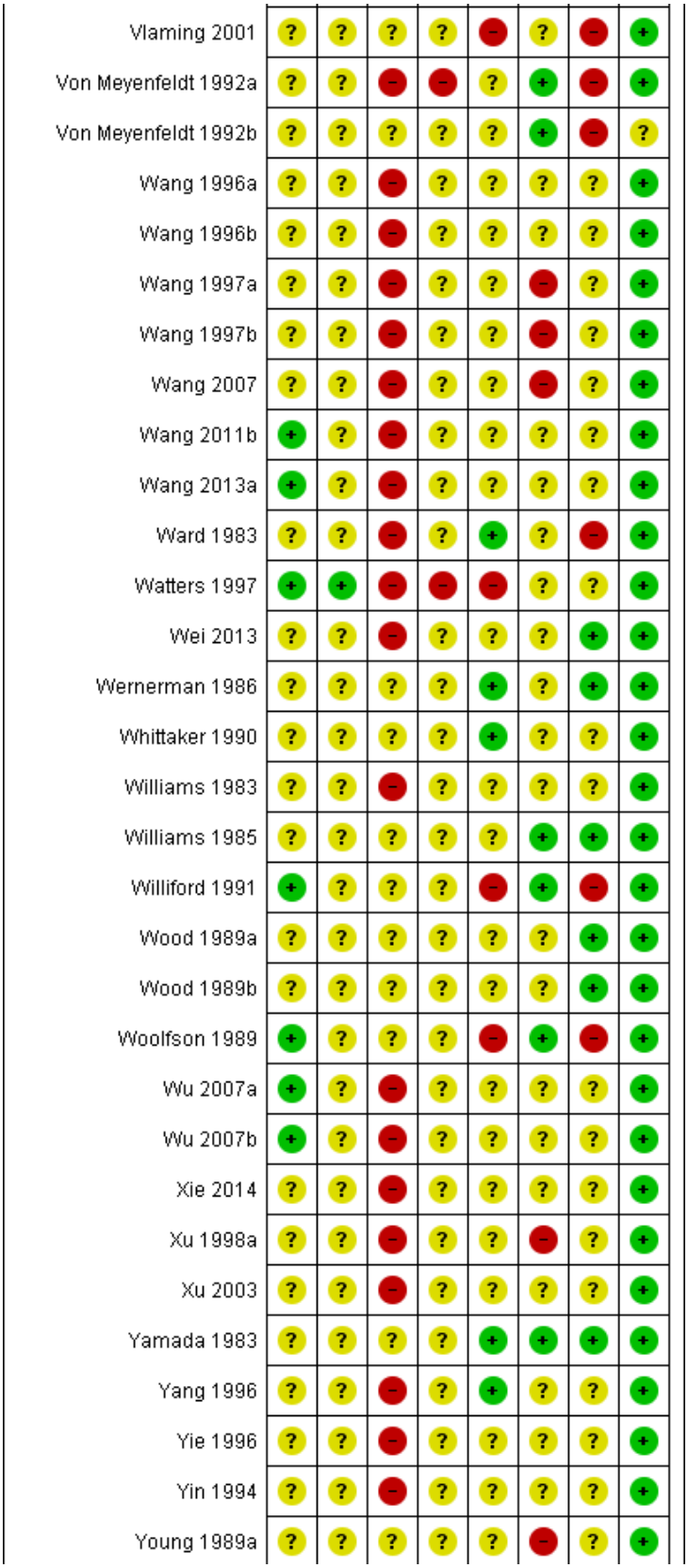


Figure 2. (Continued)

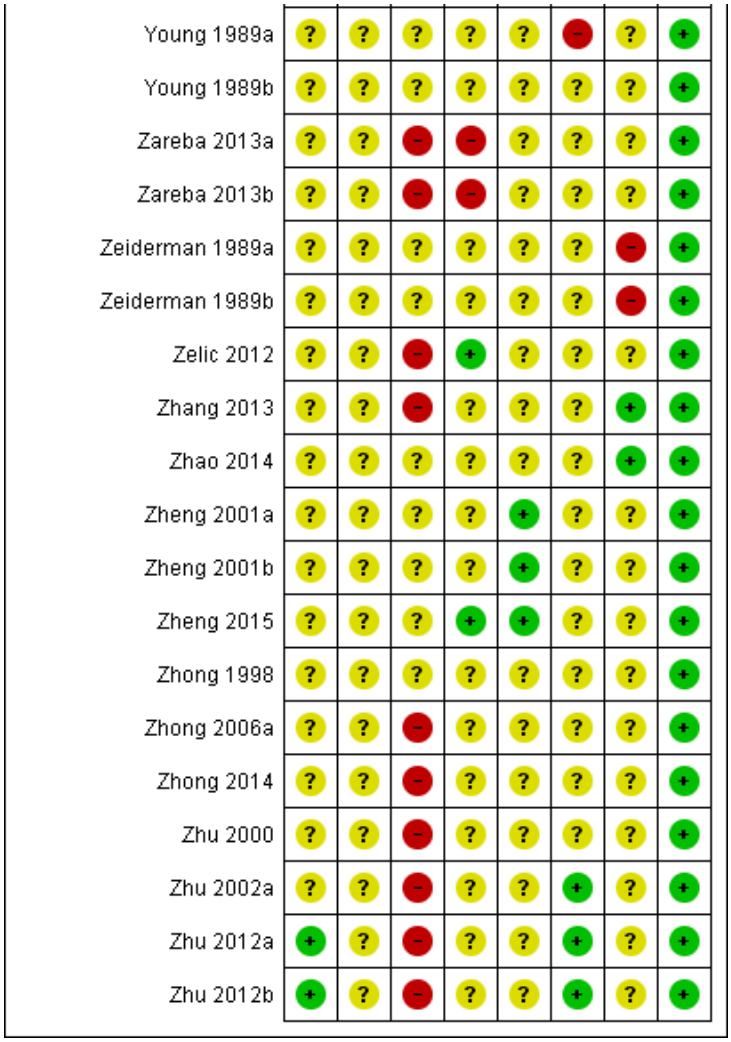
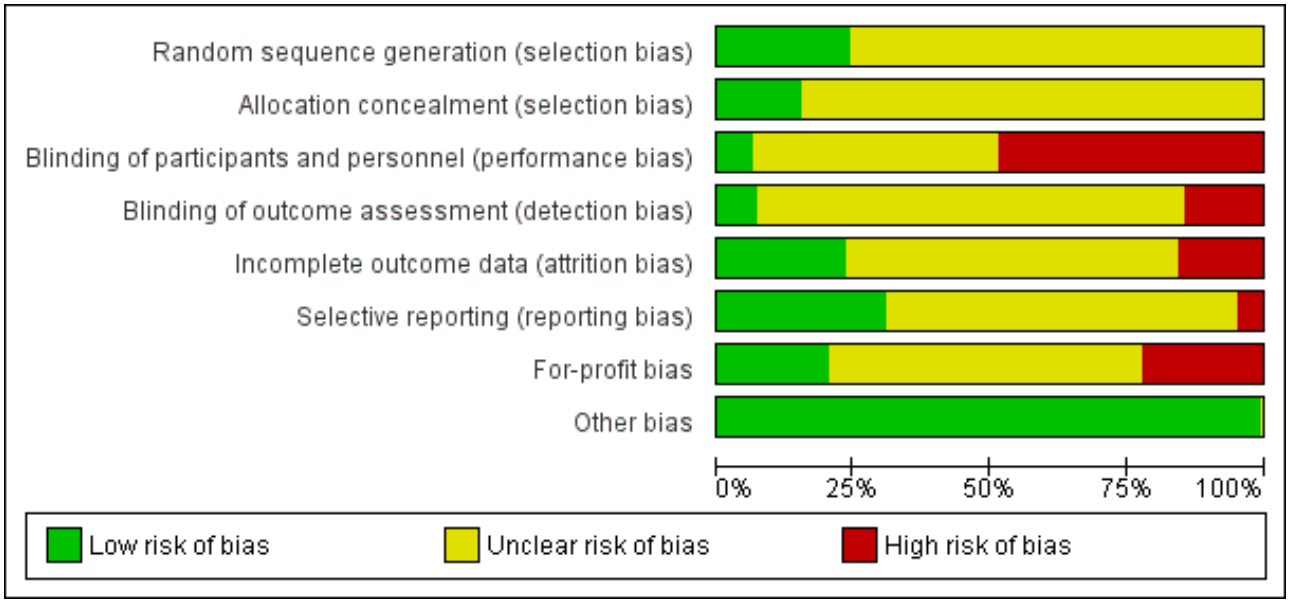


Figure 3. Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included studies.



Allocation

The generation of the allocation sequence was low risk of bias in only 62 trials. The remaining 182 trials were described as being randomised, but without explaining the method used for sequence generation.

The method used to conceal allocation was adequate in only 39 trials. The remaining 205 trials were described as being randomised, but the method used for allocation concealment was either not described or insufficiently described.

Blinding

The blinding of participants and personnel was performed and adequately described in only 15 trials. One hundred and seventeen trials did not blind the participants and personnel. The method for blinding of participants and personnel for the remaining 112 trials was either not described or insufficiently described. The blinding of outcome assessors was performed and adequately described in 17 trials. Thirty-six trials did not blind the outcome assessors. The method for blinding of outcome assessors for the remaining 191 trials was either not described or was insufficiently described.

Incomplete outcome data

Only 49 trials adequately addressed incomplete outcome data. Forty-one trials did not properly deal with incomplete outcome data. In 154 trials, incomplete outcome data were either not described or were insufficiently described.

Selective reporting

Seventy-five trials reported the outcomes stated in their respective protocols, or reported serious adverse events (including reporting complications, morbidity, or similar terms) and mortality, resulting in our assessment of a 'low risk of bias'. Twelve trials did not report the same outcomes they had stated in the protocol. In 157 trials, no protocol was available and the trial did not report mortality or serious adverse events.

Other potential sources of bias

Fifty-three trials reported how they were funded and appeared to be free of industry sponsorship or other type of for-profit support that may bias the results of the trial (Lundh 2017). Fifty-two trials were funded by industry sponsorship or other type of for-profit support. In 139 trials it was unclear how the trial was funded.

We did not identify any clear signs of academic bias or other potential sources of bias in any of the included trials. Therefore, we rated all 244 trials as 'low risk of bias' in the 'Other potential bias' domain.

Effects of interventions

See: **Summary of findings for the main comparison** Nutrition support versus no intervention, placebo, or treatment as usual in hospitalised adults at nutritional risk

Primary outcomes

All-cause mortality

End of intervention

One hundred and fourteen of 244 trials (46.7%), covering 21,758 participants, reported mortality at end of intervention. Eight hundred and thirty-one of 11,088 nutrition-support participants (7.49%) died versus 885 of 10,670 control participants (8.3%). Random-effects meta-analysis showed that nutrition support did not significantly affect the risk of all-cause mortality at end of intervention (RR 0.94, 95% CI 0.86 to 1.03, P = 0.16, I^2 = 0%, 21,758 participants, 114 trials, low quality of evidence, Analysis 1.1). The point estimate of absolute risk for short-term mortality was non-significantly 0.5% lower (8.3% in the control group compared with 7.8% (7.1% to 9.5%) following nutritional interventions.

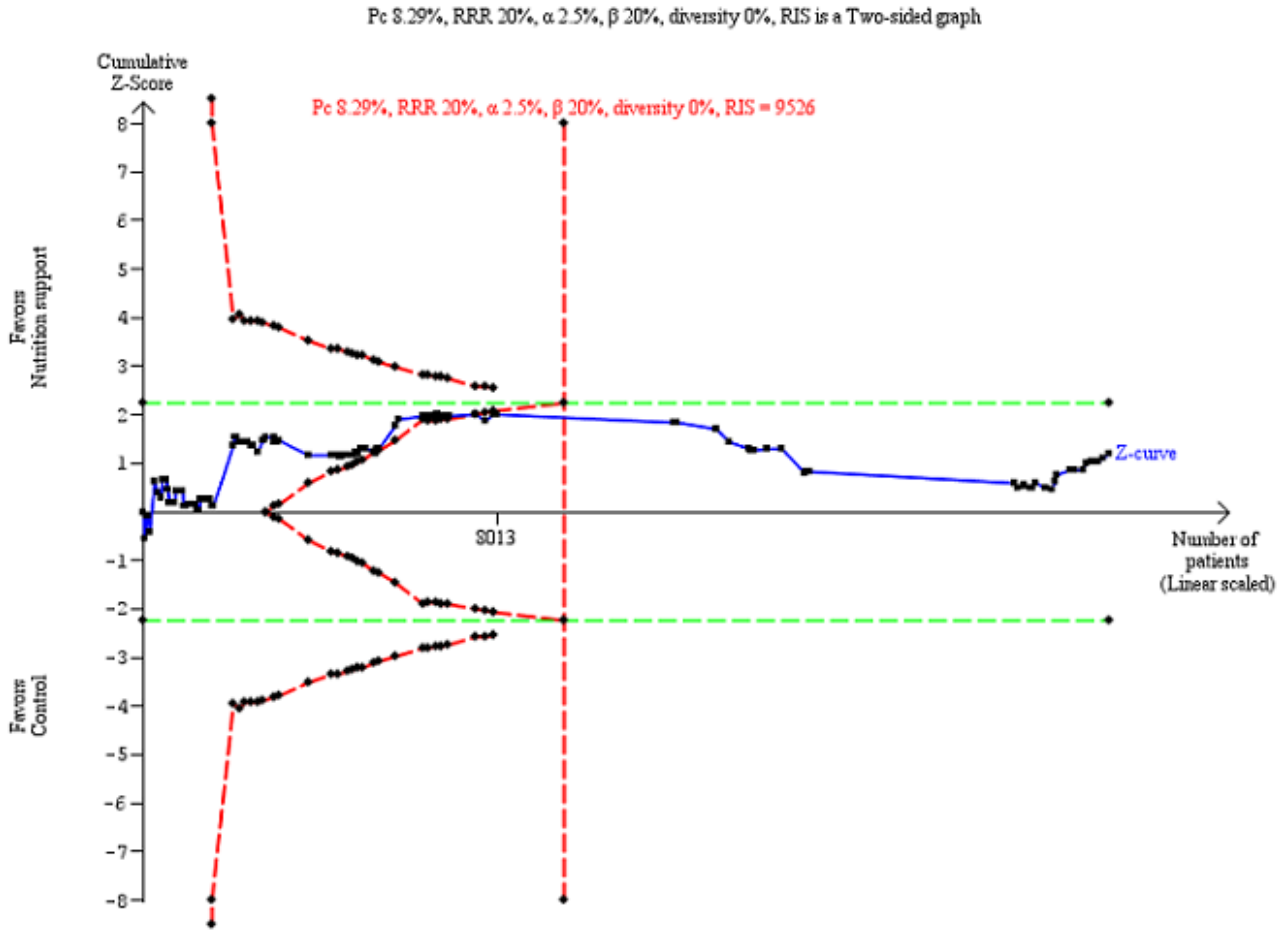
Heterogeneity

Neither visual inspection of the forest plots nor tests for statistical heterogeneity (I^2 = 0%; P = 0.90) indicated significant heterogeneity.

Trial Sequential Analysis

The Trial Sequential Analysis showed that the Z-curve crossed the boundary for futility. Hence, there is firm evidence that nutrition support versus control does not reduce the risk ratio for all-cause mortality by 20% at end of intervention (Figure 4). A post hoc Trial Sequential Analysis showed that the acquired information was large enough to rule out that nutrition support versus control reduces the risk ratio of all-cause mortality by 11% or more (Supplementary online material). It should be noted that Trial Sequential Analysis only assessed the risk of random error and did not consider the risk of bias.

Figure 4. Trial Sequential Analysis on all-cause mortality (end of intervention) in 114 high risk of bias trials. The diversity-adjusted required information size (RIS) was calculated based on mortality in the control group of 8.29%; risk ratio reduction of 20% in the experimental group; type I error of 2.5%; and type II error of 20% (80% power). No diversity was noted. The required information size was 9526 participants. The cumulative Z-curve (blue line) did not cross the trial sequential monitoring boundaries for benefit or harm (red inward sloping lines). The cumulative Z-curve crossed the inner-wedge futility line (red outward sloping lines). Additionally the cumulative Z-score crossed the RIS. The green dotted line shows conventional boundaries (2.5%).



Bayes factor

We calculated the Bayes factor based on a RR of 20% and the meta-analysis result (RR 0.94). Bayes factor (92.92) was above the Bayes factor threshold for significance of 0.1, supporting that there seems to be no significant effect of nutrition support on all-cause mortality at end of treatment.

Risk of bias and sensitivity analyses

We rated the risk of bias of the outcome result as high.

The 'best-worst' and 'worst-best' case meta-analyses showed that incomplete outcome data bias has the potential to influence the results ('best-worst' random-effects meta-analysis: RR 0.74, 95% CI 0.65 to 0.84, P < 0.001, 22,207 participants, 114 trials, low-quality evidence Analysis 1.12; 'worst-best' random-effects meta-analysis: RR 1.13, 95% CI 0.97 to 1.31, P = 0.12, 22,207 participants, 114 trials, low-quality evidence, Analysis 1.13.). Data were imputed for 22 trials.

Visual inspection of the funnel plots showed signs of asymmetry (Supplementary online material). Harbord's test showed no small-study effect (P = 0.095). Based on visual inspection of the funnel plot, we assessed the risk of publication bias as high.

Subgroup analyses

Analysis 1.3, comparing trials with different modes of delivery: test of interaction showed no statistically significant difference (subgroup difference P = 0.69).

Analysis 1.4, comparing trials with participants from different medical specialties: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.44).

Analysis 1.5, comparing trials where the adequacy of the amount of calories received was different: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.45).

Analysis 1.6, comparing trials with different screening tools: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.12).

Analysis 1.7, comparing trials where participants at nutritional risk according to specific condition: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.62).

Analysis 1.8, comparing trials where participants were at nutritional risk according to specific criteria (BMI, weight, insufficient food intake): test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.59).

Analysis 1.9, comparing trials where the participants were classified as at nutritional risk according to biomarkers or anthropometrics: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.21).

Analysis 1.10, comparing trials according to publication year: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.83).

Analysis 1.11, comparing the length of the intervention: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.78).

Zero-event handling

To test the robustness of our results according to the type of zero-event handling, we conducted our meta-analysis using the Trial Sequential Analysis software. We performed our meta-analysis using both the 'reciprocal of opposite intervention group' continuity correction, a constant continuity correction using both 0.5, 0.01 and 0.001, and an empirical continuity correction using 0.5, 0.01 and 0.001. None of the meta-analyses produced a P value under 0.025.

Maximum follow-up

Only 127 of 244 trials (52%), covering 23,170 participants, reported all-cause mortality at maximum follow-up (often months and in some cases years after). All trials were at high risk of bias. One thousand three hundred and eighty-two of 11,788 nutrition support participants (11.67%) died versus 1494 of 11,382 control participants (13.1%). Overall, we found no statistically significant benefit or harm on all-cause mortality at maximum follow-up, considering a P value of less than 0.025 significant (Jakobsen 2014) (random-effects model meta-analysis: RR 0.93, 95% CI 0.88 to 0.99, P = 0.03, I^2 = 0%, 23,170 participants, 127 trials, low quality of evidence, Analysis 2.1).

The point estimate of absolute risk for long-term mortality was non-significantly 1% lower (13.2% in the control group compared with 12.2% (11.6% to 13%) following nutritional interventions.

Heterogeneity

Neither visual inspection of the forest plots nor tests for statistical heterogeneity (I^2 = 0%; P = 0.74) indicated significant heterogeneity.

Trial Sequential Analysis

The Trial Sequential Analysis showed that the Z-curve crossed the boundary for futility. Hence, there is firm evidence that nutrition support versus control does not reduce the risk ratio for all-cause mortality by 20% at maximum follow-up (Supplementary online material). A post hoc Trial Sequential Analysis showed that the information size was large enough also to rule out that nutrition support versus control reduces the risk ratio of all-cause mortality by 10% or more (Supplementary online material). It should be noted that Trial Sequential Analysis only assessed the risk of random error and did not consider the risk of bias.

Bayes factor

We calculated the Bayes factor based on a RR of 20%, and the meta-analysis result (RR 0.93). Bayes factor (374.86) was above the Bayes factor threshold for significance of 0.1, supporting that there is no significant effect of nutrition support on all-cause mortality at maximum follow-up.

Risk of bias and sensitivity analyses

We rated the risk of bias of the outcome result as high.

The 'best-worst' and 'worst-best' case meta-analyses showed that incomplete outcome data bias has the potential to influence the results ('best-worst' random-effects meta-analysis: RR 0.77, 95% CI 0.69 to 0.85, P < 0.001, 23,700 participants, 127 trials, low quality of evidence, Analysis 2.12; 'worst-best' random-effects meta-analysis: RR 1.09, 95% CI 0.98 to 1.23, P = 0.12, 23,700 participants, 127 trials, low quality of evidence, Analysis 2.13). Data were imputed for 25 trials.

Visual inspection of the funnel plots showed signs of asymmetry (Supplementary online material). Harbord's test showed a small study effect (P = 0.024). Hence, we assessed the risk of publication bias as high.

Subgroup analyses

Analysis 2.3, comparing trials with different modes of delivery: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.35).

Analysis 2.4, comparing trials with participants from different medical specialties: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.40).

Analysis 2.5, comparing trials where the adequacy of the amount of calories received was different: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.61).

Analysis 2.6, comparing trials with different screening tools: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.14).

Analysis 2.7, comparing trials where participants were at nutritional risk according to specific condition: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.67).

Analysis 2.8, comparing trials where participants were at nutritional risk according to specific criteria (BMI, weight, insufficient food intake): test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.80).

Analysis 2.9, comparing trials where the participants were classified as at nutritional risk according to biomarkers or anthropometrics: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.21).

Analysis 2.10, comparing trials according to publication year: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.92).

Analysis 2.11, comparing the length of the intervention: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.58).

Zero-event handling

To test the robustness of our results according to the type of zero-event handling, we conducted our meta-analysis using the Trial Sequential Analysis software. We performed our meta-analysis using both the 'reciprocal of opposite intervention group' continuity correction, a constant continuity correction using both 0.5, 0.01 and 0.001, and an empirical continuity correction using 0.5, 0.01 and 0.001. None of the meta-analyses produced a P value under 0.025.

Serious adverse events

End of intervention

One hundred and twenty-three of 244 trials (50.4%), covering 22,087 participants, reported serious adverse events at end of intervention. All trials were at high risk of bias. Nine hundred and ninety-six of 11,260 nutrition support participants (8.8%) experienced one or more serious adverse events versus 1067 of 10,827 control participants (9.9%). Overall, we found no statistically significant benefit or harm of nutrition support at the end of intervention, considering a P value of less than 0.025 as significant (Jakobsen 2014) (random-effects model meta-analysis: RR 0.93, 95% CI 0.86 to 1.01, P = 0.07, I^2 = 0%, 22,087 participants, 123 trials, low quality of evidence, Analysis 3.1). We present an overview of serious adverse events in specific trials in Table 2. The point estimate of absolute risk for short-term serious adverse events was non-significantly 0.7% lower following nutrition support compared with control (9.9% versus 9.2% (8.5% to 10%)).

Heterogeneity

Neither visual inspection of the forest plots nor tests for statistical heterogeneity (I^2 = 0%; P = 0.65) indicated significant heterogeneity.

Trial Sequential Analysis

The Trial Sequential Analysis showed that the Z-curve crossed the boundary for futility. Hence, there is firm evidence that nutrition support versus control does not reduce the risk ratio for serious adverse events by 20% at end of intervention (Supplementary online material). A post hoc Trial Sequential Analysis showed that the information size was also large enough to rule out that nutrition support versus control reduces the risk ratio of serious adverse events by 11% or more (Supplementary online material). It should be noted that Trial Sequential Analysis only assessed the risk of random error and did not consider the risk of bias.

Bayes factor

We calculated the Bayes factor based on a RR of 20%, and the meta-analysis result (RR 0.93). Bayes factor (2.0) was above the Bayes factor threshold for significance of 0.1, supporting that there is no significant effect of nutrition support on serious adverse events at end of intervention.

Risk of bias and sensitivity analyses

We rated the risk of bias of the outcome result as high.

The 'best-worst' and 'worst-best' case meta-analyses showed that incomplete outcome data bias has the potential to influence the results ('best-worst' random-effects meta-analysis: RR 0.74, 95% CI 0.65 to 0.83, P < 0.001, 22,557 participants, 123 trials, low quality of evidence, Analysis 3.12; 'worst-best' random-effects meta-analysis: RR 1.06, 95% CI 0.92 to 1.21, P = 0.53, 22,557 participants, 123 trials, low quality of evidence, Analysis 3.13). Data were imputed for 25 trials.

Visual inspection of the funnel plots showed signs of asymmetry (Supplementary online material). Harbord's test showed small-study effects (P = 0.003). Hence, we assessed the risk of publication bias as high.

Subgroup analyses

Analysis 3.3, comparing trials with different modes of delivery: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.51).

Analysis 3.4, comparing trials with participants from different medical specialties: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.45).

Analysis 3.5, comparing trials where the adequacy of the amount of calories received was different: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.52).

Analysis 3.6, comparing trials with different screening tools: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.47).

Analysis 3.7, comparing trials where participants were at nutritional risk according to specific condition: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.40).

Analysis 3.8, comparing trials where participants were at nutritional risk according to specific criteria (BMI, weight, insufficient food intake): test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.79).

Analysis 3.9, comparing trials where the participants were classified as at nutritional risk according to biomarkers or anthropometrics: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.15).

Analysis 3.10, comparing trials according to publication year: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.46).

Analysis 3.11, comparing the length of the intervention: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.35).

Zero-event handling

To test the robustness of our results according to the type of zero-event handling, we conducted our meta-analysis using the Trial Sequential Analysis software. We performed our meta-analysis using both the 'reciprocal of opposite intervention group' continuity correction, a constant continuity correction using both 0.5, 0.01 and 0.001, and an empirical continuity correction using 0.5, 0.01 and 0.001. None of the meta-analyses produced a P value under 0.025.

Maximum follow-up

One hundred and thirty-seven of 244 trials (56.14%), covering 23,413 participants, reported serious adverse events at maximum follow-up. All trials were at high risk of bias. One thousand five hundred and eighty of 11,940 nutrition support participants (13.2%) experienced one or more serious adverse events versus 1741 of 11,473 control participants (15.2%). Overall, we found a statistically significant effect of nutrition support at maximum follow-up, considering a P value of less than 0.025% significant (Jakobsen 2014) (random-effects model meta-analysis: RR 0.91, 95% CI 0.85 to 0.97, P = 0.004, I^2 = 3%, 23,413 participants, 137 trials, low quality of evidence, Analysis 4.1). For an overview of the serious adverse events in specific trials please see Table 3. At maximum follow-up the reduction in the absolute risk of serious adverse events was 1.5%, from 15.2% in control groups to 13.8% (12.9% to 14.7%) following nutritional support.

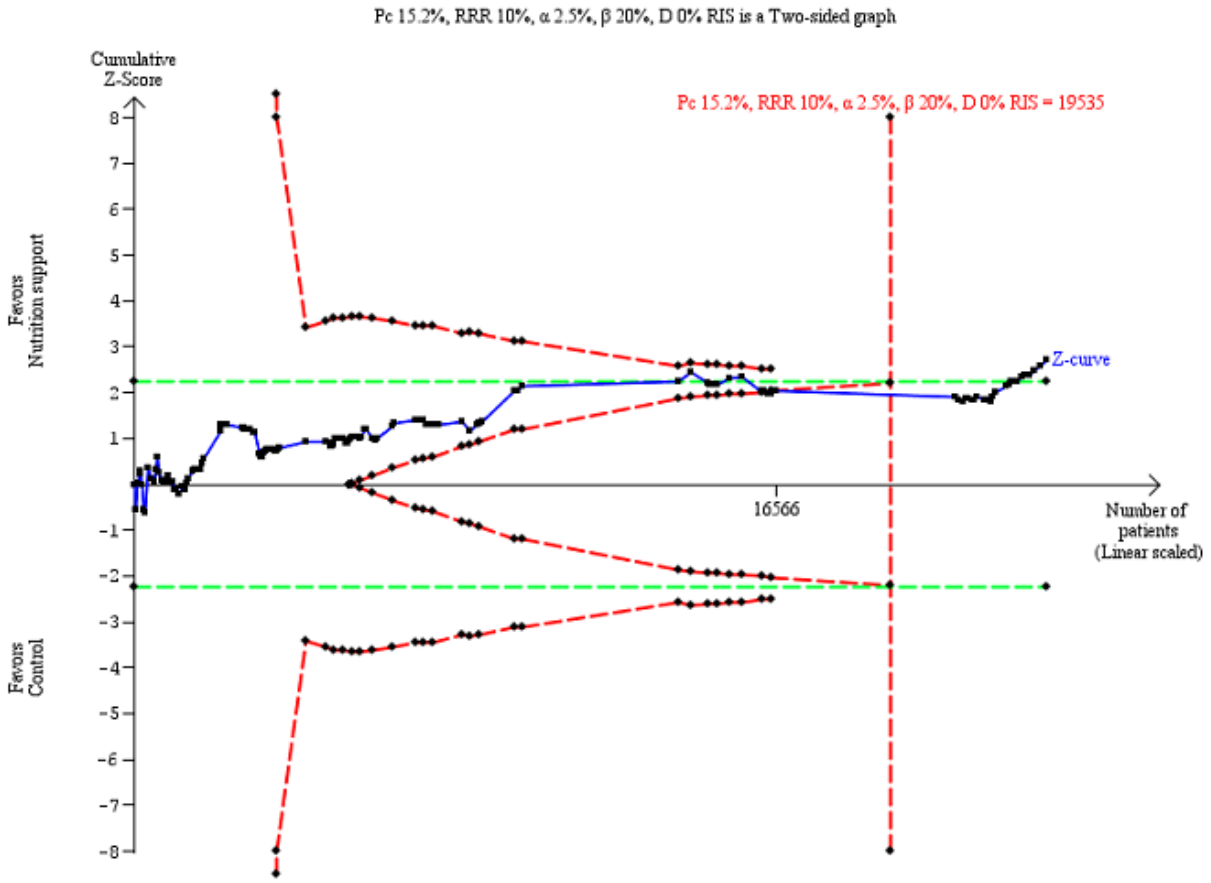
Heterogeneity

Neither visual inspection of the forest plots nor tests for statistical heterogeneity (I^2 = 3%; P = 0.39) indicated significant heterogeneity.

Trial Sequential Analysis

The Trial Sequential Analysis showed that the Z-curve crossed the boundary for futility. Hence, there is firm evidence that nutrition support versus control does not reduce the risk ratio for serious adverse events by 20% at maximum follow-up (Supplementary online material). A post hoc Trial Sequential Analysis showed that the information size was large enough to rule out that nutrition support versus control reduces the risk ratio of serious adverse events by 10% or more (Figure 5). It should be noted that Trial Sequential Analysis only assessed the risk of random error and did not consider the risk of bias.

Figure 5. Trial Sequential Analysis on serious adverse events (maximum follow-up) in 137 high risk of bias trials. The diversity-adjusted required information size (RIS) was calculated based on an incidence rate of serious adverse event in the control group of 15.2%; risk ratio reduction of 10% in the experimental group; type I error of 2.5%; and type II error of 20% (80% power). No diversity was noted. The required information size was 19535 participants. The cumulative Z-curve (blue line) did not cross the trial sequential monitoring boundaries for benefit or harm (red inward sloping lines). The cumulative Z-curve crossed the inner-wedge futility line (red outward sloping lines) indicating that sufficient information is provided. Additionally the cumulative Z-score crossed the RIS. The green dotted line shows conventional boundaries (2.5%). The cumulative Z-curve later crosses the green line, indicating a possible significant effect, but one that is smaller than a 10% risk ratio reduction.



Bayes factor

We calculated the Bayes factor based on a RR of 20% and the meta-analysis result (RR 0.91). Bayes factor (0.056) was below the Bayes factor threshold for significance of 0.1, supporting that the alternative hypothesis was more likely than the null hypothesis.

Risk of bias and sensitivity analyses

We rated the risk of bias of the outcome result as high.

The 'best-worst' and 'worst-best' case meta-analyses showed that incomplete outcome data bias has the potential to influence the results ('best-worst' random-effects meta-analysis: RR 0.72, 95% CI 0.65 to 0.79, P < 0.001, 24,315 participants, 137 trials, low quality of evidence, Analysis 4.12; random-effects meta-analysis: RR 1.05, 95% CI 0.94 to 1.17, P = 0.38, 24,082 participants, 137 trials, low quality of evidence, Analysis 4.13). Data were imputed for 31 trials.

Visual inspection of the funnel plots showed signs of asymmetry (Supplementary online material). Harbord's test showed small-study effects (P = 0.000). Hence, we assessed the risk of publication bias as high.

Subgroup analyses

Analysis 4.3, comparing trials with different modes of delivery: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.14).

Analysis 4.4, comparing trials with participants from different medical specialties: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.31).

Analysis 4.5, comparing trials where the adequacy of the amount of calories received was different: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.36).

Analysis 4.6, comparing trials with different screening tools: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.22).

Analysis 4.7, comparing trials where participants were at nutritional risk according to specific condition: test for subgroup difference showed a statistically significant difference (subgroup difference P = 0.03).

Analysis 4.8, comparing trials where participants were at nutritional risk according to specific criteria (BMI, weight, insufficient food intake): test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.74).

Analysis 4.9, comparing trials where the participants were classified as at nutritional risk according to biomarkers or anthropometrics: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.13).

Analysis 4.10, comparing trials according to publication year: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.34).

Analysis 4.11, comparing the length of the intervention: test for subgroup difference showed no statistically significant difference (subgroup difference P = 0.70).

Zero-event handling

To test the robustness of our results according to the type of zero-event handling, we conducted our meta-analysis using the Trial Sequential Analysis software. We performed our meta-analysis using both the 'reciprocal of opposite intervention group' continuity correction, a constant continuity correction using both 0.5, 0.01 and 0.001, and an empirical continuity correction using 0.5, 0.01 and 0.001. All of the meta-analyses produced a P value under 0.025.

Quality of life

Only 16 of 244 trials reported quality of life (Saudny-Unterberger 1997; Bokhorst-de 2000; Liu 2000a; MacFie 2000; Johansen 2004; Smedley 2004a; Dennis 2005; Dennis 2006; Miller 2006a; Campbell 2008; Kawaguchi 2008; Ha 2010; Starke 2011; Ljunggren 2012; Neelemaat 2012; Breedveld-Peters). Few trials used similar quality-of-life questionnaires and only data from EuroQoL utility score and SF-36 could be used in a meta-analysis. All trials were at high risk of bias.

Two trials reported quality of life at end of intervention using the SF-36 questionnaire (Johansen 2004; Starke 2011). A meta-analysis of the trials found no effect for physical performance (random-effects MD 2.35, 95% CI -2.94 to 7.65, P = 0.65, 242 participants, 2 trials, very low quality of evidence; Analysis 5.1) or mental performance (random-effects MD -0.90, 95% CI -3.92 to 2.13, P = 0.56, 242 participants, 2 trials, very low quality of evidence; Analysis 7.1). Three trials at high risk of bias reported quality of life at maximum follow-up using the SF-36 questionnaire (Johansen 2004; Campbell 2008; Starke 2011). A meta-analysis of the trials found no effect for physical performance (random-effects MD 1.54, 95% CI -2.47 to 5.55, P = 0.45, 289 participants, 3 trials, very low quality of evidence; Analysis 6.1) or mental performance (random-effects MD -0.25, 95% CI -3.02 to 2.53, P = 0.86, 289 participants, 3 trials, very low quality of evidence; Analysis 8.1).

Two trials reported quality of life at end of intervention using EuroQoL utility score (Dennis 2005; Dennis 2006). A meta-analysis of the trials found no significant effect (random-effects MD -0.01, 95% CI -0.03 to 0.01, P = 0.45, 2 trials, 3961 participants, very low quality of evidence; Analysis 9.1).

One trial reported quality of life using the EORTC QLQ-C30 questionnaire (Bokhorst-de 2000). The trial of 21 participants found no effect of nutrition support on quality of life in head and neck cancer patients undergoing surgery using the end-score. Using change-score, nutrition support also did not show a beneficial effect on physical functioning when considering a P value of 0.025 significant (P = 0.05).

Four trials reported quality of life using the EQ-5D (VAS) questionnaire (Ha 2010; Ljunggren 2012; Neelemaat 2012; Breedveld-Peters). However, we could not obtain data for a meta-analysis. Ha 2010 reported within-group improvement and worsening of quality of life parameters. This trial randomised 78 participants and found a beneficial effect of nutrition support on quality of life in change score between the study groups (P = 0.009). Ljunggren 2012 (57 participants), Neelemaat 2012 (185 participants) and Breedveld-Peters (131 participants), found no beneficial effect of nutrition support on quality of life.

One trial reported quality of life using a self-rating questionnaire involving physical and mental symptoms (Kawaguchi 2008). The trial, with 29 participants, found a beneficial effect of nutrition support on thirst (P = 0.01), fatigue (P = 0.01), and hunger (P = 0.003), but no combined score was reported or available.

One trial at high risk of bias reported quality of life using a general well-being score (Saudny-Unterberger 1997). The trial, with 20 participants, found no effect of nutrition support on quality of life.

One trial reported quality of life using the Hospital Anxiety and Depression scale (MacFie 2000). The trial randomised 52 participants and found no effect of nutrition support on anxiety and depression.

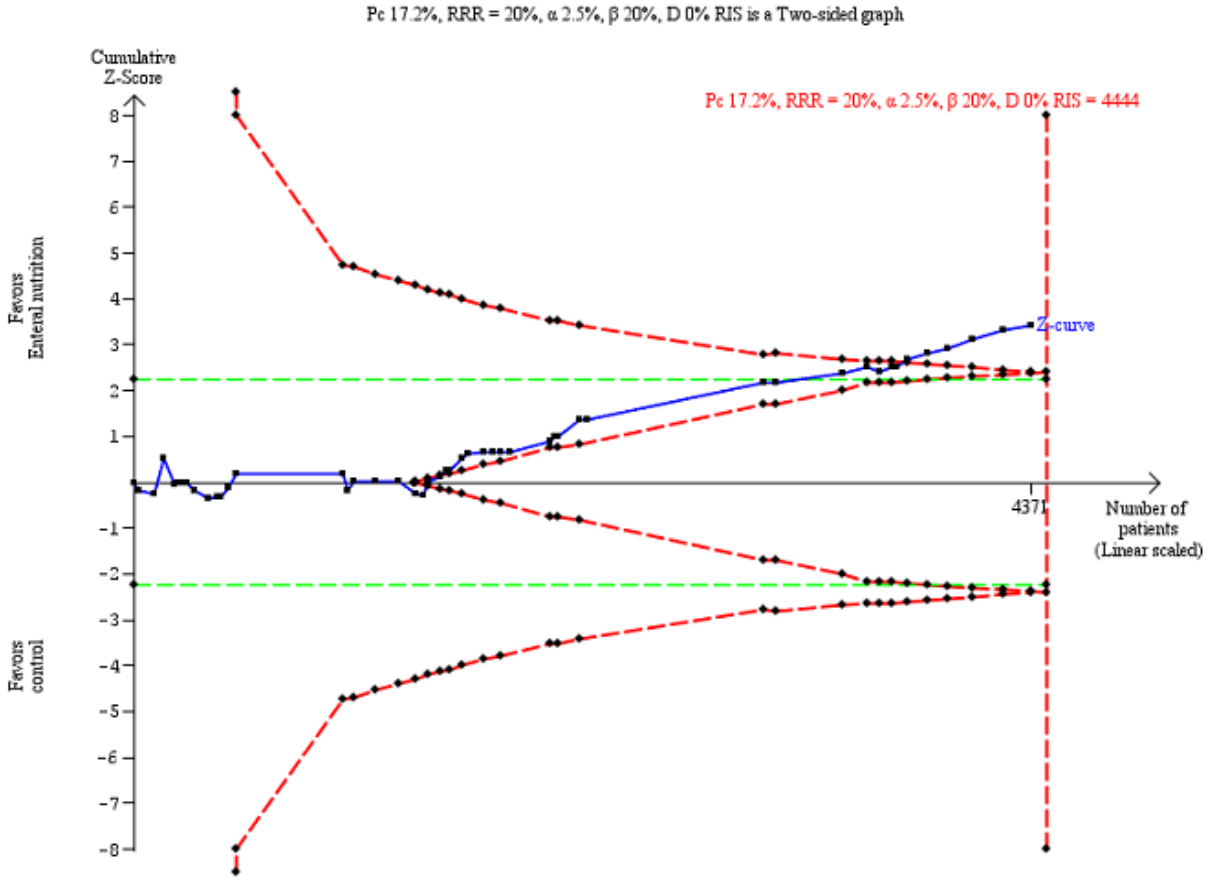
One trial reported quality of life using the SF-12 questionnaire (Miller 2006a). The trial randomised 100 participants and found no effect of nutrition support on quality of life.

Two trials described quality of life as an outcome (Liu 2000a; Smedley 2004a). However, we failed to obtain any data from the trial or by contacting the authors.

Post hoc Trial Sequential Analyses of the different modes of delivery for serious adverse events at maximum follow-up

A Trial Sequential Analysis for enteral nutrition showed that the Z-curve crossed the boundary for benefit. This Trial Sequential Analysis was based on a risk ratio reduction of 20%, an event rate in the control group of 17.2%, a two-sided alpha of 2.5%, a beta of 20%, a diversity of 0%. This indicates that enteral nutrition versus control may result in a 20% or greater risk ratio reduction of serious adverse events at maximum follow-up (Figure 6).

Figure 6. Trial Sequential Analysis on serious adverse events (maximum follow-up) with participants receiving enteral nutrition in 49 high risk of bias trials. The diversity-adjusted required information size (RIS) was calculated based on an incidence rate of serious adverse event in the control group of 17.2%; risk ratio reduction of 20% in the experimental group; type I error of 2.5%; and type II error of 20% (80% power). No diversity was noted. The required information size was 4444 participants. The cumulative Z-curve (blue line) did cross the trial sequential monitoring boundaries for benefit (red inward sloping lines) indicating that enteral nutrition may result in a 20% or greater risk ratio reduction of serious adverse events at maximum follow-up. The cumulative Z-curve did not cross the inner-wedge futility line (red outward sloping lines). The green dotted line shows conventional boundaries (2.5%).



A Trial Sequential Analysis for oral nutrition support showed that the Z-curve crossed the futility boundary as well as the diversity-adjusted required information size. This Trial Sequential Analysis was based on a risk ratio reduction of 20%, an event rate in the control group of 12.6%, a two-sided alpha of 2.5%, a beta of 20%, and the observed diversity of 0%. This indicates that there is firm evidence that oral nutrition support versus control does not result in a 20% or greater risk ratio reduction or increase in serious adverse events at maximum follow-up (Supplementary online material).

A Trial Sequential Analysis for parenteral nutrition showed that the Z-curve crossed the futility boundary as well as the diversity-adjusted required information size. This Trial Sequential Analysis was based on a risk ratio reduction of 20%, an event rate in the control group of 14.5%, a two-sided alpha of 2.5%, a beta of 20%, and the observed diversity of 0%. This indicates that there is firm evidence that parenteral nutrition versus control does not result in a 20% or greater risk ratio reduction or increase of serious adverse events at maximum follow-up (Supplementary online material).

For general nutrition support, fortified foods, and mixed nutrition support, there was not enough information available to produce Trial Sequential Analyses.

Subgroup analyses of the effect of oral nutrition support on all-cause mortality and serious adverse events

Post hoc subgroup analyses of oral nutrition support found no subgroup difference of nutrition support compared with control in any subgroup (Analyses 29 through 32).

Subgroup analyses of the effect of enteral nutrition support on all-cause mortality and serious adverse events

Post hoc subgroup analyses of enteral support found no subgroup difference of nutrition support compared with control in any subgroup (Analyses 33 through 36)

Subgroup analyses of the effect of parenteral nutrition support on all-cause mortality and serious adverse events

Post hoc subgroup analyses of parenteral nutrition support found no subgroup difference of nutrition support compared with control in any subgroup (Analyses 37 through 40).

Post hoc analyses of major surgery

A Trial Sequential Analysis for major surgery participants on serious adverse events at maximum follow-up using a risk ratio reduction of 20%, an event rate in the control group of 15.2%, a two-sided alpha of 2.5%, a beta of 20%, a diversity of 0%, showed that nutrition support did not reduce serious adverse events at maximum follow-up for major surgery participants of 20% or more (Supplementary online material).

Post hoc analyses of participants admitted with stroke

A Trial Sequential Analysis for stroke participants on serious adverse events at maximum follow-up using a risk ratio reduction of 20%, an event rate in the control group of 19.2%, a two-sided alpha of 2.5%, a beta of 20%, a diversity of 83%, showed that nutrition support did not reduce serious adverse events at maximum follow-up in stroke participants of 20% or more (Supplementary online material). The Trial Sequential Analyses did not break the boundary for futility or reach the required information size (Supplementary online material).

Post hoc analyses of the adverse events with uncertain diagnostic criteria and seriousness

In a number of trials the adverse events were not reported adequately. Multiple trialists only reported a proportion of participants experiencing, e.g. 'cardiac failure' or 'pneumonia', but did not report how the diagnosis was made or how 'serious' the event was, and the total number of observed participants was also often missing. We therefore did not include these poorly-reported outcome results in the 'serious adverse event outcome', based on our predefined criteria (see Primary outcomes). Appendix 3 lists the adverse events/complications always considered as a serious adverse event even without a detailed description. We assessed the following outcomes post hoc: pneumonia, wound dehiscence, renal failure, wound infection, and heart failure.

Pneumonia

We included 28 trials reporting on 12,443 participants. All trials were at high risk of bias. Eight hundred and forty-nine of 6342 participants (13.4%) randomly assigned to nutrition support versus 766 of 6101 participants (12.5%) randomly assigned to no intervention, placebo, or treatment as usual experienced pneumonia. Overall, we found no statistically significant benefit or harm of nutrition support at maximum follow-up (random-effects meta-analyses RR 1.06, 95% CI 0.96 to 1.16, P = 0.28, I^2 = 2%, 12,443 participants, 28 trials, low quality of evidence, Analysis 10.1).

Wound dehiscence

We included 12 trials reporting on 2280 participants. All trials were at high risk of bias. Thirty-seven of 1237 (3.0%) nutrition support participants experienced wound dehiscence, compared with 43 of 1043 control participants (4.1%). Overall, we found no statistically significant benefit or harm of nutrition support at maximum follow-up (random-effects meta-analyses RR 0.71, 95% CI 0.40 to 1.24, P = 0.22, I^2 = 22%, 2280 participants, 12 trials, low quality of evidence, Analysis 11.1).

Renal failure

We included four trials reporting on 6359 participants. All trials were at high risk of bias. Two hundred and sixteen of 3272 (6.6%) nutrition support participants experienced renal failure versus 214 of 3087 control participants (6.9%). Overall, we found no statistically significant benefit or harm of nutrition support at maximum follow-up (random-effects meta-analyses RR 1.00, 95% CI 0.83 to 1.20, P = 0.99, I^2 = 0%, 6649 participants, 4 trials, low quality of evidence, Analysis 12.1).

Wound infection

We included 26 trials reporting on 8324 participants. All trials were at high risk of bias. Two hundred and sixteen of 4263 (5.1%) nutrition support participants experienced wound infection versus 211 of 4061 control participants (5.2%). Overall, we found no statistically significant benefit or harm of nutrition support at maximum follow-up (random-effects meta-analyses RR 0.81, 95% CI 0.60 to 1.10, P = 0.18, I^2 = 36%, 8324 participants, 26 trials, low quality of evidence, Analysis 13.1).

Heart failure

We included three trials reporting on 1041 participants. All trials were at high risk of bias. Thirteen out of 520 (2.5%) randomly assigned to nutrition support versus 11 out of 521 participants (2.1%) randomly assigned to no intervention, placebo, or treatment as usual experienced heart failure. Overall, we found no statistically significant benefit or harm of nutrition support at maximum follow-up (random-effects meta-analyses RR 1.11, 95% CI 0.34 to 3.61, P = 0.87, I^2 = 20%, 1041 participants, 3 trials, low quality of evidence, Analysis 14.1).

Post hoc analyses combining subgroups to assess the effect of following the nutritional guidelines on mortality and serious adverse events

Guidelines today focus on screening patients that are presumably at nutritional risk using screening tools designed for the purpose and providing adequate nutrition support for nutritionally at-risk adults that are not likely to achieve adequate intake through spontaneous food intake. As a further post hoc analysis, we combined trials that included participants using screening tools (NRS 2002, MUST, SGA and MNA) which also provided the experimental group with clearly adequate nutrition and the control group with clearly inadequate nutrition (Analysis 15.1; Analysis 15.2; Analysis 15.3; Analysis 15.4). We also did a post hoc analysis of trials that included participants either with impaired nutritional status/decreased food intake (Analysis 1.8; Analysis 2.8; Analysis 3.8; Analysis 4.8) and/or increased nutritional requirements (ICU patients, major surgery, stroke and frail elderly patients) (Analysis 1.7; Analysis 2.7; Analysis 3.7; Analysis 4.7) and had a clearly adequate intake in the experimental group and had clearly inadequate intake in the control group (Analysis 1.5; Analysis 2.5; Analysis 3.5; Analysis 4.5). The results are presented in Analysis 16.1; Analysis 16.2; Analysis 16.3; Analysis 16.4. None of the analyses found any significant effect of nutrition support on mortality or serious adverse events.

Secondary outcomes

Time to death (survival data)

We included 11 trials reporting survival data (Nixon 1981; Valdivieso 1987; Kearns 1992; Brennan 1994; Bauer 2000; Bokhorst-de 2000; Espaulella 2000; Dennis 2005; Dennis 2006; Oh 2014; Moreno 2016). All trials reported Kaplan-Meier survival curves, but it was not possible to calculate log hazard ratios and standard errors based on these curves. No trial reported hazard ratios and standard errors. Therefor, we were unable to perform any meta-analyses. None of the trials found significant effects of nutritional support on survival.

Morbidity

End of intervention

Only one trial reported 'morbidity' at end of intervention (Fan 1994). This trial included 124 participants and found a statistically significant benefit of nutrition support on morbidity at end of intervention using the random-effects model (RR 0.63, 95% CI 0.42 to 0.94, P = 0.02, 124 participants, very low quality of evidence, Analysis 29.1). Fisher's exact test gave a P value of 0.0293.

Maximum follow-up

Two trials reported morbidity at maximum follow-up (Fan 1994; Barlow 2011), including 245 participants, and found a statistically significant benefit of nutrition support on morbidity at maximum follow-up using the random-effects model (RR 0.71, 95% CI 0.53 to 0.95, P = 0.02, I^2 = 0%, 2 trials, 245 participants, very low quality of evidence, Analysis 30.1).

BMI

End of intervention

Fourteen trials (1008 participants) reported BMI at end of intervention. Overall, we found a statistically significant effect of nutrition support on BMI at end of intervention using the random-effects model (MD 0.57 kg/m^2, 95% CI 0.38 to 0.77, P < 0.001, I^2 = 0%, 1008 participants, 14 trials, very low quality of evidence, Analysis 31.1). The test for subgroup difference found no significant difference in any analysis (Analysis 31.2; Analysis 31.3; Analysis 31.4; Analysis 31.5; Analysis 31.6; Analysis 31.7; Analysis 31.8; Analysis 31.9; Analysis 31.10; Analysis 31.11).

Egger's test for funnel plot asymmetry was not significant (P = 0.222). Begg's test was also not significant (P = 0.547).

Maximum follow-up

Nineteen trials (1528 participants) reported BMI at maximum follow-up. Overall, we found no statistically significant effect of nutrition support on BMI at maximum follow-up using the random-effects model (MD 0.40 kg/m^2 95% CI -0.02 to 0.83, P = 0.06, I^2 = 61%, 1528 participants, 19 trials, very low quality of evidence, Analysis 32.1). The test for subgroup differences found no significant difference in any analysis (Analysis 32.2; Analysis 32.3; Analysis 32.4; Analysis 32.5; Analysis 32.6; Analysis 32.7; Analysis 32.8; Analysis 32.9; Analysis 32.10; Analysis 32.11).

Egger's test for funnel plot asymmetry was not significant (P = 0.756). Begg's test was also not significant (P = 0.162).

Weight

End of intervention

Sixty-eight trials (5445 participants) reported weight. Overall, we found a statistically significant benefit of nutrition support on weight at the end of intervention using the random-effects model (MD 1.32 kg, 95% CI 0.65 to 2.00, P < 0.001, I^2 = 98%, 5445 participants, 68 trials, very low quality of evidence, Analysis 33.1).

Subgroup analysis

In subgroup analyses we found the following: the test for subgroup difference could not be performed for the subgroup comparing high risk of bias outcomes with low risk of bias outcomes as we found no outcome results with low risk of bias (Analysis 33.2).

Analysis 33.3, comparing different modes of delivery: we found a statistically significant subgroup difference (subgroup difference: P < 0.001).

Analysis 33.4, comparing trials with participants from different medical specialties: we found a statistically significant subgroup difference (subgroup difference: P < 0.001).

Analysis 33.5, comparing adequacy of the amount of nutrition: no statistically significant subgroup difference was found (subgroup difference: P = 0.57).

Analysis 33.6, comparing different screening tools: we found no statistically significant subgroup difference (subgroup difference P = 0.52).

Analysis 33.7, comparing different conditions known to be associated with malnutrition: we found no statistically significant subgroup difference (subgroup difference P = 0.52).

Analysis 33.8, participants classified as at nutritional risk according to specific criteria concerning BMI, weight, insufficient food intake: we found a statistically significant subgroup difference (subgroup difference P = 0.01).

Analysis 33.9, comparing participants classified as at nutritional risk according to biomarkers or anthropometric: we found a statistically significant subgroup difference (subgroup difference P = 0.006).

Analysis 33.10, comparing year of publication: we found no statistically significant subgroup difference (subgroup difference P = 0.06).

Analysis 33.11, comparing different interventions lengths of intervention: we found no statistically significant subgroup difference (subgroup difference P = 0.20).

Sensitivity analysis

For trials with missing SDs, we imputed SDs from trials with a similar number of participants. For Fan 1994 we used the SD from Starke 2011, for Førli 2001 from Kawaguchi 2008, for Hickson 2004 from Dong 1996, for Hoffmann 1988 from Munk 2014, for Malhotra 2004 from Johansen 2004, for McWhirter 1996a; McWhirter 1996b from Zheng 2001a; Zheng 2001b. This exploratory analysis still resulted in a small statistically significant benefit using the random-effects model (MD 1.40 kg, 95% CI 0.76 to 2.03, P < 0.001, I^2 = 98%,

5445 participants, 68 trials, very low quality of evidence, Analysis 33.12).

Egger's test for funnel plot asymmetry was not significant (P = 0.823). Begg's test was also not significant (P = 0.149).

Maximum follow-up

Seventy-eight of 244 trials (29.91%), with 6865 participants, reported weight. Overall, we found a statistically significant benefit of nutrition support on weight at maximum follow-up using the random-effects model (MD 1.13, 95% CI 0.50 to 1.75, P < 0.001, I^2 = 98%, 6916 participants, 78 trials, very low quality of evidence, Analysis 34.1).

Subgroup analysis

In subgroup analyses we found the following: we could not perform the test for subgroup difference for the subgroup comparing high risk of bias outcomes with low risk of bias outcomes, because we found no outcome results with low risk of bias (Analysis 33.2).

Analysis 34.3, comparing different modes of delivery: we found a statistically significant subgroup difference : P < 0.001).

Analysis 34.4, comparing trials with participants from different medical specialties: we found a statistically significant subgroup difference (subgroup difference: P < 0.001).

Analysis 34.5, comparing adequacy of the amount of nutrition: we found no statistically significant subgroup difference (subgroup difference: P = 0.85).

Analysis 34.6, comparing different screening tool: we found a statistically significant subgroup difference (subgroup difference P = 0.004).

Analysis 34.7, comparing different conditions known to be associated with malnutrition: we found a statistically significant subgroup difference (subgroup difference P < 0.001).

Analysis 34.8, participants classified as at nutritional risk according to specific criteria concerning BMI, weight, insufficient food intake: we found a statistically significant subgroup difference (subgroup difference P = 0.02).

Analysis 34.9, comparing participants classified as at nutritional risk according to biomarkers or anthropometric: we found a statistically significant subgroup difference (subgroup difference P = 0.005).

Analysis 34.10, comparing year of publication: we found a statistically significant subgroup difference (subgroup difference P = 0.008).

Analysis 34.11, comparing different lengths of intervention: we found no statistically significant subgroup difference (subgroup difference P = 0.29).

Egger's test for funnel plot asymmetry was not significant (P = 0.887). Begg's test was also not significant (P = 0.145).

Hand-grip strength

End of intervention

Eleven trials (783 participants) reported hand-grip strength at end of intervention. Overall, we found a statistically significant benefit of nutrition support on hand-grip strength using the random-effects model (MD 1.47 kg, 95% CI 0.58 to 2.37, P = 0.001, I^2 = 48%, 783 participants, 11 trials, very low quality of evidence, Analysis 35.1). Two trials reported hand-grip strength in kilo pascal (Keele 1997; MacFie 2000). These were not part of the meta-analysis.

Egger's test for funnel plot asymmetry was not significant (P = 0.546). Begg's test was also not significant (P = 0.788).

Maximum follow-up

Fourteen trials (1240 participants) reported hand-grip strength at maximum follow-up. Overall, we found no statistically significant benefit of nutrition support on hand-grip strength using the random-effects model (MD 0.96 kg, 95% CI 0.15 to 1.76, P = 0.02, I^2 = 40%, 14 trials, 1240 participants, very low quality of evidence, Analysis 36.1). Two trials reported hand-grip strength in kilo pascal (Keele 1997; MacFie 2000). These were not part of the meta-analysis.

Egger's test for funnel plot asymmetry was not significant (P = 0.834). Begg's test was also not significant (P = 0.625).

Six-minute walking distance

One trial reported six-minute walking distance (Rabadi 2008). It found a statistically significant benefit of nutrition support on six-minute walking distance (MD 133.27 feet, 95% CI 24.32 to 242.22, P = 0.02, very low quality of evidence, Analysis 37.1).

Summary of findings table

Our main results are summarised in the 'Summary of findings for the main comparison'.

DISCUSSION

Summary of main results

We included 244 trials randomising 28,619 participants. The trials included a heterogenous group of participants, the settings varied, and the experimental and control interventions differed. All trials were at high risk of bias and the level of evidence was low for all-cause mortality and serious adverse events, and very low for health-related quality of life. Despite these limitations, overall we saw small or no effects of nutrition support on all outcomes, and our findings had surprisingly low heterogeneity. These limited signs of statistical heterogeneity support the decision to conduct the meta-analysis by pooling all types of nutrition support interventions in one meta-analysis, as we did (see Overall completeness and applicability of evidence for a detailed discussion).

Our meta-analyses showed that nutrition support versus control did not have a statistically significantly effect on all-cause mortality at end of intervention. The result of our Trial Sequential Analyses implied firm evidence of nutrition support not reducing or increasing the risk ratio of all-cause mortality by 20% or more at end of intervention (Figure 4; Effects of interventions). Post hoc Trial Sequential Analysis showed we had enough power to reject a risk ratio of 11% or more reduction in all-cause mortality at end of

intervention (Supplementary online material). All-cause mortality at maximum follow-up also showed no statistically significant effect of nutrition support when considered against a predefined threshold for statistical significance of 0.025. The result of our Trial Sequential Analyses implied firm evidence of nutrition support not reducing or increasing the risk ratio for all-cause mortality by 20% or more at maximum follow-up (Supplementary online material; Effects of interventions). Post hoc Trial Sequential Analysis showed we had enough power to reject a 10% or more reduction in all-cause mortality at maximum follow-up Supplementary online material).

Our meta-analyses showed that nutrition support versus control did not have a statistically significant effect on serious adverse events at end of intervention. The result of our Trial Sequential Analysis implied firm evidence of nutrition support not reducing or increasing the risk ratio of serious adverse events by 20% or more at end of intervention (Supplementary online material; Effects of interventions). Post hoc Trial Sequential Analysis showed we had enough power to reject a risk ratio of 11% or more reduction in serious adverse events at end of intervention (Supplementary online material). Serious adverse events at maximum follow-up were statistically significantly reduced with nutrition support, but this was not seen at end of intervention and therefore the finding may be a result of multiplicity or risk of bias or both (Jakobsen 2014; Jakobsen 2016). The outcome results were at high risk of bias and the result of our Trial Sequential Analysis analysis implied firm evidence of nutrition support not reducing or increasing serious adverse events by 20% or more at maximum follow-up (Supplementary online material; Effects of interventions). Post hoc Trial Sequential Analysis showed we had enough power to reject a risk ratio of 10% or more reduction in serious adverse events at maximum follow-up (Figure 5).

Quality of life in participants receiving nutrition support was not statistically significantly affected at maximum follow-up. Few trials used similar quality-of-life questionnaires, and only data from EuroQoL utility score and SF-36 could be used in a meta-analysis. In both meta-analyses we found no beneficial or harmful effects. While most of the trials found no beneficial or harmful effect of nutrition support, a few trials found a beneficial effect on specific quality-of-life variables.

BMI at end of intervention showed a statistically significant improvement when participants received nutrition support (Analysis 31.1). The clinical relevance of this increase is unknown. BMI at maximum follow-up did not show a statistically significant increase (Analysis 32.1).

Weight at end of intervention and at maximum follow-up showed a statistically significant increase when participants received nutrition support. The clinical relevance of this increase is unknown (Analysis 33.1; Analysis 34.1).

Hand-grip strength at end of intervention showed a statistically significant improvement when participants received nutrition support, but the increase was not statistically significant at maximum follow-up. The clinical relevance of this increase is unknown.

Nutrition support analysed by route of administration

We assessed individually the different modes of delivery of nutrition support. Trial Sequential Analysis for enteral nutrition for serious adverse events at maximum follow-up broke the threshold for significant benefit (Analysis 4.3; Figure 6; Effects of interventions). There are, however, many important considerations when interpreting this result: all trials were at high risk of bias and the funnel plot was highly suggestive of publication bias (Supplementary online material). Furthermore, it is important to note that, given the amount of subgroup analyses, outcomes, time points, and our threshold for significance, one might expect that by chance alone a type I error would occur (Jakobsen 2016). Despite the significant meta-analysis result and confirmed 20% risk ratio reduction in the Trial Sequential analysis, trials at low risk of bias will need to assess the effects of enteral nutrition before we can draw any conclusions.

Standard parenteral and oral nutrition broke the threshold for futility, indicating no beneficial or harmful effects despite the high risk of bias (Supplementary online material).

We also performed our subgroup analyses according to the different kinds of nutrition support (not for general and fortified foods, since we identified very few trials that used these kinds of nutrition support) at the suggestion of the editor and one of the peer reviewers. The results of the new subgroup analyses are in agreement with the subgroup analyses of our overall analyses: we found no benefit of oral nutrition support or parenteral nutrition support in any subgroup. Enteral nutrition may be beneficial for different subgroups of patients and may be tested in future trials with low risk of bias and with adequate power.

Exploratory subgroup analyses

Tests for subgroup differences found a significant difference in the subgroup comparing different conditions, theoretically known to increase the nutritional requirements on serious adverse events at maximum follow-up (Analysis 4.7). Trial Sequential Analysis for major surgery did not pass through the boundary for benefit, implying that nutrition support does not result in a risk ratio reduction of 20% in the risk of a serious adverse event at maximum follow-up, especially when considering the fact that the trials were at high risk of bias (Supplementary online material).

Trial Sequential Analysis for stroke participants did not pass through the boundary for benefit, implying that nutrition support does not reduce the risk ratio of serious adverse events at maximum follow-up of 20%. The Trial Sequential Analysis did not reach the required information size (Supplementary online material).

Using the test for subgroup differences, no other subgroups showed significant benefit or harm. For a discussion of the limitations in the way we have handled subgroups and the review in general, see Overall completeness and applicability of evidence.

Overall completeness and applicability of evidence

We searched for published and unpublished trials irrespective of publication type, publication date, and language. We also searched bibliographies of both Cochrane and non-Cochrane Reviews on nutrition support for any trials we missed. Overall, we have included more trials than any nutrition review ever before, due to our broader inclusion criteria as well as our extensive searches.

A number of the funnel plots suggest that we are still missing data from trials favouring the control group compared with nutrition support (Supplementary online material). This may be due to

publication bias, but other types of bias might also cause the asymmetries. The high risks of bias suggest that our results may possibly be due to an overestimate of the benefit and an underestimate of the harm of nutrition support.

Discussion of heterogeneity (clinical and statistical) regarding our overall analysis

We included a very clinically heterogenous participant population assessed in various settings examining various types of nutrition support administered through different routes. Different inclusion criteria exist regarding how to assess whether or not a participant is at nutritional risk and we therefore chose to include various definitions. We chose to focus primarily on the overall analysis, with all types of nutrition support pooled in one analysis for three reasons: 1) we wanted to assess the overall effects of nutrition support in hospitalised adults at nutritional risk; 2) this pooled analysis would have the largest statistical power as well as precision; and 3) pooling all types of nutrition support makes it possible to use subgroup analyses to compare the effects of the different nutrition support interventions. If by pooling all the trials we saw very large heterogeneity, we would not have conducted the overall analyses and instead would have explored (as we still do) any possible explanation for the heterogeneity seen.

We found no signs of statistical heterogeneity in the meta-analyses, using both visual inspection of the forest plots as well as the statistical tests for heterogeneity for our primary outcomes. For our secondary outcomes, we found no heterogeneity when visually inspecting the forest plots, but the I^2 for the outcomes results of weight was high. Our many subgroup analyses also found few subgroups of participants that may benefit from nutrition support, the potential exception being major surgery and stroke participants (Analysis 4.7). The latter subgroup analysis was only significant at maximum follow-up for serious adverse events. It is important to make the distinction between clinical heterogeneity (which is very large in this review) and statistical heterogeneity (of which there is little indication of in this review). In case of large statistical heterogeneity, we would have had to split up the review perhaps into different modes of administration or concluded that no overall conclusion for nutrition support could be made. However, we found no signs of statistical heterogeneity and the pooling of the different nutritional interventions seems to be appropriate. The overall agreement between our review and the other Cochrane Reviews assessing nutrition support for hospitalised adults makes it even more plausible that our conclusions on nutrition support appy to participants regardless of how they were included in our review (see Agreements and disagreements with other studies or reviews for further details).

Applicability of results for specific subgroups

Mode of delivery

We found no subgroup differences between the different types of nutrition support . Our exploratory Trial Sequential Analyses indicated that enteral nutrition may be beneficial in the settings tested, whereas parenteral nutrition and oral nutrition do not seem to offer any benefit in the settings tested. Performing the same subgroups analyses as for the overall analyses, but only looking at parenteral nutrition support or oral nutrition support, we found no benefit in any subgroup. There was insufficient statistical power for general nutrition support and fortified foods. We therefore primarily recommend future research assessing the effects of enteral nutrition, because this intervention seems to be the only potentially promising nutritional intervention.

Other subgroup analyses (including specific patient populations)

The main objective of this review was to assess the effects of nutrition support in adults at nutritional risk. As described in the Background section, malnutrition can be divided into starvation-related malnutrition and disease-related malnutrition. If a common pathway exists from disease to malnutrition to poorer clinical outcome, we expected that our approach would show that nutrition support benefits the participants across medical specialties as they would share a common feature, i.e. malnutrition. This was the rationale for looking at nutrition support broadly instead of assessing participants according to medical specialty as has previously been done in most reviews. As noted above, this has introduced large clinical heterogeneity. However, across most of our subgroups, there was no difference in the effect of nutrition support and a noticeable absence of heterogeneity. Guideline developers may wish to look at the overall analyses as well as the subgroup analyses.

In future updates, we plan to include secondary publications looking at the different participant populations as well as exploring possible areas of benefit of the different types of nutrition support.

It is very important when exploring possible areas of benefit, as we intend in subsequent updates, that we pay attention to the risk of multiplicity as well as assessing the limitations of the amount of information. Subgroup analyses should be confirmed in new trials at low risk of bias. Our results indicate that in most cases there will be too little information to conclude whether nutrition support is beneficial or harmful for specific subgroups of participant, using a specific nutrition support intervention.

Limation of the external validity of our review

We only included hospitalised adults and it is possible that nutrition support administered in an outpatient setting may be beneficial.

We did not include interventions assessing immuno-nutrition, elemental diets, glutamine only as the primary intervention, micronutrients only, or similar non-standard nutrition support interventions. Neither does our review provide any evidence on the effect of nutrition support in children.

The co-interventions/standard care also varied across the included trials, due to the diverse participant population, the difference in practices, as well as the different time periods in which the included trials were conducted. Even though our results did not indicate any significant statistical heterogeneity, the clinical heterogeneity is a limitation of our systematic review, because the subsequent generalisation of the review results might be limited.

It is also important to note that our results only apply to participants who were randomised to nutrition support versus 'no nutrition support', i.e. it was judged to be ethically acceptable that the control participants could receive 'no nutrition support'. Hence, our results do not apply to hospitalised adults who were not able to eat, were unconscious, or unable to absorb nutrients, e.g. due to short bowl syndrome. The benefits and harms of the different forms of nutritional support in such participant groups need further specific scrutiny in systematic reviews.

In our review, we have not specifically assessed the effects on non-serious adverse events/non-serious complications. We only assessed adverse events if they were 'serious'. The reason for this was that we expected to identify a large number of trials from all medical specialties, with different types of participants, different types of interventions, etc. We expected that assessing the effects of nutrition support on non-serious adverse events across these different types of trials would have limited validity, as the events would be very heterogenous as well as differing in their clinical significance. Additionally, we did not assess the risk of serious adverse events and non-serious adverse events in quasi-randomised and observational studies. Specific systematic reviews of these types of studies are needed. Moreover, we did not assess cluster-randomised clinical trials.

We identified three cluster-randomised trials. Two reported no effect of nutrition support on mortality (Bourdel-Marchasson 2000; Martin 2004) and one trial had not reported data at the time of writing (Britton 2012). Bourdel-Marchasson 2000 also found a reduction in pressure sores. Martin 2004 did not report adverse events.

Quality of the evidence

We downgraded the quality of evidence to low due to very serious risk of bias for all-cause mortality and serious adverse events outcomes. Quality of life was downgraded to very low quality of evidence due to a very serious risk of bias, and a serious inconsistency of the evidence. Weight was downgraded to very low quality of evidence because of very serious risk of bias and inconsistency (see Summary of findings for the main comparison).

We found no trials or outcome results with a low risk of bias (see Risk of bias in included studies). There is a high risk of our results showing an overestimation of benefit and underestimation of harm of nutrition support (Hrobjartsson 2012; Hrobjartsson 2013; Hrobjartsson 2014a; Hrobjartsson 2014b; Savović 2012a; Schulz 1995; Sutton 2000; Wood 2008).

Visual inspection of a number of funnel plots suggested asymmetry, including the few outcome results that indicated benefit for nutrition support. We then used the trim-and-fill method in an attempt to assess the impact of publication bias on our results. The trim-and-fill method showed us that the possible publication bias did not appear to have a strong influence on our results.

Despite the variation in the participant populations recruited to the studies, we observed very little statistical heterogeneity in our primary results.

Trial Sequential Analyses of both all-cause mortality and serious adverse events showed that we had enough information to confirm or reject our anticipated intervention effects. Given we have met the required information size forrisk ratio reductions (RRR) of 10% or more, and we a priori considered a RRR of 20% clinically significant, we do not regard the confidence intervals as wide enough to downgrade further to very low quality due to serious imprecision. The Trial Sequential Analyses of the third primary outcome, quality of life, showed we did not have enough information to confirm or reject our anticipated intervention effect. The Trial Sequential Analysis for enteral nutrition showed that we had enough information to confirm or reject our anticipated intervention effect. Despite this, much consideration must still be given when interpreting this result, see 'Potential biases in the review process'.

The average non-significant reduction at end of intervention in absolute all-cause mortality following any type of nutrition support when compared with control was around 0.5%, from 8.3% to 7.8%. For serious adverse events, the non-significant reduction in risk was 0.7%, from 9.9% to 9.2%. The point estimate from maximum follow-up was slightly larger (1% for all-cause mortality and 1.5% for serious adverse events). However, the Trial Sequential Analysis showed that we had enough information to rule out 11% or more relative risk reductions for both outcomes at end of intervention and at maximum follow-up, but not enough information to confirm or reject risk ratios of 10% or below. Whether RRRs below 10% are clinically relevant is debatable. Consideration should perhaps be given to critically-ill populations with very high underlying risk of death or serious adverse events.

Potential biases in the review process

Strengths

We included trials regardless of language of publication and whether they reported data on the outcomes we needed. We contacted relevant authors for additional information. We included more participants than previous systematic reviews (Koretz 2001; Perel 2006; Koretz 2007; Milne 2009; Burden 2012; Koretz 2012; Koretz 2014; Avenell 2016), giving us increased power and precision to detect any significant differences between the intervention and control groups.

We followed our peer-reviewed Cochrane protocol which was published before the literature search began (Feinberg 2015). We conducted the review using the methods recommended by Cochrane and findings of additional methodological studies (Higgins 2011). We also performed Trial Sequential Analyses and used an eight-step procedure to assess whether the thresholds for statistical and clinical significance were crossed (Jakobsen 2014). This adds further robustness to our results and conclusions. We also tested the robustness of our results with sensitivity analyses ('best-worst', 'worst-best', no-event trials and for missing SDs).

Our meta-analyses had little statistical heterogeneity, strengthening the validity of our results.

Limitations

Our systematic review has several limitations. Our findings, interpretations, and conclusions are affected by the quality and quantity of the trials we included. We included both different participant populations and different forms of nutrition support, which introduced some possible interpretative limitations to our review (see 'Overall completeness and applicability of evidence' for a discussion).

A potential methodological limitation is our definition of a serious adverse event. In line with the protocol (Feinberg 2015), we included the trial result as a serious adverse event if the event or complications was described as any untoward medical occurrence that resulted in death, was life-threatening, required hospitalisation or prolongation of existing hospitalisation, or resulted in persistent or significant disability or incapacity. Using this definition, we created a list early in the review process of the events we considered serious and would therefore include, even if

the trialist did not classify the adverse events as a 'serious adverse event'. We also included the event as a serious adverse event if the trialists used the term 'serious' or 'major' when reporting the adverse event or complication. If there was doubt if the event should be included then we contacted the trial authors in order to clarify whether we should include the event in our analyses. Most of the trials were not adequately blinded and the assessment of the adverse events in these trials might have been influenced by knowledge of treatment allocation. It is therefore likely that our results overestimate the beneficial effect and underestimate the possible harmful effects of nutrition support. Furthermore, It is always problematic to use composite outcomes, because the different elements of the composite outcome will often have different degrees of severity. It is therefore possible that even with a neutral result there is in reality a significant difference in the severity of symptoms between the compared groups. Nevertheless, using composite outcomes increases power and is therefore often a valid technique, but the limitations must be considered when interpreting results on, for example, serious adverse events.

Another possible limitation of our review is that we do not require a minimum amount of nutrition support. We did this in order to avoid arbitrary cut-offs. We have instead analysed this in subgroup analyses (Analysis 1.5; Analysis 2.5; Analysis 3.5; Analysis 4.5). The analyses found no difference between the 'adequate' and 'inadequate' nutrition-support trials. The subgroups were based on our a priori definitions including our predefined cut-offs. Our cut-offs may be questionable. It may also be that indirect calorimetry to assess individual nutritional requirement is necessary. We should perhaps have included a definition of 'adequate protein' in our review.

We also made some changes from the protocol stage and added some post hoc analyses, which is also a limitation of our review, see 'Differences between protocol and review' for details.

Our review does not specifically address international guidelines. According to recent international guidelines (Jensen 2010), being nutritionally at-risk includes both the aspect of nutritional status and the aspect of an elevated rate of catabolism caused by inflammation in participants, who are unlikely to eat adequately and who are treated with an adequate intake. The post hoc Analysis 16.4 results in a statistically significant effect of nutrition support on serious adverse events at maximum follow-up (RR 0.76, 95% CI 0.61 to 0.95, P = 0.02, I^2 = 0%, 2372 participants, 21 trials, low quality of evidence) when removing Casaer 2011. The reason for omitting Casaer 2011 is the controversy surrounding the validity of Casaer 2011 (Bistrian 2011; Felbinger 2011; Marik 2011; O'Leary 2011; McClave 2012). It must be noted that Analysis 16.4 is not significant with Casaer 2011 included. Given the large consensus among clinical societies around the approach of identifying nutritionally at-risk participants based on specific criteria and providing adequate nutrition to these people despite the lack of documented effect, future trials should be conducted to test this approach.

We also included a very large number of subgroup analyses and numerous outcomes. Although we have adjusted our threshold for significance for our three primary outcomes, there is still a substantial risk of a type 1 error (i.e. falsely rejecting the null hypothesis), given that we have assessed three primary outcomes, seven secondary outcomes, two time points of interest, and have 10 subgroup analyses. This leads to problems with multiplicity (Jakobsen 2014; Jakobsen 2016). It is plausible that the few significant effects of nutrition we have found may be due to 'random error'. We therefore consider the subgroup analyses results as exploratory and hypothesis-generating. We accept a P value of 0.05 or below as statistically significant in these analyses, i.e. we do not adjust our P values for subgroup analyses. It is obvious to most that when you collect a large amount of data as we have done here, you also want to explore any possible interactions, and we therefore caution the reader to interpret our findings with respect to the substantial risk of a type 1 error.

Our 'worst-best' and 'best-worst' analyses showed that there is a high risk of incomplete outcome data bias (Analysis 1.12; Analysis 1.13; Analysis 2.12; Analysis 2.13; Analysis 3.13; Analysis 3.12; Analysis 4.12; Analysis 4.13). Incomplete outcome data bias might alone have caused the few significant results of nutrition. Most of the trials did not report exactly how all-cause mortality or serious adverse events were assessed. It was often only reported that a certain number of participants died or experienced a serious adverse event, without reporting how many participants were analysed (and hence, how many had incomplete outcome data). One hundred and ninety-four of 244 trials were assessed as being at unclear or high risk of bias on the incomplete outcome data bias domain, illustrating the high risk of missing data potentially biasing our review results. If insufficient data were reported by the trialists then we tried to contact the authors, but they seldom replied, so we often had insufficient information to assess whether the reported number of deaths or serious adverse events were out of the intention-to-treat population or out of an unclearly-defined observed-cases population. This might bias our sensitivity meta-analyses because we used only the data on the reported population if no other information was available. Incomplete outcome data bias might potentially have an even greater impact than our 'best-worst'/'worst-best' case scenarios show, i.e. the 'true' difference between the observed cases and the intention-to-treat population might be larger than our data suggest.

We were unable to obtain 34 publications: (Wenzel 1968; Serrou 1982a; Cardona 1986; Liu 1989; Rovera 1989; Huang 1990; Eckart 1992; Mori 1992; Dai 1993; Kolacinski 1993; Li 1993; Driver 1994; Cao 1995; Lv 1995; Wu 1995; Yu 1995; Hu 1996; Liu 1996; Liu 1996a; Volkert 1996; Wu 1996a; Xue 1996; Yoichi 1996; Yu 1996; Lu 1997; Zeng 1997; Zhen 1997; Chai 1998; Guo 1998; Huo 1998; Jin 2000; Anonymous 2003; Nutrition 2003; Li 2013). Most of these seem to have been conducted in China.

We also only assessed academic bias as an 'other potential bias', as well as any obvious bias we encountered, i.e. not in a systematic way. As such, we have not taken systematic account of other potential sources of bias.

We did not search the database CINAHL, which is a limitation of our systematic review.

Agreements and disagreements with other studies or reviews

Below we have compared our results with the results of other reviews on nutrition.

Reviews that lacked estimations of required information sample sizes calculations but reached similar conclusions as our review:

Perel 2006 found no statistically significant benefit on mortality of early versus delayed nutrition support for head-injured participants.

Milne 2009 found no effect on mortality of oral nutrition support in hospitalised elderly participants at nutritional risk (fixed-effect meta-analysis RR 0.91, 95% CI 0.80 to 1.04). The authors did, however, conclude that there was a small increase in weight for elderly participants (both hospitalised and community dwellers) (fixed-effect meta-analysis MD 2.15 kg, 95% CI 1.80 to 2.49, P < 0.001).

Avenell 2016 found no statistically significant effect on mortality or 'unfavourable outcomes' of nutrition support as after-care for hip fracture participants.

Koretz 2012 found no effect on mortality of enteral, parenteral, and oral nutrition supplements for liver patients, both medical and surgical. One trial at low risk of bias showed increased mortality.

Koretz 2014 found a beneficial effect of enteral nutrition on mortality in critically-ill adults (RR 0.61, 95% CI 0.41 to 0.89). However, the benefit of nutrition support on mortality was only present in trials with high risk of bias and the review concluded that there was currently not enough evidence to conclude that enteral nutrition for critically-ill adults is beneficial, and that randomised clinical trials at low risk of bias are needed.

Bally 2016 found no effect on mortality in hospitalised medical participants. The systematic review included 22 trials covering 3726 participants. As a secondary outcome, the authors found a statistically significant increase in weight (MD 0.72 kg, 95% CI 0.23 to 1.21). The findings are in agreement with our review, with nutrition only showing a small benefit on weight but no effect on mortality.

Reviews that lacked estimations of required information sizes and found benefit of nutrition support:

Burden 2012 (preoperative gastro-intestinal surgery) did not assess mortality. They did, however, show a reduction in major complications when using preoperative parenteral nutrition but no effect of oral nutrition supplements nor of enteral nutrition. Our overall conclusions differ from Burden 2012 but our subgroup of adults undergoing gastro-intestinal surgery showed that this group may have more benefit of nutrition support than other participant groups.

Reviews that lacked estimations of required information sizes and concluded more trials were needed:

Murray 2017 found that there was not enough information to conclude whether providing standard parenteral nutrition over intravenous hydration was beneficial for bone marrow transplant patients. The review included three trials.

Wasiak 2006 found no statistically significant effect on mortality of early versus delayed nutrition support in burn patients but only included one trial (Peck 2004), and concluded that more trials were needed.

AUTHORS' CONCLUSIONS

Implications for practice

In populations identified as being at nutritional risk by any of our predefined inclusion criteria, we found that risk ratio reductions of approximately 10% or more from nutrition support can be rejected in both the short term (at end of intervention) and long term (maximum follow-up) for death and serious adverse events. We do not regard the confidence interval for either effect as wide enough to warrant downgrading for imprecision, even though neither result showed a statistically significant increase or reduction of mortality or serious adverse events.

Our overall meta-analysis result might guide hospital-based decision-makers who are considering whether or not to implement nutrition support interventions across medical specialties for nutritionally at-risk patients compared with standard care (typically a standard hospital diet providing 1800 to 2000 kcal). Prior to making a decision on whether or not to administer nutrition support,a valid assessment should be made of a given patient's capacity to receive standard nutritional support. If this is not obvious, i.e. the patient eats without any problem, such an assessment might be done by specially-trained personnel. This practice should also be tested in a randomised clinical trial. Our results apply only to patients whom it was ethical to randomise.

Oral nutrition support and parenteral nutrition support did not reduce or increase mortality or serious adverse events across any subgroup of participants. Our results indicate that enteral nutrition may reduce the risk of serious adverse events at maximum follow-up. However, there is a high risk that this significant result is attributable to bias. There was not enough information to assess general nutrition support, fortified nutrition support, or mixed nutrition support.

Our meta-analyses do not rule out that a specific nutrition support intervention for a specific patient population has larger beneficial or harmful effects than the average effects we have estimated.

One subgroup (major surgery and stroke participants) demonstrated a significant subgroup difference, but this did not break the threshold for significance in post hoc Trial Sequential Analyses. No other test for subgroup differences found any other differences, including different medical specialties.

Implications for research

We do not recommend further research on nutrition support as an overall intervention in hospitalised adults at nutritional risk according to our criteria (see 'Types of participants'). Our subgroup analyses and exploratory Trial Sequential Analyses suggest that future trials may assess the benefits and harms of enteral nutrition across different participant populations. Such trials ought to be designed and reported according to the SPIRIT (www.spirit-statement.org/) and CONSORT (www.consort-statement.org/) guidelines. Furthermore, such trials should be conducted with low risk of systematic error and low risk of random errors, and should assess quality of life. They should also be powered to detect a risk ratio reduction of under 10% on all-cause mortality and serious adverse events.

Future trials may assess the effects of nutrition support in 'well-defined' at-risk adults, especially given that this is the

recommendation of clinical societies today. Future trials may wish to assess nutrition support in specific subpopulations where there are currently very few trials.

There is a need for systematic reviews assessing serious adverse events in quasi-randomised and observational studies. There is also a need for systematic reviews assessing benefits and harms of specialised nutrition support such as immuno-nutrition. Moreover, we need individual patient data systematic reviews as well as network meta-analyses on nutrition support (Cipriani 2013; Tudur Smith 2016).

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* Indicates the major publication for the study

CHARACTERISTICS OF STUDIES

Characteristics of included studies *[ordered by study ID]*

Abalan 1992

Methods	Randomised clinical trial, France
Participants	29 hospitalised geriatric adults, at nutritional risk as characterised by trialist Male:female = 1:28 Mean age = 85 years Exclusion criteria: diabetes mellitus, hepatic, renal, cardiac failure, major illness, sensory impairment, other conditions impeding assessment, prior nutritional treatment, uncooperativeness, poor oral intake, tube-feeding or being bedridden
Interventions	Experimental group: Oral nutrition support (n = 15) In addition to normal hospital food, participants received oral nutrients during the 105 trial days. The amounts of calories ingested daily were from day 1 through day 35 equal to 1254 kcal (± 259 kcal), and from day 36 through day 105 equal to 936 kcal (± 235 kcal) Control group: No intervention (n = 15) Co-interventions**:** Participants received normal hospital food with no nutritional supplements
Outcomes	Cognitive function (using MMS scores), body weight
Study dates	Not stated
Notes	We contacted the authors on 6th September 2015 by email: fabalan@ch-perrens.fr. Authors replied with additional information on randomisation sequence (although we were missing information on whether the coin toss was performed by an independent person), blinding and incomplete outcome data.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Randomisation was done my means of coin toss but it was unclear if it was performed by an independent person.
Allocation concealment (selection bias)	Unclear risk	Not described.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Blinding of outcome assessment was not performed.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no drop-outs.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality and serious adverse event.
For-profit bias	High risk	Trial was supported by Sopharga, Latema and Valpan Laboratories, who provided the oral nutrition support.

Abalan 1992 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Abel 1976

Methods	Randomised clinical trial, USA
Participants	44 hospitalised adults undergoing cardiac surgical procedures and malnourished at nutritional risk due to anthropometricsMale:female = not stated Mean age = not stated Exclusion criteria: not stated.
Interventions	Experimental group: immediate hypertonic total parenteral nutrition for 5 days(n = 20) Control group: routine postoperative intravenous solutions for 5 days(n = 24)
Outcomes	Mortality, net fluid balance, nitrogen balance
Study dates	Not stated
Notes	We contadted the authors on 9th November 2015 by email barnett.octo@mgh.harvard.edu. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not described.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Abrishami 2010

Methods	Randomised clinical trial, Iran
Participants	20 hospitalised adults with recent ICU admission (< 24 hrs), having systemic inflammatory response syndrome, Acute Physiology and Chronic Health Evaluation II (APACHE II) score > 10 and expected not to feed via oral route for at least 5 days, at nutritional risk due to being in a ICU Mean age = 56.5 years Exclusion criteria: adults with high probability of death in the next 7 days of admission, pregnant, lactating, and having EN contra-indication
Interventions	Experimental group: parenteral nutrition (500 ml 10% amino acid solution, 500 ml 50% dextrose) (n = 10) Control group: no intervention (n = 10) Co-interventions: standard ICU care + EN (1 kCal/ml)
Outcomes	Mortality, pre-albumin, tumour necrosis factor, sequential organ failure assessment, therapeutic intervention scoring system
Study dates	November 2007 and May 2009
Notes	We contacted the authors on 9th November 2015 by email: Mojtahed@sina.tums.ac.ir . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	One person dropped out (5%) and had missing data.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse.
For-profit bias	Low risk	The study was partly supported by grant from Tehran University of Medical Sciences research council.

Abrishami 2010 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Anbar 2014

Methods	Randomised clinical trial, Israel
Participants	51 hospitalised adults undergoing surgery for hip fracture, at nutritional risk due to being frail elderly Male:Female = 17:33 Mean age = 83 Exclusion criteria: patients were excluded if they presented to hospital > 48 hours after the injury, were receiving steroids or immunosuppression therapy, or both; in the presence of active oncologic disease, multiple fractures, diagnosed dementia or in the event that patients required supplemental nasal oxygen which precludes the measurement of REE
Interventions	Experimental group: the tight calorie group received calories with an energy goal determined by repeated REE measurements using indirect calorimetry (IC) (Fitmate, Cosmed, Italy) which was based on hospital-prepared diets (standard or texture-adapted). Oral nutritional supplements (ONS) were started 24 hours after surgery and the amount adjusted to make up the difference between energy received from hospital food and measured energy expenditure. The ONS was provided in the form of Ensure plus (Abbott Laboratories) containing 355 kcal/237 ml and 13.5 g protein or Glucerna (Abbott Laboratories) containing 237 kcal/237 ml and 9.9 g protein/237 ml. The adult, family and caregivers were educated regarding the importance of nutritional support and more attention was given to personal food preferences. (n = 23) Control group: no intervention (n = 28) Co-intervention: standard hospital diet which provided a mean of 1800 kcal and 80 g of protein
Outcomes	BMI, Biochemical parameters including serum glucose, albumin, lymphocyte count and creatinine levels
Study dates	May 2010 to December 2011
Notes	We contacted the authors on 21st October 2015 by email: psinger@clalit.org.il. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The trial states that "Randomization was performed using a concealed, computer-generated program".
Allocation concealment (selection bias)	Unclear risk	It was unclear how the randomisation code was concealed although it was stated that it was concealed as above.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as unblinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial was described as unblinded.

Anbar 2014 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Low risk	There was one randomised participant who did not complete the trial.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause mortality and complications.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Aquilani 2008

Methods	Randomised clinical trial, Italy
Participants	48 adults hospitalised with subacute stroke, cognitive dysfunction (< 20 in the mini-mental state examination) and independent in their alimentation. They were at nutritional risk due to stroke. Male:Female = 27:21 Mean age = 73 years (experimental group), 71 years (control group) Exclusion criteria: aphasic patients, patients with chronic renal failure or diabetes on hypoglycaemic therapy, or both
Interventions	Experimental group: Oral caloric-protein supplement for 21 days, containing 200 ml mixture of cubitan, nutricia, Italy providing 250 calories, 20 g protein, 28,2 g carbohydrates and 7 g lipids (n = 24) Control group: No intervention (n = 24)
Outcomes	Anthropometric and nutritional (3-day diary) variables, cognitive function (MMSE) Weight, height, BMI, daily caloric and macronutrient intake
Study dates	Not stated
Notes	We contacted the authors on 27th September 2015 by email: labmio@unipv.it. We received an initial reply, but did not receive a reply for our follow-up questions.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation where performed using SAS statistical tool
Allocation concealment (selection bias)	Unclear risk	The description of allocation concealment was too unclear to permit judgement of low or high risk of bias.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	The study reports to be "double blinded", but does not explicitly describe how. The physician who evaluated the MMSE score was blinded to the supplementation and was different from the physician who prescribed the supplementation.
Blinding of outcome assessment (detection bias)	Unclear risk	Not described

Aquilani 2008 *(Continued)*

All outcomes		
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Arias 2008

Methods	Randomised clinical trial, Uruguay
Participants	667 hospitalised adults admitted to the medical ward, at nutritional risk due to being malnourished or severely malnourished according the Subjective Global Assessment criteria Male:Female = 337:200 (excluding dropped-out participants) Exclusion criteria: diabetic, decompensated hepatitis with encephalitis, altered consciousness, difficulty understanding instructions or handicap, where the family was unwilling to co-operate
Interventions	Experimental group: oral nutrition support with 1 cal/ml (54.5% carbohydrates, 31.5% lipid, 14% protein), 700 ml maximum (n = 333) Control group: no intervention (n = 334) Co-interventions: treatment as usual
Outcomes	Development of infections, pressure ulcers, length of hospital stay, mortality and weight
Study dates	May 2005 to September 2006
Notes	We contacted the authors by email: sylviaarias@montevideo.com.uy. We received a reply and received information on sequence generation, allocation concealment and weight data.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	The 'code' was made by folding papers with either a T or a C, not performed by an independent person.
Allocation concealment (selection bias)	Unclear risk	The papers were folded and put into a dark bag. It is unclear if the allocation was concealed properly.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was not blinded.
Blinding of outcome assessment (detection bias)	High risk	The trial was not blinded.

Arias 2008 *(Continued)*

All outcomes		
Incomplete outcome data (attrition bias) All outcomes	High risk	130 participants dropped out, without the trial using proper methods to deal with the dropouts.
Selective reporting (reporting bias)	Low risk	All-cause mortality and complications were reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Banerjee 1978

Methods	Randomised clinical trial, unknown country.
Participants	63 hospitalised long-stay elderly, at nutritional risk according to the trialist Male:Female = 21:42 Mean age: 81 years
Interventions	Experimental group: 60 g daily oral supplements (n = 31) Control group: no intervention (n = 32) Co-intervention: observation for 14 weeks before study start, standard hospital diet
Outcomes	Change in intake, skin-fold thickness, laboratory test, mortality
Study dates	Not stated
Notes	We did not contact the authors due to the trial's late inclusion.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias)	Low risk	Less than 5% dropped out (3 participants)

Banerjee 1978 *(Continued)*
All outcomes

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events.
For-profit bias	High risk	The trial was funded by Glaxo Laboratories.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Barlow 2011

Methods	Randomised clinical trial, hospital in UK
Participants	121 hospitalised adults; most suspected upper gastrointestinal malignancy referred for major elective surgery, at nutritional risk due to major surgery Male:Female = 83:38 Mean age = 64 years Exclusion criteria: age under 18 years; unable or unwilling to give informed consent; pregnant; pre-operative infection; previous intestinal surgery resulting in residual small intestine length of less than 100 cm
Interventions	Experimental group: Early Enteral Nutrition was delivered via a needle catheter jejunostomy. Nutritional support begun within 12 hrs of the surgery at 20 ml/hr of a standard 1 kcal/ml commercial whole protein enteral feed for the first 24 hrs in participants undergoing oesophagogastric resection, with the rate increasing as tolerated by 10 ml/hr every 12 hrs, until the maximum feed target rate of 80 ml/h was achieved. Participants undergoing pancreatic resection were started on 10 ml/hr of a 1.3 kcal/ml commercial semi-elemental enteral feed on the first post-operative day, which was then steadily increased as for the oesophagogastric participants. The aim was to achieve a minimum of half of nutritional requirements by the 5th postoperative day. Intravenous fluids were administered in addition to the enteral feeding as necessary to maintain fluid balance. Once oral intake was established, participants began a 1.5 kcal/ml enteral feed and converted to overnight enteral nutrition via the jejunostomy over 12 hrs. This continued until it was deemed that 75% of nutritional requirements were being achieved orally. (n = 64) Control group: Participants were kept nil by mouth, with hydration maintained by means of intravenous fluids, which continued until the introduction of oral fluids and diet. These participants also received 10 ml/hr of sterile water via a needle catheter jejunostomy until introduction of oral fluids. (n = 57)
Outcomes	Postoperative morbidity and mortality, wound infections, chest infections, anastomotic leaks, length of hospital stay
Study dates	
Notes	We contacted the authors on 30th June 2015 by email: barlowR1@cf.ac.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement

Barlow 2011 *(Continued)*

Random sequence generation (selection bias)	Low risk	The randomisation sequence was generated by computer in permuted blocks of 30.
Allocation concealment (selection bias)	Low risk	The code was kept in opaque, sealed envelopes labelled with sequential study numbers in a locked box.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial is described as unblinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial is described as unblinded.
Incomplete outcome data (attrition bias) All outcomes	Low risk	No dropouts and data on all participants
Selective reporting (reporting bias)	Low risk	Protocol is available, but contains no outcomes. In the trial all-cause mortality and serious adverse events are reported.
For-profit bias	Low risk	This trial was funded by a grant from The Health Foundation, London, UK.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Barratt 2002a

Methods	Randomised clinical trial, Australia
Participants	57 hospitalised adults scheduled for major upper abdominal surgery, at nutritional risk due to major abdominal surgery Male:Female = 27:20 Mean age = 60.25 years Exclusion criteria: Younger than 21 years or older than 80 years of age, required IVN because of severe malnutrition, or postoperative complications such as sepsis or haemorrhage, surgery involving the diaphragm or thorax, significant cardiac disease, respiratory disease, renal disease, musculoskeletal or neurological disease, hematological disease, drug dependency disorder, or psychiatric disease.
Interventions	Experimental group: Multimodal analgesia and intravenous nutrition, either glucose or lipid-based. On the second postoperative day, a peripheral "long-line" IV was inserted for IVN. From this time, IV feeding was established and continued until day 14. The formulation included 66% of the non-protein kilo joules as lipid, 9 g/L of nitrogen (Vamin 18; Kabi Vitrum, Stockholm, Sweden), and a non-nitrogen energy load of 4200 kJ/L. This was infused at a rate of 2 to 2.8 L/24 hr, depending on the participant's calculated requirements. (n = 18) Control group: Multimodal analgesia (n = 14)
Outcomes	Duration of hospital stay, time to start of oral nutrition, weight (kg), BMI, fat (kg), protein (kg), water (Kg), nitrogen balance. Significant clinical complications
Study dates	Not stated

Barratt 2002a *(Continued)*

Notes	We contacted the authors on 12th September 2015 by email mdd06sb@sheffield.ac.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Randomly allocated cards, but it was unclear if the shuffling was done by an independent person.
Allocation concealment (selection bias)	Unclear risk	The envelopes used to conceal the randomisation code were described as sealed envelopes, but it was unknown if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding was not performed.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Blinding was not performed.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not described.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Barratt 2002b

Methods	Randomised clinical trial, Australia
Participants	57 hospitalised adults scheduled for major upper abdominal surgery, at nutritional risk due to major abdominal surgery Male:Female = 27:20 Mean age = 60.25 years Exclusion criteria: Younger than 21 years or older than 80 years, required IVN because of severe malnutrition, or postoperative complications such as sepsis or haemorrhage. Surgery involving the diaphragm or thorax, significant cardiac disease, respiratory disease, renal disease, musculoskeletal or neurological disease, haematological disease; drug dependency disorder, or psychiatric disease
Interventions	Experimental group: participant-controlled analgesia with opioids + Intravenous nutrition either glucose- or lipid-based. On the 2nd postoperative day, a peripheral “long-line” IV was inserted for IVN. From this time, IV feeding was established and continued until day 14. The formulation included 66% of the non-protein kilo joules as lipid, 9 g/L of nitrogen (Vamin 18; Kabi Vitrum, Stockholm, Sweden), and a non-nitrogen energy load of 4200 kJ/L. This was infused at a rate of 2 to 2.8 L/24 hrs, depending on the participant's calculated requirements. (n = 12)

Barratt 2002b *(Continued)*

	Control group: participant-controlled analgesia with opioids(n = 13)
Outcomes	Duration of hospital stay, time to commencement of oral nutrition, weight (Kg), BMI, fat (Kg), protein (g), water (Kg), nitrogen balance. Significant clinical complications
Study dates	Not stated
Notes	We contacted the authors on 12th September 2015 by email: mdd06sb@sheffield.ac.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Randomly allocated cards, but it was unclear if the shuffling was done by an independent person
Allocation concealment (selection bias)	Unclear risk	The envelopes used to conceal the randomisation code were described as sealed envelopes, but it was unknown if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial was not blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Bastow 1983a

Methods	Randomised clinical trial, hospital in UK
Participants	122 hospitalised adults with fractured neck of femur and assessed as thin (1 - 2 SDs below the mean), at nutritional risk due to being frail elderly with hip fracture Only women Mean age = 80 years Exclusion criteria: severe dementia or serious concomitant physical disorders, e.g. stroke
Interventions	Experimental group: an overnight feed of 1 litre Clinifeed Iso (4 - 2 MJ (1000 kcal), including 28 g protein). It was started within 5 days of operation and delivered over 8 hrs each night through a fine bore soft nasogastric tube using a peristaltic pump. Tube-feeding was continued until the adult was discharged from the ward, did not tolerate the tube or died.(n = 39)

Bastow 1983a *(Continued)*

	Control group: no intervention(n = 35) Co-interventions: both control and tube-fed adults ate a normal ward diet during the day and were given free access to snacks and drinks.
Outcomes	Weight, upper arm circumference, triceps skinfold thickness, mortality, food intake, length of hospital stay, mobility, plasma protein
Study dates	Not stated
Notes	Same trial as Bastow 1983b but with the participants characterised as 'thin'. We could not obtain any contact information on the author.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse events.
For-profit bias	High risk	One of the authors was supported by a grant from Roussell Laboratories Ltd.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Bastow 1983b

Methods	Randomised clinical trial, hospital in UK
Participants	122 hospitalised adults with fractured neck of femur and assessed as very thin (> 2 SDs below the mean), at nutritional risk due to being frail elderly with hip fracture Only women Mean age = 80 years Exclusion criteria: severe dementia or serious concomitant physical disorders, e.g. stroke

Bastow 1983b *(Continued)*

Interventions	Experimental group: an overnight feed of 1 litre Clinifeed Iso (4 - 2 MJ (1000 kcal), including 28 g protein). It was started within 5 days of operation and delivered over 8 hours each night through a fine bore soft nasogastric tube using a peristaltic pump. Tube-feeding was continued until the adult was discharged from the ward, did not tolerate the tube or died. (n = 25) Control group: no intervention (n = 23) Co-interventions: both control and tube-fed adults ate a normal ward diet during the day and were given free access to snacks and drinks.
Outcomes	Weight, upper arm circumference, triceps skinfold thickness, mortality, food intake, length of hospital stay, mobility, plasma protein
Study dates	Not stated
Notes	Same trial as Bastow 1983a but with the participants characterised as 'very thin'

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse events.
For-profit bias	High risk	One of the authors was supported by a grant from Roussell Laboratories Ltd.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Bauer 2000

Methods	Randomised clinical trial (blocks of 10), France
Participants	120 hospitalised adults admitted to the ICU for more than 2 days, at nutritional risk due to being in the ICU Male:Female = 82:38

Bauer 2000 *(Continued)*

	Mean age: 54 years Exclusion criteria: elective surgery or presenting a contraindication to enteral or parenteral support, or both, having a previous history of allergy to vitamins
Interventions	Experimental group: received parenteral nutrition. Treatment consisted of a 3-in-1 solution of carbohydrates, fat, and protein, Vitrimix KV and hydrosoluble vitamins, Soluvit. (n = 60)Control group: received placebo. Treatment consisted of sodium chloride 0.9% with Intralipid 20% (50 ml/l) and Soluvit (10 ml/l), stable for 24 hrs Treatment and placebo were administered in the same type of plastic bags (1 ± 2 l), at a concentration of 1 kcal/ml in the treatment group. The solution was administered through a central line (960 mOSm/l) that was not inserted solely for nutritional purposes. The rate of intravenous administration was increased to 120 ml/hr for 18 ± 24 hrs. (n = 60) Co-intervention: both groups received enteral support: Participants were bolus-fed every 4 hrs, 5 times a day with a standard, noncommercial, modular polymeric diet. The composition of the solution was protein (20%), polyunsaturated fats (30%), carbohydrates (50%), non-soluble fibres, sodium chloride (2 g/l), potassium chloride (3 g/l), and a standard solution of hydro- and lipo-soluble vitamins; the concentration of the solution was 1 kcal/ml. A typical 70-kg participant would receive 100 ml initially, with an increased amount in 50-ml steps to a maximum of 350 ml every 4 hrs 5 times a day.
Outcomes	Levels of retinol-binding protein and prealbumin, morbidity, mortality, cost
Study dates	Not stated
Notes	No contact information could be obtained.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The envelopes were described as sealed but it was uncertain if the envelopes were opaque.
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Neither the healthcare providers nor the participants were aware of the treatment given.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Although the statistician was blinded to the allocation of treatment until all events had occurred, it is not stated clearly who performed the outcome assessment.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	6/60 early dropouts in the experimental group and 7/60 in the control group They stated that they used intention-to-treat analysis, but did not fully describe how they dealt with missing participants.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause mortality and serious adverse events. No protocol could be found.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Beier-Holgersen 1999

Methods	Randomised clinical trial, Denmark
Participants	60 hospitalised adults with gastro-intestinal diseases requiring major surgery, at nutritional risk due to major surgery Male:Female = 38:22 Mean age = 64 years Exclusion criteria: Adults with insulin-dependent diabetes mellitus, inadequate renal or hepatic functions, or inflammatory bowel disease were excluded, as were adults receiving immunosuppressive drugs.
Interventions	Experimental group: Nutrition (Nutridrink with orange flavour, Nutricia). They were scheduled to receive 600 ml on the day of operation, increasing by 400 ml daily until the 4th postoperative day. (n = 30) Control group: Placebo (water with orange flavour)(n = 30) They were scheduled to receive 600 ml on the day of operation, increasing by 400 ml daily until the 4th postoperative day.
Outcomes	Cell-mediated immunity, serious adverse events, all-cause mortality
Study dates	Not stated
Notes	We contacted the authors on 27th September 2015 by email: rabeho@hih.regionh.dk, We received an initial reply but no reply on following emails.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	It was reported that the study was double-blinded, but it was not further described.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	It was reported that the study was double-blinded, but it was not further described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but all-cause mortality and serious adverse events were assessed.
For-profit bias	High risk	"Nutricia Research, Zoetermeer, the Netherlands" kindly contributed financially to the study.

Beier-Holgersen 1999 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Bellantone 1988

Methods	Randomised clinical trial, Italy
Participants	100 hospitalised adults admitted for gastro-intestinal surgery, at nutritional risk due to major surgery Male:Female = 64:36 Mean age = 58 years
Interventions	Experimental group: Parenteral supplements (30 Cal/kg/day 200 mg/kg/day nitrogen) for at least 7 days prior to surgery(n = 54) Control group: No intervention(n = 46) Co-intervention: Standard hospital oral diet
Outcomes	Mortality, septic complications
Study dates	Not stated
Notes	We contacted the authors on 9th November 2015 by email: rbellantone@rm.unicatt.it . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.

Bellantone 1988 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Bokhorst-de 2000

Methods	Randomised clinical trial, the Netherlands
Participants	49 adults undergoing radical and extensive surgery for advanced head and neck cancer (stage III and IV) severely malnourished (preoperative weight loss > 10%), at nutritional risk due to major surgery Male:Female = 18:15 Mean age = 62.5 years Exclusion criteria: Well-nourished (weight loss < 10%), received other investigational drugs or steroids, or suffered from renal insufficiency, hepatic failure, any genetic immune disorders or a confirmed diagnosis of AIDS
Interventions	Experimental group: standard preoperative enteral nutrition (1250 kcal/L, 62.5 g. protein/L) (n = 15) Control group: No preoperative nutritional support(n = 17) Co-interventions: preoperatively fed for 7 – 10 days. Postoperatively tube-fed for approximately 14 days, as was standard hospital procedure
Outcomes	Quality of life, using the scales: QLQ-C30, COOP–WONCA
Study dates	1994 to 1997
Notes	We only use groups 1 and 2. We contacted the authors in September 2015 by email: m.van-bokhorst@vumc.nl. We received a reply with the specific calorie intake in the 2 groups.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding of participants, healthcare professionals involved in participant treatment and assessors was only possible in groups II and III.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Blinding of participants, healthcare professionals involved in participant treatment and assessors was only possible in groups II and III.
Incomplete outcome data (attrition bias) All outcomes	High risk	There were missing data for 18 out of 49 participants for quality of life and the trial did not use proper methodology to account for the missing data.

Bokhorst-de 2000 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Bonkovsky 1991a

Methods	Randomised clinical trial, USA
Participants	39 hospitalised adults with alcoholic hepatitis due to 1. prolonged ethanol intake; 2. laboratory studies; 3. time of cessation of alcohol intake 5 - 14 days before entry to the study, at nutritional risk according to the trialist Male:Female = 19:20 Mean age = 42 years Exclusion criteria: recent severe gastro-intestinal bleeding, severe ascites, severe degree of encephalophathy, renal insufficiency, acute pancreatitis, haemodynamic instability, advanced pulmonary disease, diabetes mellitus, active malignancy
Interventions	The trial consisted of 4 groups. Groups 1 and 3, and groups 2 and 4 could be compared. Experimental group: parenteral nutritional supplementation 2 L (3.5 amino acids, 5% dextrose) for 21 days(n = 9) Control group: no intervention(n = 12) Co-intervention: standard therapy (nutritionally adequate diets) in all groups and Oxandrolone in groups 2 and 4
Outcomes	Laboratory measurements, complications
Study dates	August 1986 to November 1988
Notes	We here report group 1 (control) versus group 3 (experimental).

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Random-numbers table
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Bonkovsky 1991a *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Low risk	Data were reported for all participants for all outcomes.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events or mortality.
For-profit bias	High risk	The trial was funded by Miles Laboratories.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Bonkovsky 1991b

Methods	Randomised clinical trial, USA
Participants	39 hospitalised adults with alcoholic hepatitis due to 1. prolonged ethanol intake; 2. laboratory studies; 3. time of cessation of alcohol intake 5 - 14 days before entry to the study, at nutritional risk according to the trialist Male:Female = 19:20 Mean age = 42 years Exclusion criteria: recent severe gastro-intestinal bleeding, severe ascites, severe degree of encephalopathy, renal insufficiency, acute pancreatitis, haemodynamic instability, advanced pulmonary disease, diabetes mellitus, active malignancy
Interventions	The trial consisted of 4 groups. Groups 1 and 3, and groups 2 and 4 could be compared. Experimental group: parenteral nutritional supplementation 2 L (3.5 amino acids, 5% dextrose) for 21 days(n = 10) Control group: no intervention(n = 8) Co-intervention: standard therapy (nutritionally adequate diets) in all groups and Oxandrolone in groups 2 and 4
Outcomes	Laboratory measurements, complications
Study dates	August 1986 to November 1988
Notes	We here report group 2 (control) versus group 4 (experimental).

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Random-numbers table
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described

Bonkovsky 1991b *(Continued)*

Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	Data were reported for all participants for all outcomes.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events or mortality.
For-profit bias	High risk	The trial was funded by Miles Laboratories.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Botella-Carretero 2008a

Methods	Randomised clinical trial, Spain
Participants	90 hospitalised adults 65 years or older undergoing surgery for hip fracture, at nutritional risk due to frail elderly with hip fracture Male:Female = 71:19 Mean age = 83.5 years Exclusion criteria: Adults with moderate to severe malnutrition (those with a weight loss of > 5% in the previous month or > 10% in the previous 6 months from their usual weight or serum albumin concentrations < 2.7 g/dL, or both) acute or chronic renal failure, hepatic insufficiency or cirrhosis (Child B or C), severe heart failure defined as New York Heart Association class III or IV, respiratory failure, and any Gl condition which precluded adequate oral nutrition intake
Interventions	Experimental group: Group 2: protein powder ONSs. Adults received protein supplementation in the form of commercial protein powder (Vegenat-med Proteina; Vegenat SA, Badajoz, Spain; 10-g packets, with each providing 9 g of protein and 38 kcal) dissolved in water or in the diet's milk or soup, to aim at 36 g of protein a day (4 packets a day)(n = 30) The oral nutritional supplement was started 48 hrs after operation and maintained after hospital discharge. Control group: No intervention(n = 15) Co-intervention: All were prescribed a standard or texture-adapted diet to meet the calculated metabolic rate.
Outcomes	Changes in serum albumin, prealbumin, retinol-binding globulin (RBG), BMI, midbrachial circumference, and tricipital fold, tolerance to prescribed ONS, length of hospital stay, postoperative complications, the time from surgery to the start of mobilisation as included in the rehabilitation programme
Study dates	February 2006 to February 2007
Notes	We contacted authors on 6th June 2015 by email: jbotella.hrc@salud.madrid.org, about details on data of BMI and complications and risk of bias (random sequence generation and blinding of outcome assessment).

Risk of bias

Botella-Carretero 2008a *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	Randomised using sealed opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants were not blinded, as the control group received no intervention
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	5 participants did not complete the study and the trial did not use proper methodology to account for the missing data.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Low risk	The trial was financed by Fundación para la Investigación Biomédica, Hospital Ramón y Cajal (FIBio-RyC), Madrid, Spain.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Botella-Carretero 2008b

Methods	Randomised clinical trial, Spain
Participants	90 hospitalised adults 65 years or older undergoing surgery for hip fracture, at nutritional risk due to frail elderly with hip fracture Male:Female = 71:19 Mean age = 83.5 years Exclusion criteria: Adults with moderate to severe malnutrition (those with a weight loss of > 5% in the previous month or > 10% in the previous 6 months from their usual weight or serum albumin concentrations < 2.7 g/dL, or both) acute or chronic renal failure, hepatic insufficiency or cirrhosis (Child B or C), severe heart failure defined as New York Heart Association class III or IV, respiratory failure, and any Gl condition which precluded adequate oral nutrition intake
Interventions	Experimental group: Group 3: Energy protein ONSs. Participants received energy and protein supplements by means of commercial enteral nutrition for oral intake (Resource Hiperproteico; Novartis Medical Nutrition, Barcelona, Spain; 200-mL bricks, with each providing 18.8 g of protein and 250 kcal) to aim at 37.6 g of protein and 500 kcal a day (2 bricks a day). The ONS was started 48 hrs after operation and maintained after hospital discharge.(n = 30) Control group: No intervention(n = 15)

Botella-Carretero 2008b *(Continued)*

	Co-intervention: All were prescribed a standard or texture-adapted diet to meet the calculated metabolic rate.
Outcomes	Changes in serum albumin, prealbumin, retinol-binding globulin (RBG), BMI, midbrachial circumference, and tricipital fold, tolerance to prescribed ONS, length of hospital stay, postoperative complications, the time from surgery to the start of mobilisation as included in the rehabilitation programme
Study dates	February 2006 to February 2007
Notes	We contacted the authors on 6th June 2015 by email: jbotella.hrc@salud.madrid.org about details on data of BMI and complications and risk of bias (random sequence generation and blinding of outcome assessment).

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	Randomised using sealed opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants were not blinded, as the control group received no intervention
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	5 participants did not complete the study and the trial did not use proper methodology to account for the missing data.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Low risk	The trial was financed by Fundación para la Investigación Biomédica, Hospital Ramón y Cajal Madrid, Spain.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Botella-Carretero 2010

Methods	Randomised clinical trial, Spain
Participants	60 hospitalised adults with hip fractures, at nutritional risk due to hip surgery Male:Female = 16:44 Mean age = 83.5 years Exclusion criteria: "Patients with moderate–severe malnutrition (those with a weight loss of more than 5% in the previous month or more than 10% in the previous 6 months from their usual weight, and/

Botella-Carretero 2010 *(Continued)*

	or serum albumin concentrations below 2.7 g/dL) were automatically excluded from the study. All of these patients receive supplementation according to our Institution protocol, following current guidelines. Other exclusion criteria were acute and/or chronic renal failure, hepatic insufficiency or cirrhosis (Child B or C), severe heart failure with class III or IV of the New York Heart Association (NYHA), respiratory failure, and any gastrointestinal condition that may preclude from adequate oral nutritional intake. None of the patients had been on ONS from the previous 6 months, or had received any nutritional support by any other means.
Interventions	Experimental group: Oral nutrition energy and protein support by means of commercial enteral nutrition for oral intake (Fortimel, 200 mL bricks, each provides 20 g protein and 200 kcal, Nutricia Advanced Medical Nutrition - Danone Group) to aim at 40 g of protein and 400 kcal a day (2 bricks a day). The treatment was started at admission, before surgery and maintained until the day of hospital discharge. (n = 30) Control group: No intervention (n = 30) Co-interventions: Every adult was prescribed a standard or texture-adapted diet to meet their calculated metabolic rate.
Outcomes	Mortality, serum proteins, BMI, postoperative complications, weight, postoperative hospital stay, time of immobilisation after surgery
Study dates	May 2007 to September 2008
Notes	We contacted the authors on 6th June 2015 by email: jbotella.hrc@salud.madrid.org about data on BMI, weight and complications, which could not be extracted from the full text.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	The randomisation was concealed by means of sealed opaque envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	High risk	Intention-to-treat analysis was performed with the last observation carried forward to evaluate data of all participants at hospital discharge. There were incomplete data for 32 participants.
Selective reporting (reporting bias)	Low risk	The protocol could not be obtained, but the study reported on mortality and complications.
For-profit bias	Low risk	One of the Researchers, B.I. was supported by the Fundación para la Investigación Biomédica Hospital Ramón y Cajal (FIBio-RyC), Madrid, Spain.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Breedveld-Peters

Methods	Randomised clinical trial, the Netherlands
Participants	152 hospitalised adults admitted for hip fracture surgery and aged > 55 years, at nutritional risk due to being frail elderly Male:Female = 44:108 Mean age = 78.5 years Exclusion criteria: Pathological or periprosthetic fracture; a disease of bone metabolism (e.g. M Paget, M Kahler, hyperparathyroidism); an estimated life expectancy < 1 year due to underlying disease; if they used an ONS before hospital admission; if they were unable to speak Dutch, lived outside the region or had been bedridden before their hip fracture, had dementia or were cognitively impaired, defined as a score of < 7 on the Abbreviated Mental Test, as assessed before inclusion
Interventions	Experimental group: frequent dietetic counselling and multinutrient ONSs until 3 months after hip fracture surgery (n = 73) Control group: standard dietetic counselling and diet (n = 79)
Outcomes	Cost, cost effectiveness, mortality, weight, quality of life
Study dates	
Notes	The trial had both an inpatient and an outpatient phase. We contacted the authors on 16th December 2015 by email: c.wyers@maastrichtuniversity.nl. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated random-number sequence list
Allocation concealment (selection bias)	Unclear risk	The allocation was described as being concealed, but it was unclear how it was concealed.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	More than 5% dropouts, and the trial did not allow proper intention-to-treat methodology.
Selective reporting (reporting bias)	High risk	The trial did not report length of stay or rate of complications, which were stated in the protocol.
For-profit bias	High risk	The oral nutritional supplements were provided by at nutrition company (Nutricia Advanced Medical Nutrition).

Breedveld-Peters *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Brennan 1994

Methods	Randomised clinical trial, USA
Participants	117 hospitalised adults undergoing major pancreatic resections, at nutritional risk due to major surgery. Male:Female = 61:55 (gender not reported for one participants) Mean age = 64 years
Interventions	Experimental group: Total parenteral nutrition (30 - 35 kcal/kg/day and 1 g protein/kg/day) (n = 60) Control group: Standard IV fluids (dextrose and salt solutions) (n = 57) Co-interventions: Both groups were given nutrition until oral intake exceeded 1000 kcal/day
Outcomes	Mortality, complications, major complications, morbidity, survival data
Study dates	February 1988 to November 1993
Notes	We contacted the author on 19th August 2015 by email: brennanm@mskcc.org . The author initially replied but did not reply on follow-up emails.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reported serious adverse events and mortality.
For-profit bias	Low risk	The trial was supported by a non-profit organisation (Lawrence M. Gelb Foundation).

Brennan 1994 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Brown 1992

Methods	Randomised clinical trial, hospital in UK
Participants	10 hospitalised adults with fractured neck of femur, at nutritional risk due to major surgery Male:Female = 0:10 Mean age = 81 years Exclusion criteria: any form of malignant disease, mental illness, renal or hepatic failure, neurological disorder, cerebrovascular accident or diabetes
Interventions	Experimental group: Enteral nutrition (Fresubin) to make up the deficit between regular intake and requirements of nutrition. Received from the 2nd day of admission until the end of the study Intervention lasted approximately 47 days. (n = 5) Control group: No intervention(n = 5) Co-interventions: Both groups received normal hospital diet.
Outcomes	Body weight, triceps skinfold thickness, midarm circumference, arm muscle circumference , time of discharge, serum concentrations of albumin, prealbumin, magnesium and zinc. Meals, snacks and fluid intake. Walking with a frame or crutches with 1 or 2 attendants, walking with or without sticks with 1 or 2 attendants, and pressure sores
Study dates	Not stated
Notes	We could not obtain contact information for the author.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were complete data for all participants.

Brown 1992 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Brown 1995

Methods	Randomised clinical trial, USA
Participants	57 hospitalised adults undergoing PEG placement due to different conditions (primarily oropharyngeal dysphagia), at nutritional risk due to trialist indication Male:Female = 38:19 Mean age = 67 years Exclusion criteria: none stated
Interventions	Experimental: early feeding within 3 hrs of placement(n = 17) Control: no intervention(n = 19) Co-intervention: feeding from the next day
Outcomes	Complications related to tube-feeding (not used)
Study dates	Not stated
Notes	We could not obtain contact information for the author.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	It was unclear how many participants had incomplete outcome data.

Brown 1995 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Bunout 1989

Methods	Randomised clinical trial, hospital in Chile
Participants	36 hospitalised adults who within the first 3 days of admission met the following criteria: (a) history of excessive alcohol ingestion for at least 2 years; and (b) the presence of 2+ major signs of liver failure: jaundice, encephalopathy, ascites, hepatomegaly, collateral circulation and oedema, who were, at nutritional risk according to the trialist Male:female = not stated Mean age = 49.1 years Exclusion criteria: contraindication for oral or enteral feeding, current upper gastrointestinal bleeding, encephalopathy grade OV and extrahepatic major organ failure (cardiac, pulmonary or renal)
Interventions	Experimental group: diet aiming at 1.5 g/kg body weight of protein and 50 kcal/kg body weight/day. The protein and energy were provided by a casein-based nutritional product. Contained casein, maltodextrins, medium-chain triglycerides, sunflower oil.(n = 17) Control group: standard nutritional therapy (n = 19)
Outcomes	Biochemical analysis, length of hospital stay, anthropometrics, mortality
Study dates	Not stated
Notes	We contacted the author on 08th February 2016 by email: dbunout@inta.cl. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but there was no description of how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but there were no description of how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias)	Low risk	There were no dropouts.

Bunout 1989 *(Continued)*

All outcomes		
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Low risk	The trial was funded by a non-profit organisation: "University of Chile grant no. PRI 823080009".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Caglayan 2012

Methods	Randomised clinical trial, Turkey
Participants	28 hospitalised adults with colorectal cancer, at nutritional risk due to oncologic history and upcoming surgery Male:Female = 11:16 (gender not reported for one participants) Mean age = 62.79 years Exclusion criteria: Clinical findings of vitamin and element deficiency, diabetes mellitus, a history of renal and hepatic deficiency as well as active infection, and immunosuppressive drug use
Interventions	Experimental group: 3 groups (only 2 could potentially have been used): Enteral: SE product without RNA or omega-3 fatty acid (Fresubin) TPN: With subclavian catheter infusion Freamin 8.5% Lipovenöz% 10 - 20 Dekstroz 10%, 20%, 30%. Soluvit N.Vitalipid N adult. Tracutil. (n = 21) Control group: Normal feeding planned by a dietitian (n = 7)
Outcomes	CD4 cell infiltrate, CD8 cell infiltrate, CD16 cell infiltrate, CD56 cell infiltrate
Study dates	Not stated
Notes	We contacted the authors on 9th December 2015 by email: kasimcaglayan@hotmail.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias)	Low risk	Pathologist was blinded.

Caglayan 2012 *(Continued)*

All outcomes		
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Campbell 2008

Methods	Randomised clinical trial, Australia
Participants	60 hospitalised adults with chronic kidney disease, at nutritional risk defined by trialists Male:Female = 34:19 (after early exclusions) Mean age = 69.9 years Exclusion criteria: < 18 years, glomerular filtration rate (GFR) > 30 ml/min , previously seen by a dietitian for Stage IV CKD, communication or intellectual impairment inhibiting their ability to undertake the intervention and malnutrition from a cause other than CKD
Interventions	Experimental group: A dietitian, experienced in renal nutrition, gave treatment over a 12-week period and aimed to optimise nutritional status and attain evidence-based dietary prescription. (n = 60) Control group: Standard care(n = 31)
Outcomes	QOL: Kidney Disease Quality of Life Short Form version 1.3, combining the Short Form-36 (SF-36), with a kidney disease-specific module
Study dates	Not stated
Notes	We contacted the authors on 5th October 2015 by email: katrina.campbell@qub.ac.uk. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Computer-generated sequence
Allocation concealment (selection bias)	Low risk	Concealed from recruiting officer
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded

Campbell 2008 *(Continued)*

Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	13 dropouts (> 5%). No use of intention-to-treat
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Low risk	Royal Brisbane and Women's Hospital Foundation seeding grant, Queensland University of Technology Postgraduate Research Award (PhD scholarship) and an Institute of Health and Biomedical Innovation Research Scholarship.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Capellá 1990

Methods	Randomised clinical trial, Spain
Participants	27 hospitalised adults with gastric adenocardinoma undergoing total gastrectomy, at nutritional risk due to major abdominal surgery Male:Female = 21:6 Mean age = 64 years
Interventions	Experimental group: Received TPN (n = 15) Control group: Received traditional serum therapy (3 participants actually received peripheral parenteral nutrition)(n = 12)
Outcomes	Mortality, complications, length of hospital stay
Study dates	1983 to 1986
Notes	We contacted the authors on 13th December 2015 by email: gcapella@ico.scs.es. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described

Capellá 1990 *(Continued)*

Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	Mortality and complications were reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Carr 1996

Methods	Randomised clinical trial, UK.
Participants	30 hospitalised adults undergoing intestinal resection, at nutritional risk due to major surgery Male:Female = 19:11 Mean age = 55.1 years Exclusion criteria: emergencies and allergy or intolerance to the constituents of the feed
Interventions	Experimental group: early enteral feeding (energy and water requirements were calculated from the weight of the participant and a mixture of Fresubin and water provided the full basic fluid requirements).(n = 15) Control group: standard care (n = 15)
Outcomes	Daily intake, anthropometrics, complications, length of stay, days to intake, hand-grip strength, weight
Study dates	Not stated
Notes	We could obtain no contact information for the author.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias)	Unclear risk	Not described

Carr 1996 *(Continued)*

All outcomes		
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	More than 5% dropped out, and the trial did not use proper methodology to deal with missing data.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but the trial reported on mortality and complications.
For-profit bias	Low risk	The trial was funded by the Departments of surgery and intensive care.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Carver 1995

Methods	Randomised clinical trial, UK
Participants	46 hospitalised adults with a BMI < 20, at nutritional risk due to having a BMI < 20.5 kg/m^2. Male:Female = 10:36 Mean age = 75 Exclusion criteria: Residents classified as emaciated, had known physical pathology or were in short-term or assessment wards
Interventions	Experimental group**:** Oral supplements in the form of 200 ml oral supplement Fortisip (Cow & Gate Ltd, Trowbridge, UK) twice daily. This provided 2.5 MJ (600 kcal) energy a day from protein, carbohydrate and fat in addition to a range of vitamins and minerals. (n = 23) Control group: Placebo, in the form of a 200 ml oral vitamin preparation twice daily providing the same vitamins as Fortisip but virtually no macronutrients and thus minimal additional energy(n = 23)
Outcomes	Weight, BMI, triceps skinfold thickness and midupper-arm circumference
Study dates	Not stated
Notes	We contacted the authors on 9th November 2015 by email: jcarver@hsc.usf.edu. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Control group received placebo
Blinding of outcome assessment (detection bias)	Low risk	All measurements were made by the authors, who did not know whether residents were in the treatment or control group.

Carver 1995 *(Continued)*
All outcomes

Incomplete outcome data (attrition bias) All outcomes	High risk	6 participants in each group (12 (26 %) in total) were withdrawn and excluded from the analyses, but reasons for withdrawal were clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was supported by Cow & Gate.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Casaer 2011

Methods	Randomised clinical trial in Belgium
Participants	4640 hospitalised adults in ICU, at nutritional risk due to having NRS score of 3 or more Male:Female = 2972:1668 Mean age = 64 years Exclusion criteria: "chronic malnourishment (defined as a BMI of < 17) before admission to an ICU and referral from another ICU with an established regimen of enteral or parenteral nutrition"
Interventions	Experimental group: "Participants received i.v. 20% glucose solution; the target for total energy intake was 400 kcal a day on ICU day 1 and 800 kcal a day on day 2. On day 3, parenteral nutrition (OliClinomel or Clinimix, Baxter) was initiated, with the dose targeted to 100% of the caloric goal through combined enteral and parenteral nutrition. (n = 2312) Control: Participants received 5% glucose solution in a volume equal to that of the parenteral nutrition administered in the early-initiation group in order to provide adequate hydration, with the delivered volume of enteral nutrition taken into account. If enteral nutrition was insufficient after 7 days in the ICU, parenteral nutrition was initiated on day 8 to reach the caloric goal."(n = 2328) Co-interventions: "All participants who were unable to eat by day 2 received enteral nutrition (mainly Osmolite, Abbott), while being maintained in a semirecumbent position unless medically contraindicated. Standing orders for enteral nutrition for all participants specified a twice-daily increase in the infusion rate for enteral nutrition and the use of prokinetic agents and duodenal feeding tubes."
Outcomes	Vital status (mortality 90 days after randomisation independent of ICU and hospital discharge status, hospital mortality, ICU mortality and proportion of participants discharged alive from ICU within 8 days), hypoglycaemia, serious adverse events and complications related to the mode of nutrition. The primary efficacy endpoint for this RCT was the time to discharge alive from ICU, time to discharge alive from the hospital, time to final (alive) weaning from mechanical respiratory support, kidney failure, need for pharmacological or mechanical haemodynamic support during ICU stay, need for a tracheostomy during ICU stay, cholestasis and liver dysfunction, occurrence of infections during ICU stay, inflammation, distribution of 6-MWD, proportion of participants independent for all ADL functions in both groups was compared at hospital discharge.
Study dates	August 2007 to November
Notes	We contacted the authors on 17th November 2015 by mail: greet.vandenberghe@med.kuleuven.be regarding allocation sequence generation. We received a reply with the information.

Casaer 2011 *(Continued)*

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-based randomisation
Allocation concealment (selection bias)	Low risk	"Sequentially numbered, sealed and opaque envelopes".
Blinding of participants and personnel (performance bias) All outcomes	High risk	None were blinded.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	All outcome assessors, which were investigators not directly involved (such as statisticians, laboratory personnel, infectious disease specialists, pathologists, physiotherapists involved in the strength measurement, electrophysiologists) as well as physicians and nurses in the conventional wards, were blinded to treatment allocation.
Incomplete outcome data (attrition bias) All outcomes	High risk	There were incomplete data for 6-MWD and the trial did not use proper methods to deal with the missing data.
Selective reporting (reporting bias)	Low risk	The trial reported on all outcomes stated in the protocol.
For-profit bias	Low risk	Funded by the Methusalem programme of the Flemish government and others.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Caulfield 2012

Methods	Randomised clinical trial, Ireland
Participants	41 hospitalised adults who were malnourished, at nutritional risk according to the trialist Male:Female = not stated Mean age = not stated Exclusion criteria: none stated
Interventions	Experimental group 1: 200 ml or 4 x 50 ml ONSs (2 kcal/ml) for 28 days(n = 27) Control group: No intervention(n = 14) Co-interventions: Dietary counselling
Outcomes	Nutritional assessment, biochemical measurements, presence of pressure ulcers, product tolerance and compliance
Study dates	Not stated

Caulfield 2012 *(Continued)*

Notes	Abstract only. We contacted the author on 9th November 2015 via Facebook. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Chen 1995a

Methods	Randomised clinical trial, China
Participants	24 hospitalised adults undergoing abdominal elective surgery, at nutritional risk due to major surgery Male:Female = 15:9 Mean age = 53.5 years Exclusion criteria: Unclear
Interventions	Experimental group A: Recieved the compound nutrition elements of Qingdao biochemical pharmaceutical factory (400 kcal, N 2.56 g per 100 g) from the 1st day after the operation. It was infused as a 10% nutrient solution continuously with the speed of 50 ml/hr, reaching the maximum volume (25% of the daily nutrient solution 3000 ml) gradually within a few days according to tolerance. Oral intake was maintained during this time. The amount of perfusion was gradually decreased and the tube removed, when nutrition sufficed from oral intake. (n = 8) Experimental group B: enteral nutrition support after postoperative flatus, in the same way as experimental group A. (n = 8) Control group: Conventional i.v. infusion after surgery. Some received albumin or blood transfusion once or twice. (n = 8)

Chen 1995a *(Continued)*

Outcomes	Complication, weight, daily calorie, nitrogen and liquid intake, albumin and transferrin, urea nitrogen concentration
Study dates	Not stated
Notes	We tried but failed to contact the author by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Chen 1995b

Methods	Randomised clinical trial, China
Participants	24 hospitalised adults undergoing abdominal elective surgery, at nutritional risk due to major surgery Male:Female = 15:9 Mean age = 53.5 years Exclusion criteria: Unclear
Interventions	Experimental group A: Received the compound nutrition elements of Qingdao biochemical pharmaceutical factory (400 kcal, N 2.56g per 100 g) from the 1st day after the operation. It was infused as a 10% nutrient solution continuously with the speed of 50 ml/hr, reaching the maximum volume (25% of the daily nutrient solution 3000 ml) gradually within a few days according to tolerance. Oral intake was maintained during this time. The amount of perfusion was gradually decreased and the tube removed, when nutrition sufficed from oral intake.(n = 8)

Chen 1995b *(Continued)*

	Experimental group B: enteral nutrition support after postoperative flatus, in the same way as experimental group A(n = 8) Control group: Conventional intravenous infusion after surgery. Some received albumin or blood transfusion once or twice.(n = 8)
Outcomes	Complication, weight, daily calorie, nitrogen and liquid intake, albumin and transferrin, urea nitrogen concentration
Study dates	Not stated
Notes	We tried but failed to contact the author by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appears to be free of other components that could put it at risk of bias.

Chen 2000a

Methods	Randomised clinical trial, China
Participants	30 hospitalised adults undergoing moderate or more elective abdominal surgery, at nutritional risk due to abdominal surgery Male:Female = 17:13. Exclusion criteria: Metabolic and infectious diseases, having taken steroids and/or immunosuppressive agents recently

Chen 2000a *(Continued)*

Interventions	Experimental group A: Enteral nutrition, Nutrison (product of Holland Nutricia company) were infused through a nutrition tube in upper jejunum at the first postoperative day, 1/3 of the total amount on the 1st day, 2/3 on the 2nd day, and full amount (125.4 KJ-1·kg-1·d-1) on the 3rd day (n = 10) Experimental group B: Parenteral nutrition (n = 10) (Huarui company products) through peripheral or central vein from the 1st postoperative day, with the same usage of enteral nutrition group Control group: Conventional infusion for 8 days, the average calorie intake was about 2514 $KJ \cdot d^{-1}$(n = 10)
Outcomes	Complications, plasma protein (total protein, albumin and transferrin), CD3, CD4, CD8, D4/CD8
Study dates	Not stated
Notes	We tried but failed to contact the author by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Chen 2000b

Methods	Randomised clinical trial, China
Participants	30 hospitalised adults undergoing moderate or more elective abdominal surgery, at nutritional risk due to abdominal surgery Male:Female = 17:13

Chen 2000b *(Continued)*

	Exclusion criteria: Metabolic and infectious diseases, having taken steroids or immunosuppressive agents or both recently
Interventions	Experimental group A: Enteral nutrition, Nutrison (product of Holland Nutricia company) were infused through a nutrition tube in upper jejunum on the 1st postoperative day, 1/3 of the total amount on the 1st day, 2/3 on the 2nd day, and full amount (125.4 KJ-1·kg-1·d-1) on the 3rd day(n = 10) Experimental group B: Parenteral nutrition (Huarui company products) through peripheral or central vein from the 1st postoperative day, with the same usage of enteral nutrition group(n = 10) Control group: Conventional infusion for 8 days, the average calorie intake was about 2514 KJ·d^{-1}(n = 10)
Outcomes	Complications, plasma protein (total protein, albumin and transferrin), CD3, CD4, CD8, D4/CD8.
Study dates	Not stated
Notes	Same trial as Chen 2000a. We tried but failed to contact the author by phone (0543-3258597).

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Chen 2006

Methods	Randomised clinical trial, China
Participants	41 hospitalised adults who were burned and admitted within 18 hours, at nutritional risk due to being in the ICU

Chen 2006 *(Continued)*

	Male:Female = 24:17 Mean age = 33.5 years Exclusion criteria: 1. Severe metabolic diseases, such as diabetes, hyperthyroidism, or low, severe liver disease; 2. Unsuitable due to shock; 3. Acute renal failure and stress ulcer that occurred during the treatment; 4. Other severe traumas such as visceral rupture and traumatic brain injury; 5. Severe heart and lung deficiency
Interventions	Experimental group: Via a nasogastric feeding tube, the participants were given protein enriched enteral nutrition mixed supplements (best, Nutricia, containing per 1000 ml; 40 g of protein, 389 g of fat, and 123 g of glucose), according to gastro-intestinal tolerance and energy demand, at a rate, from 30 ~ 50 ml/hr. It was gradually increased to 120 ~ 150 ml/hr, so that on day 8 - 9 the total amount given was 2500 ~ 3000 ml as a restricted diet. It was unknown for how long the treatment was continued. (n = 21) Control group: Via a central venous catheter, the participants were given the required parenteral nutrition every day (1000 ml, containing 29 g of protein, 25 g of fat, and 62.5 g of glucose, thermal energy 2.78 MJ). They were encouraged to eat regularly as well. It was unknown for how long the treatment was continued. (n = 20)
Outcomes	Biomarkers, health economics, adverse events
Study dates	Not stated
Notes	We tried but failed to contact the author by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Choudhry 1996

Methods	Randomised clinical trial, USA
Participants	41 hospitalised adults undergoing PEG placement due to not being able to be orally fed, at nutritional risk due to trialist indication Male:Female = 41:0 Mean age = 72.3 years Exclusion: Inability to obtain an informed consent, not expected to survive the duration of the study, any contraindications for endoscopy, inability to successfully transilluminate the abdominal wall, ascites, massive organomegaly, coagulopathy, and systemic infection
Interventions	Experimental: Feeding through tube started 3 hrs after PEG placement(n = 10) Control: no intervention (n = 10) Co-intervention: PEG placement and full-strength iso-osmolar feeding after 24 hrs
Outcomes	The outcomes assessed included maximum residual volumes for each group for each day, adverse events, 30-day mortality, number of participants alive in each group at the termination of the study, mean number of days a participant lived after PEG placement, and the number of days between PEG placement and termination of the study.
Study dates	Not stated
Notes	

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not described.
Selective reporting (reporting bias)	Low risk	The trial reported mortality and adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Chourdakis 2012

Methods	Randomised clinical trial, Greece
Participants	59 hospitalised adults admitted to the ICU, at nutritional risk due to being at the ICU Male:Female = 47:12 Mean age = 34.7 Exclusion criteria: Age < 18 or ≥ 70 years, GCS score ≤ 9, obesity (≥ 30 BMI), pregnancy, lactation, had received corticosteroids or thyroidal hormones or both during the previous month, any of the following conditions: Heart failure, respiratory problems, metabolic syndrome, immunodeficiency, diabetes, neurological problems, internal bleeding, indication for TPN, delay of admission to ICU > 24 hrs from injury
Interventions	Experimental group: early (within 24 – 48 hrs) enteral feeding (EEF) In the EEF group, enteral feeding was established through the nasogastric tube and feeding began within 24 – 48 hrs from admission to the ICU. The initial administration rate was 30 mL/hr, and the rate reached 80 – 100 mL/hr within 48 hrs by subsequently increasing by 10 mL/hr every 4 – 6 hrs. (n = 34) Control group: Standard delayed enteral feeding (DEF): DEF was initiated when gastroparesis was resolved (> 48 hrs) but no later than 5 days after admission to the ICU, and the goal for the administration rate was to reach 100% of the needs within 4 days. (n = 25)
Outcomes	The administration rate for the prescribed quantity was calculated for < 24 hrs, excessive gastric residue, frequent diarrhoea, ileus, and thrombocytopenia. Complications, mortality, duration of stay in the ICU, hormonal status
Study dates	August 2003 to May 2005
Notes	We contacted the authors by email: kouvelas@auth.gr on 5th October 2015. We received no answer.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	"open-labelled trial"
Blinding of outcome assessment (detection bias) All outcomes	High risk	"open-labelled trial"
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were complete data for all participants.
Selective reporting (reporting bias)	Low risk	Mortality and serious adverse events are reported.

Chourdakis 2012 *(Continued)*

For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Chuntrasakul 1996

Methods	Randomised clinical trial, Thailand
Participants	38 hospitalised adults with severe traumatic injury, at nutritional risk due to being at the ICU Male:Female = 31:7 Mean age= 26 - 33 years
Interventions	Experimental group: Received either enteral feeding through a NG tube (30 ml/hr of .075 kcal/ml) or parenteral nutrition consisting of hypertonic glucose, amino acids and lipids(n = 21) Control group: 5% dextrose as maintenance fluid supplemented with oral nutrition when bowel function was observed(n = 17)
Outcomes	Complications, serum albumin, mortality, ICU stay
Study dates	June 1992 to January 1994
Notes	We contacted the authors on 3rd December 2015 by email: chomchark@gmail.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	There was no protocol and the trial did not fully report complications.
For-profit bias	High risk	The trial was supported by Bristol-Meyer-Squibb and Osothsapha.

Chuntrasakul 1996 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Cicco 1993

Methods	Randomised clinical trial, Italy
Participants	50 hospitalised adults with neoplasms scheduled to receive at least 2 identical courses of chemotherapy, at nutritional risk according to the trialist Male:Female = 26:17 (gender not reported for two participants) Mean age = 59 years Exclusion criteria: weight loss of 6 - 10% of their usual body weight (the study only included normally nourished or undernourished participants) and if one of the following conditions were present: Diabetes mellitus; heart, pulmonary, liver, and kidney failure; sepsis; and bone marrow involvement
Interventions	Experimental group: TPN (Nonprotein caloric content was divided between dextrose (60%) and lipids (40%) (Intralipid, Kabi Pharmacia, Stockholm, Sweden). Crystalline amino acids (Freamine III, Kendall McGaw Laboratories, Irvine, CA) were provided at a calorie:nitrogen ratio of 160 kcal:l g of nitrogen (1.4 ± 0.2 g of amino acids per kilogram a day). Mineral salts (sodium, potassium, chlorine, magnesium, phosphorus, and calcium), as clinically indicated, and trace elements (5 mL of trace element mix, Don Baxter Laboratories, Trieste, Italy) were added to the nutrient mixture, which was prepared in ethyl-vinylacetate bags.(n = 24) Control group: No intervention (n = 26) Co-interventions: Chemotherapy
Outcomes	Chemotherapy-related myelotoxicity (leukopenia, anaemia and thrombocytopenia), gastro-intestinal toxicity(diarrhoea, nausea/vomiting) Fast-turnover visceral protein and nitrogen balance
Study dates	Not stated
Notes	This is a cross-over study, the 2 groups switch intervention after the 1st round of chemo. We contacted the authors on 5th October 2015 by email: dfantin@cro.it. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Block randomisation - blocks of 4. Not otherwise described.
Allocation concealment (selection bias)	Unclear risk	Not described.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described.

Cicco 1993 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	High risk	7 patients dropped out - 4 because of disease progression, 2 because of refusal of venous catheterization, and one patient died.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse events.
For-profit bias	Low risk	"This study was supported by Grant 1580 from the Fondo Sanitario Nazionale. Regione Friuli-Venezia Giulia, Italy." No industry involvement.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Clamon 1985

Methods	Randomised clinical trial, USA (Prior to randomisation, participants were stratified by extent of disease, weight loss over or under 2% during the 3 months prior to diagnosis, and performance score)
Participants	119 hospitalised adults that had histologically- or cytologically-documented small cell lung cancer, with no previous therapy, measurable or evaluable disease, a life expectancy of more than 8 weeks, and a performance score of 3 or better on the ECOG scale, at nutritional risk, due to trialist indication Male:Female = 89:30 Mean age = 60 years Exclusion criteria: Leukocyte count less than 3000/mm^3, platelet count < 100.000/mm^3, bilirubin level more than 2 mg/dl, creatinine more than 2 mg/dl or blood urea nitrogen (BUN) level greater than 30 mg/dl, recent myocardial infarction, congestive heart failure or arrhythmia precluding adriamycin (doxorubicin) therapy, documented central nervous system metastases, superior vena cava obstruction, inappropriate antidiuretic hormone secretion, or significant other medical problems precluding central venous hyperalimentation
Interventions	Experimental group: Central IVH for 28 days if no complications occurred. IVH was provided using an amino acid mixture (Travasol, Travenol Company, Deerfield, IL), glucose, and 10% lipid emulsion. Nonprotein calories were evenly divided between glucose and lipid. Electrolytes, multi-vitamins, and trace elements were added daily; folate and vitamin K were given weekly. Vitamin B12 was given monthly. Participants nutritionally normal at entry to the study were started at 32 cal/kg/day and 1 g protein/kg/day. After 1 week, they were increased to 40 cal/kg and 1.25 g of protein/kg a day and maintained at this level for 3 weeks. Participants nutritionally depleted at entry into the study were started at 48 cal/kg and 1.5 g of protein/kg/day and increased to 56 cal/kg and 1.75 g/kg of protein a day. The IVH was started 1 week prior to the 1st dose of chemotherapy. Participants at the University of Toronto were maintained without oral intake while receiving IVH; at all other institutions participants were allowed to eat ad libitum during IVH. (n = 57) Control group: No intervention (n = 62)
Outcomes	A nutritional assessment consisting of weight, serum albumin, total iron binding capacity, midarm muscle circumference, triceps skinfold thickness, and creatinine height index was obtained at the beginning of the study (baseline) and repeated every 3 weeks. 3-day diet records were obtained before the initiation of treatment and at the end of 3 weeks after the 1st, 2nd, 4th, 8th, and 12th cycles of chemotherapy and at the end of 1 year.

Clamon 1985 *(Continued)*

Study dates	Not stated
Notes	We contacted the authors on 5th October 2015 by email: emmoran@uci.edu; edgar.moran@va.gov. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Low risk	This trial was sponsored and funded by the Diet, Nutrition and Cancer Program of the National Cancer Institute.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

De Sousa 2012

Methods	Randomised clinical trial, Portugal
Participants	37 undernourished hospitalised adults aged 60+ years, with recently-diagnosed probable mild AD and who presented weight loss higher than 5% of body weight in the previous year, at nutritional risk due to anthropometrics Male:Female = 9:26 (gender not reported for one participants) Mean age = 78 years Exclusion criteria: having severe acute illness or being in terminal care, a diagnosis of cancer in the last 5 years, enteral or parenteral nutritional support, and receiving dietary advice or use of nutritional supplements in the preceding month
Interventions	Experimental group: Oral nutrition. The participants received a 200 mL high-protein, energy-dense liquid, which provided 400 kcal/day (42.8 g carbohydrates, 17.4 g fat, and 18 g protein). The OS was available in 2 flavours (vanilla and apricot) and was consumed in the morning, between breakfast and lunch, or in the afternoon. The intervention lasted 21 days. (n = 20)

De Sousa 2012 *(Continued)*

	Control group: No intervention (n = 17) Co-interventions: All the participants received standard dietetic advice and they followed the treatment protocol in the Geriatric Unit that included folic acid and vitamin B12 supplementation.
Outcomes	Mini Nutritional Assessment (MNA), weight, BMI, triceps skinfold, upper-arm circumference, arm muscle circumference, cognitive function (MMSE), functional status (Barthel index), clock-drawing test, serum nutritional biomarkers (albumin, total protein, total cholesterol, vitamin B12 and folic acid) and mortality
Study dates	Not stated
Notes	We contacted the authors on 1st January 2015 by email: luisavice@gmail.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial is described as non-blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial is described as non-blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	There were no dropouts but it was unclear how many participants had missing data.
Selective reporting (reporting bias)	Unclear risk	The trial reports all-cause mortality, but not serious adverse events. We found no protocol.
For-profit bias	High risk	The nutritional supplements were offered by Novartis, Portugal.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Delmi 1990

Methods	Randomised clinical trial, Switzerland/France
Participants	59 hospitalised adults with a femoral neck fracture, at nutritional risk due to being frail elderly with fracture of the proximal femur Male:Female = 6:53 Mean age = 81 years

Delmi 1990 *(Continued)*

	Exlusion criteria: Younger than 60, fractures resulting from violent external trauma and pathological fractures due to tumours or non-osteoporotic osteopathies, renal, hepatic, or endocrine disease, gastrectomy or malabsorption, or treatment with phenytoin, steroids, barbiturates, fluoride, or calcitonin
Interventions	Experimental group: Oral supplements 250 ml of ONS provided 254 kcal, 20.4 g protein, 29 g carbohydrate, 5 - 8 g lipid, 525 mg calcium, 750 IU vitamin A, 25 IU vitamin D3' vitamins E, B, B2, B63 B12, C, nicotinamide, folate, calcium pantothenate, biotin, and minerals. Supplementation was started on admission to the orthopaedic unit and continued throughout the stay in the 2nd (recovery) hospital. The supplement was given for a mean period of 32 days at 2000 hrs. (n = 27) Control group: No intervention(n = 32) Co-interventions: Voluntary oral intake
Outcomes	Mortality, upper arm circumference, triceps skinfold thickness, complications, serum albumin levels, transferrin levels, alkaline phosphatase levels, osteocalcin levels, lenght of hospital stay
Study dates	March 1985 to May 1985
Notes	We contacted the authors on 17th November 2015 by email: marino.delmi@grangettes.ch. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not possible due to the nature of the intervention
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were dropouts above 5%.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but the trial reported serious adverse events and mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Dennis 2005

Methods	Randomised clinical trial (stratified for age, sex, and predicted probability of poor outcome), UK

Dennis 2005 *(Continued)*

Participants	4023 hospitalised adults with either: 1. admission to a hospital due to a stroke (1st or recurrent stroke) within 7 days of onset OR 2. suffering a stroke whilst already in hospital where the randomising clinician was uncertain about the best feeding policy and with consent or assent obtained from close relatives as well as having passed a shallow screen. The participants were at nutritional risk due having had a stroke. Male:Female: 53% male Mean age = 71 years Exclusion: (a) People with subarachnoid haemorrhage, people who experienced a transient ischaemic attack (TIA) or trivial stroke and were likely to remain in hospital for only a few days (b) people who could swallow but in whom nutritional supplementation was contraindicated (e.g. morbidly obese) (c) those in coma (i.e. unresponsive to pain) or who were very unlikely to survive more than a few days because of some severe non-stroke illness OR (d) people who had already been entered into the same FOOD Trial
Interventions	Experimental group: oral nutritional supplement (equivalent to 360 mL at 6·27 kJ/mL and 62·5 g/L in protein every day) and regular hospital diet(n = 2016) Control group: regular hospital diet(n = 2007)
Outcomes	Death or poor outcome and overall survival at 6 months, health-related QoL among survivors, time to hospital discharge, length of stay in hospital, number of days of tube-feeding, adverse effects of feeding regimens, premature cessation of feeding regimens and reasons
Study dates	Nov 1996 to August 2003
Notes	We contacted the authors on 12th November 2015 by email: martin.dennis@ed.ac.uk. We received data on quality of life.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated
Allocation concealment (selection bias)	Low risk	Locked computer
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded. Participants knew their allocation.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Only a blinded assessment at 6 months follow-up.
Incomplete outcome data (attrition bias) All outcomes	Low risk	7 dropouts but reasons for the dropouts were clearly stated and the trial used intention-to-treat.
Selective reporting (reporting bias)	Low risk	All clinically relevant outcomes were reported, as stated in the protocol.
For-profit bias	Low risk	FOOD was funded by the NHS R&D Health Technology Assessment Programme (Reference 96/29/01), The Stroke Association (Reference 17/98) and Chest

Dennis 2005 *(Continued)*

		Heart and Stroke Scotland (Reference 97/4). The Singapore Medical Research Council supported the trial in Singapore. The Royal Australasian College of Physicians supported the trial in Hawkes Bay, New Zealand.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Dennis 2006

Methods	Randomised clinical trial, UK
Participants	859 hospitalised adults who were 1. either admitted to hospital with a stroke (1st or recurrent stroke) within 7 days of onset OR 2. suffering a stroke whilst already in hospital AND 3. randomising clinician uncertain about the best feeding policy AND 4. consent or assent from close relatives obtained and 5. did not pass shallow screen. The participants were at nutritional risk due to having had a stroke. Exclusion: Subarachnoid haemorrhage
Interventions	Experimental group: early enteral tube-feeding. (n = 429) Control group: no tube-feeding for > 7 days (early versus avoid)(n = 430)
Outcomes	Death or poor outcome and overall survival, proportion of participants who were dead at 6 months, health-related QoL among survivors, time to hospital discharge, length of stay in hospital (which will provide a surrogate outcome for analysis of cost), number of days of tube-feeding, adverse effects of feeding regimens, premature cessation of feeding regimens and reasons
Study dates	Nov 1996 to August 2003
Notes	We contacted the authors on 12th November 2015 by email: martin.dennis@ed.ac.uk. We received data on quality of life.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Computer-generated
Allocation concealment (selection bias)	Low risk	Locked computer
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded. Participants knew their allocation.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Only a blinded assessment at 6 months follow-up.
Incomplete outcome data (attrition bias) All outcomes	Low risk	1 lost to follow-up

Dennis 2006 *(Continued)*

Selective reporting (reporting bias)	Low risk	All clinically relevant outcomes were reported, as stated in the protocol.
For-profit bias	Low risk	FOOD was funded by the NHS R&D Health Technology Assessment Programme (Reference 96/29/01), The Stroke Association (Reference 17/98) and Chest Heart and Stroke Scotland (Reference 97/4). The Singapore Medical Research Council supported the trial in Singapore. The Royal Australasian College of Physicians supported the trial in Hawkes Bay, New Zealand.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Ding 2009

Methods	Randomised clinical trial, China
Participants	60 hospitalised adults diagnosed with invasive gastric cancer by gastroscopy and pathology, at nutritional risk due to major surgery Male:Female =41:19 Mean age = 47.5 Exclusion criteria: Bad liquid quality, diabetes, hyperthyroidism and other metabolic diseases, poorly-controlled heart and lung function which could not tolerate surgery, as well as other digestive system diseases such as intestinal obstruction, appendicitis, cholecystitis, vomiting, abdominal distension, diarrhoea
Interventions	Experimental group: Oral supplement, Nutrison Fibre (Nutricia China,4184 kJ/L)1000 ml/day, based on baseline diet. It was started 3 days prior to the surgery, with the amount calculated based on the co-intervention. (n = 21) Control group: Normal daily diet prior to surgery, with the amount based on the co-intervention. (n = 21) Co-interventions: Postoperative fasting and TPN support for 4 to 5 days, the ratio of nutrient solution to the venous nitrogen was 0.15 g/kg 1/day, nitrogen source was 18 amino acids, non-protein calorie was 117.2 kJ/kg/day, fat emulsions were 30% ~ 40% and glucose was 60% ~ 70%. It was prepared as a nutrient mixture including insulin, potassium chloride, and vitamins in correct proportion.
Outcomes	Albumin, immunoglobulin, body mass
Study dates	Not stated
Notes	We tried but failed to contact the authors by phone.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	The sequence generation was achieved using a random-numbers table.
Allocation concealment (selection bias)	Unclear risk	Not described

Ding 2009 *(Continued)*

Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Dionigi 1991

Methods	Randomised clinical trial, Italy
Participants	33 hospitalised adults with advanced gastric cancer, at nutritional risk due to major surgery Male:Female = 24:9 Mean age: 65 years Exclusion criteria: Not specified
Interventions	Experimental group: parenteral or enteral hyperalimentation, or both. The total energy supply was 1.5 x BEE calculated according to the Harris-Benedict formula: the ratio KcaYgN administered was adjusted to 130:1. (n = 7) Control group: oral alimentation as possible or peripheral fluids (n = 9)
Outcomes	SH-thymidine (3HT)
Study dates	Not stated
Notes	We contacted the author on 9th December 2015 by email: p.dionigi@smatteo.pv.it. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described

Dionigi 1991 *(Continued)*

Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was funded by Ajinomoto Co. Inc.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Doglietto 1990

Methods	Randomised clinical trial, Italy
Participants	29 hospitalised adults affected by cancer undergoing total or subtotal gastrectomy, at nutritional risk due to major abdominal surgery Male:Female = 20:9 Mean age = 54 years Exclusion criteria: Not stated
Interventions	Experimental group: Preoperative enteral nutrition support, which was administered as a supplement to the oral diet for at least 7 days, providing 30 kcal/kg a day (70% as dextrose and 30% as lipids) and 200 mg/kg a day of nitrogen(n = 13) Control group: Standard hospital oral diet (n = 16)
Outcomes	Postoperative morbidity, mortality, septic complications
Study dates	Not stated
Notes	We contacted the authors on 26th June 2015 by email: gbdoglietto@rm.unicatt.it. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described

Doglietto 1990 *(Continued)*

Blinding of participants and personnel (performance bias) All outcomes	High risk	Partipants and personnel were not blinded due to the nature of the intervention.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.Other bias

Doglietto 1996

Methods	Randomised clinical trial, multicenter, Italy
Participants	678 hospitalised adults undergoing elective abdominal surgery, at nutritional risk due to major elective abdominal surgery Male:Female = 392:286 Mean age = 61 years Exclusion criteria: < 18 and > 80, major concurrent illness, insulin-dependent diabetes, refusal of informed consent, severe malnutrition
Interventions	Experimental group: Received 1.16 ± 0.22 g/Kg/day amino acids for at least 5 postoperative days(n = 338) Control group: Received 150 g glucose daily for at least 5 postoperative days(n = 340) Co-interventions: Additional fluids, electrolytes, vitamins, and trace elements were provided as clinically indicated.
Outcomes	All-cause mortality, major complications, minor complications
Study dates	November 1992 to November 1994
Notes	We contacted the authors on 26th June 2015 by email: gbdoglietto@rm.unicatt.it. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated random numbers

Doglietto 1996 *(Continued)*

Allocation concealment (selection bias)	Unclear risk	The trial was described as randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	No blinding was performed.
Blinding of outcome assessment (detection bias) All outcomes	High risk	No blinding was performed.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	Both all-cause mortality and serious adverse events were reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Dong 1996

Methods	Randomised clinical trial, China
Participants	520 hospitalised adults undergoing oesophageal and gastric resection, at nutritional risk due to major surgery Male:Female = 340:180 Mean age = 56.5 years Exclusion criteria: None stated
Interventions	Experimental group: Received enteral nutrition in the form of mixed milk post-surgery On the first day,1000 ml mixed milk was given. If no side effect occurred, a minimum of 2500 ml a day were given from the 2nd day, up to 4 - 6 times a day, at a speed of 30 ml per min. After 7 - 9 days the nutrition tube was removed , if there were no serious adverse effects.(n = 256) Control group: No intervention(n = 264) Co-interventions: Post-surgery a daily supplement of glucose 150 ˜ 200 g was given, as well as a discontinuous transmission of plasma, blood or albumin, to maintain the water and electrolyte balance. This was continued until the oral intake was started again.
Outcomes	Albumin, pre-albumin, transferrin, weight difference, nitrogen balance
Study dates	Not stated
Notes	We could find no contact information for the author.
Risk of bias	

Dong 1996 *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reproted
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.Other bias

Drott 1988

Methods	Randomised clinical trial, Sweden
Participants	23 hospitalised adults with nonseminomatous germ cell tumours of the testis, at nutritional risk due to trialist indication Male:Female = 23:0 Mean age = 28.5 years. Exclusion criteria: None stated
Interventions	Experimental group: TPN administered 4 - 5 days before chemotherapy initiation as well as during hospitalisation. Non-eprotein calories were isocalorically divided between fat (intralipid 20%) and D-glucose 30%. Control: Spontanous oral intake Co-intervention: Chemotherapy
Outcomes	Weight
Study dates	Not stated
Notes	We found no contact information for the author.

Drott 1988 *(Continued)*

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality and serious adverse events.
For-profit bias	Low risk	Supported by the Swedish Cancer Society.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Duncan 2006

Methods	Randomised clinical trial, UK.
Participants	314 hospitalised adults undergoing surgery for hip fracture, at nutritional risk due to being frail elderly undergoing less than major surgery Male:Female = 0:314. Exclusion criteria: None stated
Interventions	Experimental group: Received additional personal attention of the dietetic assistants in addition to standard care throughout the length of the intervention (n = 153) Control group: the conventional pattern of nurse- and dietitian-led care, normally provided on the trauma unit (n = 165)
Outcomes	Mortality, length of stay, energy intake and nutritional status
Study dates	May 2000 to August 2003.
Notes	We contacted the authors on 12th December 2015 by email: antony.johansen@wales.nhs.uk. We received no reply.

Risk of bias

Duncan 2006 *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation was by sequentially-numbered, opaque envelopes, in blocks of 10, prepared by a member of staff not directly involved in the trial.
Allocation concealment (selection bias)	Low risk	They used sealed envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment was blinded.
Incomplete outcome data (attrition bias) All outcomes	Low risk	They partly used intention-to-treat, but had a small number of dropouts.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was funded by British Dietetic Association.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Dvorak 2004

Methods	Randomised clinical trial, Canada
Participants	17 hospitalised adults who sustained an ASCI with an International Standards for Neurologic Classification of Spinal Cord Injury Impairment Scale15 grades A, B, C., had a last normal neurologic level between C2 and T1, and were admitted to the ASCIU within 72 hours of injury. At nutritional risk due to trauma. Male:Female = 15:2 Mean age = 43 years Exclusion criteria: 1. Had a pre-existing medical condition such as active bowel disease or a premorbid condition with a significantly diminished nutritional status (e.g. AIDS, cancer). 2. Had surgical resection of a portion of the large or small bowel. 3. Had additional injuries that prevented feeding through a nasogastric tube. 4. Had major chest or abdominal trauma
Interventions	Experimental: Enteral feeding from 72 hours using continuous enteral feeding. A registered dietitian evaluated the participant's conditions to determine their estimated energy requirements, using the Harris-Benedict equation. The formulas used were Promote, Jevity, Jevity Plus, and Osmolite HN.(n = 7) Control: No intervention (n = 10) Co-intervention: Enteral feeding from 120 hrs using Promote, Jevity, Jevity Plus, and Osmolite HN
Outcomes	Complications (count data), length of stay

Dvorak 2004 *(Continued)*

Study dates	Not stated
Notes	We did not contact the authors due to the late inclusion of the trial.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer program (omnistat)
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not described.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report mortality.
For-profit bias	Low risk	Supported by the Mr. and Mrs. P. A. Woodward's Foundation, Vancouver, BC, Canada.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Dölp 1987

Methods	Randomised clinical trial, Germany
Participants	20 hospitalised adults undergoing vaginal hysterectomy, at nutritional risk due to major surgery Male:Female = 0:20 Mean age = 53.5 years
Interventions	Experimental group: Parenteral nutrition (40 ml/kg body weight 3.5% amino acid solution, 5% carbohydrates) for 3 days(n = 10) Control group: Water and electrolytes (standard treatment)(n = 10)
Outcomes	Plasma proteins, nitrogen balance
Study dates	Not stated
Notes	We found no contact information for the author.

Dölp 1987 *(Continued)*

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not described.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Elbers 1997

Methods	Randomised clinical trial, Germany.
Participants	20 hospitalised adults undergoing curative resection of gastric cancer, at nutritional risk due to major surgery Male:female = 11:9 Mean age = 64 years
Interventions	Experimental group: oral supplement with a proteinful, liquid sip feed (3 x 200 ml, 600 kcal/day, 54 g protein/day) starting on day 5 after surgery(n = 10) Control group: no intervention(n = 10) Co-intervention: standard diet and parenteral nutrition until day 5
Outcomes	Plasma proteins, nitrogen balance
Study dates	Not stated
Notes	We found no contact information for the author.

Risk of bias

Elbers 1997 *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report mortality.
For-profit bias	Unclear risk	The trial was supported by a company that might have an interest in a given result (Fresemius AG).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Elimam 2001

Methods	Randomised clinical trial, Sweden
Participants	14 hospitalised adults undergoing elective open cholecystectomy, at nutritional risk due to major surgery Male:Female = 8:6 Mean age = 42.5 years
Interventions	Experimental group: TPN immediately after surgery (T 135 kJ/kg body weight every 24 hrs)(n = 7) Control group: Saline infusion for 24 hrs postoperatively(n = 7) Co-interventions: Saline infusion during surgery
Outcomes	Biochemistry
Study dates	Not stated
Notes	We contacted the authors n 19th August 2015 by email: claude.marcus@ki.se. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement

Elimam 2001 *(Continued)*

Random sequence generation (selection bias)	Unclear risk	The trial was described as randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Low risk	The trial was funded by: "Wera EkstroÈm Foundation, the Frimurare Barnhuset Foundation, the Jerring Foundation, the Swedish Society for Medical Research, and the Swedish Medical Research Council (9941, 04210, 09101).".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Eneroth 2005

Methods	Randomised clinical trial, Sweden
Participants	80 hospitalised adults admitted for hip surgery, at nutritional risk because of being frail elderly with minor surgery Male:Female = 17:63 Mean age = 81.5 years Exclusion criteria: Multiple fractures, pathologic fractures, malignant disease, inflammatory joint disease, pain or functional impairment other than the hip fracture which might hamper normal mobilisation, depression, dementia, acute psychosis, known alcohol or medication abuse, epileptic seizures, diseases of such severity that they might negatively influenced the supplementary treatment regimen
Interventions	Experimental group: intravenous supplementary nutrition (1000 kcal/day) for 3 days followed by OSN (400 kcal/day) for 7 days or until discharge(n = 40) Control group: No intervention(n = 40) Co-interventions: Standard hospital food and beverage
Outcomes	Anthropometrics (triceps skin-fold, arm muscle circumference, BMI), biochemistry, SGA-screening
Study dates	Not stated

Eneroth 2005 *(Continued)*

Notes	We contacted the authors on 12th November 2015 by email: magnus.eneroth@med.lu.se. We received a reply (allocation concealment).

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Low risk	The trial used sealed, opaque envelopes for allocation concealment.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as being unblinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial was described as being unblinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	There were above 5% dropouts on BMI, and it was unclear who and how these were handled.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained. The trial reported mortality and complications.
For-profit bias	Low risk	This trial was supported by a non-profit organisation (Medical Faculty of Lund University, the County of Skane and the Swedish National Board of Health and Welfare).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Espaulella 2000

Methods	Randomised, placebo-controlled clinical trial, Spain.
Participants	171 hospitalised adults hospitalised due to hip fracture, at nutritional risk due to being frail elderly Male:Female = 36:135 Mean age = 82.5 years Exclusion criteria: Younger than 70, advanced dementia, need for IVN, those with pathological fractures or fractures not due to accidental falls
Interventions	Experimental group: Oral supplement of 20g protein and 800 mg calcium for 60 days(n = 85) Control group: Placebo (n = 86) Co-interventions: Normal diet
Outcomes	Mortality, complications, functional recovery, use of walking aids

Espaulella 2000 *(Continued)*

Study dates	Not stated
Notes	We contacted the authors by email: hguyer@umich.edu. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated in blocks of 4
Allocation concealment (selection bias)	Low risk	Allocation concealment with sealed envelopes
Blinding of participants and personnel (performance bias) All outcomes	Low risk	An independent pharmacist assigned the study number, and prepared the appropriate nutritional supplement.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	It was unclear how the outcome assessment was blinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	The pattern of dropouts was not clearly stated, and exceeded 5%. The trial did not use multiple imputation.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was funded by Clinical Nutrition SA.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Essén 1993

Methods	Randomised clinical trial, presumably Sweden
Participants	17 hospitalised adults admitted for elective open cholecystectomy, at nutritional risk due to major surgery Male:Female = 3:14 Mean age = 42.5 Exclusion criteria: metabolically unhealthy
Interventions	Experimental group: TPN (135 kj/kg body weight/day and 0.2 g/kg body weight/day protein) for 3 days (n = 9) Control group: saline infusion (n = 8)
Outcomes	Rate of protein synthesis, urine excretion
Study dates	Not stated

Essén 1993 *(Continued)*

Notes	We contacted the author on 12th November 2015 by Linkedin. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events
For-profit bias	High risk	The trial was supported by the company Kabi Baxter Infusion AB
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Eyer 1993

Methods	Randomised clinical trial, USA
Participants	52 hospitalised adults admitted for blunt trauma ICU, at nutritional risk due to being at an ICU department Male:Female = 22:16 (analysed participants) Mean age = 42.5 years Exclusion criteria: Contra-indication for enteral feeding, new upper intestinal suture lines, unstable cervical fracture, admission creatinine level > 2 mg/dL, admission bilirubin > 3 mg/dL; pre-existing malnutrition, use of steroids, radiation, chemotherapy, malignancy, acute spinal cord injury
Interventions	Experimental group: Early feeding within < 24 hrs (Enteral nutrition: 1.33 kcal/mL, 125:1 nonprotein kcal/g. 58g protein, 158g carbohydrate, 52g fat) (n = 26) Control group: No intervention (n = 26) Co-interventions: Enteral feeding after 72 hrs
Outcomes	Urinary catecholamine, cortisol excretion, infections, ICU days, ventilation days, mortality

Eyer 1993 *(Continued)*

Study dates	December 1988 to May 1991
Notes	We could obtain no contact information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial used sealed envelopes to conceal the allocation, but it was unclear if the envelope was opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as unblinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was funded in part by Hoechst-Roussel.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Fan 1989

Methods	Randomised clinical trial, Hong Kong
Participants	40 hospitalised adults with oesophageal cancer, at nutritional risk due to major surgery Male:Female = 35:5 Mean age = 65 years Exclusion criteria: Not described.
Interventions	Experimental group: Pre-operative parenteral nutrition 14 days before surgery(n = 20) Control group: No intervention(n = 20) Co-interventions: Oral feeding
Outcomes	Nitrogen intake, calorie intake, weight, lymphocyte count before surgery, complications, mortality and albumin
Study dates	April 1985 to November 1986

Fan 1989 *(Continued)*

Notes	We contacted the authors in September 2015 by email: stfan@hku.hk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	It was only described that participants were randomised by "drawing sealed envelopes".
Allocation concealment (selection bias)	Unclear risk	It was only described that participants were randomised by "drawing sealed envelopes".
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not described.
Selective reporting (reporting bias)	Low risk	There was no protocol. The trial reported all-cause mortality and complications.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Fan 1994

Methods	Randomised clinical trial, Hong Kong
Participants	150 hospitalised adults undergoing resection of hepatocellular carcinoma, at nutritional risk due to major abdominal surgery Male:Female = 109:15 (gender not reported for 26 participants) Mean age = 53.5 years Exclusion criteria: Metastatic disease (exclusion was done after randomisation)
Interventions	Experimental group: Perioperative parenteral nutrition started 7 days before hepatic resection and continued for 7 days after operation. PN consisted of 1.5 g amino acid a kilogram of body weight, dextrose and lipid emulsion providing 30 kcal a kilogram each day.(n = 75) Control group: No intervention except 5% dextrose in normal saline postoperatively(n = 75) Co-interventions: Usual oral diet. Cefotaxime at the time of induction and postoperatively, and 25 g of albumin intravenously for 5 days

Fan 1994 *(Continued)*

Outcomes	All-cause mortality, complications, morbidity, aspartate aminotransferase, glucose, urea, transferrin, prealbumin, retinol-binding protein, body weight, midarm circumference, triceps skinfold, grip strength, serum immunoglobulin, hospital stay
Study dates	September 1990 to June 1993
Notes	We contacted the authors on 23rd June 2015 by email: stfan@hku.hk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as unblinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	It was determined by an independent observer, but not described that person was blinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	There were above 5% dropouts, and even though it was clearly stated who was removed from the trial, the trial did not use proper methodology to deal with incomplete outcome data.
Selective reporting (reporting bias)	Low risk	Seriours adverse events and all-cause mortality were reported. No protocol could be found.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Fasth 1987

Methods	Randomised clinical trial, Sweden
Participants	92 hospitalised adults undergoing major colorectal surgery for carcinoma of the large bowel or inflammatory bowel disease Male:Female = unknown Mean age = unknown Exclusion criteria: none specified
Interventions	Experimental group: 48 participants were allocated to postoperative TPN for a minimum of 7 days or until an oral diet was tolerated. The TPN was given through a central venous catheter and included infusion of an amino acid solution to a mean nitrogen intake of 215+8 mg/ kg/ day, and 500 ml of a 20%

Fasth 1987 *(Continued)*

	fat emulsion plus 10% dextrose to 45 + 1.6 kcal/ kg/day. The TPN was given for 9.7 + 1.1 days. 20 mmol of phosphate was added daily to everyone in the TPN group. (n = 48) Control group: No intervention (n = 44) Co-interventions:10% dextrose solution containing electrolytes according to individual needs until an oral diet was tolerated, these participants were given an IV fusion with a mean of 16 + 0.8 kcal/kg/day for 6.2 + 0.7 days (mean + SD).
Outcomes	Overall mortality, serious adverse events (septic and non-septic complications), morbidity
Study dates	Not described
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not described.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was funded by Vitrum AB.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Figuerasfelip 1986

Methods	Randomised clinical trial (multicentre study in 4 hospitals), Spain
Participants	70 hospitalised adults undergoing medium to major surgery, at nutritional risk due to major surgery Male:Female = 38:32 Mean age = 57 years Exclusion criteria: recent loss of more than 10% of body weight, serum albumin of 3 g/dl or less, serum creatinine above 2 mg/dl; diabetes, sepsis or recent haemorrhage, or both

Figuerasfelip 1986 *(Continued)*

Interventions	Experimental group: hypocaloric peripheral parenteral nutrition (HPPN), consisting of 1 g of amino acids and 2 g of polyols (sorbitol and xylitol) a kg each day. The solution was started on the 1st postoperative day after normalisation of the haemodynamic status and remained in the study for a minimum of 5 days. (n = 41) Control group: 1500 ml of 5% glucose and 1500 ml of saline The solution was started on the 1st postoperative day after normalisation of the haemodynamic status and remained in the study for a minimum of 5 days. (n = 29)
Outcomes	Weight, urinary nitrogen excretion, serum albumin, total proteins, prealbumin, transferrin, glucose, urea, creatinine and cholesterol, hospital stay
Study dates	
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	Sealed envelopes
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained. The trial reported complications and mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Fletcher 1986a

Methods	Randomised clinical trial, Australia
Participants	28 hospitalised adults admitted for aortic grafting, at nutritional risk due to major surgery Male:Female = 22:6 Mean age = 64 years

Fletcher 1986a *(Continued)*

Interventions	Experimental group 1: 1 litre of their daily intravenous fluid requirements given as TPN (250 gm dextrose, 40 gm amino acids)(n = 10) Control group: Standard intravenous fluids postoperatively(n = 5)
Outcomes	Nitrogen intake and balance, mortality, complications, length of stay
Study dates	Not stated
Notes	Same as Fletcher 1986b. We only reported experimental group 1 vs control here. We contacted the authors 12th December 2015 by email: johnf@med.usyd.edu.au. The author replied that he would give us the information some time in the future. We have not received the information at the time of writing.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Only experimental group two received an enteral tube.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report serious adverse events properly (only total complications, not by group).
For-profit bias	High risk	The trial was funded by Bristol-Myers Squibb.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Fletcher 1986b

Methods	Randomised clinical trial, Australia
Participants	28 adult hospitalised patients admitted for aortic grafting, at nutritional risk due to major surgery Male:Female = 22:6 Mean age: 64 years
Interventions	Experimental group 2: Enteral nutrition(n = 9)

Fletcher 1986b *(Continued)*

	Control group: Standard intravenous fluids postoperatively(n = 4)
Outcomes	Nitrogen intake and balance, mortality, complications, length of stay
Study dates	
Notes	

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Only experimental group two received an enteral tube.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report serious adverse events properly (only total complications, not by group).
For-profit bias	High risk	The trial was funded by Bristol-Myers Squibb.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Foschi 1986

Methods	Randomised clinical trial, Italy
Participants	64 hospitalised adults with obstructive jaundice, with serum bilirubin above 200 µmol undergoing percutaneous transhepatic biliary drainage, at nutritional risk due to undergoing major surgery Male:Female = 39:21 (gender not reported for four participants) Mean age = 63.5 years Exclusion criteria: None stated
Interventions	Experimental group: Either enteral (19 participants) or parenteral nutrition (4 participants) or both (5 participants). Enteral nutrition was Precision BR with 10% peptides, 0.8% lipid, 81.9% carbohydrate; parenteral nutrition was Freamine III (50% dextrose and 8.5% amino acid). All nutrition was for at least 12 days preoperatively.(n = 28)

Foschi 1986 *(Continued)*

	Control group: no intervention(n = 32) Co-interventions: percutaneous trans-hepatic biliary drainage and standard care
Outcomes	Complications, mortality
Study dates	Not stated
Notes	We contacted the authors on 6th April 2016 by email: Diego.Foschi@unimi.it. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	There are > 5% dropouts and it is unclear how the trial handles missing data.
Selective reporting (reporting bias)	Low risk	The trial reports complications and mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Førli 2001

Methods	Randomised clinical trial (stratified for age and sex), Norway
Participants	42 underweight hospitalised adults with end-stage pulmonary disease referred to the hospital to be evaluated for lung transplantation, at nutritional risk due to low BMI Male:Female = 20:22 Mean age = 48.5 years Exclusion criteria: Unwillingness to participate and eat the prescribed diet, too sick to be able to co-operate and leave of absence due to the possibility of eating meals outside the hospital
Interventions	Experimental group: Energy-rich diet 10 MJ/day + offered extra meals(n = 20) Control group: Regular hospital diet 8.5 - 9 MJ/day(n = 22)

Førli 2001 *(Continued)*

Outcomes	Weight, BMI, energy intake, mortality, pulmonary function
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The trial used random-number tables.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as unblinded
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial was described as unblinded
Incomplete outcome data (attrition bias) All outcomes	High risk	Above 5% dropouts and the trial did not allow proper methodology for an intention-to-treat analysis.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was supported by the Research Council of Norway and the Norwegian Heart and Lung Association, as well as financial support from Pharmacia & Upjohn and Abbott Norway A/S.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Gariballa 1998

Methods	Randomised clinical trial, UK
Participants	42 hospitalised adults admitted with an acute stroke and did not have problems with swallowing. The participants had to be conscious the 1st week after the stroke, and they had to show evidence of undernutrition measured with midarm circumference ˜1 SD below the mean, and triceps skinfold thickness. Partipants were at nutritional risk due to stroke. Male:Female = 21:21 Mean age = 78 years Exclusion criteria: cerebral and subarachnoid haemorrhage, active gastrointestinal disease, gastric surgery, biochemical evidence of hepatic or renal impairment, uncontrolled heart failure, diagnosed malignancy, sepsis, or persistent swallowing difficulty

Gariballa 1998 *(Continued)*

Interventions	Experimental group: Daily oral food supplement for 4 weeks in addition to hospital food(n = 21) The nutritional support consisted of > 400 mL of Fortisip containing 600 kcal and 20 g protein. Control group: Received only hospital food for 4 weeks(n = 21)
Outcomes	Energy and protein intakes during the intervention period, change in nutritional status, disability, infective complications, length of stay, and mortality
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: s.gariballa@uaeu.ac.ae . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as block-randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Low risk	Randomisation blocks were kept separately by the dietitian, and allocation to the treatment group was done by telephone.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Nurses and participants were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Single-blinded study, with the outcome assessors blinded
Incomplete outcome data (attrition bias) All outcomes	High risk	Above 5% dropouts according to weight, and the trial did not allow proper methodology for intention-to-treat analysis.
Selective reporting (reporting bias)	Low risk	All-cause mortality and serious adverse events were reported. A protocol was not found.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Gariballa 2006

Methods	Randomised clinical trial, UK.
Participants	445 hospitalised adults > 65 of age and able to swallow, at nutritional risk according to the trialist Male:Female = 234:211 Mean age = 76.7 Exclusion criteria: Undergone gastric surgery, diagnosed malabsorption and morbid obesity, in a coma, diagnosed severe dementia, malignancy, living in an institution, already taking supplements

Gariballa 2006 *(Continued)*

Interventions	Experimental group: Oral supplements (400 ml 995 kcal)(n = 223) Control group: Placebo (n = 222) Co-interventions: Standard hospital diet
Outcomes	6 months of disability (Barthel score), non-elective readmission, length of stay in hospital, discharge destination, morbidity (infective complications), mortality, nutritional status
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: s.gariballa@uaeu.ac.ae . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The sequence was generated by the trial statistician but it was unclear how.
Allocation concealment (selection bias)	Low risk	Sealed opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	Low risk	The trial was a placebo study.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The trial was placebo and no-one knew who received placebo or supplement.
Incomplete outcome data (attrition bias) All outcomes	High risk	Above 5% dropouts according to BMI, and the trial did not allow proper methodology for intention-to-treat analysis.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Gazzotti 2003

Methods	Randomised clinical trial, Belgium
Participants	80 hospitalised adults, at nutritional risk based on Mini Nutritional Assessment Male:Female = 19:61 Mean age = 80 years
Interventions	Experimental group: oral supplements (1.5 kcal/ml 500 kcal and 21 g protein a day in 200 ml cup)(n = 39)

Gazzotti 2003 *(Continued)*

	Control group: no intervention(n = 41) Co-interventions: standard diet throughout the hospitalisation and after discharge for 2 months
Outcomes	All-cause mortality, weight change, MNA score
Study dates	November 1999 to April 2000
Notes	We contacted the authors on 23rd June 2015 by email: claire.gazzotti@chrcitadelle.be. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Low risk	The allocation was concealed using sealed envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial was described as not blinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	Above 5% dropouts and the trial did not use proper methodology for intention-to-treat analysis.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Low risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Gong 2011

Methods	Randomised clinical trial, China
Participants	24 hospitalised adults diagnosed with ulcerative colitis in accordance with China's diagnosis of inflammatory bowel disease and treatment standard of consensus on diagnostic criteria, at nutritional risk due to ulcerative colitis. Male:Female = 12:9 (gender not reported for three participants) Exclusion criteria: Unclear
Interventions	Experimental group: short peptide enteral nutrition agent of 125 g (100 general, Nutricia Pharmaceutical Co. Ltd, Switzerland) for oral feeding, 4 times each day (n = 11)

Gong 2011 *(Continued)*

	Control group: no intervention (n = 10) Co-intervention: mesalazine 1.0 g (ADIS, ethypharm Pharmaceutical Group, France) by mouth, 4 times each day
Outcomes	Fructose concentration, mannitol concentration, disease activity index, BMI, symptom relief
Study dates	Not stated
Notes	We tried but failed to contact the authors by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence generation was achieved using a random-numbers table.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Gunerhan 2009

Methods	Randomised clinical trial, Turkey
Participants	38 hospitalised adults with gastrointestinal tumours admitted for surgery, at nutritional risk according to the trialist Male:Female = 9:17 Mean age = 62.5 Exclusion criteria: Diabetes mellitus, renal or hepatic failure or both, active infection, a history of immunosuppressive drug use or clinical signs of vitamin or trace element deficiency
Interventions	Experimental group: Standard enteral feeding (without RNA and omega3)(n = 19)

Gunerhan 2009 *(Continued)*

	Control group: Normal feeding planned by a dietitian(n = 19)
Outcomes	Lymphocyte count, complications, length of hospital stay
Study dates	Not stated
Notes	There was also a 3rd group of immunonutrition, not included in this review. We contacted the authors on 19th August 2015 by email: ygunerhan@gmail.com . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded. Only the experimental group received a tube.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	Above 5% dropouts and the trial did not allow proper methodology for intention-to-treat analysis.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Gupta 1998

Methods	Randomised clinical trial, UK
Participants	37 hospitalised adults undergoing hepatic or pancreatic surgery due to benign or malignant disease, at nutritional risk due to major surgery. Male:Female = not reported Mean age = not reported. Exclusion criteria = not stated
Interventions	Experimental group: Received total enteral nutrition immediately postoperatively(n = 15) Control group: No intervention (n = 20)

Gupta 1998 *(Continued)*

Outcomes	Oxidative stress
Study dates	Not stated
Notes	We contacted the authors on 12th December 2015 by email: c.d.johnson@soton.ac.uk. The author could not provide any additional information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Guy 1995

Methods	Randomised clinical trial, country unknown.
Participants	32 hospitalised adults awaiting liver transplant, at nutritional risk due to malnutrition Male:Female = not reported. Exclusion criteria: admitted to the ICU, grade 4 encephalopathy or with infections precluding liver transplant candidacy
Interventions	Experimental group: Enteral nutrition. Fed via nasogastric tube with “Impact” (n = not reported) Control group: No intervention (n = not reported) Co-interventions: Oral diet with unrestricted protein/calorie supplements
Outcomes	Nutritional intake, encephalopathy, gastro-intestinal bleeding, infection, length of hospital stay and mortality

Guy 1995 *(Continued)*

Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Ha 2010

Methods	Randomised clinical trial, Norway
Participants	165 hospitalised adults admitted due to stroke, at nutritional risk due to MUST Male:Female = 60:64 (only reported for the participants that completed the study) Mean age = 79 years
Interventions	Experimental group: Individualised nutritional care aiming to prevent weight loss(n = 84) Control group: Routine practice with use of oral sip feeding, or tube feeding at the discretion of the attending physician(n = 86)
Outcomes	Number of participants with unintentional weight loss of 5% after 3 months, all-cause mortality, weight change, quality of life, hand-grip strength, length of hospital stay
Study dates	May 2005 to December 2007

Ha 2010 *(Continued)*

Notes	We contacted the authors on 12th December 2015 by email: lisaha@online.no. We received information on serious adverse events and participants lost to follow-up.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The randomisation sequence was computer-generated in blocks of 20.
Allocation concealment (selection bias)	Low risk	The allocation was sequentially-numbered, non-transparent envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The personnel were not blinded to the treatment.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The assessor performing the outcome assessment was not blinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	Above 5% dropouts and the trial did not allow proper methodology for intention-to-treat analysis.
Selective reporting (reporting bias)	Low risk	The outcomes described in the protocol, were assessed in the trial.
For-profit bias	Low risk	This study was supported by the South-Eastern Norway Regional Health Authority and Østfold Hospital Trust.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hartgrink 1998

Methods	Randomised clinical trial, the Netherlands
Participants	140 hospitalised adults admitted due to hip fracture and a pressure sore risk score of 8, at nutritional risk due to being frail elderly Male:Female = 16:113 (of participants analysed) Mean age = 83.7 years Exclusion criteria: Pressure sore of grade 2 or more at admission
Interventions	Experimental group: Tube-feeding consisting of 1 litre Nutrison Steriflo Energy (1500 kcal/1 energy, 60 gram/1 protein) which was administered with a feeding pump through a nasogastric feeding tube. Tube-feeding was meant to be given for 2 weeks, and was administered between 21:00 and 05:00 to minimise interference with the normal hospital diet.(n = 70) Control group: No intervention(n = 70) Co-interventions: Standard hospital diet

Hartgrink 1998 *(Continued)*

Outcomes	Risk factors for pressure sores, pressure-sore grade, mortality, serum protein, albumin
Study dates	May 1993 to November 1995
Notes	We contacted the authors on 19th August 2015 by email: H.H.Hartgrink@lumc.nl. The authors did not keep records of any of the missing information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and physicians were not blinded, since the control group did not receive a naso-gastric tube.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	The trial had more than 5% of participants with incomplete data, and the trial did not use proper methodology for intention-to-treat analysis.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	"The authors want to thank Nuldcia corp., Netherlands for their support of Nutrison tube feeding and the nasogastric tubes".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hasse 1995

Methods	Randomised clinical trial, USA
Participants	50 hospitalised adults undergoing surgery with liver transplant, at nutritional risk due to major surgery Male:Female = 17:14 (completed the study) Mean age = 51 years Exclusion criteria: Dialysis requirements or choledochojejunostomy was performed at the time of transplant.
Interventions	Experimental group: With feeding-tube the participants were given full-strength Reabilan HN (Elan Pharma, Cambridge, MA) 12 hours after surgery. The infusion rate was started at 20 ml/hr and was increased to 40 mL/hr 24 hrs after the initiation of the tube-feeding. If tolerated 40 mL/hour, the feeding rate was increased to 60 mL/hr 12 hrs after the previous rate increased.(n = 25)

Hasse 1995 *(Continued)*

	Control group: Conventional IV electrolytes(n = 25) Co-interventions: non-feeding naso-gastric tube
Outcomes	Medical condition, tube-feeding tolerance, signs of infection, calorie and protein intake, resting energy expenditure, respiratory quotient (RQ), urinary urea nitrogen (UUN), nitrogen balance, hand-grip strength, length of hospital stay, rehospitalisation, overall cost, weight, chemical assays
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: jm.hasse@baylorhealth.edu . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	The 2 groups could not be described as similar, and the dropout rate was above 5%.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality.
For-profit bias	High risk	The study was supported in part by grants from the Di-etitians in Nutrition Support Practice Group Member Research Award, Elan Pharma.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Heidegger 2013

Methods	Randomised clinical trial, Switzerland
Participants	305 hospitalised adults admitted to ICU for more than 3 days. They were expected to stay for more than 5 days at the ICU and to survive for more than 7 days. They received less than 60% of their energy target and were at nutritional risk due to being in a ICU. Male:Female = 215:90 Mean age = 60.5 years

Heidegger 2013 *(Continued)*

	Exclusion criteria: Receiving PN, had persistent gastro-intestinal dysfunction and ileus, were pregnant, refused to consent, or had been readmitted to the ICU after previous randomisation
Interventions	Experimental group: supplemental parenteral feeding, 0.62 – 1.37 kcal/mL of energy (20% proteins, 29% lipids (15% medium-chain triglycerides), and 51% carbohydrates) on day 3(n = 153) Control group: no intervention on day 3(n = 152) Co-interventions: enteral nutrition
Outcomes	Nosocomial infections, number of antibiotic-free days, duration of invasive and non-invasive mechanical ventilation, length of stay in the ICU and hospital, mortality in ICU, general mortality, duration of renal replacement therapy, glycaemia (crude blood glucose concentration and area under the curve (AUC)), phosphataemia, concentration of C-reactive protein, liver test results, and drug administration (insulin, steroids, and antifungal agents).
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: claude.pichard@unige.ch. We received an initial reply, but obtained no further information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated randomisation sequence
Allocation concealment (selection bias)	Low risk	Sequentially-numbered, sealed, opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	High risk	Treatment providers and participants were unblinded.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The statistician did not know to which group the participants were allocated.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were under 5% of participants with incomplete outcome data.
Selective reporting (reporting bias)	High risk	The trial did not report ICU complications as stated in the protocol.
For-profit bias	High risk	Financial support came from the public Foundation Nutrition 2000Plus, APSI-ICU quality funds of the Geneva University Hospital, Internal Service Resources of the Lausanne University Hospital, and from unconditional and non-restrictive research grants from Baxter and Fresenius Kabi, representing less than 25% of the global expenses. RT has received a research award from the academic Société Nationale Française de Gastroentérologie. The sponsors did not place any restrictions on the study design.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Heim 1985

Methods	Randomised clinical trial, Germany
Participants	36 hospitalised adults with advanced colorectal carcinoma, at nutritional risk due to trialist indication Male:Female = 20:16 Mean age = 52 years Exclusion criteria: None stated
Interventions	Experimental group: a standard 10% amino acid solution, 40% dextrose and 10% fat solution over a 10-day period(n = 18) Control group: No intervention(n = 18) Co-intervention: chemotherapy
Outcomes	Survival (not usable), side effects of parenteral nutrition
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reported survival and side effects.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hendry 2010

Methods	Randomised clinical trial, factorial design
Participants	74 hospitalised adults undergoing liver resection, at nutritional risk due to major surgery Male:Female = 38:30 (gender not reported for six participants) Median age = 62 years Exclusion criteria: Patients with a BMI of < 18 or greater than 30 kg/m^2, pre-existing conditions limiting mobility, underlying cirrhotic liver disease, a history of liver resection, and those in whom bile duct excision and central or extended hepatectomy was planned before randomisation
Interventions	Experimental group: Received 800 ml oral carbohydrate loading drink (Nutricia Preop); Nutricia Clinical Care, Trowbridge, UK) at 22.00 hrs the night before surgery and 400 ml at 06.00 hrs on the morning of surgery. In addition, they received ONS (2 cartons a day comprising 400 ml, 600 kcal, 24 g protein, Nutricia Fortisip; Nutricia Clinical Care) from the day of surgery until day 30 (n = 36) Control group: no intervention (n = 38) Co-interventions: standard care, laxatives (only in 2 of the arms)
Outcomes	Mortality, morbidity, gastric emptying, length of hospital stay
Study dates	Not stated
Notes	We contacted the authors on 29th April 2016 by email: paul.hendry@ed.ac.uk. We have not received a reply at the time of writing.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The trial used a random-numbers table.
Allocation concealment (selection bias)	Low risk	The trial used sealed opaque envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded
Blinding of outcome assessment (detection bias) All outcomes	High risk	Not blinded
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	There were above 5% dropouts and it was unclear how the trial accounted for missing data.
Selective reporting (reporting bias)	Low risk	No prepublished protocol could be obtained but the trial reported mortality and morbidity (NCT00538954).
For-profit bias	High risk	Nutricia Preop (Nutricia Nutridrink in The Netherlands) and Nutricia Fortisip drinks were supplied by Nutricia Clinical Care (Trowbridge, UK) and Nutricia Nederland (Advanced Medical Nutrition, Zoetermeer, The Netherlands).

Hendry 2010 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Henriksen 2003a

Methods	Randomised clinical trial, Denmark
Participants	58 hospitalised adults admitted for bowel resection, at nutritional risk due to major surgery Male:Female = 21:37 Mean age = 63.7 years Exclusion criteria: inflammatory bowel disease, disseminated malignant disease, previous treatment for intra-abdominal cancer, serious cardiovascular disease (New York Heart Association angina class III and IV) diabetes mellitus, disabling mental disease, dementia or a history of alcoholic, medicine or drug abuse
Interventions	The night before surgery: Experimental group 1: 12.5 g/100 ml carbohydrate (maltodextrin) drink (n = 16) Experimental group 2: 2.5 g/100 ml carbohydrate (maltodextrin) and 3.5 g/100 ml of hydrolyzed soy protein (n = 16) Control group: No treatment (n = 8) Co-interventions: Pure water until 3 hrs before induction of anaesthesia + basic postoperative regimen
Outcomes	Voluntary grip and quadriceps strength, body composition, pulmonary function, VAS-score of 8 parameters of well-being, muscle biopsies and insulin, glucagon, IGF-1 and free fatty acids
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: gaarden@dadlnet.dk . We received a reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The trial used sealed envelopes for allocation but it was unclear if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Nutritional status was described as blinded, but it was unclear how the rest of the outcomes were assessed.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of dropouts exceeds 5%. The dropouts were described, but it was unclear from which group they came.

Henriksen 2003a *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Henriksen 2003b

Methods	Randomised clinical trial, Denmark
Participants	58 hospitalised adults admitted for bowel resection, at nutritional risk due to major surgery. Male:Female = 21:37 Mean age = 63.7 years Exclusion criteria: inflammatory bowel disease, disseminated malignant disease, previous treatment for intra-abdominal cancer, serious cardiovascular disease (New York Heart Association angina class III and IV) diabetes mellitus, disabling mental disease, dementia or a history of alcoholic, medicine or drug abuse
Interventions	The night before surgery: Experimental group 1: 12.5 g/100 ml carbohydrate (maltodextrin) drink (n = 16) Experimental group 2: 2.5 g/100 ml carbohydrate (maltodextrin) and 3.5 g/100 ml of hydrolyzed soy protein (n = 16) Control group: No treatment (n = 8) Co-interventions: Pure water until 3 hrs before induction of anaesthesia + basic postoperative regimen
Outcomes	Voluntary grip and quadriceps strength, body composition, pulmonary function, VAS-score of 8 parameters of well-being, muscle biopsies and insulin, glucagon, IGF-1 and free fatty acids
Study dates	Not stated
Notes	We report here group 2 vs control group. We contacted the authors on 19th August 2015 by email: gaarden@dadlnet.dk . We received a reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The trial used sealed envelopes for allocation but it was unclear if they were opaque
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	There was no description of blinding of participants and personnel.
Blinding of outcome assessment (detection bias)	Unclear risk	Nutritional status was described as blinded, but it was unclear how the rest of the outcomes were assessed.

Henriksen 2003b *(Continued)*

All outcomes		
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of dropouts exceeds 5%. The dropouts were described, but it was unclear from which group they came.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Herndon 1987

Methods	Randomised clinical trial, USA
Participants	28 hospitalised adults with burns > 50% of total body surface area, at nutritional risk due to trauma Mean age = 36 years
Interventions	Experimental group: supplementary TPN (n = 13) Control group: No intervention (n = 15) Co-interventions: peripheral intravenous fluids to meet fluid requirements
Outcomes	Caloric intake, immune function, liver function, serum albumin, mortality
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: dherndon@utmb.edu. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Herndon 1987 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Heys 1991

Methods	Randomised clinical trial, UK
Participants	18 hospitalised adults admitted for localised colorectal carcinoma, at nutritional risk due to major surgery Male:Female = not stated Mean age = 72 years Exclusion criteria: Metastasis
Interventions	Experimental group: 20 hours of intravenous nutrition. Amino acids 1.25 g/kg body weight and 25 kcal/kg body weight (40% dextrose and 60% lipid)(n = 9) Control group: Fluids only(n = 9) Co-interventions: Vitamins and electrolytes + low-residue diet given days 2 and 3 before surgery
Outcomes	Tumour protein synthesis rate
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: s.d.heys@abdn.ac.uk . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were below 5% dropouts.

Heys 1991 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	"We thank the Wellcome Trust, Grampian Health Board, Scottish Hospital Endowment Research Trust and Nestec Ltd." The trial was supported by a company that might have an interest in a given result.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hickson 2004

Methods	Randomised clinical trial, UK
Participants	592 hospitalised adults admitted to 3 Medicine for the Elderly wards, at nutritional risk due to being frail elderly Male:Female = 219:373 Mean age = 82 years Exclusion criteria: unable to take food orally (e.g. unconscious, severe dysphagia), those not expected to survive the current admission, those who had discharge planned within 4 days, and those who were readmitted and had already participated in the trial
Interventions	Experimental group: This group received additional nutritional care in the form of feeding support from a trained healthcare assistant (HCA), which began as soon as the participant was randomised. The health assistants helped in the following ways: 1. Identified reduced food intake and other risk factors for malnutrition and planned care to resolve these problems. 2. Encouraged and enabled participants in feeding and supported the ward staff in this role. 3. Offered snacks and drinks throughout the day.(n = 292) Control group:Usual ward care(n = 300) Co-interventions: prescribed medical and nutritional therapy
Outcomes	Mortality in hospital, infection rate, intravenous or subcutaneous fluids or both, length of hospital stay
Study dates	Not stated
Notes	We contacted the authors in September 2015 by email: mary.hickson@imperial.nhs.uk. We received a reply with the caloric intake.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Prepared by an independent group
Allocation concealment (selection bias)	Low risk	The randomisation code was concealed using sealed envelopes.

Hickson 2004 *(Continued)*

Blinding of participants and personnel (performance bias) All outcomes	High risk	Not possible to blind
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial stated that the researcher in charge of outcome assessment was not blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The analysis was on an intention-to- treat basis, but the method was not further described. There were many drop-outs described.
Selective reporting (reporting bias)	Unclear risk	No protocol was found, but the study reported all-cause mortality (while hospitalised).
For-profit bias	Low risk	The trial was funded by the NHS.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hill 2002

Methods	Randomised clinical trial, USA
Participants	46 hospitalised multitrauma adults having an injury severity score (ISS) > 20, at nutritional risk due to being being multitrauma patient. Male:Female = unclear Mean age = 41 years Exclusion criteria: Not described
Interventions	Experimental group: Enteral nutrition within 24 hours of injury(n = 22) Control group: Enteral nutrition started at day 5 post-injury(n = 24)
Outcomes	Mortality, IL6, CRP, pneumonia
Study dates	Not stated
Notes	There was an additional group which did not fit our inclusion criteria.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias)	Unclear risk	Not described

Hill 2002 *(Continued)*

All outcomes		
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	Not described
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events (only pneumonia).
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hoffmann 1988

Methods	Randomised clinical trial, Denmark
Participants	102 hospitalised adults undergoing surgery due to colorectal cancer, at nutritional risk due to major surgery Male:Female = not described Mean age = not reported. Exclusion criteria: Previous cancer diagnosis and hormonal disorders
Interventions	Experimental group: Received TPN containing 4400 kcal a day, 45% fat/55% glucose, starting 3 days preoperatively and continued until 7 days post-operation, except for the day of the operation(n = 51) Control group: No intervention(n = 51) Co-interventions: Usual treatment
Outcomes	Postoperative complications, mortality, length of hospital stay and weight loss
Study dates	1984-1986
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described

Hoffmann 1988 *(Continued)*

Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The pattern of dropouts was reported to be differently in the 2 intervention groups.
Selective reporting (reporting bias)	Low risk	No protocol available, but all-cause mortality and serious adverse events are reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Holter 1977

Methods	Randomised clinical trial, USA
Participants	56 hospitalised adults undergoing open abdominal surgery, at nutritional risk due to major surgery Male:Female = not described Exclusion criteria: not described
Interventions	Experimental group**:** parenteral nutrition. TPN began 72 hrs prior to surgery. At the time of surgery participants were receiving 80 cc/hr or approximately 2000 calories/day with approximately 80 g of protein equivalent, either in the form of casein hydrolysate or crystalline amino acids. Hyperalimentation was continued for a 10-day period postoperatively or until 1500 calories were achieved by oral intake. (n = 30) Control group: Treatment as usual with blood and albumin infusions, as is routine. (n = 26)
Outcomes	Mortality, complications, weight, serum albumin levels and time needed to archive full peri-oral nutrition
Study dates	Not stated
Notes	We could not find any contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Participants were randomised from a random-numbers table.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described

Holter 1977 *(Continued)*

Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but the trial reported serious adverse events and mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Holyday 2012

Methods	Randomised clinical trial, Australia
Participants	143 hospitalised adults admitted to the geriatric ward due to falls, delirium and polypharmacy problems, at nutritional risk due to being elderly frail Male:Female = 61:82 Mean age = 83.5 Exclusion criteria: expected length of stay < 72 hrs, palliative unable to be nutritionally assessed (non-English-speaking, severe dementia/confusion, non-co-operative/refused), already seen by a dietitian during the admission (e.g. transferred from another ward) or enrolled in the study during a previous admission
Interventions	Experimental group: General nutrition support. The Malnutrition Care Plan involved the modification of hospital meals (texture modification and fortification), prescription of nutrition supplements, i.e. nutrient-dense drinks and snacks including commercial supplements, flagging for assistance with meals by ward-based staff, education of participants and their caregivers regarding optimisation of nutrition intake and referral to other health professionals for discharge planning. The Malnutrition Care Plan was tailored to individual requirements based on the clinical dietitian's assessment and prescription.(n = 71) Control group: Treatment as usual(n = 72)
Outcomes	Weight, mortality, length of stay and cost of hospital admission
Study dates	Between April 2006 and September 2006
Notes	We contacted the authors on 9th June 2015 by email: Margaret.Holyday@sesiahs.health.nsw.gov.au. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Participants were randomised by computerised random-number generator.

Holyday 2012 *(Continued)*

Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel could not be blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report serious adverse events.
For-profit bias	High risk	The trial was funded by the Gut Foundation (Randwick, Australia) and funded by Pharmatel Fresenius Kabi Pty Ltd.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Houwing 2003

Methods	Randomised clinical trial, the Netherlands
Participants	103 hospitalised adults admitted for hip fracture and PO-score > 8, at nutritional risk due to being frail elderly Male:Female = 19:84 Mean age = 81 years Exclusion criteria: Terminal care, metastatic hip fracture, insulin-dependent diabetes, renal disease (creatinine > 176 mmol/l), hepatic disease, morbid obesity (BMI > 40), need for therapeutic diet incompatible with supplementation, and pregnancy or lactating
Interventions	Experimental group: 400 ml high-protein nutritional supplement enriched with arginine, zinc and antioxidants with energy: 500 kcal, 40 g of protein (n = 51) Control group: 400 ml placebo (non-caloric, water-based drink only sweeteners, colourants and flavourings) Look and taste of the supplements were not exactly identical, but were given in similar, blinded packages to mask the differences. Participants received 400 ml daily between regular meals of either the study or placebo supplement starting immediately postoperatively for a period of 4 weeks or until discharge. (n = 52) Co-intervention: regular diet (oral)
Outcomes	Incidence of pressure ulcers and maximum wound size
Study dates	Between April 1998 and December 1999

Houwing 2003 *(Continued)*

Notes	We contacted the authors by Linkedin. We received an initial response but no further response.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Low risk	The control group received a placebo drink.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	It was unclear how the outcome assessment was performed.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were below 5% dropouts and participants with incomplete data.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was funded by a company that might have conflict of interest (Numico).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hsu 2000a

Methods	Randomised clinical trial, Taiwan
Participants	80 hospitalised adults admitted for colon resection due to colorectal cancer, at nutritional risk due to major surgery Male:Female = 44:36 Mean age = 61.6 years Exclusion criteria: previous gastric resection, previous vagotomy, and active peptic ulcer
Interventions	Experimental group 1: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as Osmolite HN (protein: 4.2 g, fat: 3.5 g, carbohydrate: 13.4 g)/100 kcal (n = 20) Experimental group 2: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as Pulmocare (protein: 4.2 g, fat: 6.1 g, carbohydrate: 7 g)/100 kcal(n = 20) Experimental group 3: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as AlitraQ (protein: 4.2 g, fat: 2 .1 g, carbohydrate: 18.2 g)/100 kcal. (n = 20)

Hsu 2000a *(Continued)*

	Control group: No oral intake for a week(n = 20)
Outcomes	Change of intragastric pH after surgery and change of intragastric pH after tube-feeding
Study dates	April 1997 to February 1998
Notes	Same trial as Hsu 2000b and Hsu 2000c with the results from experimental group 1 vs control. We contacted the authors on 13th December 2015 by email: tzuchi@ms2.mmh.org.tw. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	The trial did not properly describe mortality,or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hsu 2000b

Methods	Randomised clinical trial, Taiwan
Participants	80 hospitalised adults admitted for colon resection due to colorectal cancer, at nutritional risk due to major surgery. Male:Female = 44:36 Mean age = 61.6 years Exclusion criteria: previous gastric resection, previous vagotomy, and active peptic ulcer
Interventions	Experimental group 1: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as Osmolite HN (protein: 4.2 g, fat: 3.5 g, carbohydrate: 13.4 g)/100 kcal(n = 20)

Hsu 2000b *(Continued)*

	Experimental group 2: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as Pulmocare (protein: 4.2 g, fat: 6.1 g, carbohydrate: 7 g)/100 kcal. (n = 20) Experimental group 3: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as AlitraQ (protein: 4.2 g, fat: 2.1 g, carbohydrate: 18.2 g)/100 kcal(n = 20) Control group: No oral intake for a week (n = 20)
Outcomes	Change of intragastric pH after surgery and change of intragastric pH after tube-feeding
Study dates	April 1997 to February 1998
Notes	Same trial as Hsu 2000a and Hsu 200c with the results from experimental group 2 vs control. We contacted the authors on 13th December 2015 by email: tzuchi@ms2.mmh.org.tw. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	The trial did not properly describe mortality, or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hsu 2000c

Methods	Randomised clinical trial, Taiwan
Participants	80 hospitalised adults admitted for colon resection due to colorectal cancer, at nutritional risk due to major surgery Male:Female = 44:36

Hsu 2000c *(Continued)*

	Mean age = 61.6 years Exclusion criteria: previous gastric resection, previous vagotomy, and active peptic ulcer
Interventions	Experimental group 1: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as Osmolite HN (protein: 4.2 g, fat: 3.5 g, carbohydrate: 13.4 g)/100 kcal(n = 20) Experimental group 2: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as Pulmocare (protein: 4.2 g, fat: 6.1 g, carbohydrate: 7 g)/100 kcal(n = 20) Experimental group 3: Received enteral nasogastric feeding, started from 500 kcal/day, and if tolerated increased to 1500 kcal/day, as well as AlitraQ (protein: 4.2 g, fat: 2.1 g, carbohydrate: 18.2 g)/100 kcal(n = 20) Control group: No oral intake for a week(n = 20)
Outcomes	Change of intragastric pH after surgery and change of intragastric pH after tube-feeding
Study dates	April 1997 to February 1998
Notes	Same trial as Hsu 2000a and Hsu 200b with the results from experimental group 3 vs control. We contacted the authors on 13th December 2015 by email: tzuchi@ms2.mmh.org.tw. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	The trial did not properly describe mortality, or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Hu 1998

Methods	Randomised clinical trial, USA
Participants	40 hospitalised adults admitted for 2-stage anterior and posterior spinal reconstructive surgery, at nutritional risk due to major surgery Male:Female = 9:31 Mean age = 50.5 Exclusion criteria: Poorly-controlled diabetes or had other medical contraindications
Interventions	Experimental group: TPN through a subclavian Hone catheter. It was started on the 1st postoperative day at 40 ml/hr and increased until calculated nutritional needs were achieved. Weaning began when they could consume 50% of their daily requirements orally. (n = 20) Control group: Standard intravenous fluids (n = 20)
Outcomes	Operative time, blood loss, transfusion requirements, all complications, length of hospital stay, albumin, pre-albumin, weight, triceps skinfold, total lymphocyte count
Study dates	May 1994 to June 1997
Notes	We contacted the authors on 23rd August 2015 by email: shu3@stanford.edu, and obtained additional information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The trial used a random-number list for the sequence generation.
Allocation concealment (selection bias)	Unclear risk	The trial was described as randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Only the experimental group had placement of a catheter.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	It was unclear how the outcome was assessed.
Incomplete outcome data (attrition bias) All outcomes	High risk	1 of the participants was transferred from the experimental group to the control group due to not receiving the intervention. There was also over 5% dropouts not accounted for with proper methodology.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events properly.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Huynh 2015

Methods	Randomised clinical trial, India
Participants	212 hospitalised adults admitted within 36 hours to either the medical or the surgical wards, and who were diagnosed with moderate or severe malnutrition based on the modified Subjective Global Assessment were eligible for inclusion. The participants were at nutritional risk due to being malnourished according to SGA. Male:Female = 115:92 (5 participants not included in this assessment) Mean age = 40 years Exclusion criteria: being less than 6 weeks post-partum,active tuberculosis, acute hepatitis B or C, or HIV, diabetes type I and II, dementia, brain metastases, active malignancy, severe renal or liver failure, burn injury covering ≥ 15% of the body, clinically significant ascites, severe oedema, eating disorders or psychological conditions that might interfere with dietary intake, severe nausea, dysphagia, vomiting, active gastritis and gastrointestinal bleeding. Other exclusion criteria included taking progestational agents, steroids and growth hormone.
Interventions	Experimental group: 2 servings of ONS a day for 12 weeks. The ONS was a commercially-available powder product (Ensure; Abbott Healthcare Private Limited, Mumbai, India). For this study, the ONS was packaged in single serving sachets (53 g each) and labelled as clinical study product. When given twice daily, the ONS provided 432 kcal, 16 g of high-quality protein, 60 g of carbohydrate, 14 g of fat and 28 micronutrients. (n = 106) Control group: No intervention (n = 106) Co-interventions: 3 sessions of dietary counselling administered at baseline, weeks 4 and 8. During the hospital stay, participants from both groups consumed hospital-prepared foods as prescribed by the dietitians.
Outcomes	Weight, BMI, modified SGA score, pre-albumin, albumin, haemoglobin, total protein and C-reactive protein, changes in dietary intake and functionality using hand-grip strength
Study dates	Not stated
Notes	The participants started the intervention during hospitalisation but received some of the intervention as outpatients. We only used the assessment at 4 weeks, due to the nature of the intervention. We contacted the author on 08th February 2016 by email: dieu.huynh@abbott.com. We received an initial reply but no further information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation was performed using SAS.
Allocation concealment (selection bias)	Low risk	The envelopes were described as sealed and opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The oral supplements were labelled as study supplement.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Huynh 2015 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	High risk	There were > 5% dropouts and the trial did not use proper methodology to account for the missing data for participants.
Selective reporting (reporting bias)	Low risk	The trial reported the outcomes in the pre-published protocol (NCT01641770).
For-profit bias	High risk	
Other bias	Low risk	

Hwang 1991

Methods	Randomised clinical trial, Taiwan
Participants	24 hospitalised adults undergoing choledocholithotomy, at nutritional risk according to the trialist Male:Female = 11:13 Mean age = 51.5 years Exclusion criteria: displayed prominent jaundice, sepsis or complicated medical problems
Interventions	Experimental group: Enteral feeding (hospital blenderised diet consisting of 17% protein, 33% fat and 50% carbohydrate) through a tube on 1st postoperative day until the 4th day. (n = 12) Control group: Nothing until 4th day (n = 12) Co-interventions: Blenderised diet for additionally 4 days
Outcomes	Daily intake/output and nitrogen balance, middle arm circumference, triceps skinfold, creatinine-height index, liver function, serum albumin, pre-albumin, transferrin, total lymphocyte count
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: hwangtl@adm.cgmh.org.tw. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Hwang 1991 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, but the trial did not report on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Inoue 1993

Methods	Randomised clinical trial, USA
Participants	13 hospitalised adults undergoing abdominal surgery, at nutritional risk due to major abdominal surgery Male:Female = not stated Mean age = not stated Exclusion criteria: diabetes or steroid medications
Interventions	Experimental group: TPN (30 nonprotein kcal/kg/day (34% fat as Intralipid), and 1.27 g protein as Aminosyn/kg/day (0.20 gmN/kg/day)) for 1 week(n = 6) Control group: Regular hospital diet (28.2 non-protein kcal/kg/day (34% fat), and 1.25 g protein/kg/day (0.20 g N/kg/day))(n = 7)
Outcomes	Brush-border amino acid and glucose transport activity
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Inoue 1993 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	There were no protocol, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Low risk	It was funded by an NIH grant CA45327 and a grant from the Veterans Administration Merit Review Board. (Dr. Souba).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Iresjö 2008

Methods	Randomised clinical trial, Sweden
Participants	12 hospitalised adults undergoing surgery of the upper gastrointestinal tract, at nutritional risk due to major surgery Male:Female = 7:5 Mean age = 64 years Exclusion criteria: diabetes or steroid medications
Interventions	Experimental group**:** Parenteral nutrition: TPN was supplied as an all-in-one bag (0.16 gN · kg−1 of body weight · day−1 (30 kcal · kg−1 of body weight · day−1); Kabiven® Perifer; Fresenius Kabi(n = 6) Control group: Placebo (saline)(n = 6) Infusions started between 16.00 and 17.00 hours on the day before the operation, and continued at a constant rate until muscle biopsies were taken from the rectus abdominis muscles directly after the induction of anaesthesia (15 – 16 hrs later)
Outcomes	Levels of amino acids and substrates in peripheral blood, formation of 4E-BPI-eIF4E and eIF4G-eIF4E complexes, 4E-BPI phosphorylation, $p70^{S6K}$ phosphorylation
Study dates	Not stated
Notes	We contacted authors about risk of bias details on 6th September 2015 by email: kent.lundholm@surgery.gu.se. We received additional information on randomisation sequence, blinding and incomplete outcome data.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Randomisation was done after the participant was recruited to the study by the responsible physician. Randomisation was done by a computer algorithm based on age, sex, cancer (type of cancer)/no cancer, height, weight, % weight loss (compared to pre-disease weight).
Allocation concealment (selection bias)	Unclear risk	Not described

Iresjö 2008 *(Continued)*

Blinding of participants and personnel (performance bias) All outcomes	Low risk	Participants were blinded as the control group received placebo.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Blinding of outcome assessment was not performed.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts and complete data for all 12 participants.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Low risk	The study was, in part, supported by grants from the Swedish Cancer Society (2014), the Swedish Research Council (08712), Tore Nilson Foundation, Assar Gabrielsson Foundation (AB Volvo), Jubileumskliniken foundation, IngaBritt & Arne Lundberg Research Foundation, Swedish and Göteborg Medical Societies, the Medical Faculty, Göteborg University, VGR 19/00, 1019/00, Swedish Nutrition Foundation.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Itou 2011

Methods	Randomised clinical trial, Japan
Participants	36 hospitalised adults with chronic liver disease and oesophageal and gastric varices, at nutritional risk defined by trialist Male:Female = 29:7 Mean age: 65.9 years Exclusion criteria: Ascites and renal failure
Interventions	Experimental group: Oral supplement consisting of a 200 kcal CalorieMate Jelly(n = 18) Control group: No intervention (no meal)(n = 18)
Outcomes	Physical symptoms (thirst, light-headedness, nausea, headache, palpitation and cold sweat) and mental symptoms(hunger, hypodynamia, fatigue, poor thinking, poor concentration, irritability)
Study dates	Not stated
Notes	The authors were contacted on 9.12.15 by email: Itou74m@med.kurume-u.ac.jp. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described

Itou 2011 *(Continued)*

Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Endoscopists were blinded.
Incomplete outcome data (attrition bias) All outcomes	Low risk	No dropouts
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse event.
For-profit bias	Low risk	The study was supported, in part, by a Grant-in-Aid for Young Scientists (B) (No.22790874 to T.K.) and a Grant-in-Aid for Scientific Research (C)(No. 21590865 to M.S.) from the Ministry of Education, Culture, Sports, Science and Technology of Japan, and by Health and Labour Sciences Research Grants for Research on Hepatis from the Ministry of Health, Labour and Welfare of Japan.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jauch 1995a

Methods	Randomised clinical trial, Germany
Participants	44 hospitalised adults undergoing major surgery and metabolically healthy, in need of ICU, at nutritional risk due to major surgery and iCU. Male:Female = 30:14 Mean age = 61.6
Interventions	Experimental group 1: Parenteral nutrition (3% amino acid solution) for 4 days(n = 17) Experimental group 2: Parenteral nutrition (carbohydrate and amino acid solution) for 4 days(n = 17) Control group: Saline solution only(n = 10)
Outcomes	Mortality, glucose, insulin, lactate, betahydroxybuturat, glycerin and fatty acids, protein, creatinine
Study dates	Not stated
Notes	Same trial as Jauch 1995b with the results from experimental group 1 vs control. We contacted the authors on 13th December 2015 by email: Karl-Walter.Jauch@med.uni-muenchen.de. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement

Jauch 1995a *(Continued)*

Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The amount of dropouts was not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jauch 1995b

Methods	Randomised clinical trial, Germany
Participants	44 hospitalised adults undergoing major surgery and metabolically healthy, in need of ICU, at nutritional risk due to major surgery and ICU. Male:Female = 30:14 Mean age = 61.6
Interventions	Experimental group 1: Parenteral nutrition (3% amino acid solution) for 4 days(n = 17) Experimental group 2: Parenteral nutrition (carbohydrate and amino acid solution) for 4 days(n = 17) Control group: Saline solution only(n = 10)
Outcomes	Mortality, glucose, insulin, lactate, betahydroxybuturat, glycerin and fatty acids, protein, creatinine
Study dates	Not stated
Notes	Same trial as Jauch 1995a with the results from experimental group 2 vs control

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described

Jauch 1995b *(Continued)*

Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The amount of dropouts was not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jensen 1982

Methods	Randomised clinical trial, Denmark
Participants	20 hospitalised adults admitted for rectal cancer, at nutritional risk due to major surgery. Male:Female = 12:8 Mean age = 61 years Exclusion criteria: diabetes mellitus, treatment with glucocorticoid, coagulation defect, above 80 years of age, not radically operated
Interventions	Experimental group: Parenteral nutrition (40 - 50 kcal/kg/day and 1.5 - 2 g protein/kg/day) for 2 days preoperatively and 6 days postoperatively (n = 10) Control group: Standard i.v. fluids for 2 days preoperatively and 6 days postoperatively(n = 10)
Outcomes	Complications, weight change, length of hospital stay, nitrogen balance
Study dates	Not stated
Notes	

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.

Jensen 1982 *(Continued)*

Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as being unblinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of dropouts was unclear.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Ji 1999

Methods	Randomised clinical trial, China
Participants	41 hospitalised adults undergoing surgery of the digestive tract, at nutritional risk due to major surgery Male:Female = 23:7 (gender not reported for 11 participants) Mean age = 58.35 years Exclusion criteria: metabolic diseases
Interventions	Experimental group: Participant was infused with saline 500 ml by using jejunum or gastrostomy nutrient catheter at 24 hrs after surgery, and followed by Nutrison Fibre 100 ml with the speed of 50 ml/hr, and 150 ml with the speed of 80 - 120 ml/hr after 72 hrs if there were no adverse reactions. It was maintained at this amount and gradually reduced the amount of peripheral venous transfusion.(n = 22) Control group: conventional infusion therapy after surgery(n = 10) Co-interventions: oral feeding after recovery of intestinal peristalsis
Outcomes	TRF, Pre-albumin, albumin, haemoglobin, thrombin time, GPT, AKP, Total bilirubin, conjugated bilirubin, BUN,Cr, Blood glucose, gastrin, weight
Study dates	Not stated
Notes	We contacted the author by phone 3 times, but he did not have time to answer any questions.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described

Ji 1999 *(Continued)*

Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial dit not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jiang 2006a

Methods	Randomised clinical trial, China
Participants	69 hospitalised adults undergoing gastrointestinal surgery, at nutritional risk due to major surgery Male:Female = 46:23 Mean age = 49.3 years Exclusion criteria: Unclear
Interventions	Experimental group 1: Enteral and parenteral nutrition: Enteral nutrition with Supportan (Sino-Swed Pharmaceutical Corp. Ltd) by using nasogastric tube. (Energy 543 kJ, protein 5.85 g, fat 7.2 g, carbohydrate 10.4 g, sugar 3.6 g, fatty acid 0.3 g, dietary fiber 1.3 g, mineral substance) (n = 22) Experimental group 2: Parenteral nutrition with Novamin (N 8.5%, amino acid injection, Sino-Swed Pharmaceutical Corp. Ltd), non-protein calorie supported by glucose and fat emulsion (Sino-Swed Pharmaceutical Corp. Ltd) on a one-to-one ratio, plus electrolytes, vitamin and microelement, total 3 L were infused through peripheral or central vein within 10 hrs. (Energy 120 kJ/kg/day, N 0.15 g/kg/day; NPC:N = 150:1)(n = 23) Control group: Conventional infusion with glucose (50 - 100 g/L), total energy 250 - 300 kJ/day(n = 22)
Outcomes	Morbidity (rate), change of weight, length of stay, time to recovery of gastrointestinal function
Study dates	Not stated
Notes	We could obtain no contact information for the author.
Risk of bias	

Jiang 2006a *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jiang 2006b

Methods	Randomised clinical trial, China
Participants	69 hospitalised adults undergoing gastrointestinal surgery, at nutritional risk due to major surgery Male:Female = 46:23 Mean age = 49.3 years Exclusion criteria: Unclear
Interventions	Experimental group 1: Enteral and parenteral nutrition: Enteral nutrition with Supportan (Sino-Swed Pharmaceutical Corp. Ltd) by using nasogastric tube. (Energy 543 kJ, protein 5.85 g, fat 7.2 g, carbohydrate 10.4 g, sugar 3.6 g, fatty acid 0.3 g, dietary fibre 1.3 g, mineral substance) (n = 22) Experimental group 2: Parenteral nutrition with Novamin (N 8.5% amino acid injection, Sino-Swed Pharmaceutical Corp. Ltd), non-protein calorie supported by glucose and fat emulsion (Sino-Swed Pharmaceutical Corp. Ltd) on a one-to-one ratio, plus electrolytes, vitamin and microelement, total 3L were infused through peripheral or central vein within 10 hrs. (Energy 120 kJ/kg/day, N 0.15 g/kg/day; NPC:N = 150:1)(n = 23) Control group: conventional infusion with glucose (50 - 100 g/L), total energy 250 - 300 kJ/day(n = 22)
Outcomes	Morbidity (rate), change of weight, length of stay, time for recovery of gastrointestinal function
Study dates	Not stated

Jiang 2006b *(Continued)*

Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jimenez 1995a

Methods	Randomised clinical trial, Spain
Participants	75 hospitalised adults, at nutritional risk due to low levels of albumin or body weight below 95% of ideal weight Male:Female = not stated Mean age = not stated Exclusion: none stated
Interventions	Experimental group 1: 59.1 g amino acids + 694 non-protein calories (glucose)(n = 20) Experimental group 2: 57.9 g amino acids + 600 non-protein calories (glycerol)(n = 20) Experimental group 3: 56.6 g amino acids + 590 non-protein calories (sorbitol-xylitol)(n = 20) Control group: Conventional infusion therapy (5% glucose)(n = 15)
Outcomes	All-cause mortality, complications, plasma concentrations
Study dates	Not stated

Jimenez 1995a *(Continued)*

Notes	Same as Jimenez 1995b and Jimenez 1995c. We only report experimental group 1 vs control here. We contacted the authors on 13th December 2015 by email: fjavierjimenez@telefonica.net. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no drop-outs.
Selective reporting (reporting bias)	Low risk	All-cause mortality and serious adverse events were assessed.
For-profit bias	Low risk	The trial was funded by the Spanish Ministry of Health.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jimenez 1995b

Methods	Randomised clinical trial, Spain
Participants	75 hospitalised adults, at nutritional risk due to low levels of albumin or body weight below 95% of ideal weight
Interventions	Experimental group 1: 59.1 g amino acids + 694 non-protein calories (glucose)(n = 20) Experimental group 2: 57.9 g amino acids + 600 non-protein calories (glycerol)(n = 20) Experimental group 3: 56.6 g amino acids + 590 non-protein calories (sorbitol-xylitol)(n = 20) Control group: Conventional infusion therapy (5% glucose)(n = 15)
Outcomes	All-cause mortality, complications, plasma concentrations
Study dates	Not stated
Notes	Same as Jimenez 1995a and Jimenenz 1995c. We only report experimental group 2 vs control here. We contacted the authors on 13th December 2015 by email: fjavierjimenez@telefonica.net. We received no reply.

Jimenez 1995b *(Continued)*

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no drop-outs.
Selective reporting (reporting bias)	Low risk	All-cause mortality and serious adverse events were assessed.
For-profit bias	Low risk	The trial was funded by the Spanish Ministry of Health.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jimenez 1995c

Methods	Randomised clinical trial, Spain
Participants	75 hospitalised adults, at nutritional risk due to low levels of albumin or body weight below 95% of ideal weight
Interventions	Experimental group 1: 59.1 g amino acids + 694 non-protein calories (glucose)(n = 20) Experimental group 2: 57.9 g amino acids + 600 non-protein calories (glycerol)(n = 20) Experimental group 3: 56.6 g amino acids + 590 non-protein calories (sorbitol-xylitol)(n = 20) Control group: Conventional infusion therapy (5% glucose)(n = 15)
Outcomes	All-cause mortality, complications, plasma concentrations
Study dates	Not stated
Notes	Same as Jimenez 1995a and Jimenez 1995b. We only report experimental group 3 vs control here. We contacted the authors on 13th December 2015 by email: fjavierjimenez@telefonica.net. We received no reply.

Risk of bias

Jimenez 1995c *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no drop-outs.
Selective reporting (reporting bias)	Low risk	All-cause mortality and serious adverse events were assessed.
For-profit bias	Unclear risk	The trial was funded by the Spanish Ministry of Health.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jin 1999a

Methods	Randomised clinical trial, China
Participants	92 hospitalised adults diagnosed with adenocarcinoma of the GI tract deemed operable by a consultant surgeon, at nutritional risk due to serum albumin < 30 g/L or a recent weight loss of > 10% body weight Male:Female = 58:34 Mean age = 57 years Exclusion:congestive heart failure, obstructive lung disease, metabolic diseases, clinically-evident cirrhotic liver disease or renal disease
Interventions	Experimental group 1**:** Parenteral nutrition: Preoperative PN provided 35 kcal/kg a day. Non-protein caloric content was divided between dextrose (60%) and lipids (40%) (Intralipid; Kabi Pharmacia, Sweden). Crystalline amino acids (7% Vamin; Kabi Pharmacia, Sweden) were provided at a calorie:nitrogen ratio of 150:1 g of nitrogen (0.23 g of nitrogen a kilogram a day). Each day, the nutrient mixture, which was prepared in ethyl vinyl acetate bags, was infused through a subclavian polyurethane catheter over 24 hrs by an infusion pump. The catheter was inserted using a strict aseptic procedure in the operating room.(n = 23) Control group 1: No intervention(n = 23)
Outcomes	Weight, complications, postoperative mortality and nutritional parametres including serum albumin (g/L), serum transferrin (g/L), nitrogen balance (g/L)

Jin 1999a *(Continued)*

Study dates	Not stated
Notes	We could obtain no contact information for the authors. Same trial as Jin 1999b but with the experimental and control group that did not received chemotherapy.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Outcome assessors were not blinded.
Incomplete outcome data (attrition bias) All outcomes	Low risk	All participants completed the study.
Selective reporting (reporting bias)	Low risk	The protocol could not be obtained, but the trial reported on serious adverse events and mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Jin 1999b

Methods	Randomised clinical trial, China
Participants	92 hospitalised adults diagnosed with adenocarcinoma of the GI tract deemed operable by a consultant surgeon, at nutritional risk due to serum albumin < 30 g/L or a recent weight loss of > 10% body weight Male:Female = 58:34 Mean age = 57 years Exclusion: congestive heart failure, obstructive lung disease, metabolic diseases, clinically-evident cirrhotic liver disease or renal disease
Interventions	Experimental group 2: Parenteral nutrition: Preoperative PN provided 35 kcal/kg a day. Non-protein caloric content was divided between dextrose (60%) and lipids (40%) (Intralipid; Kabi Pharmacia, Sweden). Crystalline amino acids (7% Vamin; Kabi Pharmacia, Sweden) were provided at a calorie:nitrogen ratio of 150:1 g of nitrogen (0.23 g of nitrogen a kilogram a day). Each day, the nutrient mixture, which was prepared in ethyl vinyl acetate bags, was infused through a subclavian polyurethane catheter over

Jin 1999b *(Continued)*

	24 hrs by an infusion pump. The catheter was inserted using a strict aseptic procedure in the operating room.(n = 23) Control group 2: No intervention (n = 23) Co-interventions: chemotherapy
Outcomes	Weight, complications, postoperative mortality and nutritional parametres including serum albumin (g/L), serum transferrin (g/L), nitrogen balance (g/L)
Study dates	Not stated
Notes	Same trial as Jin 1999a but with the experimental and control group that received chemotherapy as a co-intervention.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Outcome assessors were not blinded.
Incomplete outcome data (attrition bias) All outcomes	Low risk	All participants completed the study.
Selective reporting (reporting bias)	Low risk	The protocol could not be obtained, but the trial reported on serious adverse events and mortality.
For-profit bias	Low risk	The study received the support of the general surgical department and the image cytometry department of Zhong Shan Hospital at the Shanghai Medical University. This research was supported by a grant from the International Clinical Epidemiology Network.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Johansen 2004

Methods	Randomised clinical trial (stratified for age), Denmark
Participants	212 hospitalised adults, at nutritional risk due to NRS-2012 Male:Female = 102:110

Johansen 2004 *(Continued)*

	Mean age = 62.2 years
Interventions	Experimental group: A specialised nutritional team (nurse and dietitian) attended the participants and staff for motivation, detailed a nutritional plan, assured delivery of prescribed food and gave advice on enteral or parenteral nutrition when appropriate.(n = 108) Control group: Standard regimen used in the department(n = 104)
Outcomes	All-cause mortality, complications, designated length of hospital stay, quality of life
Study dates	August 1st 2001 to March 1st 2002
Notes	We contacted the authors on 13th December 2012 by email: nielsjohansen@dadlnet.dk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence was generated by a random-numbers system.
Allocation concealment (selection bias)	Low risk	Sequentially-numbered sealed opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	High risk	The nurses and participants were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Even though the investigator assessing the outcome was blinded, the nurses who reported the outcomes were not.
Incomplete outcome data (attrition bias) All outcomes	High risk	There were above 5% dropouts, and the trial did not use proper intention-to-treat analysis.
Selective reporting (reporting bias)	Low risk	Both all-cause mortality and serious adverse events were reported.
For-profit bias	Low risk	The trial was not funded by any company that had an interest in the outcome.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Kang 2012

Methods	Randomised clinical trial, South Korea
Participants	60 elderly hospitalised adults older than 65 years and admitted to the hospital for hip fracture surgery, at nutritional risk due to being frail elderly Male:female = not stated Mean age = 80.7 years

Kang 2012 *(Continued)*

Interventions	Experimental group: ONSs, trace elements supplements and dietetic counselling for 2 weeks postoperatively (n = 30) Control group: usual care (n = 30)
Outcomes	MNA, hand-grip strength
Study dates	Not stated
Notes	Only abstract. We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Kaur 2005

Methods	Randomised clinical trial, India
Participants	100 hospitalised adults undergoing open abdominal surgery, at nutritional risk due major surgery Male:Female = 79:21 Mean age = 36 years Exclusion criteria: dementia, diabetes, renal failure, or hepatic failure
Interventions	Experimental group: Early Enteral Nutrition: Participants were given a hospital kitchen-prepared feed through the nasojejunal tube 24 hrs after surgery. The 500 ml of feed contained 375 ml milk, 12.5 g sugar, 12.5 g butter, 12.5 g starch, 125 ml rice water, and half an egg. The feed provided 500 kcal energy,

Kaur 2005 *(Continued)*

	16.66 g protein, 43.5 g carbohydrates, and 30 g fat. The feed was started at a rate of 50 ml/hr in the 1st 6 hrs and gradually increased to 100 ml/hr by the 3rd postoperative day. The nutritional goal was to deliver 35 - 40 kcal/kg/day and 1.5 - 2.0 g protein/kg/day. The nasogastric tube was taken out when gastric aspirate was minimal or nil and when participants started taking 2 L of feed a day, usually by the 4th or 5th postoperative day. (n = 50) Control group: Treatment as usual(n = 50)
Outcomes	All cause-mortality, hand-grip strength, complications
Study dates	April 2000 to March 2002
Notes	We contacted the authors on 9th June 2015 by email: dr_navkaur@hotmail.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The method of blinding of outcome assessment was not described.
Incomplete outcome data (attrition bias) All outcomes	Low risk	All participants completed the study.
Selective reporting (reporting bias)	Low risk	No protocol available, but serious adverse events and all-cause mortality were reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Kawaguchi 2008

Methods	Randomised clinical trial, Japan
Participants	29 hospitalised adults with cirrhosis, at nutritional risk due to the trialist indication Male:Female = 18:11 Mean age = 63.2 years Exclusion criteria: Ascites or renal failure
Interventions	Experimental group: Supplement 200 kcal(n = 18)

Kawaguchi 2008 *(Continued)*

	Control group: No energy supplied (fasting)(n = 11)
Outcomes	Self-rating questionnaire (physical symptoms and mental symptoms), biochemical parameters, CT or MRI.
Study dates	April 2005 to July 2006
Notes	We contacted the authors on 19th August 2015 by email: takumi@med.kurume-u.ac.jp . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Low risk	The trial was funded by grants from the Ministry of Education, Culture, Sports, Science and Technology, Japan, the Vehicle Racing Commemorative Foundation, Japan, and the Ishibashi Foundation for the Promotion of Science, Japan.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Kearns 1992

Methods	Randomised clinical trial, USA
Participants	31 hospitalised adults with alcoholic liver disease, a serum bilirubin leve1 of > 5 l pmol/L, and one of the following: albumin < 30 g/L, prothrombin time prolonged ≥ 4 seconds over control, or presence of ascites on physical examination at nutritional risk due to trialist indication Male:Female = 21:10 Mean age = 44 years

Kearns 1992 *(Continued)*

	Exclusion criteria (prospectively): Objection to the length of the study, refusal of nasoduodenal (ND) tube placement, continuation of gastro-intestinal bleeding, elevation of serum creatinine level to > 221 pmol/L, and inability to give informed consent
Interventions	Experimental group: Enteral nutrition. The EN provided 167 kJ/kg and 1.5 g/kg of ideal body weight protein. A constant-infusion pump delivered the solution through an 8F ND tube. 2-gram sodium and 1500-mL fluid restrictions were imposed in the presence of peripheral oedema or ascites. Participants remained on a medical ward until discharge. Subsequently, they stayed in the clinical research unit for the remaining 28 days. If appetite permitted, the treatment group drank the EN after transfer.(n = 16) Control group: No intervention(n = 15) Co-interventions: Regular diet
Outcomes	The average lengths of hospital stay, incidence of diarrhoea, renal insufficiency, gastro-intestinal bleeding, changes in anthropometrics and ascites, weight, pneumonia, improvement of encephalopathy, change in metabolic rate, calorie intake, change in functional hepatic mass, survival, lactulose requirements. Biochemical outcomes: serum albumin, serum bilirubin, antipyrine elimination, alanine amino-transferase, aspartate aminotransferase, y-glutamyltransferase, alkaline phosphatase, pre-albumin, thyroid-binding globulin, and transferring
Study dates	Not stated
Notes	We contacted the authors on 1st October 2015 by email: pj.kearns@med.stanford.edu. We received a reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	A random-number generator was used, performed by personnel not a part of the clinical phase of the study.
Allocation concealment (selection bias)	Low risk	The random numbers were recorded and placed into numbered, opaque envelopes.
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Investigators and participants were blinded to allocation.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Outcome assessors were not blinded.
Incomplete outcome data (attrition bias) All outcomes	Low risk	Each group had 3 participants drop out. Clinical characteristics of dropouts were well matched to those of participants completing the trial. The dropouts did not have missing data. Data were censored at the participant's death and last-observed data points were used.
Selective reporting (reporting bias)	Low risk	No protocol available, but serious adverse events and all-cause mortality were reported.
For-profit bias	High risk	The trial was supported in part by Mead Johnson Nutritional Division Inc., Evansville, Indiana, and by National Institutes of Health Grant 22209.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Keele 1997

Methods	Randomised clinical trial, UK
Participants	100 hospitalised adults admitted for major abdominal surgery, at nutritional risk due to major abdominal surgery Male:female = 48:38 (gender not reported for 14) Mean age: 62.5 years
Interventions	Experimental group: Standard ward diet + oral supplements (200 ml (1.5 kcal/ml and 0.05 g protein/ml) (n = 47) Control group: Standard ward diet(n = 53)
Outcomes	All-cause mortality, complications, nutritional status, anthropometrics, hand-grip strength
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	There were above 5% dropouts, and the trial did not use proper intention-to-treat analysis.
Selective reporting (reporting bias)	Low risk	Both all-cause mortality, and serious adverse events were reported.
For-profit bias	High risk	The trial was funded by Nutricia research, which might have a conflict of interest.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Kendell 1982

Methods	Randomised clinical trial, USA
Participants	24 hospitalised adults undergoing orthognathic surgery and maxillomandibular fixation, at nutritional risk due major surgery to decreased food intake Male:Female = 5:17 (gender not reported for two participants) Mean age = 25 years Exclusion criteria: Participants who showed evidence of pathologic condition or systemic disease
Interventions	Experimental group: Participants were instructed to consume a minimum of 50% of their calculated caloric requirements in the form of a nutritionally-complete liquid supplement containing 1.5 cal/ml. The supplement consisted of 14.7% of calories as protein, 32% as fat and 53.3% as carbohydrates. The intervention lasted 6 weeks by mouth.(n = 12) Control group: No intervention (n = 12) Co-interventions: Dextrose (5%) in water and ¼ normal saline solution were administered postoperatively at a rate consistent with each participant's requirement. Everyone consumed blenderised foods. All were required to refrain from consuming any other commercial supplement or vitamin preparation.
Outcomes	Weight, mid-arm muscle circumference, triceps skinfold, creatinine height index, serum albumin, transferrin, total lymphocyte count, urinary nitrogen and creatinine, serum chemistries, caloric intake, protein and carbohydrate intake, thiamine, niacin, zinc, folic acid and riboflavin intake and length of hospital stay
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were complete data for all participants.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.

Kendell 1982 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Lanzotti 1980

Methods	Randomised clinical trial, USA
Participants	48 hospitalised adults with Non-Oat cell Lung Cancer, at nutritional risk due to decreased food intake Male:Female: Not reported Exclusion criteria: 1 person was excluded due to diagnosis mesothelioma
Interventions	Experimental group: Parenteral Nutrition. TPN administered by central venous catheter at ≥ 35 ckal/kg/day. TPN was initiated 7 days before the 1st course and 2 days before the 2nd course of chemotherapy. TPN was discontinued on day 12 of each course of chemotherapy. Thus the intervention group received 19 days with the 1st course and 14 days with the 2nd. (n = 14) Control group: No intervention (n = 13)
Outcomes	Average time of survival, white cell count/granulocyte count
Study dates	Not stated
Notes	We contacted the authors on 13th November 2015 by email: lanzotti@unina.it. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Larsson 1990a

Methods	Randomised clinical trial, Sweden
Participants	501 adults hospitalised at the geriatric ward, at nutritional risk due to being elderly Male:Female = 190:311 Mean age = 79 years Exclusion criteria: none stated
Interventions	Experimental group: 400 ml dietary supplement containing 4 g of protein, 4 g of fat and 11.8 g of carbohydrate per 100 ml. Served in the morning and in the evening (n = 250) Control group: no intervention(n = 251) Co-intervention: standard ward diet (2200 kcal/day)
Outcomes	Nutritional status by anthropometry, serum protein analysis, delayed hypersensitivity skin test, mortality
Study dates	Not stated
Notes	We contacted the authors on 22nd August 2015 by email: mitra.unosson@liu.se. We received an initial reply but no further reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The randomisation code was concealed using sealed envelopes but it unclear if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	There were above 5% dropouts, and the trial did not use proper intention-to-treat analysis.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events.
For-profit bias	High risk	The trial was supported from a company that might have an interest in a given result: "Grants from the Swedish Medical Research Council (project no. 07528 and 09330). the Research Fund of the County of Östergotland, the University Hospital and the University of Linkoping, and Kabi Nutrition, Sweden,".

Larsson 1990a *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Ledinghen 1997

Methods	Randomised clinical trial, France
Participants	22 hospitalised adults with cirrhosis and bleeding from oesophageal varices, at nutritional risk as defined by trialists Male:Female = 17:5 Mean age = 56 years Exclusion criteria: severe liver failure (defined as a hepatorenal syndrome or end-stage cirrhosis), hepatocellular carcinoma, severe hepatic encephalopathy, 80 years old or older
Interventions	Experimental group: Enteral nutrition: Polymeric enteral diet (Dripac Sondalis, Sopharga, France) was infused by bolus administration and provided 1665 kcal/day and 71 g of protein. A constant-infusion pump delivered each Dripac in 3 hrs, by a 10 French nasogastric feeding tube. Participants received EN from day 1 through the 2nd sclerotherapy session.(n = 12) Control group: Treatment as usual (n = 10) From day 1 through day 3, participants received nil by mouth. On day 4, all received a standard low-sodium milk diet (800 kcal), on day 5 a mixed, warm, low-sodium diet (1400 kcal), and on day 6 a standard low-sodium hospital diet (1800 kcal).
Outcomes	Child-Pugh's score, occurrence of pneumonia, presence of gastro-intestinal bleeding or diarrhoea, amount of ascites, degree of encephalopathy, height, triceps skinfold thickness, mid-arm muscle circumference, BMI, serum creatinine level, liver function tests, prothrombin time, serum albumin and pre-albumin, nitrogen balance and mortality
Study dates	August 1994 through August 1995
Notes	We contacted the authors on 9th June 2015 by email: victor.deledinghen@chu-bordeaux.fr. We received an initial reply but no reply after this.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Ledinghen 1997 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Low risk	The protocol could not be obtained, but the trial reported on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Levinson 1993a

Methods	Randomised clinical trial, Australia
Participants	100 hospitalised adults admitted to the ICU and critically ill, at nutritional risk due to inability to take food orally Male:Female = Not reported Mean age = Not reported Exclusion criteria: No bowel sounds, nasogastric aspirates for the previous day exceeded 300 ml/24 hrs, unstable, if the enteral feeding was an unsuitable feed, diarrhoea, or major bowel resection
Interventions	Experimental group: Enteral feeding. The participants received a standard isotonic feed via nasogastric tube, initially at 40 ml/hr and increased by 20 ml/hr every 12 hrs until desired caloric load was reached. Enteral feeding was temporarily ceased if the residual gastric volume (RGV) exceeded 100 ml and reattempted after 4 hours. Each intervention period lasted for 3 days. (n = 19) Control group 1: No intervention(n = 7) Co-interventions: All participants received nitrogen and calories from supplemental parenteral nutrition during the study. Enteral nutrition for the first 3 days of the study.
Outcomes	Mortality, diarrhoea, stool frequency, colonising organisms from stool culture, serum albumin concentration, RGV and gastric colonisation
Study dates	Not stated
Notes	We here report the experimental group that received Experimental enteral feeding for 6 days versus the group that received it only for the 1st 3 days. We contacted the authors on 1st October 2015 by email: mlevinson@cabrini.com.au. We received an initial reply but no answer to our specific questions. Note that for a large amount of participants, it was not stated which group they were randomised to.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Randomisation was performed by shuffling cards and producing batches of 15 protocol sheets to be used in order. Uncertain if it was performed by an independent person not otherwise involved in the trial
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.

Levinson 1993a *(Continued)*

Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants were blinded to treatment. Treatment providers were not blinded to feeding.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Outcome assessors were not blinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	Participants who failed to complete the first 3 days of the study were not analysed further, other than to record the cause of failure. This resulted in above 5% dropouts. The trial did not use proper methodology to deal with incomplete outcome data.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause mortality and serious adverse events. No protocol could be found.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Levinson 1993b

Methods	Randomised clinical trial, Australia
Participants	100 hospitalised adults admitted to the ICU and critically ill, at nutritional risk due to inability to take food orally Male:Female = Not reported Mean age = approximately 55 Exclusion criteria: no bowel sounds, nasogastric aspirates for the previous day exceeded 300 ml/24 hrs, if the enteral feeding was an unsuitable feed, diarrhoea, or major bowel resection
Interventions	Experimental group: Enteral feeding. The participants received a standard isotonic feed via nasogastric tube, initially at 40 ml/hr and increased by 20 ml/hr every 12 hrs until desired caloric load was reached. Enteral feeding was temporarily ceased if the residual gastric volume (RGV) exceeded 100 ml and reattempted after 4 hrs. Each intervention period lasted for 3 days. (n = 19) Control group 2: No intervention (n = 17) Co-interventions: All participants received nitrogen and calories from supplemental parenteral nutrition during the study.
Outcomes	Mortality, diarrhoea, stool frequency, colonising organisms from stool culture, serum albumin concentration, RGV and gastric colonisation
Study dates	Not stated
Notes	We here report the experimental group that received Experimental enteral feeding for the last 3 days versus the group that did not receive enteral nutrition.

Risk of bias

Bias	Authors' judgement	Support for judgement

Levinson 1993b *(Continued)*

Random sequence generation (selection bias)	Unclear risk	Randomisation was performed by shuffling cards and producing batches of 15 protocol sheets to be used in order. Uncertain if it was performed by an independent person not otherwise involved in the trial.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants were blinded to treatment. Treatment providers were not blinded to feeding.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Outcome assessors were not blinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	Participants who failed to complete the first 3 days of the study were not analysed further, other than to record the cause of failure. This resulted in above 5% dropouts. The trial did not use proper methodology to deal with incomplete outcome data.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause mortality and serious adverse events. No protocol could be found.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Li 1997

Methods	Randomised clinical trial, China
Participants	21 hospitalised adults diagnosed with COPD and critically ill according to the following criteria: diagnosed with pulmonary heart disease, pulmonary function test is FEV1/FVC < 70%, less than 10% increase of FEVI/FVC after using bronchus spasmolytic, arterial blood gas analysis: PaO^2 < 60 mmHg and (or) $PaCO^2$ > 50 mmHg. The participants were also diagnosed with malnutrition according to following criteria: 1. referred to the multiparameter nutritional index scoring system (MNI) by Laeabn JP, considering body weight (WT); 2. triceps skinfold (TSF); 3. mid-arm muscle circumference (MAMC); 4. creatinine increased with normal liver and kidney function, at nutritional risk according to the trialist. Male:Female = 19:2 Mean age = 68 years Exclusion criteria: asthma, neuromuscular disease, chronic gastrointestinal malabsorption, diabetes, thyroid disease and cancer
Interventions	Experimental group: Parenteral nutrition: 30 Kcal/ Kg each day, nitrogen 0.20˜ 0.25g/kg by amino acid, 35%˜45% calorie by fat emulsion. Treatment course was 14 days.(n = 10) Control group: Intravenous infusion: 100˜200Kcal glucose each day for 14 days.(n = 11) Co-interventions**:** Food nutrition: hospital-made nutrition diet(protein 17%, fat 30% and carbohydrate 53%).
Outcomes	Serum albumin concentration, serum TRF, pre-albumin concentration, CHI, SFAA.

Li 1997 *(Continued)*

Study dates	Not stated
Notes	We contacted the authorby phone 3 times, but he had no time to answer.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse event.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Li 1998

Methods	Randomised clinical trial, China
Participants	20 hospitalised adults undergoing resection of pancreas and duodenum, at nutritional risk due to major surgery Male:Female = 16:4 Mean age = 56 years Exclusion criteria: Unclear
Interventions	Experimental group: TPN through central vein from the 1st day after surgery for 7 days. The calorie was 125.52 ~ 146 KJ/(kg/day), of which 35% ~ 40% was provided by 10% Interlipid and others by glucose. Nitrogen supply was 0.2 g/kg/day) provided by 15-HBC (Tianjin amino acid); vitamin and trace elements(SSPC) were supplied as conventional amount; water and electrolyte according to the balance of intake and output. All nutrients were mixed in an infusion bag, and distributed uniformly over 24 hrs. (n = 10)

Li 1998 *(Continued)*

	Control group: Conventional infusion: 200 g glucose calorie by 10% glucose liquid, without exogenous nitrogen supply, for 7 days(n = 10)
Outcomes	Weight, triceps skinfold thickness, arm circumference, and nitrogen balance
Study dates	Not stated
Notes	We contacted the author by phone 3 times, but he had no time to answer.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial dit not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Lidder 2013a

Methods	Randomised clinical trial, UK
Participants	120 hospitalised adults with planned curative resection and primary anastomosis of histologically-confirmed colorectal cancer, at nutritional risk due to weight loss > 5% over the past 3 months. Male:Female = 61:57 (gender not reported for two participants) Mean age = approximately 70 years Exclusion criteria: younger than 18 years, inability to give informed consent, frailty (unlikely to be able to mobilise immediately after the operation), participation in another trial, pregnancy, diabetes, a preoperative fasting glucose > 7 mmol/l, use of steroids or immunosuppressants, history of abnormal gastric emptying, intestinal obstruction, or concurrent parenteral or enteral nutrition
Interventions	Experimental group:

Lidder 2013a *(Continued)*

	Group B: Received carbohydrate drinks preoperatively. On the day of surgery, 400 ml of carbohydrate supplement was given 2 hrs before surgery. The supplement consisted of carbohydrate, 50 kcal per 100 ml, 290 mOsm/kg, pH 5.0(n = 30) Group C: Received a postoperative carbohydrate drink (Fortifresh!, Numico) consisting of 50 kcal per 100 ml, 965 mOsm/kg, pH 4.2(n = 32) Group D: Received the same preoperative carbohydrate drink as group B and the same postoperative carbohydrate drink as group C(n = 31) Control group (group A): received placebo(n = 27) Co-interventions: free fluids permitted immediately after surgery and a light diet as tolerated
Outcomes	Postoperative fluid balance, energy intake, Insulin resistance, hand-grip strength, peak expiratory flow rate, intestinal permeability, bowel function, nausea, vomiting, abdominal pain, insulin, glucose, length of postoperative hospital stay, postoperative complications (wound infection, pneumonia, diarrhoea, septicaemia, anastomotic leak, intra-abdominal collection, intestinal obstruction, ileus, stroke/transient Ischaemic attack, thrombosis, congestive cardiac failure, myocardial infarction, renal failure) and mortality
Study dates	Not stated
Notes	Same trial as Lidder 2013b and Lidder 2013c. We here report group B compared with control. We contacted the authors on 11th November 2015 by email: sjl@doctors.org.uk. We received information on hand-grip strength, BMI and weight.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation codes were computer-generated using Microsoft Excel.
Allocation concealment (selection bias)	Low risk	Randomisation codes were held in sealed, opaque envelopes.
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Participants and investigators were blinded to the treatment allocation. The active and placebo products were packaged identically.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Analysis was conducted by a trialist blinded to which intervention the participants received.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were none lost to follow-up.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause mortality and serious adverse events.
For-profit bias	High risk	One of the authors received grants from "Numico Research".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Lidder 2013b

Methods	Randomised clinical trial, UK
Participants	120 hospitalised adults with planned curative resection and primary anastomosis of histologically-confirmed colorectal cancer, at nutritional risk due to weight loss > 5% over the past 3 months Male:Female = 61:57 (gender not reported for two participants) Mean age = approximately 70 years Exclusion criteria: younger than 18 years, inability to give informed consent, frailty (unlikely to be able to mobilise immediately after the operation), participation in another trial, pregnancy, diabetes, a preoperative fasting glucose > 7 mmol/l, use of steroids or immunosuppressants, history of abnormal gastric emptying, intestinal obstruction, or concurrent parenteral or enteral nutrition
Interventions	Experimental group: Oral nutrition. Group B: Received carbohydrate drinks preoperatively. On the day of surgery, 400 ml of carbohydrate supplement was given 2 hrs before surgery. The supplement consisted of carbohydrate, 50 kcal per 100 ml, 290 mOsm/kg, pH 5.0(n = 30) Group C: Received a postoperative carbohydrate drink (Fortifresh!, Numico) consisting of 50 kcal per 100 ml, 965 mOsm/kg, pH 4.2(n = 32) Group D: Received the same preoperative carbohydrate drink as group B and the same postoperative carbohydrate drink as group C(n = 31) Control group (group A): received placebo preoperatively(n = 27) Co-interventions: Postoperatively: Polymeric nutritional supplement drink (600 ml/day) from the period immediately after their operation until discharge. The supplement consisted of 150 kcal per 100 ml, 965 mOsm/kg, pH 4.2. Free fluids permitted immediately after surgery and a light diet as tolerated
Outcomes	Postoperative fluid balance, energy intake, Insulin resistance, hand-grip strength, peak expiratory flow rate, intestinal permeability, bowel function, nausea, vomiting, abdominal pain, insulin, glucose, length of postoperative hospital stay, postoperative complications (wound infection, pneumonia, diarrhoea, septicaemia, anastomotic leak, intra-abdominal collection, intestinal obstruction, ileus, stroke/transient Ischaemic attack, thrombosis, congestive cardiac failure, myocardial infarction, renal failure) and mortality
Study dates	Not stated
Notes	Same trial as Lidder 2013a and Lidder 2013c, but group C compared with control

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation codes were computer-generated using Microsoft Excel.
Allocation concealment (selection bias)	Low risk	Randomisation codes were held in sealed, opaque envelopes.
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Participants and investigators were blinded to the treatment allocation. The active and placebo products were packaged identically.

Lidder 2013b *(Continued)*

Blinding of outcome assessment (detection bias) All outcomes	Low risk	Analysis was conducted by a trialist blinded to which intervention the participants received.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were none lost to follow-up.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause mortality and serious adverse events.
For-profit bias	High risk	One of the authors received grants from "Numico Research".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Lidder 2013c

Methods	Randomised clinical trial, UK
Participants	120 hospitalised adults with planned curative resection and primary anastomosis of histologically-confirmed colorectal cancer, at nutritional risk due to weight loss > 5% over the past 3 months Male:Female = 61:57(gender not reported for two participants) Mean age = approximately 70 years Exclusion criteria: younger than18 years, inability to give informed consent, frailty (unlikely to be able to mobilise immediately after the operation), participation in another trial, pregnancy, diabetes, a preoperative fasting glucose > 7 mmol/l, use of steroids or immunosuppressants, history of abnormal gastric emptying, intestinal obstruction, or concurrent parenteral or enteral nutrition
Interventions	Experimental group: Group B: Received carbohydrate drinks preoperatively. On the day of surgery, 400 ml of carbohydrate supplement was given 2 hrs before surgery. The supplement consisted of carbohydrate, 50 kcal per 100 ml, 290 mOsm/kg, pH 5.0(n = 30) Group C: Received a postoperative carbohydrate drink (Fortifresh!, Numico) consisting of 50 kcal per 100 ml, 965 mOsm/kg, pH 4.2(n = 32) Group D: Received the same preoperative carbohydrate drink as group B and the same postoperative carbohydrate drink as group C(n = 31) Control group (group A): Received placebo(n = 27) Co-interventions: Free fluids permitted immediately after surgery and a light diet as tolerated
Outcomes	Postoperative fluid balance, energy intake, insulin resistance, hand-grip strength, peak expiratory flow rate, intestinal permeability, bowel function, nausea, vomiting, abdominal pain, insulin, glucose, length of postoperative hospital stay, postoperative complications (wound infection, pneumonia, diarrhoea, septicaemia, anastamotic leak, intra-abdominal collection, intestinal obstruction, ileus, stroke/transient ischaemic attack, thrombosis, congestive cardiac failure, myocardial infarction, renal failure) and mortality
Study dates	Not stated

Lidder 2013c *(Continued)*

Notes	Same trial as Lidder 2013a and Lidder 2013b, but group D compared with control. We contacted the authors on 11th November 2015 by email: sjl@doctors.org.uk. We received information on hand-grip strength, BMI and weight.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation codes were computer-generated using Microsoft Excel.
Allocation concealment (selection bias)	Low risk	Randomisation codes were held in sealed, opaque envelopes.
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Participantsand investigators were blinded to the treatment allocation. The active and placebo products were packaged identically.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Analysis was conducted by a trialist blinded to which intervention the participants received.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were none lost to follow-up.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause mortality and serious adverse events.
For-profit bias	High risk	One of the authors received grants from "Numico Research".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Liu 1990

Methods	Randomised clinical trial, China
Participants	12 hospitalised adults undergoing radical gastrectomy for advanced gastric antrum cancer and with normal liver and kidney function, at nutritional risk due to advanced gastric cancer after radical gastrectomy Male:Female = Unclear Mean age = 55 years Exclusion criteria: metabolic diseases
Interventions	Experimental group: Intravenous nutrition with 134 ± 15.9 kJ/kg (32 ± 3.8 kcal/kg) calories a day, including the use of 14-823 Compound amino acid liquid which was produced by Changzheng pharmaceutical factory, Shanghai, as a protein stroma with a dosage of 1.23 g/kg/day).(n = 6) Control group: conventional fluid infusion with 59 ± 5.0 kJ/kg (14 ± 1.2 kcal/kg) calories a day without exogenous protein intake (n = 6)

Liu 1990 *(Continued)*

	Co-interventions: after been hospitalised, all participants were given fixed diet (1.3 g/kg protein and 121 kJ/kg (29 kcal/kg) calories) a day for a week prior to the surgery.
Outcomes	The decomposition rate of total protein, creatinine, urea nitrogen, 3-methylhistidine (3-MN), serum CPK and change of weight
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse event.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Liu 1996b

Methods	Randomised clinical trial, China
Participants	29 hospitalised adults between 60 ˜ 80 year admitted with gastrointestinal disorders, at nutritional risk due major surgery Male:Female = 17:12 Mean age = 66.2 years Exclusion criteria: Other serious diseases, besides the gastrointestinal system
Interventions	Experimental group: Parenteral nutrition was given through peripheral vein or central vein in perioperative period, and ½ ˜ ⅔ dose on surgery day. The treatment course was 5 ˜ 14 days. The non-protein calorie was given as 150% of basic energy consumption (BEE) (calculated through Harris and Bene-

Liu 1996b *(Continued)*

	dict equation), provided by prepared nutrient solution (7 g nitrogen and 25% glucose/L, and trace elements, vitamin, electrolyte). Control group: participants were encouraged to eat food, and given fluid supplement prior to the surgery; general intravenous infusion of glucose, isotonic saline and vitamin, etc. were given after surgery.
Outcomes	Plasma albumin, lymphocyte count, weight, postoperative complications
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence generation was achieved using a random-numbers table.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Liu 1997

Methods	Randomised clinical trial, China
Participants	41 hospitalised adults admitted with COPD (diagnostic criteria standard), at nutritional risk due to being elderly with COPD Male:Female = 32:6 (gender not reported for three participants) Mean age = 66 years Exclusion criteria: Unclear

Liu 1997 *(Continued)*

Interventions	Experimental group: Normal diet + nutraceutical series made by Huarui Pharmaceutical Co. Ltd. 1. 20% Intralipid 250 ml+ Soluvit 10 ml, and 2.vamin N solution 250 ml+ Addamel 10 ml ivgtt, alternating twice a week(n = 29) Control group: no intervention(n = 9) Co-interventions: Normal diet
Outcomes	Weight, circumference of the upper arm, albumin, trace elements in plasma (Fe, Cu, Zn), lung function, humoral immunity, T cells (T3, T4, T8)
Study dates	Not stated
Notes	We contacted the author by phone 3 times, but he had no time to answer.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Liu 2000a

Methods	Randomised clinical trial, China
Participants	40 hospitalised adults admitted with advanced pancreatic carcinoma by pathological diagnosis and undergoing palliative operation, at nutritional risk due to major surgery Male:Female = 25:15 Mean age = 58 years

Liu 2000a *(Continued)*

	Exclusion criteria: Unclear
Interventions	Experimental group: TPN: total caloric value (NPC) 20 Kcal/(kg/day), N/Q = 1 g: 125 Kcal, glucose:fat = 6:4. The average course of treatment was 11.5 days (8 ~ 15 days). (n = 20) Control group: Routine treatment; the detailed information and the course of the treatment were unclear.(n = 20) Co-interventions: All participants received combined chemotherapy, with a regimen of 5-Fu + CF + MMC +DDP/EPI (5-fluorouracil + Calcium folniate + Cisplatin or Eplrubicin) or IFN-γ(interferon-γ). Dosages of drugs were modified for bone marrow toxicity, stomatitis and declining performance status. After 28 days, the regimen was repeated.
Outcomes	Nutritional and immunological parameters, quality of life, effects of treatment
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Liu 2008

Methods	Randomised clinical trial, China
Participants	48 hospitalised adults admitted with thoracolumbar vertebral tuberculosis and had received anti-tuberculosis treatment for 4 weeks, haemoglobin > 10 g/L, and did not have abortive tuberculosis in other parts; surgical indications where the following surgery could be conducted: anterior cervical le-

Liu 2008 *(Continued)*

	sions removal + autogenous iliac bone graft + anterior plate internal fixation, definitely diagnosed as TB by intraoperative rapid pathological section, and continue to anti-tuberculosis after the surgery; agreed to participate in the trial and could co-operate with researchers. At nutritional risk due to thoracolumbar spinal tuberculosis Male:Female = 25:23 Mean age = 48.25 years Exclusion criteria: Unclear
Interventions	Experimental group: Parenteral nutrition (0.2 g/kg nitrogen and 104.6 KJ/kg calorie, nitrogen comes from aminophenol, 60% non-protein calories provided by glucose, and 40% of them are provided by fat emulsion, aminophenol preparation was 8.5% Novamin, fat emulsion was 20%, 30% Introlipid). Given on the basis of the common diet, started 7 days prior to the surgery and lasted until 7 days after the operation. It was put into 3 L sacks,and infused through the jugular vein.(n = 24) Control group: Ordinary diet was given prior to the surgery, liquid diet and intravenous fluids (glucose and saline) were started from the 1st day after the surgery, and normal diet afterwards. (n = 24)
Outcomes	Weight, serum albumin, ESR
Study dates	Not stated
Notes	We tried and failed 3 times to contact the author by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Ljunggren 2012

Methods	Randomised clinical trial, Sweden
Participants	60 hospitalised adults undergoing elective hip fracture surgery, at nutritional risk due to being frail elderly with hip fracture Male:Female = not reported Mean age = 69 years. Exclusion criteria: endocrinologic disorders, including diabetes, and treatment with cortisone
Interventions	Experimental group: a carbohydrate drink (50 kcal/100 mL; Preop, NutriciaNordica AB, Stockholm, Sweden) 800 mL in the evening before the surgery (Day 0) and 400 mL 2 hrs before entering the operating room (Day 1) (n = 20) Control group: no food or water from midnight before the surgery (n = 20)
Outcomes	Stress (cortisol in plasma and urine), muscle catabolism (urinary 3-methylhistidine), well-being, glucose clearance and insulin sensitivity
Study dates	Not stated
Notes	We contacted the authors on 2nd October 2015 by email: r.hahn@telia.com. We received information on randomisation, quality of life, serious adverse events.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The randomisation was not performed by an independent party. It was performed by making envelopes with the intervention to be received and these envelopes were then put into a bag. It was unclear if this unorthodox method was at low risk of bias.
Allocation concealment (selection bias)	Low risk	The envelopes used for randomisation are described as sealed and opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The study was not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The study was not blinded.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were 5% dropouts.
Selective reporting (reporting bias)	Low risk	The outcomes stated in the protocol were reported on.
For-profit bias	Low risk	Supported by: Olle Engkvist Byggmästare Foundation the Stockholm County Council (Grant number 2009 – 0433).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Lough 1990

Methods	Randomised clinical trial, UK
Participants	29 hospitalised adults undergoing bone marrow transplantation Male:Female = 20:9 Mean age = 69 Exclusion criteria: none stated
Interventions	Experimental group: TPN as a solution of dextrose (50%), intralipid (20%), amino acid (8.5%), sodium, potassium, magnesium, SolivitoH, Vitlipid; Addamel for 14 days (n = 14) Control group: 5% dextrose solution for 14 days (n = 15) Co-intervention: standard care including standard oral diet
Outcomes	Weight, albumin, transferrin, mortality
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The envelopes were described as sealed but it was unclear if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	It was unclear how many participants had incomplete outcome data
Selective reporting (reporting bias)	Unclear risk	The trial reports survival at 100 days but does not report complications in general terms
For-profit bias	Unclear risk	It was unclear how the trial was funded
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Lu 1996

Methods	Randomised clinical trial, China
Participants	27 hospitalised adults undergoing radical total gastrectomy (RTG) due to gastric cardia cancer with a weight loss of at least 10% during the last 3 months, at nutritional risk due to major surgery Male:Female = 18:9 Mean age = 55(E), 40(C) Exclusion criteria: Unclear
Interventions	Experimental group: TPN with 35 ~ 40 Kcal/kg calories, 0.2 g/kg nitrogen each day. 30% ~ 40% non-protein calorie was provided by the 10% Intralipid, 60% to 70% of them was provided by glucose. The course of the treatment was unclear. (n = 17) Control group: partial parenteral nutrition with 15 ~ 20 kcal/kg calories provided by glucose, and 0 ~ 0.1 g/kg nitrogen each day. The course of the treatment was unclear. (n = 10)
Outcomes	NK cell activity,T lymphocyte and its subsets (CD_3^+, CD_4^+, CD_8^+).
Study dates	Not stated
Notes	We tried to contact the author by phone 3 times, but the author was too busy to answer.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Luo 2011

Methods	Randomised clinical trial, China
Participants	127 hospitalised adults admitted due to hip fracture surgery within 14 days of fracture and serum albumin levels < 38 g/l as well as moderately malnourished, at nutritional risk due to being frail elderly Male:Female = not stated Mean age = not stated Exclusion criteria: none stated
Interventions	Experimental group: ONS 3 times a day (100 ml between meals and 200 ml as evening snack). Each 200 ml (389 kcal, 17 g protein, 18 g fat, 40 g CHO) for 28 days (n = 63) Control group: No intervention(n = 64) Co-interventions: Standard hospital diet
Outcomes	Weight, serum albumin, pre-albumin, total protein, suture status and functional recovery status
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The reasons for dropouts were unclear.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Luo 2012

Methods	Randomised clinical trial, China
Participants	60 hospitalised adults diagnosed with acute exacerbation of COPD, at nutritional risk due to trialist indication Male:Female = Unclear Mean age = Unclear Exclusion criteria: Malignant tumour, gastro-intestinal bleeding, intestinal obstruction, gastroenteritis, severe haemodynamic instability, severe liver and kidney function, hyperthyroidism, diabetes, tuberculosis
Interventions	Experimental group: A deep venous catheter was adopted for nutritional support. Amino acid was provided by 8.5% novamin, fat was provided by 20% medium long chain fat emulsion. Fat and glucose accounted for 50% of the energy. Supplement water-soluble vitamins, fat-soluble vitamins and micro elements were given each day. (n = 30) Control group: no intervention(n = 30) Co-interventions: placement of nasogastric tube and started feeding at an amount of 20 ml/h nutrition by pumping. Residual gastric volume was checked every 4 hrs, and the feeding speed was increased with 20 ml/h every 8 hrs if residual gastric volume was below 200 ml and no abdominal distention, or diarrhoea occurred. It was continued until target quantity. The speed was suspended to give nutrition and assessed after 4 hrs if the gastric residual was above 200 ml or abdominal distension and diarrhoea occurred. Instead was chosen Nutrison Fibre (a balanced EN mixed suspension,with total protein fibre type, containing a variety of dietary fibre,16% protein, 35% fat and 49% carbohydrate, energy density of 6.276 kJ/ml,and calorie/nitrogen ratio of 548.1 kJ:lg) as nutraceutical.
Outcomes	Urine nitrogen, nitrogen balance, the former protein, transferrin before and 7 days after treatment, 7-day and 28-day offline success rate, 28-day incidence of ventilator-associated pneumonia (VAP) and mortality at 28 days
Study dates	Not stated
Notes	We tried but failed to contact the authorsby phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence generation was achieved using a random-numbers table.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The procedure of blinding was insufficiently described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Luo 2012 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse event.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

López 2008

Methods	Randomised clinical trial, Spain
Participants	24 hospitalised adults undergoing elective gastroenterologic surgery, at nutritional risk due to undergoing major surgery Male:Female = not stated Mean age = not stated (between 30 - 80) Exclusion criteria: no kidney or liver disease, no peritoneal carcinomatosis or known metastasis, no malnutrition (normal albumin and transthyretin, normal BMI, no weight loss greater than 10% in the last 3 months) and no metabolic disease
Interventions	Experimental group: was given 3 different formulas of parenteral nutrition Group 2: 5% glucose, 30 g/L aminoacids(n = 6) Group 3: 6.7% carbohydrates, 30 g/L aminoacids, 16.6 g/L fat(n = 6) Group 4: 10% carbohydrates, 45 g/L amino acids, 44.4 g/L fat(n = 6) Control group: 5% glucose (n = 6)
Outcomes	Whole body protein, nitrogen balance
Study dates	Not stated
Notes	We contacted the authors on 13th July 2016 by email: joalopez@ir.vhebron.net. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Random-numbers table
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Coded black infusion bags
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

López 2008 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report mortality or serious adverse events.
For-profit bias	Low risk	"This study was supported by the Spanish Ministry of Health Grant FIS 97/0932.".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

MacFie 2000

Methods	Randomised clinical trial, UK
Participants	52 hospitalised adults undergoing elective major gastrointestinal surgery, at nutritional risk due to major gastrointestinal surgery Male:Female = 20:32 Mean age = 65 years Exclusion criteria: dementia, major concurrent metabolic problems, such as uncontrolled diabetes, advanced liver disease, or uraemia, and those requiring emergency surgery
Interventions	Experimental group: Oral Dietary Supplements for at least 7 days Oral dietary supplements were available in 200-mL cartons (Fortisip, Nutricia Ltd., Towbridge, Wiltshire, UK), in a variety of flavours providing 1.5 kcal, 0.05 g protein, and 0.18 g carbohydrate per mL. A fruit-flavored supplement (Fortijuice, Nutricia Ltd.) was available as an alternative, providing 1.25 kcal, 0.025 g protein, and 0.285 g carbohydrate per mL. Participants were instructed to drink the supplements in addition to and not in place of their normal diet and were encouraged to take a minimum of 2 cartons daily. They were advised to drink only the volume of supplement they felt able to tolerate. (n = 27) Control group: No intervention(n = 25) Co-interventions: Normal diet
Outcomes	Nutritional status, voluntary food intake, weight loss, serum albumin, morbidity and mortality, anxiety and depression, postoperative activity levels, hand-grip strenght, midarm circumference, triceps skinfold thickness and BMI
Study dates	Not stated
Notes	We include only the inpatient part of the trial. We contacted the author on 30th June 2015 by email: johnmacfie@aol.com. We received information on financial support and randomisation.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation was done by a random-number sequence.

MacFie 2000 *(Continued)*

Allocation concealment (selection bias)	Low risk	Sealed envelopes were used.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Described as unblinded
Blinding of outcome assessment (detection bias) All outcomes	High risk	Described as unblinded
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The amount of dropouts was unclear.
Selective reporting (reporting bias)	Low risk	No protocol published, but the trial reported all-cause mortality and serious adverse events.
For-profit bias	Low risk	No financial support.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Maderazo 1985

Methods	Randomised clinical trial, USA
Participants	18 hospitalised adults admitted following motor vehicle accidents, at nutritional risk due to trauma
Interventions	Experimental group: intravenous hyperalimentation for at least 7 days(n = 9) Control group: no intravenous hyperalimentation (n = 9)
Outcomes	Chemokinesis, chemotaxis
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described

Maderazo 1985 *(Continued)*

Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Malhotra 2004

Methods	Randomised clinical trial, India
Participants	200 hospitalised adults undergoing surgical intervention for peritonitis following perforation of the gut, at nutritional risk due to major surgery Male:Female = 159:41 Mean age = 37 years Exclusion criteria: Undergoing ileostomy.
Interventions	Experimental group: Early Enteral Nutrition (through a naso-gastric tube) from the 2nd postoperative day 100 grams of a balanced diet formula (containing proteins, fats, carbohydrates, vitamins, minerals and fibre) dissolved in 500 ml of gram dry weight (GDW) 5% (600 Calories) was given slowly at the rate of 50 ml/hr by an intravenous drip set connected to a nasogastric tube. Participants received another 300 - 400 calories in the form of intravenous dextrose. From the 5th postoperative day, in addition to enteral feeds, participants were kept on intravenous patency line. Between the 8th and t10th day the nasogastric tube was removed and complete oral feeds in the form of semi-solid diet were begun. (n = 100) Control group: Conventional regimen of intravenous fluid administration for up to 7 days and kept nil by oral intake. Participants were assessed for the feasibility of oral intake on the 5th postoperative day and those found suitable were given sips of an appetising liquid. Those tolerating the sips graduated to 500-ml liquids and then semi-solids over the next 2 days. Those who did not tolerate oral feed stayed on intravenous fluids till they could take feeds orally.(n = 100)
Outcomes	Complications: wound infection, wound dehiscence, pneumonia, leakage of anastomoses, abdominal distension, vomiting, diarrhoea, leak, septicaemia and death. Calorie intake, mean duration of stay, mean duration of ICU stay. Determination of weight on the 1st, 7th and 10th postoperative days or at the time of discharge, or both. Biochemical and haematological investigations that were done included: estimation of haemoglobin concentration, levels of albumin and creatinine in the serum, blood urea levels and urinary urea levels on the 3rd and 8th postoperative days.
Study dates	May 2000 and February 2003

Malhotra 2004 *(Continued)*

Notes	On postoperative day 8, 84% from the experimental group and 0% from the control group received over 2500 calories a day. We have estimated this to be an adequate amount of nutrition for the experimental group and an inadequate amount for the control group. We could otain no contact information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation was performed using random tables.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding was not performed.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	5 left against medical advice. In the experimental group there were 3 drop outs because of side effects.
Selective reporting (reporting bias)	Low risk	No protocol published, but the trial reported all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Mattox 1992

Methods	Randomised clinical trial, USA
Participants	18 hospitalised adults admitted for rectal carcinoma surgery, at nutritional risk due to major surgery. Male:Female = not stated Mean age = not stated Exclusion criteria: none stated
Interventions	Experimental group: Lipid-based TPN(n = 9) Control group: Intravenous fluid (n = 9)
Outcomes	Tumour protein synthesis
Study dates	Not stated
Notes	We contacted the author on 13th December 2015 by email: mattoxtw@moffitt.usf.edu. We received no reply.

Mattox 1992 *(Continued)*

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The reasons for dropouts were unclear.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Maude 2011

Methods	Randomised clinical trial, Thailand
Participants	56 hospitalised adult with proven cerebral plasmodium falciparum malaria, at nutritional risk due to being admitted to an ICU. Male:Female = 10:46 Mean age = 31 years
Interventions	Experimental group: Enteral feeding at admission (1000 – 2000 kCal every 24 hrs for an adult weighing 50 kg) (n = 27) Control group: Standard i.v. fluids (n = 29) Co-interventions: Nasogastric tube at admission + after 60 hours: continued enteral nutrition or oral feeding if the participants were able to
Outcomes	Aspirations, pneumonia, death, sepsis
Study dates	Not stated
Notes	We contacted the author on 19th August 2015 by email: arjen@tropmedres.ac, and on 23rd August 2015 by email: Richard@tropmedres.ac. We only received an initial response.

Maude 2011 *(Continued)*

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	The allocation was concealed in sealed envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was unblinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial was unblinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	There were no dropouts.
Selective reporting (reporting bias)	High risk	Time to stand was not described in the trial.
For-profit bias	Low risk	The trial was funded by: Wellcome Trust of Great Britain (www.wellcome.ac.uk, grant number 077166/Z/05/Z).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

McCarter 1998

Methods	Randomised clinical trial, USA
Participants	112 hospitalised adults with an appropriate clinical indication for PEG, 16 years of age or older, and life expectancy of 30 days or more, at nutritional risk due to trialist indication Male:Female = 63:49 Mean age = 63 years Exclusion: prior gastric surgery, evidence of gastro-intestinal obstruction, known gastric or small bowel dysmotility, marked ascites, infection or cellultis at the anticipated PEG site, proximal small bowel fistula, neoplastic or infiltrative disease of the gastric wall, morbid obesity, extensive scarring of the anterior abdominal wall, prolonged prothrombin time not correctable to < 3 s of the control value, and platelet count < 50 K
Interventions	Experimental: started enteral feeding (Isocal) through PEG after 4 hours(n = 57) Control: no intervention(n = 55) Co-intervention: enteral feeding (Isocal) after 24 hrs
Outcomes	Mortality, complications

McCarter 1998 *(Continued)*

Study dates	Not stated
Notes	We could find no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reports mortality and complications.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

McEvoy 1982

Methods	Randomised clinical trial, UK
Participants	51 hospitalised elderly adults at the the acute geriatric ward, at nutritional risk due to weight below 85% of ideal weight for height, triceps skinfold thickness below 85% of standard values or serum albumin level < 34 g/l Male:Female = Not reported Mean age = Not reported Exclusion criteria: Malignant conditions or metabolic disease such as thyrotoxicosis or diabetes
Interventions	Experimental group: received 2 sachets of “Build-up” oral supplement daily providing 36.4 g protein and 644 kcal(n = 26) Control group: No intervention(n = 25) Co-interventions: All received a normal hospital diet

McEvoy 1982 *(Continued)*

Outcomes	Weight, triceps skinfold thickness, mid-upper arm circumference, serum albumin level and nutritional status
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

McWhirter 1996a

Methods	Randomised clinical trial, UK
Participants	86 hospitalised adults admitted to a medical ward, at nutritional risk according to anthropometric measurements 29 were mildly, 23 moderately, and 34 were severely nutritionally depleted Male:Female = Not reported Mean age = 71 years Exclusion criteria: Not described
Interventions	Experimental group: Group 1: Participants received ONSs (n = 35) Group 2: Participants were tube-fed, through nasogastric tube (n = 25)

McWhirter 1996a *(Continued)*

	Feeding was continued until oral intake or nutritional status had improved sufficiently or when agreement between participant and medical staff deemed it appropriate, or on discharge from hospital. Nutrients were prescribed to make up the difference between inadequate oral intake and estimated energy requirements. Energy requirements were defined for each participant using the Schofield equation 24 corrected for stress and activity. All participants were fed for at least 7 days. Control group: No intervention(n = 26) Co-interventions: Both intervention groups had access to hospital diet.
Outcomes	Nutritional status, nutritional intake, weight, height, triceps skinfold thickness, mid-arm muscle circumference
Study dates	Not stated
Notes	Same trial as McWhirter 1996b with the results of experimental group 1 vs control. We contacted the authors on 17th November 2015 by email: janetbaxter@nhs.net. We received no additional information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The description of the number of dropouts is unclear.
Selective reporting (reporting bias)	Unclear risk	The trial did not report on all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was supported by Clintec Nutrition Ltd. which might have and interest in the outcome.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

McWhirter 1996b

Methods	Randomised clinical trial, UK

McWhirter 1996b *(Continued)*

Participants	86 hospitalised adults admitted to a medical ward, at nutritional risk according to anthropometric measurements 29 were mildly, 23 moderately, and 34 were severely nutritionally depleted. Male:Female = Not reported Mean age = 71 years Exclusion criteria: Not described
Interventions	Experimental group: Group 1: Participants received ONSs. (n = 35) Group 2: Participants were tube-fed, through nasogastric tube. (n = 25) Feeding was continued until oral intake or nutritional status had improved sufficiently or when agreement between participant and medical staff deemed it appropriate, or on discharge from hospital. Nutrients were prescribed to make up the difference between inadequate oral intake and estimated energy requirements. Energy requirements were defined for each participant using the Schofield equation 24 corrected for stress and activity. All participants were fed for at least 7 days. Control group: No intervention(n = 26) Co-interventions: Both intervention groups had access to hospital diet.
Outcomes	Nutritional status, nutritional intake, weight, height, triceps skinfold thickness, mid-arm muscle circumference
Study dates	Not stated
Notes	Same trial as McWhirter 1996a with the results of experimental group 1 vs control. We contacted the authors on 17th November 2015 by email: janetbaxter@nhs.net. We received no additional information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The description of the number of drop outs is unclear.

McWhirter 1996b *(Continued)*

Selective reporting (reporting bias)	Unclear risk	The trial did not report on all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was supported by Clintec Nutrition Ltd. which might have and interest in the outcome.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Meng 2014

Methods	Randomised clinical trial, China
Participants	64 hospitalised adults with hepatocellular carcinoma and cirrhosis, at nutritional risk due to hepatectomy Male:Female = 39:25 Mean age = 51 years Exclusion criteria: none specified
Interventions	Enteral nutrition suspension (TP-MCT) 500ml (1 bottle/day) orally on 3rd preoperative day, using jejunal nutrient canal with 500 ml normal saline during operation for 12 hrs, and enteral nutrition suspension (TP-MCT) 1000 ml on postoperative days 2 to 4; Based on co-intervention. Total treatment duration was 7 days.(n = 55) Control: treatment as usual (n = 54)
Outcomes	Biomarkers, adverse events, complications
Study dates	Not stated
Notes	We tried to contact the authors by phone and by email: mengfl.123@163.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Random-number table
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias)	Unclear risk	The number of participants with incomplete data was not described.

Meng 2014 *(Continued)*

All outcomes		
Selective reporting (reporting bias)	Low risk	No protocol but the trial reported on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Mezey 1991

Methods	Randomised clinical trial, USA
Participants	54 hospitalised adults with severe alcoholic hepatitis, recent history of heavy alcohol ingestion, laboratory-based liver disease discriminant function defined as 4.6 X prothrombin time + serum bilirubin > 85 (mg/dl) and the clinical and laboratory characteristics adopted by the International Association for the Study of the Liver for the diagnosis of alcoholic hepatitis Male:Female = 32:22 Mean age = 43 years Exclusion criteria: pregnancy, cardiovascular, pulmonary or chronic kidney disease; pancreatitis, type I diabetes, recent (within 1 month) gastro-intestinal bleeding, peptic ulcer disease, or concurrent infection
Interventions	Experimental group: 1L parenteral nutrition each 12 hour (25.8 g amino acids) for 30 days(n = 28) Control group: no intervention(n = 26) Co-intervention: Standard hospital diet + parenteral nutrition (6.5% glucose)
Outcomes	Biochemistry, mid-arm circumference, triceps skinfold thickness, body weight, mortality
Study dates	Not stated
Notes	The trial was included late in the process of the review, so we did not contact the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	The code was kept by the pharmaceutical company, and was not broken until the study was terminated.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	The participants and investigators were described as unaware of the allocation. However, the placebo was not described.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	It was described that the participants and investigators was unaware of the allocation. However, the placebo was not described.

Mezey 1991 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	More than 5% were lost to follow-up, and the trial did not use proper methodology to deal with missing data.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report serious adverse events.
For-profit bias	Low risk	The trial was funded by the United States-Spanish Joint Committee for Scientific and Technological Cooperation (grant CCA-85101050).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Miller 2006a

Methods	Randomised clinical trial, Australia
Participants	100 hospitalised adults aged 70 or above and admitted with fall-related lower limb fracture at nutritional risk due to being frail elderly with lower limb fracture Male:Female = 21:79 Mean age: 83 years Exclusion: Did not reside within southern Adelaide, unable to comprehend instructions relating to positioning of the upper arm for eligibility assessment, unable to fully weight-bear on the side of the injury for more than 7 days post-admission, not independently mobile prefracture, medically unstable/7 days post-admission, suffering from cancer, chronic renal failure, unstable angina or unstable diabetes or were not classified as malnourished, (]/25th percentile for mid-arm circumference of a large representative sample of older Australians/27.0 cm for men and 26.3 cm for males and 26.3 cm for women).
Interventions	Experimental group: Fortisip (Nutricia Australia Pty Ltd), a complete ONS (6.3 kJ (1.5 kcal)/mL, 16% protein, 35% fat and 49% carbohydrate). Between 580 - 800 mL was given. (n = 25) Control: Attention control, with tri-weekly visits (of equivalent duration) from weeks 1 to 6 and then weekly visits weeks 7 to 12, to match the home visits of the active intervention groups. (n = 26) Co-intervention: usual clinical care, including general nutrition and exercise advice, usual dietetic and physiotherapy care, transfer to residential care, rehabilitation facility or directly home.
Outcomes	Mid-arm circumference, quality of life, weight, quadriceps strength, mortality
Study dates	September 2000 and October 2002
Notes	The groups with nutrition + resistance training vs resistance training alone. We contacted the authors on 25th January 2016 by email: maria.crotty@flinders.edu.au. We received no reply. The trial starts as an inpatient trial but the intervention continues outside the hospital.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated allocation sequence

Miller 2006a *(Continued)*

Allocation concealment (selection bias)	Low risk	Sealed opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	It was unclear if the trial was blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	it was unclear if the participants were blinded, and the trial reported quality of life.
Incomplete outcome data (attrition bias) All outcomes	High risk	There was above 5% dropouts for weight data and the trial did not account for the missing data properly.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained. The trial reported all-cause mortality but did not report serious adverse events.
For-profit bias	High risk	Supported by: NHMRC Public Health Postgraduate Research Scholarship, Flinders University-Industry Collaborative Research Grant and Nutricia Australia Pty Ltd.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Miller 2006b

Methods	Randomised clinical trial, Australia
Participants	100 hospitalised adults aged 70 or above and admitted with fall-related lower limb fracture, at nutritional risk due to being frail elderly with lower limb fracture Male:female = 21:79 Mean age: 83 years Exclusion: Did not reside within southern Adelaide, unable to comprehend instructions relating to positioning of the upper arm for eligibility assessment, unable to fully weight-bear on the side of the injury for more than 7 days post-admission, not independently mobile prefracture, medically unstable/7 days post-admission, suffering from cancer, chronic renal failure, unstable angina or unstable diabetes or were not classified as malnourished, []/25th percentile for mid-arm circumference of a large representative sample of older Australians/27.0 cm for men and 26.3 cm for women)
Interventions	Experimental group: Fortisip (Nutricia Australia Pty Ltd), a complete oral nutritional supplement (6.3 kJ (1.5 kcal)/mL, 16% protein, 35% fat and 49% carbohydrate). Between 580 - 800 mL was given. (n = 24) Control: Attention control, with tri-weekly visits (of equivalent duration) from weeks 1 to 6 and then weekly visits weeks 7 to 12, to match the home visits of the active intervention groups. (n = 25) Co-intervention: usual clinical care (including general nutrition and exercise advice, usual dietetic and physiotherapy care, transfer to residential care, rehabilitation facility or directly home) and resistance training.
Outcomes	Mid-arm circumference, quality of life, weight, quadriceps strength, mortality
Study dates	September 2000 and October 2002

Miller 2006b *(Continued)*

Notes	Groups attention control vs nutrition supplements

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated allocation sequence
Allocation concealment (selection bias)	Low risk	Sealed opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	It was unclear if the trial was blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	it was unclear if the participants were blinded, and the trial reported quality of life.
Incomplete outcome data (attrition bias) All outcomes	High risk	There was above 5% dropouts for weight data and the trial did not account for the missing data.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained. The trial reported all-cause mortality but did not report serious adverse events.
For-profit bias	High risk	Supported by: NHMRC Public Health Postgraduate Research Scholarship, Flinders University-Industry Collaborative Research Grant and Nutricia Australia Pty Ltd.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Moreno 2016

Methods	Randomised clinical trial, Belgium
Participants	136 hospitalised adults with severe alcoholic hepatitis, at nutritional risk by trialists Male:Female = 86:50 Mean age = 50 years Exclusion criteria: Not stated
Interventions	Experimental group: Intensive enteral nutrition: Enteral nutrition was given using a feeding tube for 14 days and participants received Fresubin HP Energy (1.5 kcal/ml, 7.5 g prot/100 ml) as follows: 1 L/day if body weight < 60 kgs, 1.5 L if body weight was between 60 and 90 kgs, 2 L if body weight was > 90 kgs. (n = 68) Control group: Treatment as usual ("conventional nutrition")(n = 68) Co-interventions: Methylprednisolone

Moreno 2016 *(Continued)*

Outcomes	6 months survival
Study dates	Feburary 2010 to February 2013
Notes	We did not contact the authors since the trial was included late in the writing phase.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	Sealed opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There was under 5% with missing data
Selective reporting (reporting bias)	Low risk	A protocol could not be obtain but the trial reported all-cause mortality and serious adverse events (NCT01801332, published after completion).
For-profit bias	High risk	Several of the authors received grants for trials which might have conflict of interest (Abbvie, Novartis).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Munk 2014

Methods	Randomized clinical trial, Denmark
Participants	84 hospitalised adults at nutritional risk according to the Nutritional Risk Screening-2002 (NRS-2002) tool. Male:Female = 34:47 (gender not reported for three participants) Mean age = 75 years Exclusion criteria: terminally ill dysphagia, food allergy or intolerance, anatomical obstructions preventing oral food intake, those who exclusively received enteral or parenteral nutrition
Interventions	Experimental group: Fortified foods: They received a special target food concept consisting of dishes fortified with natural energy and protein ingredients and with high-quality protein powder. These dishes supplemented the standard hospital food. The final energy and protein fortified novel menu consisted of 23 small dishes. All dishes contained a minimum (range) of 6 g (6.1 – 11.5 g) of protein. The mean

Munk 2014 *(Continued)*

	(range) energy density was 9.4 kJ/g (2.5 kJ/g to 19.8 kJ/g). All but 3 dishes (baked salmon, meat loaf, meat balls of veal) contained protein powder. The intervention menu was served a la carte with room service.(n = 44) Control group: No intervention (n = 40) Co-intervention: Standard food service Buffet-style serving system: 3 main meals + 2 - 3 in-between meals, e.g. snacks The national nutritional guidelines for the 'hospital diet', with energy- and protein-rich beverage included, recommended that the hospital diet on average contained 9000 kJ, 95 g of protein (15% – 20% of energy), 100 g of fat (40% – 50% of energy) and 225 g of carbohydrate (40% – 45% of energy).
Outcomes	Energy and protein intake, hand-grip strength, average daily energy and protein intake, use of tube-feeding, use of parenteral nutrition, length of stay, changes in body weight
Study dates	October 2011 to February 2012
Notes	We contacted the authors on 11th February 2016 by email: Tina.munk@regionh.dk. We received additional information on the random sequence generation.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Participants were randomised using stratified block-randomisation. The allocation sequence was generated by a secretary who was not otherwise involved in the trial by randomly allocating sealed opaque envelopes.
Allocation concealment (selection bias)	Low risk	Participants were randomised using sealed, opaque envelopes with a total of 9 blocks, each consisting of 10 envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding of participants and personnel was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Data analysis was blinded by allocating the letters A and B to the two groups. The analysis was undertaken by the principal investigator who was blinded to the randomisation.
Incomplete outcome data (attrition bias) All outcomes	Low risk	81 participants completed the trial, giving a completion rate of 96%.
Selective reporting (reporting bias)	Low risk	The protocol was published before the trial was begun and the outcomes stated in the protocol were reported on.
For-profit bias	High risk	"We also thank the company 'Toft Care System' (Copenhagen, Denmark) for giving us the protein powder used free of charge. The sources of funding had no influence on the design of the study; the collection, analysis, or interpretation of the data; the writing of the manuscript; or the decision to submit for publication."
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Myers 1990

Methods	Randomised clinical trial, USA
Participants	80 hospitalised adults with non-surgically debrided pressure ulcers, at nutritional risk as defined by trialists Male:Female = 46:34 Mean age = 70.4 years Exclusion criteria: Not described
Interventions	Experimental group: Prescribed nutritional support, including oral supplements, tube-feedings, parenteral nutrition, vitamins, and trace elements according to the clinical condition and the nutritional assessment completed by the hospital nutritional support team (n = 25) Control group: No intervention (n = 20) Co-interventions: Standard hospital care. This included both wound treatment and nutritional evaluation and recommendation by dietitians to attending physicians.
Outcomes	Change in ulcers stage, changes in ulcer size, clinical assessment of treatment
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the study did not report on all-cause mortality or serious adverse events.
For-profit bias	High risk	The study was supported by a grant from Ross Laboratories, who might have had an interest in the outcome assessment.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Müller 1982a

Methods	Randomised cclinical trial, Germany
Participants	160 hospitalised adults with carcinoma of the oesophagus, stomach, colon, rectum or pancreas, at nutritional risk due to major surgery of gastrointestinal carcinoma Male:Female = 77:48 (gender not reported for 35 participants) Mean age = 59 years Exclusion criteria: Total obstructions of the gut
Interventions	Experimental group: Preoperativ parenteral nutrition. The experimental group received 10 days of preoperative parenteral nutrition group (1.5 g amino acids/kg body weight; 11 g glucose/kg body weight; electrolytes, trace elements, and vitamins) by a central venous catheter(n = 80) Control group: Treatment as usual They received regular hospital diet of 2400 kcal/day. (n = 40)
Outcomes	Postoperative complications, mortality, serum protein levels (total protein, albumin, pre-albumin, thyroxine-binding globin, retinol-binding protein, transferrin), immunological status (IgA, IgM, IgG, C3A, C4, skin tests).
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding was not possible due to the nature of the intervention.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	33 (13%) of participants were withdrawn from the trial and analysis and reasons for withdrawal were clearly stated.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but the trial reported mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Müller 1982b

Methods	Randomised cclinical trial, Germany
Participants	160 hospitalised adults with carcinoma of the oesophagus, stomach, colon, rectum or pancreas, at nutritional risk due to major surgery of gastrointestinal carcinoma Male:Female = 77:48 (gender not reported for 35 participants) Mean age = 59 years Exclusion criteria: Total obstructions of the gut
Interventions	Experimental group: Preoperativ parenteral nutrition: The experimental group received 10 days of preoperative parenteral nutrition group (1.5 g amino acids/kg body weight; 45 kcal/kg body weight with half derived from lipids; electrolytes, trace elements, and vitamins) by a central venous catheter(n =55) Control group: Treatment as usual. They received regular hospital diet of 2400 kcal/day. (n = 40)
Outcomes	
Study dates	
Notes	

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Random-numbers table
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding was not possible due to the nature of the intervention.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	33 (13%) of participants were withdrawn from the trial and analysis and reasons for withdrawal were clearly stated.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but the trial reported mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Naveau 1986

Methods	Randomised clinical trial, France
Participants	40 hospitalised adults with alcoholic cirrhosis and total serum bilirubin ≥ 5 mg a dL, at nutritional risk due trialist indication Male:Female = 25:15 Mean age = 53 years Exclusion criteria: hepatocellular carcinoma, renal failure, hyponatraemia septicaemia, spontaneous bacterial peritonitis, gastro-intestinal bleeding within 3 days or hepatic coma
Interventions	Experimental group: Received daily through central catheter 40 kcal a kg of body weight measured before illness, given as equal proportions of glucose (50% glucose) and intravenous fat emulsion (20% Intralipid), and 200 mg nitrogen a kg of body measured weight before illness. This SPN provided electrolytes, minerals, vitamins and trace element requirements in a sodium-free solution. (n = 20) In participants with ascites, the oral sodium intake was 400 mg a day; without ascites, the oral sodium was 4 mg a day. The intervention lasted 28 days. Control group: No intervention (n = 20) Co-interventions: All were offered a daily diet containing 40 kcal a kg and 200 mg nitrogen a kg of their body weight measured before illness.
Outcomes	Serum bilirubin, prothrombin time and proaccelerin expressed as percentage of normal, blood, urea nitrogen, hematocrit, plasma protein, serum creatinine, sodium, y-glutamyl transpeptidase (GGT) and TSB/GGT ratio, SGOT, SGPT, albumin, alkaline phosphatase, transferrin, pre-albumin, retinol binding protein, upper-arm fat and upper-arm muscle areas expressed as percentage of the standard value of the age- and sex-specific 50th percentile and skin test, mortality and anthropometric measurements
Study dates	Not stated
Notes	We contacted the authors on 30th June 2015 by email: sylvie.naveau@abc.ap-hop-paris.fr. We received only an initial reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation was performed using a computer programme.
Allocation concealment (selection bias)	Low risk	Serially-numbered, sealed, opaque envelopes were used for random assignment of participants in 2 groups.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	There was above 5% dropouts and it was unclear how the trial accounted for the participants.

Naveau 1986 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol was available, but the numbers and reasons for all-cause mortality and serious adverse events was reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Neelemaat 2012

Methods	Randomised cclinical trial, the Netherlands
Participants	210 hospitalised adults at nutritional risk due to a > 10 % unintentional weight loss in the previous 6 months and/or > 5% unintentional weight loss in the previous month and/or a BMI < 20 kg/m^2 Male:Female = 94:116 Mean age = 74 years. Exclusion criteria: Senile dementia, not able to understand the Dutch language or not able or willing to give fully-informed consent
Interventions	Experimental group: Fortified foods and general nutrition support. Participants received standardised nutritional support started at the hospital and continued until 3 months after discharge. It included: - Energy- and protein-enriched diet (during the stay at hospital) - 2 additional servings of an ONS (Nutridrink!, Nutricia), leading to an expected increase in intake of 2520 kJ/day (1⁄4600 kilocalories/day and 24 g protein/day (during the entire study period)) - 400 IE vitamin D3 and 500 mg calcium (Calci-Chew D3!, Nycomed) a day (during the entire study period) - Telephone counselling by a dietician in order to give advice and to stimulate compliance with the proposed nutritional intake (every other week after discharge from the hospital, 6 in total)(n = 105) Control group: Usual care(n = 105) Participants were given nutritional support only on prescription by their treating physician. In general, they did not receive post-discharge nutritional support.
Outcomes	QALY, body weight, BMI, fat-free mass, hand-grip strength, physical activity, fall incidence, mortality, cost effectiveness, functional limitations
Study dates	Not stated
Notes	We contacted the authors on 04th April 2016 by email: f.neelemaat@vumc.nl.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation was performed using a random-number generator. Block randomisation in blocks of 10 was used to ensure equal numbers of participants in each group.

Neelemaat 2012 *(Continued)*

Allocation concealment (selection bias)	Low risk	The randomisation was concealed using numbered, opaque envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding of participants and personnel was not performed.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The participants were not blinded, and the trial reported quality of life.
Incomplete outcome data (attrition bias) All outcomes	High risk	Data was incomplete for 60 (28.6%) participants.The trial performed intention-to-treat analysis but used last observation carried forward for missing data besides cost, which was imputed using multiple imputations.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and serious adverse events were not reported.
For-profit bias	Low risk	The trial was funded by: The Netherlands Organisation for Health Research and Development (ZonMw) (94506203).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Neuvonen 1984

Methods	Randomised clinical trial, Finland
Participants	19 hospitalised adults undergoing major abdominal surgery and having 3 out of the following 7 criteria: weight loss > 5% a month, the weight-for-height index, arm muscle circumference, triceps skinfold thickness or creatinine-height index was < 90% of normal or if the serum albumin concentration was < 32 g/l or the serum pre-albumin concentration was < 0.08 g/l, at nutritional risk due major abdominal surgery Male:Female = 12:7 Mean age = 55 years Exclusion criteria: Not stated
Interventions	Experimental group: TPN was started 10 days before the planned operation. The participants received nutrition through a central venous catheter which included 1 - 2 g/kg/day amino acids, 150 - 200 kcal/1gN (glucose and fat), 40 - 60 ml/kg water together with the necessary minerals and vitamins(n = 9) Control group: No treatment(n = 10)
Outcomes	Leucocyte counts, mitogen- and antigen-induced lymphocyte proliferative responses, complications, mortality
Study dates	Not stated
Notes	We found no contact information for the authors.
Risk of bias	

Neuvonen 1984 *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded due to the nature of the intervention.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but the trial reported serious adverse event and mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Nguyen 2012

Methods	Randomised clinical trial, Australia
Participants	28 hospitalised adults admitted to a level 3 ICU due to being critically ill and able to receive enteral nutrition, and likely to receive mechanical ventilation for at least 4 days, at nutritional risk due to ICU hospitalisation Male:Female = 18:10 Mean age = 55.6 years Exclusion criteria: transferred from other ICUs or were recently (within 14 days) admitted to an ICU; receiving parenteral nutrition; recent (< 4 weeks) major surgery that involved opening the abdominal cavity or gastro-intestinal tract or previous surgery of the oesophagus or stomach; receiving prokinetic therapy within 24 hrs before the study; and pregnant or breastfeeding
Interventions	Experimental group: Early enteral feeding within 24 hrs of admission for 4 days (n = 14) Control group: delayed feeding in which the participants did not receive any form of nutritional support, including parenteral nutrition for the first 4 days in ICU (n = 14) Co-intervention: Normal enteral feeding after 4 days, nasogastric tube
Outcomes	Plasma 3-OMG levels, duration of mechanical ventilation, prevalence of ventilator-associated pneumonia, and mortality, length of stay at ICU, gastric emptying
Study dates	Not stated

Nguyen 2012 *(Continued)*

Notes	We contacted the authors on 19th August 2015 by email: quoc.nguyen@health.sa.gov.au. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated sequence
Allocation concealment (selection bias)	Low risk	List was maintained by an independent research co-ordinator.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events.
For-profit bias	Low risk	The trial was funded by a non-profit organisation (National Health and Medical Research Council, and by the Australian National Health and Research Council grant).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Nixon 1981

Methods	Randomised clinical trial, USA
Participants	50 hospitalised adults with advanced colorectal carcinoma, at nutritional risk according to the trialist Male:Female = 19:26 (gender not reported for five participants) Mean age = 58 years Exclusion criteria: severe heart or renal disease, antibiotic-resistant infections, weight loss > 24% of premorbid level, or important nutrient losses from vomiting, diarrhoea, or fistulae. No surgery, radiation, or chemotherapy could have occurred for 2 weeks prior to study entry.
Interventions	Experimental group: Total parenteral nutrition and chemotherapy. Participants were to receive 28 days of central parenteral hyperalimentation at the level of 30 - 35 kcal and 0.2 - 0.3 N/kg body weight/day. Chemotherapy (5-fluorouracil + methyl CCNU) was begun on the 14th day after these nutrient levels were reached. Only 1 course of total parenteral nutrition was administered; afterwards total oral intake as wished was tolerated.(n = 25)

Nixon 1981 *(Continued)*

	Control group: No intervention. Control group were begun immediately on an identical chemotherapy regimen and allowed to eat as they wished. (n = 25) Co-intervention: Chemotherapy
Outcomes	Overall median survival (days)
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	The trial used a sealed-envelope system developed by the support contractor.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding was not performed.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	5 (10%) of the participants were withdrawn from the trial and the analyses. It was unclear how the trial dealt with missing data.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Low risk	The study was funded by NIH contract NO1-CP-65892, NIH Grants RR39 and 16255, the American Legion Gioia Osborne Cancer Research Fund, and the state of Georgia Contract Cancer-Nutrition.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Norman 2005

Methods	Randomised clinical trial, Germany
Participants	63 hospitalised adults admitted with decompensated liver cirrhosis, at nutritional risk according to the trialist Male:Female = not stated Mean age = not stated Exclusion criteria: none stated

Norman 2005 *(Continued)*

Interventions	Experimental group: Protein-rich enteral nutrition (35 kcal/kg body weight and 1.5 g protein/kg body weight) for 14 days(n = 13) Control group: Standard hospital diet(n = 12)
Outcomes	Muscle function, prothrombin time, hand-grip strength, subjective global assessment, bilirubin, albumin
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: matthias.pirlich@charite.de. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reporteded.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Oh 2014

Methods	Randomised clinical trial, Korea
Participants	31 hospitalised adults with a diagnosis of advanced cancer with no future plans for anticancer treatment, at nutritional risk due to being in intensive care Male:Female = 19:12 Mean age = 59 years

Oh 2014 *(Continued)*

	Exclusion criteria: cardiac or renal disease that restricted the administration of fluid; an electrolyte controlled diabetes (HbA_{1c} > 8% despite therapy); an indication of unsuitability for participating in the trial as determined by the attending physician
Interventions	Experimental group: Parenteral nutrition. The Nutritional Support Team determined the parenteral nutrition composition during initial periods of the study treatment. All types of marketed intravenous amino acid and fat emulsions were allowed, including ready-to-use products. Treatment was continued from randomisation until death or withdrawal of consent.(n = 16) Control group: Treatment as usual (n = 15) Cointervention: Participants received intravenous fluid. The total amount of fluid was determined by the attending physician with a maximum of 30 ml/kg a day in addition to replacement of abnormal losses from the previous day to meet the physiologic fluid requirement of healthy adults. The fluids were normal saline, half saline or dextrose water. Decision of total administered calories was made by the attending physician, but limited to under the 20 kcal/kg a day, which is the minimum energy requirement of a bedridden person.
Outcomes	Overall survival, total administered calories
Study dates	June 2011 to December 2011
Notes	We did not obtain the author's email until late in the writing phase of the review, and have not contacted them.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Low risk	Random allocation was made by research staff of Seoul Medical Center Research Institute. Allocated groups were announced to investigators at the time of assignment of each participant by telephone call.
Blinding of participants and personnel (performance bias) All outcomes	High risk	No blinding of participants and personnel was performed.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and all-cause mortality and serious adverse events were not reported.
For-profit bias	Low risk	This study received 2011 grant of Seoul Medical Center Research Institute.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Ollenschläger 1992

Methods	Randomised clinical trial, Germany
Participants	32 hospitalised adults with acute leukaemia, at nutritional risk due to weight loss > 5% within 3 months or acute weight < 90% ideal body weight Male:Female = approximately 14:16 Mean age ~ 37 Exclusion criteria: metabolic diseases; renal or liver insufficiency; need for artificial nutrition
Interventions	Experimental group: General nutrition support; intensified oral nutrition. Participants received nutrition education, daily visits by a dietitian and recording of food intake, as well as a weekly assessment of subjective well-being. Intervention lasted throughout the whole tumour therapy (median 22 weeks). (n = 16) Control group: No intervention(n = 16) Co-intervention: All received menus of free choice, with a daily offer of 1.0 - 2.0 g protein, 30 - 50 kcal/kg body weight, depending on the pretreatment nutritional status
Outcomes	Septic episodes, days with body temperatures above 38.5 °C, mortality, nutritional status, weight, tumour treatment side effects, amount of complete remissions, energy intake, nutrient intake, quality of life (only experimental group)
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	No described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not properly report serious adverse events. All-cause mortality was reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.

Ollenschläger 1992 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Pacelli 2007

Methods	Randomised clinical trial, Italy
Participants	20 hospitalised adults with a clinical or pathologic diagnosis of cancer of the stomach, at nutritional risk due to weight loss of 10% with respect to usual body weight Male:Female = 10:10 Mean age = 69.5 years
Interventions	Experimental group: standard hospital oral diet plus PN. The PN formula contained 0.2 g/kg/day of nitrogen and 30 nonprotein kcal/kg/day. The PN was given as a balanced mixture of D-glucose, lipids (20% Intralipid), and amino acids, electrolytes, vitamins, and trace elements. (n = 10) Control group: standard hospital oral diet(n = 10)
Outcomes	Percentage of cells incorporating bromodeoxyuridine in vitro and percentage of cells in the S-phase as measured by flow cytometry
Study dates	Not stated
Notes	We contacted the authors on 23rd June 2015 by email: maubosso@tin.it.. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Randomisation was performed by using a central computerised system.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts or withdrawals.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.

Pacelli 2007 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Page 2002

Methods	Randomised clinical trial, UK
Participants	40 hospitalised adults undergoing oesophageal resection for carcinoma, at nutritional risk due to major surgery Male:Female = 28:12 Mean age = 67.3 years
Interventions	Experimental group: Isocaloric enteral feed (1048 kcal/l and 40 g protein/l)(n = 20) Control group: Standard intravenous fluids (5% glucose)(n = 20)
Outcomes	Weight, BMI, haematological and serological parameters, days in hospital, duration of enteral feed, death, complications
Study dates	Not stated
Notes	We contacted the authors on 23rd June 2015 by email: richard.page@ccl-tr.nwest.nhs.uk. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Low risk	The trial used sealed envelopes.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reported serious adverse events and all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Pang 2007

Methods	Randomised clinical trial, China
Participants	89 hospitalised adults undergoing either gastrointestinal, urologic neoplasms, cardiothoracic, hepato-biliary or pancreas surgery, at nutritional risk due to major surgery Male:Female = 47:42 Mean age = 46 years Exclusion criteria: none stated
Interventions	Experimental group: Participants received continuous infusion of enteral nutrition liquid by using nasal-jejunal feeding-tube, infusion speed from 25 ml/hr to 100 ml/hr, for 15 days.(n = 49) Control group: Home-made diet by oral feeding for 15 days(n = 40)
Outcomes	Total lymphocyte counts, serum albumin, and wound-healing rate, thyroxin and albumin levels, cost effectiveness
Study dates	Not stated
Notes	We tried and failed 5 times to contact the author by phone.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Peck 2004

Methods	Randomised clinical trial, USA
Participants	32 hospitalised adults either between 18 and 50 and admitted within 24 hours of burn injury with at least 20% of total body surface area burns, or younger than 18 or older than 50 and with at least 10% total body surface area burns, at nutritional risk due to trauma Male:Female = 19:8 (analysed) Mean age = 46.5 years Exclusion criteria: Pre-existing medical conditions that led to inanition and wasting (e.g. such as adult immunodeficiency syndrome, cancer), had high-voltage electrical injuries, were admitted to the burn centre for treatment of an exfoliative skin disorder, or were treated with the volumetric diffusive respirator (VDR) for smoke inhalation injury because of the inability to obtain indirect calorimetry measurements on the VDR
Interventions	Experimental group: Early feeding through nasogastric tube group initiated within 24 hrs(n = 16) Control group: No intervention(n = 16) Co-intervention: Nasogastric tube placement at admission. Normal oral feeding
Outcomes	REE/BEE, weight, transthyretin, transferrin, urine urea nitrogen, feeding complications, infections, number of antibiotic days, number of ventilator days, number of ICU days, length of acute days, mortality
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: mpeck@unc.med.edu. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Unclear risk	The trial used sealed envelopes but it was unclear if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The trial reported 5 dropouts, but it was unclear from which group and the trial did not allow proper intention-to-treat methodology.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not properly report serious adverse events.
For-profit bias	Low risk	The trial was funded by a non-profit organisation (Sponsored by the North Carolina Jaycee Burn Center and General Clinical Research Center Program of the Division of Research Resources).

Peck 2004 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Peng 2001

Methods	Randomised clinical trial, China
Participants	22 hospitalised adults admitted with severe burn injuries (TBSA > 50%), at nutritional risk due to trauma Male:Female = 15:7 Mean age = 31 years Exclusion criteria: moderate-to-severe inhalation injury, diarrhoea or ileus
Interventions	Experimental group: Early enteral feeding. Participants were given ENSURE (carbohydrate 54.5%, protein 14%, lipid 31.5%) oral or nasal feeding. 78 - 80 ml/3hr, 0.75 Kcal/ml in first 24 hrs after burn, 100 - 150 ml/3hr, 0.75 - 1 Kcal/ml within the next 24 hrs.(n = 13) Control group: Delayed enteral feeding. Oral liquid diet 48 hrs after burn(n = 9) Co-intervention: Conventional therapy
Outcomes	Plasma, endotoxin TNF-α, urine mannitol, urinary lactulose
Study dates	Not stated
Notes	We tried and failed 3 times to contact the author by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.

Peng 2001 *(Continued)*

For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Popp 1981

Methods	Randomised clinical trial, USA
Participants	42 hospitalised adults undergoing aggressive induction-consolidation-late intensification chemotherapy for advanced diffuse lymphoma Male:Female = 23:18 (gender not reported for 1 participant) Mean age = 42 years Exclusion: None stated
Interventions	Experimental group: TPN during the first 14 days of each 28-day induction and late intensification chemotherapy cycle. TPN contained 500 mL of Freamine II as well as vitamins and minerals. (n = 20) Control: no intervention (n = 21) Co-intervention: chemotherapy with ProMACE and MOPP, oral intake as wished.
Outcomes	Survival, nutritional markers, blood count
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	Under 5% of participants had incomplete outcome data.
Selective reporting (reporting bias)	Low risk	The trial reports mortality and nutrition-related complications.

Popp 1981 *(Continued)*

For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Potter 2001

Methods	Randomised clinical trial, UK
Participants	381 hospitalised elderly adults admitted from home and with no known malignancy, had the ability to swallow, and were not obese (BMI < 75th percentile), at nutritional risk according to anthropometrics. Male:Female = not reported Median age = 83.years Exclusion criteria: none specified
Interventions	Experimental group: Normal ward diet + oral supplements (1.5 kcal/mL energy, intended to provide 22.5 g protein and 540 kcal energy a day. It was prescribed 3 times daily with 120 mL each time (8:00 AM, 2:00 PM, and 6:00 PM).(n =186) Control group: Normal ward diet + dietetic intervention was available to all participants in the study.(n = 195)
Outcomes	Total energy intake, weight, arm muscle circumference, mortality, functional recovery, discharge placement, length of hospital stay
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: Jan.potter@guic.scot.nhs.uk . We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The trial used sealed envelopes, but it was unclear if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was a non-placebo trial, and the participants were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The dietician performing the outcome assessment was blinded to the intervention.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	There were above 5% dropouts according to weight, and they were not accounted for using proper methodology.

Potter 2001 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and serious adverse events was not reported.
For-profit bias	High risk	The trial received supplements from a company that might have conflict of interest (Frusenius UK Ltd).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Prieto 1994

Methods	Randomised clinical trial, Spain
Participants	84 hospitalised adults entering the Digestive Surgery Service and with planned surgery, at nutritional risk due to the trialist classifying them as at risk Male:Female = 33:51 Mean age = 57 years
Interventions	Experimental group: Received peripheral parenteral nutrition (25.30 g amino acids/3L, 50 g carbohydrates/3L)(n = 22) Control group: Received conventional serum therapy of 5% glucose(n = 22)
Outcomes	Percentage of ideal weight, albumin, haemoglobin, arm circumference, transferrin
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.

Prieto 1994 *(Continued)*

For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Pupelis 2000

Methods	Randomised clinical trial, Latvia
Participants	29 hospitalised adults undergoing surgery for severe pancreatitis, at nutritional risk due to major surgery Mean age = 51 years Male:female = not reported Exclusion criteria: not reported
Interventions	Experimental group: Postoperative enteral nutrition during the first 24 hrs after operation with Pepti 2000 until the participant could receive standard nutrition.(n = 11) Control group: No intervention(n = 18) Co-interventions: Conventional intravenous fluids
Outcomes	APACHE-score, number of complications, length of hospital stay, length of stay in ICU
Study dates	January 1997 to February 1998
Notes	We contacted the authors on 23rd June 2015 by email: pupelis@gailes.lv. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Only the experimental group had a tube.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	Serious adverse events and mortality were reported.

Pupelis 2000 *(Continued)*

For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Pupelis 2001

Methods	Randomised clinical trial, Latvia
Participants	60 hospitalised adults undergoing surgery for peritonitis and severe pancreatitis. None of the included participants received TPN before surgery. At nutritional risk due to major surgery Male:Female = 45:15 Mean age = 51.4 years Exclusion criteria: none specified
Interventions	Experimental group: Jejunal feeding was started during the 1st 12 hrs postoperatively in the ICU with full-strength whole-protein formula (1 kcal/mL) or oligopeptide-based formula (1 kcal/mL), providing at least 300 mL each day.(n = 30) Control group: Standard intravenous fluids(n = 30)
Outcomes	Complications, SIRS, death caused by multiple organ dysfunction syndrome, mortality
Study dates	January 1997 to April 1999
Notes	We contacted the authors on 23rd June 2015 by email: pupelis@gailes.lv. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Only the experimental group received a tube.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	No protocol was found. Serious adverse events and all-cause mortality were reported.

Pupelis 2001 *(Continued)*

For-profit bias	High risk	The trial was funded by Amaija ltd. (Nutrition manufacturer).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Rabadi 2008

Methods	Randomised clinical trial, USA
Participants	116 hospitalised adults with 1. 1st acute stroke event within 4 weeks of admission to an inpatient rehabilitation facility; 2. haemorrhagic or ischaemic stroke documented clinically and by neuroimaging; 3. significant weight loss as indicated by unintentional weight loss of at least 2.5% within 2 weeks following stroke onset; 4. medically stable from a cardiorespiratory standpoint that they could participate in their daily therapies; 5. ability to ingest food including supplements either orally or through the PEG tube; 6. Informed consent, if possible from the participant; where it was not possible, proxy consent was obtained from the next of kin according to institutional IRB standards. At nutritional risk due to stroke. Male:Female = 68:48 Mean age = 74.2
Interventions	Experimental group: The “intensive” nutritional supplement was Novasource 2.0 (240 calories, 11 g of proteins).(n = 58) Control group: The “standard” nutritional supplement was Resource Standard (127 calories, 5 g of protein).(n = 58) The supplements were always given within 72 hrs after arriving at the rehabilitation facility.
Outcomes	FIM-score, 2-minute walking test, 6-minute walking test, weight, albumin, transferrin, % IBW
Study dates	Not stated
Notes	We contacted the authors on 23rd June 2015 by email: rabadimh@gmail.com. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	10-block randomisation
Allocation concealment (selection bias)	Low risk	Sealed opaque envelopes
Blinding of participants and personnel (performance bias) All outcomes	Low risk	The trial was blinded to the participants and personnel.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The investigators performing the outcome assessment were blinded.

Rabadi 2008 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	High risk	There were more than 5% dropouts, and the dropouts in the 2 groups could not be described as being similar.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Low risk	No pharmaceutical company funded the trial.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Rana 1992

Methods	Randomised clinical trial, country unknown.
Participants	54 hospitalised adults admitted for 1 of the following elective gastrointestinal surgical procedures: Gastro-oesophagectomy, total and subtotal gastrectomy for carcinoma, open cholecystectomy, and exploration of common bile duct, palliative cholecystojejunostomy and enterostomy or choledochojejunostomy and enterostomy for carcinoma of the pancreas, ileocolonic resection, hemicolectomy or anterior resection of colon and abdominoperineal resection of colon; at nutritional risk due to major surgery Male:Female = 19:21 (only participants that completed the study) Mean age: 60.7 years (only participants that completed the study) Exclusion criteria: dementia, received any form of pre-operative nutritional support.
Interventions	Experimental group: Oral nutrition sip feed of 200 ml. (1.5 kcal/ml, 7.8 g/L)(n = 27) Control group: No intervention(n = 27) Co-intervention: Standard hospital diet
Outcomes	Nutritional status, nutritional intake, monitoring and complications
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias)	Unclear risk	Not described

Rana 1992 *(Continued)*

All outcomes		
Incomplete outcome data (attrition bias) All outcomes	High risk	More than 5% dropped out, and the trial did not use proper methodology to deal with missing data.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained but the trial reported serious adverse events and mortality.
For-profit bias	High risk	The trial was funded by Nutricia.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Reilly 1990

Methods	Randomised clinical trial, USA
Participants	18 hospitalised adults with hypoalbuminaemic cirrhosis admitted for liver transplantation, at nutritional risk due to major surgery Male:Female = 9:9 Mean age = 47.5 years
Interventions	Experimental group: TPN (non-protein caloric intake 35 kcal/kg and 1.5 g/kg/day amino acids)(n = 10) Control group: No specific nutritional therapy, standard intravenous isotonic glucose solutions(n = 8)
Outcomes	GCS, nitrogen balance, serum ammonia, bilirubin, days intubated, days in ICU, length of stay, hospital costs, mortality
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: jjreilly@andrew.cmu.edu. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as being partially blinded, but the control group was not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Reilly 1990 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Reissman 1995

Methods	Randomised clinical trial, USA
Participants	161 hospitalised adults undergoing major abdominal surgery, at nutritional risk due to major surgery Male:Female = 77:84 Mean age = 53.5 years
Interventions	Experimental group: Early feeding group, clear liquid diet on 1st postoperative day, and advanced to a regular diet with 24 - 48 hrs(n = 80) Control group: Regular feeding. Nothing by mouth until resolution of ileus(n = 81)
Outcomes	Vomiting, abdominal distention, length of ileus, tolerance of regular diet, length of hospitalisation, and complications
Study dates	November 1992 and April 1994
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Reissman 1995 *(Continued)*

Selective reporting (reporting bias)	Low risk	All-cause mortality and serious adverse events were reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Ren 2015

Methods	Randomised clinical trial, China
Participants	167 adult hospitalised adults, at nutritional risk due to orthopaedic injury operation Male:Female = 88:79 Mean age: 58.8 years Excluded criteria: None specified
Interventions	Experimental group: Enteral nutrition: Short peptide nutrient solution was taken orally the 1st day after operation. 80 - 160 g of short peptide nutrition was diluted to 300 ml with water and the treatment dose was dependent on participant's disease degree and health status.(n = 85) Control group**:** Standard care after the operation (n = 82)
Outcomes	Time of leaving bed, hospital stays, anus exhaust time, effective rate and complications
Study dates	Not stated
Notes	We contacted the authors by phone. We received information on random sequence generation.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	The randomisation was conducted by random table.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Whether the outcome assessors were blinded was not reported.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not reported.

Ren 2015 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	All-cause mortality and serious adverse events were reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial may or may not be free of other components that could put it at risk of bias.

Rimbau 1989

Methods	Randomised clinical trial, France
Participants	20 hospitalised adults undergoing aortabifemoral bypass, at nutritional risk due to major surgery Male:female = not stated Mean age = 56.5 years Exclusion: diseases predisposing malnutrition, renal or hepatic disease
Interventions	Experimental group: TPN from 12 hrs post-operatively to day 4 at the rate of 0.16 N/kg/day and 16.7 kcal/kg/day with 50% from carbohydrates and 50% from lipids (n = 10) Control group: standard post-operative fluids (n = 10)
Outcomes	IPN prior to the surgery and on day 4, triceps skinfold thickness, albumin, transferrin, delayed cutaneus hypersensibility defined on a scale from 0 to 2, protein catabolism, blood loss during surgery, complications, length of hospital stay, cost benefit
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	No dropouts

Rimbau 1989 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	Mortality was not reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Roberts 2000

Methods	Randomised clinical trial, USA
Participants	55 hospitalised adults undergoing analogues marrow or blood transplantation Male:Female = not described Mean age = not described Exclusion criteria: Not reported
Interventions	Experimental: TPN 30 - 35 kcal/kg and 1.5 - 1.75 g protein/kg(n = 28) Control: No intervention(n = 28) Co-intervention: Oral diet
Outcomes	Length of stay, albumin, hand-grip strength (not used)
Study dates	Not stated
Notes	We contacted the authors by email: Susan.Roberts@BSWHealth.org. The author responded with information on blinding.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded
Blinding of outcome assessment (detection bias) All outcomes	High risk	The outcome assessors were not blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Roberts 2000 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report mortality or complications.
For-profit bias	Low risk	The trial was funded by the local hospital.
Other bias	Unclear risk	The trial appeared to be free of other components that could put it at risk of bias.

Roth 2013

Methods	Randomised clinical trial, Switzerland
Participants	157 hospitalised adults undergoing surgery with pelvic lymph node dissection, cystectomy and ileal diversion for bladder cancer, at nutritional risk due to major surgery Male:Female = 106:51 Mean age = 67 years Exclusion criteria: previous pelvic lymph node dissection, previous radiation therapy, prior bowel surgery, severe hepatic or cardiac dysfunction, an inability to give fully informed consent
Interventions	Experimental group**:** TPN consisting of Nutriflex special 70/240 (B. Braun Medical, Melsungen, Germany), a solution with a total energy of 1240 kcal/1000 ml and containing polyamino acids, glucose, and electrolytes. TPN (1500 ml/day; total 1860 kcal/day; 105 g polyamino acids/day; 360 g glucose/day; 0 g lipids/day) was administered continuously for 5 days starting on postoperative day 1. No intravenous supplementation of vitamins or trace elements were given. An additional 30 IU Actrapid HM (Novo Nordisk, Copenhagen, Denmark) and 1875 IU heparin (Liquemin; Drossapharm, Basel-Stadt, Switzerland) every 24 hrs were added to the TPN solution. (n = 74) Control group: Ringer's lactate solution (Sintetica–Bioren, Mendrisio, Switzerland; 1500 ml/24 h) and additional potassium substitution (40 mmol/24 h) (n = 83) Co-interventions: Oral intake was started with clear fluids on the day of surgery, with fluids started on postoperative day 1. Solid diet was resumed on the return of active bowel sounds and when fluids were well tolerated. Perioperatively, a central venous catheter was placed in all participants. Perioperative antibiotic therapy consisted of aminoglycoside and metronidazole for 48 hrs and amoxicilin/clavulanic acid until removal of all stents and catheters. Perioperatively, 3000 - 4000 ml of parenteral crystalloids were routinely administered. Combined general and epidural anaesthesia were given intra-operatively. Postoperative epidural (T9 - T10) analgesia was routinely used, but systemic morphine derivates were avoided. To stimulate postoperative bowel function, subcutaneous injections of 0.5 mg neostigmine methylsulfate up to 6 times a day were administered to all in similar distribution starting on postoperative day 2 and continuing until bowel activity resumed. Anti-emetics and other prokinetic drugs were not routinely administered and only given as needed. Low-molecular-weight heparin (Fraxiparine) was started on the evening before surgery and maintained for at least 10 days.
Outcomes	Occurence of postoperative complications, time to recovery of bowel function, biochemical nutritional (serum albumin, serum prealbumin, serum total protein) and inflammatory (C-reactive protein) parametres, length of hospital stay, cost attributed to the TPN, time to full diet resumption
Study dates	September 2008 and March 2011
Notes	We contacted the authors on 07th April 2016 by email: urology.berne@insel.ch.
Risk of bias	

Roth 2013 *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomisation was done by a computer-based programme.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding was not performed.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	No drop-outs, none lost to follow-up
Selective reporting (reporting bias)	Low risk	No protocol could be obtained but the trial reported complications and mortality.
For-profit bias	Low risk	The trial was not funded by any company that might have a vested interest in the results.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Russell 1984

Methods	Randomised clinical trial, Canada
Participants	31 hospitalised adults with small-cell lung cancers, at nutritional risk due to trialist indication Male:Female = 21:10 Mean age = 55.8 years Exclusion criteria: (a) recent myocardial infarction (< 3 months from the date of diagnosis), congestive cardiac failure, or cardiac arrhythmia; (b) documented central nervous system metastases (c) superior vena cava obstruction precluding central venous catheterisation for TPN; (d) inappropriate antidiuretic hormone syndrome; (e) other comorbid disease which rendered treatment inappropriate; (f) performance status of 4 on the ECOG scale
Interventions	Experimental: the TPN provided between 1 and 1.25 g/kg body weight/day of crystalline amino acids (Travasol; Baxter-Travenol Laboratories of Canada) and a nonprotein calorie intake of between 32 and 40 kcal/kg body weight/day given as an equicaloric mixture of dextrose and lipid (Nutralipid; Pharmacia, Canada). Depleted participants (> 5% body weight loss in the 3 months prior to diagnosis) received an amino acid intake of between 1.50 and 2.0 g/kg body weight/day and a nonprotein calorie intake of 48 to 64 kcal/kg body weight/day. Both the protein and calorie intake were reassessed each week, and minor adjustments were made depending on clinical assessment of the nutritional status. Oral intake was restricted to noncaloric fluids. (n = 15) Control: continued to consume a self-regulated oral diet(n = 16)

Russell 1984 *(Continued)*

	Co-interventions: chemotherapy
Outcomes	Energy metabolism and substrate hormone profile
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report mortality or complications.
For-profit bias	Unclear risk	It was unclear if the trial was supported by a company with an interest in a given result: "Supported by an NIH Contract with the University of Toronto (Contract NOICM- 97267), the Ontario Ministry of Health (Grant PR 228), and various sponsors.".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Ryan 1993

Methods	Randomised clinical trial, Canada
Participants	10 hospitalised adults, at nutritional risk due to being 85% of ideal weight Male:Female = 5:5 Mean age = 68 years
Interventions	Experimental group: nocturnal supplemental nasoenteric infusion (1000 kcal above usual caloric intake), or 1.7 times measured REE.(n = 6) Control group: placebo (containing < 100 kcal, same volume)(n = 4)

Ryan 1993 *(Continued)*

	Co-intervention: normal diet
Outcomes	Kcal/day, weight change, Vo2/min, RQ
Study dates	Not stated
Notes	We contacted the authors on 13th December 2015 by email: fryan@interchange.ubc.ca. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Low risk	The trial was a placebo study, and described how the participants and personnel were blinded.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The trial was a placebo study, and described how the outcome assessment was blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was funded by a pharmaceutical company (Bristol-Myers Squibb).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sabin 1998

Methods	Randomised clinical trial, Germany
Participants	80 hospitalised adults admitted for PEG placement, at nutritional risk due to being in an ICU
Interventions	Experimental group: Enteral nutrition 3 hrs after PEG placement for 1 day(n = 40) Control group: i.v. fluids for 2 days(n = 40) Co-interventions: Normal enteral nutrition from 2nd day
Outcomes	RV, complications, mortality, pneumoperitoneum
Study dates	Not stated

Sabin 1998 *(Continued)*

Notes	We contacted the authors on 13th December 2015 by email: med2.keymling@klinikum-meiningen.de. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reported serious adverse events and mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sacks 1995

Methods	Randomised clinical trial, USA
Participants	17 hospitalised adults with severe closed-head injury, at nutritional risk due to increased nutritional requirements Male:Female = not reported Mean age = 37.2 years Exclusion criteria: Pregnancy, age > 65 years, documented hepatic dysfunction (serum bilirubin > 2.0 mg/dL or a history of cirrhosis), hypertriglyceridaemia (> 300 mg/dL), or infection at the time of admission. People with significant intra-abdominal injuries routinely received enteral nutrition through jejunal tubes and were not enrolled into the study. People requiring scheduled corticosteroid pharmacotherapy after the 1st 24 hrs of hospital admission were also excluded from the study.
Interventions	Experimental group: Participants received parenteral nutrition (PN) at day 1 through a central venous catheter with a nutrient goal of 2 g protein/kg a day and 40 non-protein kcal/kg a day. Maximum glucose administration was not allowed to exceed 6 mg/kg a minute. IV fat emulsion was administered and comprised 15% to 30% of non-protein calories. The PN solution was supplemented with electrolytes and standard amounts of vitamins and trace elements.(n = 8)

Sacks 1995 *(Continued)*

	Control group: No intervention(n = 9) Co-interventions: Participants were transitioned to enteral nutrition support as soon as the gastro-intestinal tract became functional and accessible.
Outcomes	T-lymphocyte responsiveness to mitogen stimulation, proliferative response to Con A stimulation, T-lymphocyte proliferative response, IL-6 serum concentrations, pre-albumin serum concentrations, A (Con A), phytohaemagglutinin (PHA), and pokeweed mitogens (PWM), peripheral blood mononuclear cells (PBMCs), urinary nitrogen excretion, immunologic function, nutrient, energy and protein intake and mortality
Study dates	Not stated
Notes	We contacted the authors on 30th June 2015 by email: KUDSK@surgery.wisc.edu. We received a reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Random sequence generation was done using a table of random numbers.
Allocation concealment (selection bias)	Unclear risk	The allocation was concealed in sealed envelopes, but it was unclear if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained. The trial reported all-cause mortality but not serious adverse events.
For-profit bias	Low risk	No financial support.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sada 2014

Methods	Randomised clinical trial, Kosovo, parallel design, conducted between January 2010 – January 2012
Participants	145 hospitalised adults undergoing open colorectal and open cholecystectomy, at nutritional risk due to undergoing major surgery Male:Female = 53:89 (3 missing) Mean age = 56 years

Sada 2014 *(Continued)*

	Exclusion: type 1 or 2 diabetes mellitus, stomach-emptying disorders or documented gastric oesophageal reflex disease, emergency surgery interventions
Interventions	Experimental: the study group received 800 mL (by mouth) of carbohydrate beverage in the evening before surgery (22:00) and an additional 400 mL 2 hrs before anaesthesia induction. The beverage contained 12.5% carbohydrates (polycarbohydrates), 50 kcal/100 mL, 285 mOsmol/kg (NutriciapreOp, Nutricia Ltd.) (n = 44) Control: there were 2 control groups: 1. The placebo group received a non-caloric colourless liquid with the same taste and without carbohydrates in the same amount as the participants in the experimental group. (n = 46) 2. The control group did not receive any of these drinks and were subject to the traditional preoperative fasting(n = 52)
Outcomes	VAS score, length of stay
Study dates	January 2010 – January 2012
Notes	Trial registration: ANZCTR.org.au: ACTRN12614000995673.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Throwing dice by an independent person, not otherwise involved in the trial
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Low risk	The placebo was identical in appearance and taste.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The placebo was identical in appearance and taste.
Incomplete outcome data (attrition bias) All outcomes	Low risk	Under 5% of participants had incomplete outcome data.
Selective reporting (reporting bias)	Unclear risk	The trial was retrospectively registered and did not report mortality or serious adverse events.
For-profit bias	Unclear risk	The trial was sponsored by University Clinical Center of Kosovo and by an individual Avdyl Krasniqi.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Saluja 2002a

Methods	Randomised clinical trial, India
Participants	20 hospitalised adults between 20 and 60 years undergoing major abdominal surgery, at nutritional risk due to major abdominal surgery
Interventions	Experimental group: Received the standard ward diet plus the hospital kitchen-prepared liquid sip feed of 500 ml, providing 500 kcal comprising 16.66 g protein, 43.5 g carbohydrate, and 30 g fat. The 500-ml sip feed contained 375 ml milk, 12.5 g sugar, 12.5 g butter, 12.5 g colustarch, 125 ml rice water, and half an egg. (n = 19) Control group: Received a standard ward diet (n = 10)
Outcomes	Weight, albumin, middle-arm circumference (MAC), hand-grip strength, lymphocyte count
Study dates	April 1999 to March 2000
Notes	1st comparison of the complete trial Saluja 2002. We contacted the authors by email sundeepsaluja@yahoo.co.in. The author could not remember the method of randomisation.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	In the trial the randomisation was described as being done through drawing lots but it was unclear if this was done by an independent person. The author could not remember the method of randomisation.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	High risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts or withdrawals.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but we received information on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Saluja 2002b

Methods	Randomised clinical trial, India

Saluja 2002b *(Continued)*

Participants	20 hospitalised adults between 20 and 60 undergoing major abdominal surgery, at nutritional risk due to major abdominal surgery
Interventions	Experimental group: Received the standard ward diet plus the hospital kitchen-prepared liquid sip feed of 500 ml, providing 500 kcal comprising 16.66 g protein, 43.5 g carbohydrate, and 30 g fat. The 500-ml sip feed contained 375 ml milk, 12.5 g sugar, 12.5 g butter, 12.5 g colostric, 125 ml rice water, and half an egg. (n = 10) Control group: Received a standard ward diet(n = 10)
Outcomes	Weight, albumin, middle-arm circumference (MAC), hand-grip strength, lymphocyte count
Study dates	April 1999 to March 2000
Notes	2nd category of the complete trial Saluja 2002

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	In the trial the randomisation was described as being done through drawing lots but it was unclear if this was done by an independent person.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts or withdrawals.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but we received information on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Saluja 2002c

Methods	Randomised clinical trial, India
Participants	20 hospitalised adults between 20 and 60 undergoing major abdominal surgery, at nutritional risk due to major abdominal surgery
Interventions	Experimental group: Received the standard ward diet plus the hospital kitchen-prepared liquid sip feed of 500 ml, providing 500 kcal comprising 16.66 g protein, 43.5 g carbohydrate, and 30 g fat. The 500-ml

Saluja 2002c *(Continued)*

	sip feed contained 375 ml milk, 12.5 g sugar, 12.5 g butter, 12.5 g colustarch, 125 ml rice water, and half an egg(n = 10) Control group: Received a standard ward diet(n = 10)
Outcomes	Weight, albumin, middle-arm circumference (MAC), hand-grip strength, lymphocyte count
Study dates	April 1999 to March 2000
Notes	3rd category of the complete trial Saluja 2002

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	In the trial the randomisation was described as being done through drawing lots but it was unclear if this was done by an independent person.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts or withdrawals.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained, but we received information on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Samuels 1981

Methods	Randomised clinical trial, USA
Participants	35 hospitalised adults admitted for stage III metastatic testicular cancer, at nutritional risk due to anthropometrics Male:Female = Not reported Mean age = Not reported Exclusion criteria: Participants characterised as severely malnourished (weight loss > 12%, duration not stated)

Samuels 1981 *(Continued)*

Interventions	Experimental group: received intravenous hyperalimentation solution containing 25% dextrose with 4.25% amino acids, supplementary vitamins, electrolytes and trace elements, which provided 35 kcals/kg/day. Intervention started on day 1 of hospitalisation, and was continued throughout the course of the chemotherapy, terminating 24 hrs before discharge. The mean duration of IVH was 48 days for noninfected participants and 18 days for infected participants. (n = 20) Control group: control participants who developed significant gastro-intestinal toxic effects received 3 litres of parenteral fluids daily, usually containing 5% glucose, 0.5 normal saline and 40 mEq of potassium chloride. In the event of > 12% weight loss after chemotherapy, control participants were crossed over to receive intravenous hyperalimentation at the discretion of the investigator. (n = 15) Co-intervention: Both groups was divided in 2, where 1 group received vinblastine and bleomycin, and the other received vinblastine, bleomycin and cisplatin.
Outcomes	Mortality, weight, septicaemia, pneumonia, infections, liver function, leukopenia, serum albumin, serum transferrin, granulocyte count, granulocytopenic fever, platelet count and oral toxicity
Study dates	Not stated
Notes	We could obtain no contact information from the authors. The 35 patients were stratified into 3 nutritional-status categories: well-nourished, moderately malnourished and malnourished.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The trial was block-randomised using random-number tables.
Allocation concealment (selection bias)	Unclear risk	Allocation concealment was done using sealed envelopes but it was unclear if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained , but all-cause-mortality and serious adverse events were reported.
For-profit bias	Low risk	Supported by contracts from the division of Cancer Cause and prevention, National Cancer institute, National Institutes of Health, Department of Health and Human Services.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Saudny-Unterberger 1997

Methods	Randomised clinical trial, Canada
Participants	33 hospitalised adults with COPD and a FEV1 ≤ 60% of the predicted value, admitted because of acute exacerbation, at nutritional risk due to trialist indication. Male:Female = 15:9 (gender not reported for nine participants) Mean age = 69 (only participants who completed the study) Exclusion criteria: in need of mechanical ventilation, gastro-intestinal tract disorder, active cancer or other conditions predisposing to weight loss, terminally ill, unable to communicate in English or French, suffered from mental confusion or followed a special diet
Interventions	Experimental group: ONS. Participants received oral supplements; Ensure, Ensure Plus, puddings or extra snacks to assure a caloric intake of at least 1.5 x resting energy expenditure (REE) if their BMI was normal (20 to 27) and at least 1.7 x REE if their BMI was below 20. (n = 17) Control group: No intervention (n = 16) Co-interventions: All participants received traditional hospital diet
Outcomes	Lung function; FEV1, FVC, inspiratory muscle strength (PImax), respiratory muscle strength; Expiratory muscle strength (PEmax), hand-grip strength, upper body strength, activities of daily living in older adults, nitrogen balance; glucocorticosteroid use, weight, mean energy and macronutrient intakes, degree of breathlessness, 6-minute walk test, length of hospital stay and general well-being (QoL)
Study dates	November 1993 to May 1996
Notes	We contacted the authors on 13th November 2015 by email: James.Martin@McGill.ca . The authors replied that additional data did not exist.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	All strength measurements were done by laboratory personnel who were blinded. Blinding of other outcome assessments was not described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	They did not use intention-to-treat analysis, but the numbers and reasons for dropouts were clearly stated. There were incomplete data for more than 5%.
Selective reporting (reporting bias)	Unclear risk	The trial reported all-cause mortality, but not serious adverse events. No protocol could be obtained.
For-profit bias	High risk	Supplements were provided by Abbott Laboratories, Montreal, Canada.

Saudny-Unterberger 1997 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sax 1987

Methods	Randomised clinical trial, USA
Participants	55 hospitalised adults with acute pancreatitis, at nutritional risk according to the trialist Male:Female = 40:15 Mean age = 39.8 years
Interventions	Experimental group: Early TPN (25% dextrose, 4.25% amino acid) for 7 days(n = 29) Control group: No intervention (n = 26) Co-interventions: Conventional therapy, consisting of intravenous fluids, analgesics, antacids, and nasogastric suction
Outcomes	Length of hospital stay, serum amylase, glucose, alkaline phosphatase, bilirubin, albumin, total lymphocyte count, days until first oral intake, nitrogen balance, serum transferrin, complications, catheter sepsis, mortality
Study dates	Not stated
Notes	We contacted the authors on 23rd June 2015 on email: hcsaxmd@gmail.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause-mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.

Sax 1987 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Schmitz 1984

Methods	Randomised clinical trial, Germany
Participants	40 hospitalised adults admitted because of polytraumatised and in need of ventilation, at nutritional risk due to being in an ICU. Male:Female = 26:14 Mean age = 35.4
Interventions	Experimental group 1: parenteral carbohydrates for 4 days(n = 10) Experimental group 2: parenteral carbohydrates + 1 g amino acids for 4 days(n = 10) Experimental group 3: parenteral carbohydrates + 2 g amino acids for 4 days(n = 10) Control group: i.v. fluids(n = 10)
Outcomes	Serum and urinary biomarkers (glucose, fructose), xylitconcentration, energy, urea
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.

Schmitz 1984 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Schriker 2008

Methods	Randomised clinical trial, Canada.
Participants	22 hospitalised adults undergoing colorectal cancer surgery, at nutritional risk due to major surgery Male:Female = 13:9 Mean age = 62.5 Exclusion criteria: metastatic disease, weight loss 10% over the preceding 3 months, congestive heart failure, hepatic disease, diabetes, and those receiving drugs known to have metabolic effects such as corticosteroids or beta-blockers
Interventions	Experimental group: Preoperative nutrition (glucose and amino acids) for 2 days(n = 11) Control group: no intervention(n = 11) Co-intervention: Postoperative nutrition (glucose and amino acids)
Outcomes	Biochemistry, gaseous exchange
Study dates	between June 2004 and June 2007
Notes	We contacted the authors on 24th August 2016 by email: thomas.schricker@mcgill.ca.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated random allocation
Allocation concealment (selection bias)	Unclear risk	The sealed envelope were not described as opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The surgeon and investigators responsible for sample analyses and data analysis were not aware of group assignment.
Incomplete outcome data (attrition bias) All outcomes	Low risk	No dropouts
Selective reporting (reporting bias)	Low risk	NCT00614133 - all outcomes stated in the protocol were assessed.
For-profit bias	Low risk	The trial was sponsored by McGill University Health Center

Schriker 2008 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Schroeder 1991

Methods	Randomised clinical trial, New Zealand
Participants	32 hospitalised adults undergoing small or large bowel resection, at nutritional risk due to major gastrointestinal surgery Male:Female = 17:15 Mean age = 52 years Exclusion criteria: none stated
Interventions	Experimental group: Enteral feeding was initiated postsurgically with 50 ml/hr and increased to 80 ml/hr if absorption was without problems (n = 16). Control group: Postoperative i.v. fluids were normal saline and 5% dextrose solutions (n = 16). Co-interventions: Oral fluids and food were restarted usually depending on the presence of bowel sounds and passage of flatus.
Outcomes	Complications, time to flatus, time to first bowel movement, weight loss, water loss, protein loss, fat loss, wound healing, muscle function, postoperative caloric intake and length of stay
Study dates	Not stated
Notes	1 participant in the Experimental group had chronic renal failure, and was given a low-protein modification of Osmolite. We contacted the authors in September 2015 by email: reception@obesity-surgery.co.nz.. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Schroeder 1991 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality.
For-profit bias	High risk	The trial was funded by Abbott Laboratories.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Schuetz 2006

Methods	Randomised clinical trial, country unknown.
Participants	22 hospitalised adults with liver cirrhosis, at nutritional risk due to increased nutritional requirements Male:Female = 16:6 Mean age = 60 years Exclusion criteria: None stated
Interventions	Experimental group: Enteral nutrition. Tube-feeding providing a high energy and protein intake for 2 weeks (n = unknown) Control group: No intervention (n = unknown) Co-interventions: Both groups received normal diet
Outcomes	Severity of hepatic encephalopathy with psychometric and neurophysiologic tests, and calorie consumption
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Schuetz 2006 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sharma 2013

Methods	Randomised clinical trial, UK
Participants	55 hospitalised adults undergoing colorectal surgery, at nutritional risk due to major gastro-intestinal surgery Male:Female = 35:20 Mean age = 66 Exclusion criteria: Dementia, lactose intolerance, pregnancy, diabetes mellitus, age under 16, musculoskeletal conditions preventing accurate use of the hand-grip dynamometer and unable to feed orally preoperatively. Postoperative exclusion criteria were postoperative admission to ICU or administration of TPN.
Interventions	Experimental group: Received standard diet + 6 x 60 ml/day of Pro-Cal (3.33 kcal/ml and 0.06 mg/ml of protein) for the duration of the hospital stay(n = 32) Control group: Received standard diet for the duration of the hospital stay (n = 30)
Outcomes	Primary outcome: Muscle strength at discharge Secondary outcome: Daily calorie intake, nausea, days to first flatus, days to first bowel movement and postoperative length of hospital stay
Study dates	Between June 2007 and November 2010
Notes	We contacted the authors in September 2015 by email: dr_miteshsharma@yahoo.co.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated
Allocation concealment (selection bias)	Unclear risk	The envelopes were described as sealed but not opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Sharma 2013 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	High risk	7 randomised participants were later excluded resulting in above 5% dropouts. The trial did not account for the missing participants.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Low risk	"The resources of our department were utilized to conduct the study".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Shestopalov 1996

Methods	Randomised clinical trial, Russia
Participants	64 hospitalised adults with multiple organ failure because of diffuse purulent peritonitis, at nutritional risk due to increased nutritional requirements Male:Female = Not reported Exclusion criteria: Not reported
Interventions	Experimental group: Enteral nutrition. Started from the 1st hours after operation (n = 33) Control group: No intervention(n = 31)
Outcomes	Metabolic, hormonal and immunologic status change, stage of intestinal insufficiency syndrome, severity of organ disorders, severity of gastro-intestinal function disorders, hepatic, cardiac and respiratory insufficiency, and mortality
Study dates	Not stated
Notes	We contacted the authors on 14th October 2015 by email: ashest@yandex.ru. We received an initial reply but no further answer.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Shestopalov 1996 *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Simon 1988

Methods	Randomised clinical trial, USA
Participants	34 hospitalised adults with moderate or severe alcoholic hepatitis (chronic ethanol ingestion > 80 g/day for at least 2 years and right lobe hepatomegaly), at nutritional risk according to the trialist Male:Female = 7:15(gender not reported for 12 participants) Mean age = 41.5 years (only for the severe malnourished) Exclusion criteria: acute pancreatitis, insulin-dependent diabetes mellitus, positive HBsAg, malignancy, hypotension, congestive heart failure, sepsis, severe COPD, and recent severe trauma, surgery, mild disease or rapidly became moribund
Interventions	Experimental group: 28 days of peripheral parenteral nutrition (2 litres a day). Each litre consisted of 35 g Aminosyn, 50 g dextrose, 500 ml of 10% Intralipid a day for a total of 1070 intravenous calories a day. (n = 16) Control group: no intervention(n = 18) Co-interventions: diet consisting of 2400 calories and 100 g protein + can of Ensure
Outcomes	Biochemistry, grade of encephalopathy, mortality, ascites, function tests
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: jgalamb@emory.edu. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The trial used sealed envelopes, but they were not described as being opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as "lack of blinding".
Blinding of outcome assessment (detection bias)	High risk	The trial was described as "lack of blinding".

Simon 1988 *(Continued)*

All outcomes		
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Singh 1998

Methods	Randomised clinical trial, India
Participants	43 hospitalised adults with nontraumatic intestinal perforation and peritonitis, at nutritional risk due to major abdominal surgery Male:Female = not described Mean age = 39.9 years Exclusion criteria: renal, cardiac, or hepatic failure at the time of admission, surgery preformed elsewhere and subsequently referred to this hospital
Interventions	Experimental group: Given a feeding jejunostomy in which they received enteral nutritional support by the following process: 12 – 24 hrs postoperatively: normal saline and 5% dextrose solution in a 1:3 ratio at 100 mL/hr; 24 – 48 hours postoperatively: 1.0 L of half-strength feed at 50 mL/hr; 48 – 72 hrs postoperatively: 2.0 L of half-strength feed at 100 mL/hr; and 72 hours onward: at least 2.0 L of full-strength feed every 24 hrs Enteral nutrition consisted of a low-residue, easily absorbable, milk-based, blenderised diet which was made in the Dietetics Department at the hospital. Proprietary vitamin supplements were added. The intervention lasted 6.5 days on average.(n = 21) Control group: Received intravenous fluids and electrolyte supplements as needed(n = 22)
Outcomes	Mortality, complications, nitrogen balance and caloric intake
Study dates	Not stated
Notes	e contacted the authors on 16th September 2015 by email: gurpreet@ksu.edu. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described

Singh 1998 *(Continued)*

Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded. The experimental group received a jejunostomy whereas the control group did not.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no incomplete data for any participants.
Selective reporting (reporting bias)	Low risk	We found no protocol. The trial reported all-cause mortality and complications.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Smedley 2004a

Methods	Randomised clinical trial, UK, factorial design.
Participants	179 hospitalised adults undergoing elective moderate to major lower gastrointestinal tract surgery, at nutritional risk due to major surgery Male:Female = 100:79 Mean age = 60 years Exclusion criteria: Age under 18, pregnancy, overt dementia, emergency or laparoscopic surgery, receipt of other forms of preoperative nutritional support, and inability to take ONS for at least 7 days before operation
Interventions	Experimental group 1: post-operative supplements (drink containing 1.5 kcal and 0.05 g protein per ml. Participants were encouraged to drink this as wanted in small, frequent quantities between meals).(n = 42) Control group 1: No intervention (n = 48) Co-interventions 1: pre-operative supplements (drink containing 1.5 kcal and 0.05 g protein per ml. Participants were encouraged to drink this ad libitumas wanted in small, frequent quantities between meals). Standard diet. Experimental group 2: post-operative supplements (drink containing 1.5 kcal and 0.05 g protein per ml. Participants were encouraged to drink this as wanted in small, frequent quantities between meals). (n = 39) Control group 2: No intervention (n = 50) Co-interventions 2: standard diet
Outcomes	Postoperative change in body weight, clinical complications, length of hospital stay, nutritional status, quality of life, cost of care, anthropometrics
Study dates	Between October 1998 and March 2001

Smedley 2004a *(Continued)*

Notes	Same trial as Smedley 2004b with results from experimental group 1 vs control 1. We contacted the authors on 19th August 2015 by email: tim.bowling@mail.qmcuh-tr.trent.nhs.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The trial used sealed envelopes, but they were not described as being opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded. Only the experimental group received a supplement.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	There were more than 5% dropouts, and the trial did not use proper intention-to-treat methodology.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality.
For-profit bias	High risk	The trial was funded by a nutrition company (Numico Research).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Smedley 2004b

Methods	Randomised clinical trial, UK
Participants	179 hospitalised adults undergoing elective moderate to major lower gastrointestinal tract surgery, at nutritional risk due to major surgery Male:Female = 100:79 Mean age = 60 years Exclusion criteria: Age under 18, pregnancy, overt dementia, emergency or laparoscopic surgery, receipt of other forms of preoperative nutritional support, and inability to take ONS for at least 7 days before operation
Interventions	Experimental group 1: post-operative supplements (drink containing 1.5 kcal and 0.05 g protein per ml. Participants were encouraged to drink this as wanted in small, frequent quantities between meals).(n = 42) Control group 1: No intervention (n = 48)

Smedley 2004b *(Continued)*

	Co-interventions 1: pre-operative supplements (drink containing 1.5 kcal and 0.05 g protein per ml. Participants were encouraged to drink this ad libitumas wanted in small, frequent quantities between meals). Standard diet. Experimental group 2: post-operative supplements (drink containing 1.5 kcal and 0.05 g protein per ml. Participants were encouraged to drink this as wanted in small, frequent quantities between meals). (n = 39) Control group 2: No intervention (n = 50) Co-interventions 2: standard diet
Outcomes	Postoperative change in body weight, clinical complications, length of hospital stay, nutritional status, quality of life, cost of care, anthropometrics
Study dates	Between October 1998 and March 2001
Notes	Same trial as Smedley 2004a with results from experimental group 2 vs control 2. We contacted the authors on 19th August 2015 by email: tim.bowling@mail.qmcuh-tr.trent.nhs.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The trial used sealed envelopes, but they were not described as being opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Only the experimental group received a supplement.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	There were more than 5% dropouts, and the trial did not use proper intention-to-treat methodology.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report on all-cause mortality.
For-profit bias	High risk	The trial was funded by a nutrition company (Numico Research).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Smith 1985

Methods	Randomised clinical trial, Australia
Participants	50 hospitalised adults with gastro-intestinal tract malignancy scheduled for surgical treatment, at nutritional risk due to undergoing major surgery

Smith 1985 *(Continued)*

	Male:Female = 34:16 Mean age = 65 years Exclusion criteria: emergency cases, people with peritonitis or bowel obstruction
Interventions	Experimental group: enteral nutrition (Isocal) containing 34 g protein, 44 g fat and 133 g glucose a litre (n = 25) Control group: no intervention(n = 25) Co-intervention: intravenous isotonic fluids and standard hospital diet
Outcomes	Mortality, complications, length of hospital stay
Study dates	January 1981 to June 1983
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Randomly-ordered cards
Allocation concealment (selection bias)	Unclear risk	Sealed envelopes but it was unclear if they were opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	It was unclear how many participants had incomplete outcome data.
Selective reporting (reporting bias)	Low risk	The trial reported mortality and complications.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Smith 1988

Methods	Randomised clinical trial, USA
Participants	34 hospitalised adults with major upper gastro-intestinal surgery, at nutritional risk due to major surgery Male:Female = 27:7

Smith 1988 *(Continued)*

	Mean age = 67.5 years
Interventions	Experimental group: preoperative intravenous nutrition 10 days before surgery. Infusing 50 - 60 kcal/kg/day of glucose/amino acid IVN mixture, containing 150 kcal/l g of nitrogen(n = 17) Control group: prepared for surgery in the usual manner and did not receive any preoperative nutritional support but were scheduled for the next convenient operating list(n = 17)
Outcomes	Mortality, major complications, serum transferrin, length of hospital stay
Study dates	Not stated
Notes	We contacted the authors in December 2015 by email: rsmith@med.usyd.edu.au. We received information regarding blinding and nutritional intake in the study group.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Randomly-ordered cards
Allocation concealment (selection bias)	Unclear risk	Sealed envelopes were used, but they were not described as opaque.
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding was not performed.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Blinding was not performed.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause-mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sokulmez 2014

Methods	Randomised clinical trial, Turkey
Participants	38 hospitalised adults with inflammatory bowel disease, at nutritional risk according to the trialist Male:Female = 28:10 Mean age = 37.1 years Exclusion criteria: none reported

Sokulmez 2014 *(Continued)*

Interventions	Experimental group: Received a standard enteral product added into the hospital diet(n = 15) Control group: No intervention(n = 23) Co-interventions: All received a normal hospital diet
Outcomes	Hospitalisation period, subjective global assessment (SGA), BMI, bowel movements, change of nutritional state, general status, disease severity, changes of clinical findings, and consumption's of nutrients, fibre and water soluble-fibre
Study dates	Not stated
Notes	We could not use this publication since it only presents results as per protocol. We contacted the authors on 30th June 2015 by email: sokulmezpinar@gmail.com and again in September by email: pinar.sokulmez@omu.edu.tr. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were complete data for all participants.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Song 1993

Methods	Randomised clinical trial, China
Participants	25 hospitalised adults with COPD and infection, PaO_2 < 8 kPa, or $PaCO_2$ > 6.7 kPa, at nutritional risk due to trialist characterising them as malnourished. Male:Female = 23:2 Mean age = 60.3 years

Song 1993 *(Continued)*

	Exclusion criteria: diabetes, hyperthyroidism or other endocrine and metabolic diseases
Interventions	Experimental group: Received parenteral nutrition in the form of amino acids injection (5% Nutrisol-S) 500 ml (Green Cross, Japan) and lipid emulsion (Intralipid: (1000 ml Intralipid contains rectification soybean oil 100 g, glycerinum 22.5 g rectification lecithin 12 g, PH 8.0, 4602.4 kJ/kg)) 500 ml (Sino-Swed Pharmaceutical Corp. Ltd. China) for intravenous drip, once daily, for 10 to 20 days (10 of the participants were over 15 days). (n = 23) Control group: standard diet(n = 23) Co-intervention: persistent low-flow oxygen inspiration and anti-infection, anti-asthmatic and antitussive and standard diet
Outcomes	All-cause mortality, NEFA, ABG, serum amino acid
Study dates	Not stated
Notes	We tried and failed to contact the authors by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained but all-cause mortality was reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sonnenfeld 1978

Methods	Randomised clinical trial, France
Participants	26 hospitalised adults undergoing gastro-intestinal surgery, at nutritional risk due to major surgery Male:Female = 17:9

Sonnenfeld 1978 *(Continued)*

	Mean age = 46.5 years Exclusion criteria: Not reported
Interventions	Experimental group: parenteral nutrition 12.4 g Nitrogen (1200 kcal) and 1200 kcal of glucose for 2 days(n = 11) Control group: no intervention (n = 15) Co-interventions: parenteral nutrition from day 2, 12.4 g Nitrogen (1200 kcal) and 1200 kcal of glucose, given until they tolerate oral intake
Outcomes	Nitrogen balance, complications, mortality
Study dates	Not stated
Notes	We could find no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Low risk	The trial reported mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Soop 2004

Methods	Randomised clinical trial, Sweden/UK
Participants	20 hospitalised adults undergoing elective major colorectal surgery, at nutritional risk due to major surgery Male:Female = 12:6 (gender not reported for two participants) Mean age = 62 years

Soop 2004 *(Continued)*

	Exclusion criteria: age below 18 years or above 80 years; BMI below 18 or above 30 kg/m^2
Interventions	Experimental group: Immediate postoperative enteral nutrition with an energy-dense residue-free solution (1·5 kcal/ml Nutrison Energy, Nutricia)(n = 10) Control group: Immediate postoperative enteral nutrition with a hypocaloric solution with an indistinguishable appearance (0·2 kcal/ml Nutricia)(n = 10)
Outcomes	Urinary nitrogen losses, insulin resistance, blood glucose, complication and hospital stay
Study dates	Not stated
Notes	We contacted the authors in December 2015 by email: mattias.soop@mac.com. We received an initial reply but no further information was supplied.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Low risk	The control group received a solution with an indistinguishable appearance.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	High risk	Financial support from Numico Research.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Stableforth 1986

Methods	Randomised clinical trial, UK
Participants	61 hospitalised adults with femoral neck fracture, at nutritional risk due to major surgery Male:Female = 0:61 Mean age = 81 Exclusion criteria: Not stated

Stableforth 1986 *(Continued)*

Interventions	Experimental group: Oral nutrition. Participants were encouraged to drink a liquid flavoured milk-based nutrient supplement through their waking hours. 1 300-ml package of the supplement contained 18.5 g protein, 11 g fat, and 40 g carbohydrate with vitamins and minerals, and provided 320 kcal per feed. Intervention period was for 10 days. Control group: No intervention Co-interventions: All participants received normal ward meals and drinks.
Outcomes	Weight, food consumption, protein and calorie intake, fluid balance, bowel action, daily nitrogen production, excreted and retained, calorie expenditure (physical activity), plasma urea concentration, urine creatinine and nitrogen
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	There was insufficient information to assess whether missing data were likely to induce bias in the results.
Selective reporting (reporting bias)	Unclear risk	The trial reported all-cause mortality and serious adverse events. No protocol could be obtained.
For-profit bias	Low risk	The trial was funded by a grant from the South West Regional Hospital Board.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Starke 2011

Methods	Randomised clinical trial, Switzerland
Participants	134 hospitalised adults at nutritional risk according to NRS-2002 Male:female = not reported Mean age: 72.5 years

Starke 2011 *(Continued)*

Interventions	Experimental group: Individual nutritional care, including a detailed nutritional assessment, individual food supply, fortification of meals with maltodextrin, rapeseed oil, cream or protein powder or both, in between snacks and oral nutritional supplements (n = 67) Control group: Standard nutritional care, including the prescription of ONSs and nutritional therapy prescribed by the physician independently of this study and according to the routine ward management (n = 67)
Outcomes	Average daily intake, protein intake, changes in body weight, complications, antibiotic therapies, length of hospital stay, quality of life, mortality, compliance, plasma-concentrations
Study dates	Not stated
Notes	We contacted the authors on 17th December 2015 by email: remy.meier@ksli.ch. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The trial was randomised using a computer-generated randomisation.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	Both all-cause-mortality and serious adverse events were reported.
For-profit bias	High risk	The trial was funded by Nestlé.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Stein 2002

Methods	Randomised clinical trial, Germany
Participants	80 hospitalised adults admitted to intensive or intermediate care with percutaneous endoscopic gastrostomy, at nutritional risk due to being ICU patients Male:Female = 33:47 Mean age = 68 years

Stein 2002 *(Continued)*

	Exclusion criteria: chronically ill admitted only for PEG placement, outpatients, not eligible for ICU or intermediate care, undergoing Billroth operation, and a PEG placed for relief of gastric outlet obstruction, and ascites
Interventions	Experimental group: received enteral feeding within 1 hr, with feeding that was provided through a tube by a continuous feeding pump and consisted of a polymeric iso-osmolar formula 1 kcal/ml(n = 40) Control group: no intervention for the first 24 hrs (n = 40) Co-interventions: All participants were tube-fed 24 hrs after PEG placement. Both groups received feedings at a rate of 30 ml/hr for 20 hrs on day 1, 70 on day 2, and 100 on day 3 after initiation of feeding. Thereafter the volume was adjusted to the individual nutritional requirements as recommended by the nutrition team.
Outcomes	Gastric residual volume, frequency of complications (stomatitis, vomiting, bleeding, leakage, diarrhoea, aspiration, and pneumoperitoneum), vital signs, abdominal distension, presence of bowel sounds, abdominal tenderness, and mortality
Study dates	Not stated
Notes	Note that all participants were tube-fed after 24 hrs, and therefore the co-intervention lasts longer than the intervention period alone. Results for maximum follow-up are after 30 days. We contacted the author on 1st October 2015 by email: j.stein@em.uni-frankfurt.de. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Blinding was not performed.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Blinding was not performed.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were complete outcome data for all participants.
Selective reporting (reporting bias)	Unclear risk	The trial reported all-cause mortality but not serious adverse events. No protocol could be obtained.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Stokes 1994

Methods	Randomised clinical trial, Ireland
Participants	20 hospitalised adults admitted for abdominal aortic aneurysm repair, at nutritional risk due to major surgery Male:Female = not stated Mean age = not stated Exclusion criteria: none stated
Interventions	Experimental group: peripheral parenteral nutrition from the second postoperative day and for 6 days(n = 10) Control group: routine postoperative fluids and diet (n = 10)
Outcomes	Respiratory and skeletal muscle function, wound healing, postoperative stay and complications
Study dates	Not stated
Notes	We found no contact information for the author.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and all-cause mortality was not reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sullivan 1998

Methods	Randomised clinical trial, USA

Sullivan 1998 *(Continued)*

Participants	18 hospitalised adults > 64 years of age, and with an acute femoral neck or intertrochanteric fracture which required surgical intervention, at nutritional risk due to being frail elderly. Male:Female = 17:1 Mean age = 75.5 years Exclusion criteria: incapable of giving informed consent and did not have a legal guardian; pathological fracture (due to cancer or other non-osteoporotic pathologies) or significant trauma to other organ systems (e.g. multi-trauma from a motor vehicle accident); metastatic cancer, cirrhosis of the liver, a contraindication to the use of enteral feedings (e.g. severe short-bowel syndrome), or organ failure which rendered the proposed intervention inappropriate
Interventions	Experimental group: 1375 cc of polymeric enteral formula (Promotet, Ross Laboratories, 85.8 g protein, 4314 non-nitrogenous kJ (1031 kcal)) over an 11-hr period (125 cc/hr by enteral feeding pump) beginning at 7 p.m. each night for at least 3 consecutive days or until discharged from the hospital(n = 8) Control group: no intervention (n = 10) Co-interventions: standard postoperative nutritional care receiving 3 meals a day
Outcomes	Complications, life-threatening complications, discharge data, mortality, MMSE, ADL-score, albumin, transferrin, cholesterol, length of hospital stay
Study dates	Not stated
Notes	Notes taken from Avanell 2010. We contacted the authors on 8th February 2016 by email: sullivandennish@uams.edu. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Low risk	"The randomization process was prepared by the biostatistician, using a series of sealed envelopes. Security (lined) envelopes were used to assure that the assignment could not be read without opening the envelope. After consent had been obtained and the baseline assessment was completed, the next envelope in order was opened to reveal the group assignment. Each envelope contained a card. The card had the assignment for treatment or control preprinted. Space was provided to enter the patient name and ID as well as the date, time and person responsible for randomization. The study nurse completed the card, photocopied it, and returned the original to the biostatistician as a check that the randomization process was progressing appropriately. Subjects were randomized to either treatment or control within blocks to assure that there were roughly equal numbers of subjects in each group at the end of the study. The block sizes were randomly varied to minimize the ability to deduce the assignment for a particular patient before opening the envelope" Quote taken from (Avenell 2016).
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was described as non-blinded: "this non-blinded randomized controlled trial".
Blinding of outcome assessment (detection bias)	High risk	The trial was described as non-blinded: "this non-blinded randomized controlled trial".

Sullivan 1998 *(Continued)*
All outcomes

Incomplete outcome data (attrition bias) All outcomes	High risk	There were more than 5% dropouts, and the trial did not use proper methodology to deal with missing data.
Selective reporting (reporting bias)	Low risk	The trial reported mortality and serious adverse events.
For-profit bias	High risk	The trial was funded by Ross Laboratories.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sullivan 2004

Methods	Randomised clinical trial, USA
Participants	57 hospitalised adults older than 64 who underwent surgical repair of an acute hip fracutre, at nutritonal risk due to being frail elderly Male:Female = 39:18 Mean age = 78.8 years Exclusion criteria: incapable of giving informed consent and did not have a legal guardian; pathological fracture (due to cancer or other non-osteoporotic pathologies), trauma to other organ systems (e.g. multi-trauma from a motor vehicle accident); metastatic cancer, cirrhosis of the liver, a contraindication to the use of enteral feedings (e.g. severe short-bowel syndrome), or organ failure which rendered the proposed intervention inappropriate
Interventions	Experimental group: The participants' 'nutrient deficit' for the day ('target intake' minus 'volitional intake') was calculated each evening. Nightly enteral feedings were initiated with a nutritionally complete, lactose-free, polymeric enteral formula (Pro-mote®, Ross Laboratories) that contained 1000 Kcal (4187kJ), 62.5 g protein (25% of calories), 26 g fat (23% of calories), and 130 grams carbohydrates (52% of calories) per litre. On the 1st night after the feeding tube was placed, the participant was provided enteral feedings at a rate of 50 cc/hr over an 11-hr period beginning at 7 p.m. (i.e. a total of 550 cc of enteral formula, 34.5 g protein). If the participant tolerated the tube-feedings, the rate was increased by 25 cc/hr each night to either: (a) a maximum of 125 cc/hr over an 11-hr period beginning at 7 p.m.; or (b) the 'nutrient deficit' was reached. For example, if the participants' 'target intake' was calculated to be 2100 Kcal and his 'volitional intake' was 1400 Kcal, the enteral feeding rate that night was set to 64 cc/hr for a total of 700 cc over 11 hrs, which equalled his 'nutrient deficit'. (n = 27) Control group: No intervention (n = 30) Co-interventions: standard postoperative care
Outcomes	Complications, life-threatening complications, discharge data, mortality, length of stay, MMSE, ADL, albumin, pre-albumin, cholesterol
Study dates	Not stated
Notes	Notes taken from Avanell 2010. We contacted the authors on 8th February 2016 by email: sullivandennish@uams.edu. We received no reply.

Risk of bias

Sullivan 2004 *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the sequence was generated.
Allocation concealment (selection bias)	Low risk	"The randomisation process was prepared by the biostatistician, using a series of sealed envelopes. Security (lined) envelopes were used to assure that the assignment could not be read without opening the envelope. After consent had been obtained and the baseline assessment was completed, the next envelope in order was opened to reveal the group assignment. Each envelope contained a card. The card had the assignment for treatment or control preprinted. Space was provided to enter the patient name and ID as well as the date, time and person responsible for randomization. The study nurse completed the card, photocopied it, and returned the original to the biostatistician as a check that the randomization process was progressing appropriately. Subjects were randomized to either treatment or control within blocks to assure that there were roughly equal numbers of subjects in each group at the end of the study. The block sizes were randomly varied to minimize the ability to deduce the assignment for a particular patient before opening the envelope" Quote taken from (Avenell 2016).
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Low risk	The trial reported mortality and serious adverse events.
For-profit bias	High risk	The trial was funded by Ross Laboratories: "We also wish to express our appreciation to Ross Laboratories for supplying the nutritional supplements and the nasogastric feeding tubes".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Summerbell 1993

Methods	Randomised clinical trial, UK
Participants	20 hospitalised adults, at nutritional risk due to low levels of albumin Male:Female = 4:16 Mean age = 87.5 years Exclusion criteria: none stated
Interventions	Experimental group: oral supplement (1365 kJ) twice daily (n = 10)

Summerbell 1993 *(Continued)*

	Control group: no intervention (n = 10) Co-intervention: normal hospital provision
Outcomes	Esterase activity, weight, middle-arm circumference, triceps skinfold thickness
Study dates	Not stated
Notes	We contacted the authors on 13th December 2015 by email: f.m.williams@ncl.ac.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	The dropouts exceeded 5% and the trial did not allow proper intention-to-treat methodology.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Sustic 2006

Methods	Randomised clinical trial, Croatia
Participants	40 hospitalised adults undergoing CABG surgery, at nutritional risk due to being ICU patients Male:Female = 30:10 Mean age = 58 years Exclusion criteria: anamnestic data about diseases of gastroduodenal part of digestive tract or endoscopic findings confirming gastric or duodenal ulceration in last 5 years; loss of weight of > 10% in last 3 months or extreme obesity (BMI > 35), diabetes mellitus, preoperative elevated biochemical parameters of hepatic (ASAT, ALAP, gamma GT and bilirubin) or renal function (urea, creatinine), preoperative intake of drugs which could influence gastric motility (cisapride, metoclopramide, erythromycin, dopamine in doses > 2 µg/kg/min) or the paracetamol absorption test (e.g. NSAID). Serious concomi-

Sustic 2006 *(Continued)*

	tant valvular disease, recent myocardial infarction (< 3 weeks), preoperative ejection fraction < 35% and intraoperative use of intra-aortic balloon pump due to the possible influence of haemodynamic instability on gastric motility
Interventions	Experimental group: Enteral feeding. The participants started with iso-osmolar enteral feeding through the nasogastric tube 18 hrs after CABG surgery according to the following protocol: the first 3 hrs 30 ml/hr, next 3 hrs 50 ml/hr, i.e. with a total of 240 ml after 6 hrs. After 6 hrs of feeding (i.e. 24 hrs after surgery) the gastric supply was stopped. (n = 20) Control group: Placebo. Participants received only crystalloid solutions for first 24 hrs. (n = 20)
Outcomes	Plasma paracetamol concentration, gastric motility, venous blood samples and emptying
Study dates	Not stated
Notes	We contacted the authors on 1st October 2015 and received a reply, see below.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	According to correspondence with the author software randomisation was used.
Allocation concealment (selection bias)	Unclear risk	It was unclear from the author's response, how the allocation sequence was concealed.
Blinding of participants and personnel (performance bias) All outcomes	Low risk	According to correspondence with the author participants and personnel were blinded.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	According to correspondence with the author outcome assessors were blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported. Correspondence with the author provided no further information.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Swails 1995

Methods	Randomised clinical trial, USA
Participants	25 hospitalised adults with cancer of the oesophagus undergoing elective oesophagogastrectomy, at nutritional risk due to major surgery Male:Female = 17:8

Swails 1995 *(Continued)*

	Mean age = 61 years Exclusion criteria: Undergoing emergency surgery for oesophagogastrectomy or an oesophagogastrectomy performed by surgeons other than a specific doctor
Interventions	Experimental group: received feeding jejunostomy tube with immediate postoperative enteral nutrition support. These participants received either a full-strength elemental or polymeric diet at 10 mL/hr within 24 hrs of operation. The enteral feeding infusion rate was gradually increased by 10 mL/hr every 12 to 24 hrs until nutritional needs were met (estimated 25 - 30 kcal/kg body weight and 1.2 - 1.5 g protein/kg body weight). After contrast radiographic demonstration of an intact anastomosis, they began oral feeding. (n = 13) Control group: Standard care. Participants received a conventional intravenous fluid and electrolyte replacement until postoperative day 4 or 5 when radiographic assessment demonstrated an intact anastomosis. A clear liquid diet was initially provided and was gradually progressed over a period of 1 to 3 days to a regular post-oesophagogastrectomy diet consisting of 6 small meals daily. (n = 12)
Outcomes	Length of hospital stay, number of days spent in the ICU, number of days fed enterally or parenterally, postoperative complications including infections, wound healing, anastomotic leak, wound dehiscence, feeding tube-related complications, caloric intake, gastrointestinal signs and symptoms
Study dates	January 1991 to June 1993
Notes	We could find no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Unclear risk	The trial reported complications, but not all-cause mortality. No protocol could be obtained.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Szeszycki 1998

Methods	Randomised clinical trial, USA
Participants	30 hospitalised adults with lymphoma or leukaemia undergoing allogenic or autologous bone marrow transplant, at nutritional risk due to major surgery Male:Female = 17:13 Mean age = approximately 38 years Exclusion criteria: not described
Interventions	Experimental group: Participants received standard glutamine-free PN, STD-PN provided calories at 1.3 BEE, (500 kcal/day as fat emulsion) and protein at 1.5 g/kg/day. PN containing micronutrients alone, without dextrose or amino acids (n = 16) Control group: Participants received PN containing micronutrients alone, without dextrose or amino acids. It provided standard amounts of vitamins, trace elements, electrolytes and 50 kcal/day as fat emulsion (to maintain blinding). Considered to be placebo (n = 14)
Outcomes	Length of hospital stay, infectious complications, non-prophylactic antibiotic administration, fever, engraftment, and body weight changes from PN initiation until hospital discharge. Serum chemistries, electrolyte requirements and oral kcal as wanted and protein intake during the period of PN infusion
Study dates	Not stated
Notes	We contacted the authors on 13th December 2015 by email: tzieg01@emory.edu. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	The trial was described as double-blinded. Participants were blinded but it is unclear whether personnel were blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The trial was described as double-blinded, but it was unclear if the outcome assessors were blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	They used intention-to-treat analysis, but did not describe how they dealt with missing participants.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report all-cause mortality, but they did report adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Thompson 1981

Methods	Randomised clinical trial, USA
Participants	21 hospitalised adults with gastrointestinal cancer and a weight loss > 10 lb over 3 to 6 months prior to admission for major surgery, at nutritional risk due to major abdominal surgery Male:Female = 21:0 Mean age = 65 years Exclusion criteria: not stated
Interventions	Experimental group: Parenteral nutrition. Participants received hyperalimentation 8 days preoperatively, 10 days postoperatively. The intervention consisted of intravenous PN, with crystalline amino acids in 25% Dextrose beginning at least 5 days preoperatively and continuing until a regular diet (1500 cal) postoperatively was tolerated. Infusion rates were to provide 40 - 50 kcal/kg/day or approximately 2000 - 4000 cal per day. (n = 12) Control group: standard care (n = 9)
Outcomes	Major postoperative complications; abscess, anastomotic leak, wound infection, minor complications; urinary tract infection, superficial wound infection, prolonged atelectasis and complications directly related to total parenteral nutrition. Weight, serum albumin and mortality
Study dates	Not stated
Notes	We contacted the authors on 13th November 2015 by email: tjulian@wpahs.org. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reported all-cause mortality and serious adverse events. No protocol could be found.
For-profit bias	Unclear risk	It was unclear how the trial was funded.

Thompson 1981 *(Continued)*

Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Tong 2006a

Methods	Randomised clinical trial, China
Participants	126 hospitalised adults with gastrointestinal tumour, at nutritional risk due to major surgery Male:Female = 62:46 Mean age = 68.2 years Exclusion criteria: Body weight over or less than 15% of the participants usual body weight, diabetes and decompensate hyperthyroidism or serious hepatorenal dysfunction (ALT > 60 U/L, TBiL > 25.7 μmol/L, BUN 10.7 mmol/L, Cre > 132.9 μmol/L) and haemorrhagic shock
Interventions	Experimental group 1: TPN after surgery (50 ml/kg/day, N/Q = 1 g:552 kJ) for intravenous drip (n = 45) Experimental group 2: Enteral nutrient fluids (50 ml/kg/day, N/Q = 1 g : 552 kJ) for infusion after gastrointestinal fistulation, 500 ml (40 - 50 ml/hr) of the fluids after 1st 24 hrs, 1000 ml (80 - 120 ml/hr) after 48 hrs, and 1500 ml (80 - 120 ml/hr) after 72 hrs. Semi-liquid diet after 6 - 7 days of infusion. (n = 45) Control group: Conventional therapy of fluid infusion, transition diet after recovery of intestinal peristalsis (n = 36)
Outcomes	Complications, body weight (9 days after treatment)
Study dates	Not stated
Notes	Same as Tong 2006b, but with experimental group 1 vs. control group. We tried but failed to contact the authors on 23rd September 2015 by phone and email: surgerytong@yahoo.com.cn.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Tong 2006a *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse event.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Tong 2006b

Methods	Randomised clinical trial, China
Participants	126 hospitalised adults with gastrointestinal tumour, at nutritional risk due to major surgery Male:Female = 62:46 Mean age = 68.2 years Exclusion criteria: Body weight over or less than 15% of the participants usual body weight, diabetes and decompensate hyperthyroidism or serious hepatorenal dysfunction (ALT > 60 U/L, TBiL > 25.7 µmol/L, BUN 10.7 mmol/L, Cre > 132.9 µmol/L) and haemorrhagic shock
Interventions	Experimental group 1: TPN after surgery (50 ml/kg/day, N/Q = 1 g:552 kJ) for intravenous drip (n = 45) Experimental group 2: Enteral nutrient fluids (50 ml/kg/day, N/Q = 1 g : 552 kJ) for infusion after gastrointestinal fistulation, 500 ml (40 - 50 ml/hr) of the fluids after 1st 24 hrs, 1000 ml (80 - 120 ml/hr) after 48 hrs, and 1500 ml (80 - 120 ml/hr) after 72 hrs. Semi-liquid diet after 6 - 7 days of infusion. (n = 45) Control group: Conventional therapy of fluid infusion, transition diet after recovery of intestinal peristalsis (n = 36)
Outcomes	Complications, body weight (9 days after treatment)
Study dates	Not stated
Notes	Same as Tong 2006a, but with experimental group 2 vs. control group

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Tong 2006b *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Vaithiswaran 2008

Methods	Randomised clinical trial, India
Participants	63 hospitalised adults undergoing elective upper gastrointestinal surgery, at nutritional risk due to major abdominal surgery Male:Female = 51:10 (only analysed participants) Mean age = 44 years (only analysed participants) Exclusion criteria: emergency upper gastro-intestinal surgery, comorbid medical conditions (diabetes mellitus, gross renal or hepatic dysfunction), intolerance to milk-based foods and unresectable tumours
Interventions	Experimental group: Early postoperative enteral nutrition through a nasojejunal tube. The diet was milk-based in a standard feeding protocol with an energy supply of 2296 kcal/day. The diet consisted of: skimmed milk powder 150 g, sugar 50 g, vegetable oil 20 g and whey water to make one litre. 12 hrs after surgery the feeding was started according to the protocol: 12 - 24 hours: normal saline and 5% dextrose; 1:3 ratio at 100 ml/hr 24 - 48 hrs: 1 litre of half-strength feed at 50 ml/hr 48 - 72 hrs: 2 litres of half-strength feed at 100 ml/hr 72 hours onwards: 2 litres of full-strength feed/24 hrs Enteral nutrition was continued until oral feeding was considered tolerable. (n = 32) Control group: Treament as usual with intravenous fluids (n = 31)
Outcomes	Body weight, serum albumin, serum transferrin, bowel sounds, passage of flatus, diarrhoea, abdominal cramps, abdominal distension, ileus, wound infection, abdominal abscess, respiratory infection, urinary nitrogen, urinary tract infection, septicaemia, wound dehiscence, anastomotic leak, respiratory infection, vomiting and length of hospital stay
Study dates	Not stated
Notes	We contacted the authors on 26th October 2015 by email: Vaithiswaran@gmail.com; vaithiv@hotmail.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement

Vaithiswaran 2008 *(Continued)*

Random sequence generation (selection bias)	Low risk	Patients were randomised into 2 groups using a random-number table.
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised, but it was unclear how the allocation was concealed.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	They did not use intention-to-treat analysis and did not fully describe how they dealt with missing participants.
Selective reporting (reporting bias)	Unclear risk	The trial reported serious adverse events, but not all-cause mortality. No protocol could be found.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Valdivieso 1987

Methods	Randomised clinical trial, USA
Participants	65 hospitalised adults, previously untreated, with small cell bronchogenic carcinoma admitted for chemotherapy, at nutritional risk according to the trialist Male:Female = 40:18 Mean age = 59 years
Interventions	Experimental group: Intravenous hyperalimentation 500 ml 50% glucose, 500 ml 8.5% amino acid(n = 30) Control group: No intervention (n = 35) Co-intervention: oral nutrition as wanted + chemotherapy
Outcomes	Myelosuppresive toxicity, infectious complications, weight, triceps skinfold, mid-upper arm muscle circumference, days of hospitalisation, survival, remission
Study dates	Not stated
Notes	The same participants were randomised to prophylactic antibiotics or no prophylactic antibiotics. The 2 groups of antibiotics could be described as being similar in the 2 groups. We contacted the authors on 23rd June 2015 by email: manuelva@umich.edu. The author replied that he had left the research environment and could not provide further information.
Risk of bias	

Valdivieso 1987 *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	There were above 5% dropouts, and the trial did not use proper methodology to deal with those lost to follow-up.
Selective reporting (reporting bias)	Low risk	The trial reported mortality and serious adverse events.
For-profit bias	Low risk	The trial was funded by a non-profit organisation (National Cancer Institute).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Vermeeren 2004

Methods	Randomised clinical trial, the Netherlands
Participants	56 hospitalised adults admitted with acute exacerbation of COPD, at nutritional risk due to BMI < 22 kg/m^2, or a BMI < 25 kg/m^2 with > 5% weight loss in 1 month, or > 10% weight loss in 6 months prior to admission to the hospital Exclusion criteria: Diabetes mellitus 1, thyroid or intestinal diseases or carcinoma
Interventions	Experimental group: 3 x 125 ml Respifors/day; 2.38 MJ/day, 20 energy% from protein, 20 energy% from fat and 60 energy% from carbohydrate (n = 29) Control group: 3 x 125 ml vanilla-flavoured water with 0 MJ/day (n = 27) Co-intervention: Nutritional intervention was implemented in the standardised usual-care management of these participants They received standardised hospital diet. Dietetic consultation was standardised during the study period and they were given 500 ml 5% glucose infusion.
Outcomes	Weight, fat-free mass, fat mass, FEV1%, IVC, Pi-max, mean hand-grip strength, quadriceps strength, dyspnoea score, loss of appetite score, early satiety score, bloating score, fatigue score, readmission to ward
Study dates	Not stated
Notes	We contacted the authors on 19th August 2015 by email: vermeeren.marja@zonnet.nl. We received no reply.

Vermeeren 2004 *(Continued)*

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Low risk	The trial was double-blinded, and the packages were described as being similar.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	There were above 5% dropouts, and the trial did not use proper intention-to-treat methodology.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was funded by a nutrition company (Numico Research BV).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Vicic 2013

Methods	Randomised clinical trial, Croatia
Participants	101 hospitalised adults with burns covering more than 20% of the body surface, at nutritional risk due to being in the ICU Male:Female = 49:52 Mean age = 48 years
Interventions	Experimental group: Fed via introduced nasojejunal probe equipped with enteral feeding. Basal feeding dose was 25 ml liquid enteral preparation each hr. (n = 52) Control group: Fed in standard manner by mouth (3 standard hospital meals) immediately after the 1st wound dressing(n = 49)
Outcomes	Complete blood count, plasma electrolytes, plasma glucose, urea, creatinine, albumin, C-reactive protein and transferrin, BMI, complications, death
Study dates	Not stated
Notes	We contacted the authors on 25th August 2015 by email: vedkovac@inet.hr. We received no reply.

Risk of bias

Vicic 2013 *(Continued)*

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	"Subjects were divided into two groups using computer randomization process."
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The trial was not blinded since the participants were they only ones with tubes.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The trial was not blinded since the participants were they only ones with tubes.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	There was no protocol. The trial reported complications and death.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Vlaming 2001

Methods	Randomised clinical trial, UK
Participants	549 hospitalised adults who were admitted acutely under the care of general medical, surgical or orthopaedic teams and were 'thin' (5% - 10% weight loss or BMI 18 - 22), at nutritional risk due to anthropometrics Male:Female = 314:235 Mean age = 66.5 years Exclusion criteria: Planned admissions to medical or orthopaedic wards or to wards other than those 15 taking part in the trial, younger than 18, suffering mental illness, if water-soluble vitamin supplementation was part of their standard treatment, if their admission would clearly be for 2 days or less, or if they had previously taken part in the trial. For the secondary randomisation to sip-feed supplements, undernourished participants were excluded if; Their BMI was < 18 or if the unintentional weight loss exceeded 10%, to allow routine supplementation, were receiving therapeutic diets, e.g. insulin-dependent diabetes, unable to swallow liquids, or if randomisation was considered clinically unacceptable. In practice, participants unable to communicate effectively and stroke victims could not be included because of consent issues. Weight loss, height and weight could not be documented in all participants. Under these circumstances the trial dietitians used their overall assessment of the participant and their discretion as to whether to randomise participants in the sip-feed study.

Vlaming 2001 *(Continued)*

Interventions	Experimental group: 400 ml of a complete sip-feed supplement (Ensure Plus, Abbott Laboratories Ltd) from the 2nd day (n = 275) Control group: 400 ml of a placebo drink (n = 274)
Outcomes	Length of hospital stay, mortality
Study dates	Not stated
Notes	We contacted the authors on 8th February 2016 by email: j.powell_tuck@qmul.ac.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	The envelopes used to conceal the randomisation code were sealed but not described as opaque.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	It was unclear if the treatment providers were properly blinded: "The enteral feeds tasted different from each other and EnsurePlus was familiar to the ward nurses. The control feed, which tasted medicinal, was described as an alternative trial feed and we avoided discussion of which feed was 'under test'. Nurses were not discouraged from assuming that it was the new, unfamiliar feed that was primarily under trial.".
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	High risk	There was more than 5% of participants without complete data. "Of 275 patients who received supplemental active sipfeed 97 had BMI data and 99 weight loss data and 54 had both." "274 patients received the placebo sip-supplement of whom 101 had BMI data and 76 weight loss data and 44 both, and 133 had either one or other." The pattern of incomplete data could be described as being different in the 2 groups.
Selective reporting (reporting bias)	Unclear risk	There was no protocol and the trial did not report serious adverse events.
For-profit bias	High risk	The trial received funds from the industry: "We are grateful also to Abbott Laboratories Ltd (especially Dr Stephen Coles, Dr Jackie Edington and Ms J Boorman) who supplied the sip feeds and placebo drinks and provided supplementary financial".
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Von Meyenfeldt 1992a

Methods	Randomised clinical trial, the Netherlands

Von Meyenfeldt 1992a *(Continued)*

Participants	151 hospitalised adults with newly-detected, histologically-proven gastric or colorectal carcinoma requiring surgical treatment, who had not undergone treatment for other malignant tumours Male:Female = 93:58 Mean age = 66.5 years Exclusion criteria: Patients above 80, patients with normal nutritional status,
Interventions	Experimental groups: Group 1 (TPN): Participants in group 1 were planned to receive 150% of BEE, calculated using the Harris and Benedict equation, as non-protein calories from a parenteral nutrition stock solution that contained 7g N/l (Synthamin 14) and 25% dextrose. Trace elements and vitamins (MVI) were added to conform to today's standards. Electrolytes were added according to the individual participant's needs. 500 ml of an intravenous fat emulsion (Intralipid 20%) was administered at least 3 times a week. Preoperative nutritional support lasted at least 10 days. (n = 51) Group 2 (TEN): Participants in group 2 received enteral nutrition (Precitene or Isotein) for at least 10 days preoperatively either by nasogastric tube or by mouth. Energy intake was planned to contain 150% of the calculated BEE.(n = 50) Control group: Group 3: No intervention (underwent immediate operation, which was assessed as an acceptable control intervention) (n = 50)
Outcomes	Mortality, complications
Study dates	Not stated
Notes	We here report group 1 versus group 3.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not possible
Blinding of outcome assessment (detection bias) All outcomes	High risk	Not possible
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reported mortality and complications.
For-profit bias	High risk	The trial was funded by a company that might have an interest in a given result (Wander Research and Clintec).

Von Meyenfeldt 1992a *(Continued)*

Other bias	Low risk	The trial appeared free of other bias that might put it at risk.

Von Meyenfeldt 1992b

Methods	Randomised clinical trial, the Netherlands
Participants	151 hospitalised adults with newly-detected, histologically-proven gastric or colorectal carcinoma requiring surgical treatment, who had not undergone treatment for other malignant tumours Male:Female = 93:58 Mean age = 66.5 years Exclusion criteria: Patients above 80, patients with normal nutritional status
Interventions	Group 1 (TPN): Participants in group 1 were planned to receive 150% of BEE, calculated using the Harris and Benedict equation, as non-protein calories from a parenteral nutrition stock solution that contained 7g N/l (Synthamin 14) and 25% dextrose. Trace elements and vitamins (MVI) were added to conform to today's standards. Electrolytes were added according to the individual participant's needs. 500 ml of an intravenous fat emulsion (Intralipid 20%) was administered at least 3 times a week. Preoperative nutritional support lasted at least 10 days. (n = 51) Group 2 (TEN): Participants in group 2 received enteral nutrition (Precitene or Isotein) for at least 10 days preoperatively either by nasogastric tube or by mouth. Energy intake was planned to contain 150% of the calculated BEE.(n = 50) Control Group: group 3, who received no intervention (underwent immediate operation, which was assessed as an acceptable control intervention) (n = 50)
Outcomes	Mortality, complications
Study dates	Not stated
Notes	We here report group 2 versus group 3.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not possible
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not possible
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Von Meyenfeldt 1992b *(Continued)*

Selective reporting (reporting bias)	Low risk	The trial reported mortality and complications.
For-profit bias	High risk	The trial was funded by a company that might have an interest in a given result (Wander Research and Clintec).
Other bias	Unclear risk	The trial appeared free of other bias that might put it at risk.

Wang 1996a

Methods	Randomised clinical trial, China
Participants	36 hospitalised adults with gastric cardia adenocarcinoma, gastric carcinoma, pancreatic carcinoma and biliary calculi, at nutritional risk due to open abdominal surgery Male:Female = 29:7 Mean age = approx 54 years
Interventions	Experimental group 1: Parenteral nutrition. Central venous infusion at postoperative day, 105 - 125 KJ/kg/d (25 - 30 kcal/kg/day), 30% - 40% of the nonprotein energy was provided by fat emulsion (10% intralipid SSPS). Nitrogen 0.12 - 0.15 g/kg/day (7% Vamin SSPC), Energy:Nitrogen = 170 - 220:1. Total infusion volume was 2500 - 3000 ml nutrition support from the 1st postoperative day, for 7 days in total. (n = 12) Experimental group 2: Enteral nutrition. Tube-feeding with Compound nutrition elements (Qingdao biochemical and pharmaceutical factory) at postoperative day, with the same intake of energy and nitrogen as experimental group 1. Peripheral intravenous infusion with energy and nitrogen from 24 to 48 hrs if the tube-feeding was insufficient. Total infusion volume was 2500 - 3000 ml nutrition support from the 1st day postoperative , for 7 days in total. (n = 12) Control group: Conventional therapy of peripheral intravenous infusion with glucose saline 2500 ml, including glucose 175 g, calorie 2926 kJ (700 kcal)/day). Total infusion volume was 2500 - 3000 ml nutrition support from the 1st day postoperative for 7 days in total. (n = 12)
Outcomes	Body weight
Study dates	Not stated
Notes	Same as Wong 1996b, but with experimental group 1 vs control group. We tried and failed to contact the authors by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.

Wang 1996a *(Continued)*

Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wang 1996b

Methods	Randomised clinical trial, China
Participants	36 hospitalised adults with gastric cardia adenocarcinoma, gastric carcinoma, pancreatic carcinoma and biliary calculi, at nutritional risk due to open abdominal surgery Male:Female = 29:7 Mean age = approx. 54 years Exclusion criteria: Not reported
Interventions	Experimental group 1: Parenteral nutrition. Central venous infusion at postoperative day, 105 - 125 KJ/kg/day (25 - 30 kcal/kg/day), 30% - 40% of the nonprotein energy was provided by fat emulsion (10% intralipid SSPS). Nitrogen 0.12 - 0.15 g/kg/day (7% Vamin SSPC), Energy:Nitrogen = 170 - 220:1. Total infusion volume was 2500 - 3000 ml nutrition support from the 1st postoperative day, for 7 days in total. (n = 12) Experimental group 2: Enteral nutrition. Tube-feeding with Compound nutrition elements (Qingdao biochemical and pharmaceutical factory) at postoperative day, with the same intake of energy and nitrogen as the experimental group 1. Peripheral intravenous infusion with energy and nitrogen from 24 to 48 hrs if the tube-feeding was insufficient. Total infusion volume was 2500 - 3000 ml nutrition support from the 1st day postoperative , for 7 days in total. (n = 12) Control group: Conventional therapy of peripheral intravenous infusion with glucose saline 2500 ml, including glucose 175 g, calorie 2926 kJ (700 kcal)/day). Total infusion volume was 2500 - 3000 ml nutrition support from the 1st day postoperative for 7 days in total. (n = 12)
Outcomes	Body weight
Study dates	Not stated
Notes	Same as Wang 1996a, but with experimental group 2 vs control group

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described

Wang 1996b *(Continued)*

Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wang 1997a

Methods	Randomised clinical trial, China
Participants	60 hospitalised adults with oesophageal cancer and cardiac cancer, at nutritional risk due to gastro-oesophageal surgery Male:Female = 47:13 Mean age = 58.7 years Exclusion criteria: Not stated
Interventions	Experimental group: Group 1: Recieved enteral nutrition of about 2.93 kJ/(kg/hr) calories from the 1st day post-operation, which was gradually increased to 5.44 kJ/(kg/hr) calories until the 4th day, and then gradually reduced to 3.35 kJ/(kg/hr) calories from the 4th day until the 14th day; including 50 g aminophenol each day. After that conventional fluid infusion (4.18 kJ/(kg/hr) and 35 g aminophenol was given each day. The course of the treatment was 14 days. (n = 20) Group 2: Recieved parenteral feeding of about 2.93 kJ/(kg/hr) calories from the 1st day post-operation, which was gradually increased to 5.44 kJ/(kg/hr) calories until the 4th day, and then gradually reduced to 3.35 kJ/(kg/hr) calories from the 4th day until the 14th day, including 50 g aminophenol each day. After that conventional fluid infusion (4.18 kJ/(kg/hr) and 35 g aminophenol was given each day. The course of the treatment was 14 days. (n = 20) Control group: Recieved conventional fluid and electrolyte infusion (about 1673.6 ˜ 2510.4 kJ calories), from the 1st until 5 ˜ 7 days after the operation. They then received a liquid diet, then gradually received semi-liquid and ended with general food.The course of the treatment was 14 days. (n = 20)
Outcomes	Triceps folds, forearm midpoint circumference, body weight, albumin, transferrin, blood biochemistry, liver function and the calculation of nitrogen balance

Wang 1997a *(Continued)*

Study dates	Not stated
Notes	Same as Wang 1997c, but with experimental group 1 vs control. We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the trial did not report on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wang 1997b

Methods	Randomised clinical trial, China
Participants	60 hospitalised adults with oesophageal cancer and cardiac cancer, at nutritional risk due to gastro-oesophageal surgery Male:Female = 47:13 Mean age = 58.7 years Exclusion criteria: not stated
Interventions	Experimental group: Group 1: received enteral nutrition of about 2.93 kJ/(kg/hr) calories from the 1st day post-operation, which was gradually increased to 5.44 kJ/(kg/hr) calories until the 4th day, and then gradually reduced to 3.35 kJ/(kg/hr) calories from the 4th day until the 14th day, including 50 g aminophenol each day. After that conventional fluid infusion (4.18 kJ/(kg/hr) and 35 g aminophenol was given each day. The course of the treatment was 14 days. (n = 20)

Wang 1997b *(Continued)*

	Group 2: received parenteral feeding of about 2.93 kJ/(kg/hr) calories from the 1st day post-operation, which was gradually increased to 5.44 kJ/(kg/hr) calories until the 4th day, and then gradually reduced to 3.35 kJ/(kg/hr) calories from the 4th day until the 14th day, including 50 g aminophenol each day. After that conventional fluid infusion (4.18 kJ/(kg/hr) and 35 g aminophenol was given each day. The course of the treatment was 14 days. (n = 20) Control group: received conventional fluid and electrolyte infusion (about 1673.6 ˜ 2510.4 kJ calories), from the 1st until 5 ˜ 7 days after the operation. They then received a liquid diet, then gradually received semi-liquid and ended with general food.The course of the treatment was 14 days.(n = 20)
Outcomes	Triceps folds, forearm midpoint circumference, body weight, albumin, transferrin, blood biochemistry, liver function and the calculation of nitrogen balance
Study dates	Not stated
Notes	Same as Wang 1997a, but with experimental group 2 vs control

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wang 2007

Methods	Randomised clinical trial, China
Participants	64 hospitalised adults with severe acute pancreatitis, at nutritional risk due to digestive disorders Male:Female = 34:30 Mean age = 52 years

Wang 2007 *(Continued)*

	Exclusion criteria: Not stated
Interventions	Experimental group: Enteral nutrition by nasogastric feeding starting 48 - 96 hrs after being hospitalised as well as conventional treatment. The course of the treatment was unclear. (n = 40) Control group: No intervention(n = 24) Co-interventions: Conventional treatment including; fasting, gastro-intestinal decompression, PPI due to acid, grease and octreotide Gabay enzyme inhibition, antibiotic therapy, colloid supplement and traditional Chinese medicine Qingyi Decotion orally
Outcomes	The recovery time from symptoms, physical signs and laboratory parameters (white blood cell count, CRP and serum amylase), changes in body weight and serum albumin, cost of hospitalisation and length of stay
Study dates	Not stated
Notes	We tried but failed to contact the authors by phone and email: meteorcloud@yeahnet.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wang 2011b

Methods	Randomised clinical trial, China
Participants	79 hospitalised adult with AIDS, at nutritional risk due to surgery or mechanical ventilation Male:Female = 41:38

Wang 2011b *(Continued)*

	Mean age = 38.2 years Exclusion criteria: diabetes mellitus, hyperthyroidism, severe liver and kidney dysfunction, CD4 cell count > 200 /μl
Interventions	Experimental group: Enteral nutrition of non-protein calorie 84 kJ/(kg/day), nitrogen 0.2 g/(kg/day). Participants received a guaranteed calorie intake every day of 83.6 ∼ 146.3 kJ/(kg/day). The course of treatment was 5 ˜ 7 days. (n = 46) Control group: no intervention (n = 33) Co-interventions: conventional treatment (glucose and saline as intravenous infusion)
Outcomes	T lymphocytes (CD3, CD4, and CD8), blood biochemical parameters.
Study dates	Not stated
Notes	We contacted the authors on email: docwang@126.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence generation was achieved using a random-numbers table.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wang 2013a

Methods	Randomised clinical trial, China
Participants	48 hospitalised adults with colorectal cancer, at nutritional risk due to major surgery

Wang 2013a *(Continued)*

	Male:Female = 27:21 Age range = 37 - 73 years Exclusion criteria: Older than 80, received chemotherapy prior to the surgery, serious organ function disorder, low rectal cancer and having abdominoperineal resection, palliative operation, or emergency operation, severely obese, fatty or malnourished, metabolic and endocrine diseases such as hyperthyroidism 7, having Intestinal obstruction, perforation, or intestinal necrosis
Interventions	Experimental group: Enteral nutrition: 500 ml Jevity each day was taken orally from the 1st day of admission to the hospital (500 ml Jevity contained 2196.6 KJ, protein 20 g, fat 17 g, carbohydrate 70 g and dietary fibre 5.3 g). A nasal tube was placed after the surgery, and water was given at the 1st postoperative day, and if there was no discomfort, 500 ml Jevity and water were administered on the 2nd postoperative day. From the 3rd day on, 1000 ml Jevity was given with certain nutrition liquid diet until hospital discharge. If the participants had symptoms like nausea, vomiting or abdominal distention, the dose of Jevity would be decreased or changed to another kind of nutrient.(n = 24) Control group: Standard usual care. Participants were administered venous transfusion after the surgery, and water was given after anal-exsufflation. If there was no discomfort, the volume of water would be increased and a liquid diet considered. (n = 24)
Outcomes	Postoperative exhaust time, hospital stay, treatment charge, bio markers postoperative complications such as pulmonary infection, the completion rate of nutrition agents
Study dates	Not stated
Notes	We contacted the authors on 09th December 2015 by phone and by email: ngds0538@sina.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The randomisation method was random table.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Ward 1983

Methods	Randomised clinical trial, UK
Participants	8 hospitalised adults with ongoing gastrointestinal oncologic surgery, at nutritional risk due to major surgery Male:Female = not stated Mean age = 69.5 years Exclusion criteria: none stated
Interventions	Experimental group: Enteral feeding of 1800 - 2000 kcal in addition to the hospitals standard diet (1600 kcal) 7 - 10 days before surgery (n = 8) Control group: Standard diet (n = 8)
Outcomes	Whole-protein turnover and muscle protein synthesis
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	No dropouts
Selective reporting (reporting bias)	Unclear risk	Not described
For-profit bias	High risk	Funded by Abbott Laboratories
Other bias	Low risk	The trial appears to be free of other components that could put it at risk of bias.

Watters 1997

Methods	Randomised clinical trial, Canada
Participants	31 hospitalised adults undergoing oesophagectomy or pancreatoduodenectomy, at nutritional risk due to major abdominal surgery Male:Female = 22:6 (analysed participants only) Mean age = 62.5 Exclusion criteria: Metastases identified before surgery or at the time of surgery, diabetes mellitus,and corticosteroid use
Interventions	Experimental group: Immediate postoperative enteral feeding (The enteral preparation provided 4.4 g protein and 445 kJ/100 mL) (n = 15) Control group: No enteral feeding during the 1st 6 postoperative days (n = 16) Co-intervention: PEG placement
Outcomes	Hand-grip strength, spirometry, serum biochemistry, urine biochemistry, mobility
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence generation was computer-generated.
Allocation concealment (selection bias)	Low risk	The allocation was concealed in sealed envelopes.
Blinding of participants and personnel (performance bias) All outcomes	High risk	The participants and personnel were unblinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The outcome assessment was unblinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	There were above 5% dropouts, and the trial did not allow proper intention-to-treat methodology.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and all-cause mortality was not reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias

Wei 2013

Methods	Randomised clinical trial, China
Participants	79 hospitalised adults admitted for the 1st time with gastro-intestinal cancer and distant metastasis undergoing Capecitabine monotherapy regimen for 2 cycles. They were younger than 60, KPS score > 60; had normal liver and kidney function, ECG, without chemotherapy contraindication, at nutritional risk due to trialist indication Male:Female = 42:37 Mean age = unknown Exclusion criteria: none stated
Interventions	Experimental group: Parenteral and enteral nutrition. The participants were given parenteral nutrition support according to gastro-intestinal function. If the oral intake was less than 60% of normal intake, a 30% fat emulsion injection was used (Intralipid force in Huarui Pharmaceutical Co. Ltd), as well as amino acid injection (Novamin, SSPC), fat-soluble vitamins (Zhi Weibao, North China Pharmaceutical Limited by Share Ltd), water-soluble vitamins (Soluvit, Huarui Pharmaceutical Co. Ltd), insulin, potassium chloride and sodium chloride to give parenteral nutrition for 3 14 days. The amount of enteral nutrition was increased gradually according to gastro-intestinal tolerability, and reaching complete enteral nutrition when nausea, vomiting and diarrhoea were absent and the body state allowed for it. The enteral nutrition was given as an emulsion (Supportan, Huarui Pharmaceutical Co. Ltd.), with an initial dosage of 20% to 50% of the required nutrients. The calorie level was 80 kJ/(kg/day), protein was 1 g/(kg/day), and the ratio of non-protein calorie versus nitrogen was 100:1. The treatment lasted for 2 cycles of chemotherapy. (n = 42) Control group: no intervention (n = 37) Co-interventions: chemotherapy
Outcomes	Nutritional statusKPS, toxic reaction and nosocomial infection rate
Study dates	Not stated
Notes	We contacted the authors on 21st January 2016 by phone. We received information on allocation sequence generation.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Random-number table
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias)	Unclear risk	The number of participants with incomplete data was not reported.

Wei 2013 *(Continued)*

All outcomes		
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Low risk	The trial was funded by Special funds of the central government (2012QN050).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wernerman 1986

Methods	Randomised clinical trial, Sweden
Participants	16 hospitalised adults admitted for elective abdominal surgery, at nutritional risk due to major surgery Male:Female = 7:9 Mean age = 57.2 years Exclusion criteria: metabolic disease
Interventions	Experimental group: TPN (135 kj/body weight/day, carbohydrates and fat and an amino acid nitrogen supply). Control group: treatment as usual (electrolytes only)
Outcomes	Polyribosomes/total ribosome, sucrose density gradient, nitrogen balance
Study dates	Not stated
Notes	We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	No dropouts

Wernerman 1986 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained.
For-profit bias	Low risk	The trial was funded by the Swedish Medical Research Council and Trygg-Hansa foundation.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Whittaker 1990

Methods	Randomised clinical trial, Canada
Participants	10 hospitalised adults with COPD, at nutritional risk due to being malnourished Male:Female = 5:5 Mean age = 68 years Exclusion criteria: Congestive heart failure, clinically unstable, active respiratory infection, malabsorption or diabetes mellitus
Interventions	Experimental group: Enteral feeding consisting of 1000 kcal/day for 16 days(n = 6) Control group: Enteral feeding < 100 kcal/day for 16 days (n = 4)
Outcomes	Weight, pulmonary function test
Study dates	Not stated
Notes	We contacted the authors were contacted on 9th December 2015 by email: swhittaker@telus.net. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	No dropouts

Whittaker 1990 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Williams 1983

Methods	Randomised clinical trial, UK
Participants	14 hospitalised adults with squamous cell carcinoma of the oesophagus, at nutritional risk according to the trialist Exclusion criteria: unable to swallow their saliva at presentation
Interventions	Experimental group: fine-bore enteral feeding (2400 ml of Isocal/24 hrs. (n = 7) Each litre = 33 g protein, 42 g of fat, 125 g carbohydrate) for 6 weeks Control group: no intervention (n = 7) Co-interventions: standard ward diet
Outcomes	Potassium, weight change
Study dates	Not stated
Notes	The trial found that very few of the experimental group had received the standard ward diet, because of the supplementary enteral feeding. The trial was terminated before it was finished, due to an increased effect of the experimental group. We contacted the authors by email:john.fenwick@ccotrust.nhs.uk. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not blinded. Only the experimental group received tube-feeding.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Williams 1983 *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report serious adverse events or mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Williams 1985

Methods	Randomised clinical trial, unknown country.
Participants	64 hospitalised adults with acute alcoholic hepatitis, at nutritional risk defined by trialist Male:Female = 31:33 Mean age = 49 years Exclusion criteria: hepatocellular carcinoma
Interventions	Experimental group: 2 litres daily of liquid diet providing, regardless of encephalopathy, approximately 2000 nonprotein kcal and 10 g nitrogen as 65 g of conventional protein administered enterally for 3 weeks (n = 21) Control group: No intervention (n = 22) Co-intervention: The control diet yielded < 22 mol sodium, 1800 - 2400 kcal and 70 - 100 g protein. The adults receiving only the control diet were given vitamin K i.v. (10 mg x 3) and were subsequently managed with protein restriction (to 40 or 60 g) if indicated for control of encephalopathy, and by intravenous infusion of 5 - 20% dextrose solutions if temporarily unable to take food orally.
Outcomes	Mortality, complications, hepatic function (prothrombin time), indices of malnutrition and nitrogen balance
Study dates	Not stated
Notes	"The authors were not contacted since dr. Calvey died several years ago and no additional data was available" (Koretz 2012).

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias)	Unclear risk	Not described

Williams 1985 *(Continued)*

All outcomes		
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	The trial reported mortality and complications.
For-profit bias	Low risk	The trial was supported by the Joint Research Committee of King's College Hospital and Medical School.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Williford 1991

Methods	Randomised clinical trial, USA
Participants	459 hospitalised adults undergoing major abdominal or thoracic surgery, at nutritional risk according to Nutritional Risk Index (NRI) Male:Female = 455:4 Mean age = 62.9 years
Interventions	Experimental group: 7 - 15 days preoperative TPN (n = 231) Control group: No preoperative TPN. After 72 hrs if clinically indicated (n = 228)
Outcomes	Complications, all-cause-mortality
Study dates	Not stated
Notes	We could find no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence was randomly computer-generated.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias)	High risk	There were above 5% dropouts, and the trial did not allow proper intention-to-treat methodology.

Williford 1991 *(Continued)*

All outcomes		
Selective reporting (reporting bias)	Low risk	The outcomes were as stated in the protocol.
For-profit bias	High risk	The trial was funded by Armour Pharmaceutical.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wood 1989a

Methods	Randomised clinical trial, USA
Participants	55 hospitalised adult men undergoing routine major surgery, at nutritional risk due to major surgery Male:Female = 55:0 Mean age = 54 years Exclusion criteria: none stated
Interventions	Experimental group 1: TPN (90 g of crystalline amino acids, 3000 calories as glucose a day) from 2 weeks prior to surgery until 1 week after surgery (n = 10) Experimental group 2: parenteral nutrition 90 g amino acids a day (n = 15) Experimental group 3: parenteral nutrition: peripheral parenteral nutrition (90 g amino acids plus 1600 calories, 60% as fat a day)(n =15) Control group: treatment as usual (100 g glucose) (n = 15)
Outcomes	Nitrogen balance, maintenance of body cell mass, serum albumin levels, exercise capacity
Study dates	Not stated
Notes	Group 1 could not be used in the analysis, since this group was not properly randomised (they had to have a certain degree of malnutrition, before being randomised to this group).

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described

Wood 1989a *(Continued)*

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	Not described
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report mortality or serious adverse events.
For-profit bias	Low risk	The trial was funded by the Veterans Affairs Administration.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wood 1989b

Methods	Randomised clinical trial, USA
Participants	55 hospitalised adult men undergoing routine major surgery, at nutritional risk due to major surgery Male:Female = 55:0 Mean age = 54 years Exclusion criteria: none stated
Interventions	Experimental group 1: total parenteral nutritionTPN (90 g of crystalline amino acids, 3,000 calories as glucose pera day) from 2 weeks prior to surgery until 1 week after surgery. (n = 10) Experimental group 2: parenteral nutrition 90 g amino acids pera day (n = 15) Experimental group 3: parenteral nutrition: peripheral parenteral nutrition (90 g amino acids plus 1,600 calories, 60% percent as fat pera day).(n =15) Control group: treatment as usual (100 g glucose) (n = 15)
Outcomes	Nitrogen balance, maintenance of body cell mass, serum albumin levels, exercise capacity
Study dates	Not stated
Notes	Group 1 could not be used in the analysis, since this group was not properly randomised (they had to have a certain degree of malnutrition, before being randomised to this group).

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias)	Unclear risk	Not described

Wood 1989b *(Continued)*
All outcomes

Incomplete outcome data (attrition bias) All outcomes	Unclear risk	Not described
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report mortality or serious adverse events.
For-profit bias	Low risk	The trial was funded by the Veterans Affairs Administration.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Woolfson 1989

Methods	Randomised clinical trial, UK
Participants	122 hospitalised adults with major thoracal/abdominal surgery Male:Female = 86:36 Mean age= 62.5 years Exclusion criteria: Unable to give consent (or refused), chronic renal or hepatic disease, diabetes mellitus requiring regular insulin treatment. Any use of systemic corticosteroids in the month prior to operation
Interventions	Experimental group: Parenteral nutrition (Glucose: 9.2 g/kg previous body weight/24 hrs (35 kcal/kg/24 hrs); Amino-acids as FreAmine II*: (1 mg amino-acid N/175 kcal/non-N energy); Intralipid 20%: 500 ml on days 2 and 5; Sodium: 150 mmol/24 hrs plus replacement of any significant extra-renal losses. Potassium: 50 mmol/24 hrs, plus 5 mmol/g N, plus replacement of any significant extra-renal losses. Phosphate: 30 mmo1/24 hrs. Micronutrients: Addamel* 1 ampoule/day Solvito* 1 ampoule/day Folate 5 mg/day Vitlipid* 1 ampoule/bottle Intralipid. Water: The total volume was made up to 2.5 - 3 L according to clinical indications. This was kept constant during the study period. Any other solutions (non-nutrient) were allowed at the discretion of the surgical team, and were recorded if given. (n = 62) Control group: The basic solutions used in each participant were 1000 ml 0.9”” saline, and 2000 ml 5’j, glucose. All the other electrolytes and additives were given, calculated as if the participants were being fed. (n = 60)
Outcomes	Any death, duration of hospital stay, complications, weight, anastomotic leakage, triceps skinfold, general progress, arm muscle circumference
Study dates	Not stated
Notes	We could find no contact information for the authors.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Random-numbers table

Woolfson 1989 *(Continued)*

Allocation concealment (selection bias)	Unclear risk	Short block sequence made it unclear if the investigators could foresee the allocation sequence.
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Although there was blinding the administration of Intralipid was not sufficiently described.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The assessment was blinded but it was not stated who did the calculations and analyses and if they were blinded.
Incomplete outcome data (attrition bias) All outcomes	High risk	There were above 5% missing data for weight and the trial did not account for the missing data.
Selective reporting (reporting bias)	Low risk	All clinical relevant outcomes were reported, despite no protocol published.
For-profit bias	High risk	Funded by Boots UK.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wu 2007a

Methods	Randomised clinical trial, China
Participants	646 hospitalised adults with gastrointestinal cancer, at nutritional risk due to gastro-colorectal surgery Male:Female = 366:280 Mean age = 62 years Exclusion criteria: severe liver function damage (Child.Pugh class > B), severe impairment of renal function (serum creatinine > 265.2 mol/L or needed haemodialysis), severe respiratory dysfunction (arterial PaO_2 < 70 mmHg), severe impairment of cardiac function (NYHA class > 3), already infected, (temperature > 37.6 °, WBC > 11.0 x 109/L or bacteraemia), immune deficiency or damage (after radiotherapy or chemotherapy or WBC < 2.0 × 10^9/L)
Interventions	Experimental group: Group 1: enteral nutrition of 125.5 kJ (30 cal)/(kg/day), 0.25 g/(kg/day) nitrogen. The course of the treatment was 7 days. (n = 215) Group 2: parenteral nutrition of 125.5 kJ (30 cal)/(kg/day), 0.25 g/(kg/day) nitrogen, electrolyte, microelements and vitamins. The course of the treatment was 7 days. (n = 215) Control group: Conventional fluid infusion (5% and 10% glucose and electrolytes) until they resumed normal eating (43.9 ˜ 13.4) kJ (10.5 ˜ 3.2) kcal/(kg/day). The course of the treatment was unclear. (n = 216)
Outcomes	Triceps folds, forearm midpoint circumference, body weight, albumin, transferrin, blood biochemistry, liver function and the calculation of nitrogen balance. Postoperative complications, mortality, serious adverse events, morbidity, postoperative length of hospital stay and weight change
Study dates	Not stated

Wu 2007a *(Continued)*

Notes	Same as Wu 2007b, but with group 1 vs control. We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence generation was achieved using computer random-number generator.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Wu 2007b

Methods	Randomised clinical trial, China
Participants	725 hospitalised adults with gastro-intestinal cancer, at nutritional risk due to gastro-colorectal surgery Male:Female = 366:280 Mean age = 62 years Exclusion criteria: severe liver function damage (Child.Pugh class > B), severe impairment of renal function (serum creatinine > 265.2 mol/L or need haemodialysis), severe respiratory dysfunction (arterial PaO_2 < 70 mmHg), severe impairment of cardiac function (NYHA class > 3), already infected (temperature > 37.6 °, WBC > 11.0 x 109/L or bacteraemia), immune deficiency or damage (after radiotherapy or chemotherapy or WBC < 2.0×10^9/L)
Interventions	Experimental group: Group 1:Enteral nutrition of 125.5 kJ (30 cal)/(kg/day), 0,25 g/(kg/day) nitrogen. The course of the treatment was 7 days. (n = 215) Group 2: parenteral nutrition of 125.5 kJ (30 cal)/(kg/day), 0.25 g/(kg/day) nitrogen, electrolyte, microelements and vitamins. The course of the treatment was 7 days. (n = 215)

Wu 2007b *(Continued)*

	Control group: Conventional fluid infusion (5% and 10% glucose and electrolytes) until resume normal eating (43.9 ˜ 13.4) kJ (10.5 ˜ 3.2) kcal/(kg/day). The course of the treatment was unclear. (n = 216)
Outcomes	Triceps folds, forearm midpoint circumference, body weight, albumin, transferrin, blood biochemistry, liver function and the calculation of nitrogen balance. Postoperative complications, mortality, serious adverse events, morbidity, postoperative length of hospital stay and weight change
Study dates	Not stated
Notes	Same as Wu 2007a, but with group 2 vs control

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The sequence generation was achieved using computer random-number generator.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Xie 2014

Methods	Randomised clinical trial, China.
Participants	120 hospitalised adults, at nutritional risk due to being frail elderly with hip fracture Male:Female = 66:54 Mean age = 69 Exclusion criteria: Not stated
Interventions	Experimental group:

Xie 2014 *(Continued)*

	Received early enteral nutrition. Stomach tube was inserted within 24 - 48 hrs after surgery, and a small dose of fluid diet was given. If there was no obvious gastric retention, the diet was provided 48 hrs after surgery, started with ¼ of required volume, and increased by ¼ volume, so that at the 6 - 7-day the intake reached full volume, i.e. 2500 mL ± 500 mL. (n = 60) Control group: No treatment (n = 60) Co-intervention: Intravenous drip of Esomeprazole 40 mg + saline 100 ml, twice a day
Outcomes	Gastric juice PH, gastroscopic mucosa pathological variation, albumin, pre-albumin, total protein, weight, digestive complications and adverse events
Study dates	Not stated
Notes	We tried and failed to contact the authors by phone and by email: 1339946939@qq.com.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	We found no protocol and the trial did not report serious adverse events or all-cause mortality.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Xu 1998a

Methods	Randomised clinical trial, China
Participants	32 hospitalised elderly adults admitted for gastro-oesophageal, small intestine, colorectal surgery, at nutritional risk due to major surgery Male:Female = 19:13 Mean age = 67.6 years

Xu 1998a *(Continued)*

	Exclusion criteria: none stated
Interventions	Experimental group: Parenteral nutrition of 104.5 ˜ 146.4 kJ/(kg/day), 0.15 ˜ 0.24 g/(kg/day) nitrogen, 10% KCL 30 ml, 10% NaCL 40 ml, glucose, vitamin and exogenous insulin. The course of treatment was 7 days. (n = 16) Control group: conventional fluid infusion (the detailed composition of conventional fluid infusion and treatment course were unclear) (n = 16)
Outcomes	Body weight, 24-hr urinary nitrogen excretion, serum albumin, siderophilin, pre-albumin, total lymphocyte count, nitrogen balance and morbidity
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	High risk	The outcomes stated in the protocol are not reported.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Xu 2003

Methods	Randomised clinical trial, China
Participants	40 hospitalised adults with oesophageal cancer, at nutritional risk due to gastroenterologic surgery Male:Female = 28:12 Mean age = 45.6 years

Xu 2003 *(Continued)*

	Exclusion criteria: abnormal function or disorder of the liver and kidney, metabolic disease
Interventions	Experimental group: Nutrison Fibre enteral nutrition. Started on the 1st day after the surgery. The course of the treatment was unclear. (n = 20) Control group: Traditional Nutrison Fibre enteral nutrition. Started when the intestinal function began to recover. The course of the treatment was unclear. (n = 20)
Outcomes	All-cause mortality, serious adverse events, biomarkers, vital signs, recovery of gastrointestinal function and morbidity
Study dates	Not stated
Notes	We could find no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, but the trial reported on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Yamada 1983

Methods	Randomised clinical trial, Japan
Participants	34 hospitalised adults who had undergone gastrectomy, at nutritional risk due to major abdominal surgery Male:Female = Not described Exclusion criteria: older than 70

Yamada 1983 *(Continued)*

Interventions	Experimental group: TPN (24% glucose and 12% crystalline amino acids) with appropriate amounts of salts and minerals started on the 4th day after the surgery and continued for 14 days(n = 18) Control group: no intervention (n = 16) Co-interventions: 5-Fluorouracil, no oral restriction
Outcomes	Mortality, complications, weight, serum values
Study dates	
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	No incomplete data
Selective reporting (reporting bias)	Low risk	No protocol could be obtained but the trial did report all-cause mortality and major complications.
For-profit bias	Low risk	Supported by grants by the Japanese Ministry of Health and Welfare.
Other bias	Low risk	The trial appears to be free of other components that could put it at risk of bias.

Yang 1996

Methods	Randomised clinical trial, China
Participants	21 hospitalised adults with gastric ulcer and cancer, at nutritional risk due to gastric surgery Male:Female = 13:8 Mean age = 48.9 years Exclusion criteria: not stated
Interventions	Experimental group: from the 1st day after operation, the participants received Nutrison enteral nutrition (418 kJ calorie, 4.0 g protein, 3.9 g fat, 12.3 g carbohydrate per 100 ml). The intake was 500 ml at

Yang 1996 *(Continued)*

	the beginning and increased with 500 ml a day, until it reached 2000 ml/day. The course of the treatment was 7 days. (n = 11) Control group: No intervention Liquid diet was started on the 3rd ˜ 5th day. (n = 10) Co-interventions: Conventional fluid infusion to maintain water, electrolyte balance. Blood transfusion was given as needed.
Outcomes	Serious adverse events, morbidity, urea nitrogen, nitrogen balance, plasma protein, T cell subsets and NK cell activity were calculated, body weight
Study dates	Not stated
Notes	We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	The numbers and reasons for the withdrawals and dropouts were clearly stated.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained. The trial reported on serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Yie 1996

Methods	Randomised clinical trial, China
Participants	83 hospitalised adults with carcinoma of oesophagus and cardia, at nutritional risk due to gastro-oesophageal surgery Male:Female = 59:24 Mean age = 55 years

Yie 1996 *(Continued)*

	Exclusion criteria: Heart, lung, liver, kidney or endocrine diseases
Interventions	Experimental group: Group 2: Based on the conventional treatment, enteral nutrition (homemade homogenate liquid made of: rice, lean meat, egg, carrot, milk powder, sugar, etc.) was started from the 5th ~ 6th day after the surgery. The treatment course was about 6 to 10 days (average 7 days). The average calorie supply was 3562 KJ. (n = 16) Control group: conventional fluid infusion through peripheral vein from the 1st day after surgery; the liquid volume was about 3000 ml; the calories were about 3562 KJ (n = 37)
Outcomes	Reduced weight/ideal body weight, BMI, morbidity and the times of stool after EN
Study dates	Not stated
Notes	We did not include group 1 as the experimental group received an elemental diet. We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Yin 1994

Methods	Randomised clinical trial, China.
Participants	25 hospitalised adults with advanced gastric cancer and undergoing surgery, at nutrition risk due to having major surgery

Yin 1994 *(Continued)*

	Male:Female = 13:12 Mean age = 61 years
Interventions	Experimental group: participants received intravenous nutrition through vein catheterisation 5 days before the operation. The amount of nitrogen was 0.15 g/kg/day, and non-protein calorie 28 kcal/kg/day, added with insuline, potassium chloride and moderate vitamins and microelements. (n = 6) Control group: no intervention (n = 6) Co-interventions: chemotherapy
Outcomes	Serum pre-albumin, transferrin, NK and LAK cell viability and FCM analysis
Study dates	Not stated
Notes	We tried but failed to contact the authors by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Young 1989a

Methods	Randomised clinical trial, UK
Participants	30 hospitalised adults with gastro-intestinal neoplasms, at nutritional risk due to having lost more than 5 kg of weight over the last 3 months Male:Female = 21:9

Young 1989a *(Continued)*

	Mean age = 65 years
Interventions	Experimental group: Group A) IVN for 3 days (0.18 g N/kg/day as amino acid; 30 kcal/kg/day as glucose)(n = 10) Group B) IVN for 7 days (n = 10) Control group: Standard hospital diet (n = 10)
Outcomes	Plasma proteins, plasma amino acids, liver protein synthesis rate
Study dates	Not stated
Notes	Same trial as Young 1989b with the results from experimental Group (A) vs control. We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	High risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Young 1989b

Methods	Randomised clinical trial, UK
Participants	30 hospitalised adults with gastro-intestinal neoplasms, at nutritional risk due to having lost more than 5 kg of weight over the last 3 months Male:Female = 21:9 Mean age = 65 years

Young 1989b *(Continued)*

Interventions	Experimental group: Group A) IVN for 3 days (0.18 g N/kg/day as amino acid; 30 kcal/kg/day as glucose) (n = 10) Group B) IVN for 7 days (n = 10) Control group: Standard hospital diet (n = 10)
Outcomes	Plasma proteins, plasma amino acids, liver protein synthesis rate
Study dates	Not stated
Notes	Same trial as Young 1989a with the results from experimental Group (B) vs control

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zareba 2013a

Methods	Randomised clinical trial, Poland
Participants	75 hospitalised adults undergoing elective gastric and large intestine cancer surgery, at nutritional risk due to major surgery Male:Female = 38:37 Mean age = 66 years

Zareba 2013a *(Continued)*

	Exclusion: frank diabetes; preoperatively-diagnosed resistance to insulin; stomach emptying disorders, undernourishment (according to SGA and NRS 2002)
Interventions	Experimental group: Group II: 25 participants who received an “all in one” type of TPN for 5 days prior to surgical procedure. The mixture contained carbohydrates (glucose solutions), lipids (lipid emulsions) and amino acid solutions. Vitamins, 10% NaCl-20ml, 15% KCl-10ml, 20% MgSO4-4ml and microelements were added to the TPN bag. Total energy value was 10 kcal/kg of body weight. (n = 25) Control group: Received no preparations influencing the perioperative insulin resistance level (n = 25) Co-intervention: They had standard hospital meals for 4 days prior to the surgery.
Outcomes	Insulin resistance level
Study dates	"Between 2008-2009"
Notes	Same trial as Zareba 2013b but with group I vs II We contacted the authors on 25th September 2015 by email: nikt00@gazeta.pl. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Trial was not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Trial was not blinded
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zareba 2013b

Methods	Randomised clinical trial, Poland

Zareba 2013b *(Continued)*

Participants	75 hospitalised adults undergoing elective gastric and large intestine cancer surgery, at nutritional risk due to major surgery Male:Female = 38:37 Mean age = 66 years Exclusion: frank diabetes; preoperatively-diagnosed resistance to insulin; stomach emptying disorders, undernourishment (according to SGA and NRS 2002)
Interventions	Experimental group: Group III: 25 participants who received standard hospital diet and TPN (with the same ingredients and energy value as in group II), as well as prior to the surgery; oral preoperative preparation. The evening before the surgery, the participants were given 800 ml of the preparation and 400 ml again on the actual day of the surgery (but no later than 2 hours prior to the start of surgery) (n = 25) Control group: Received no preparations influencing the perioperative insulin resistance level (n = 25) Co-intervention: They had standard hospital meals for 4 days prior to the surgery.
Outcomes	Insulin resistance level
Study dates	"Between 2008-2009"
Notes	Same trial as Zareba 2013a but with group I vs III. We contacted the authors on 25th September 2015 by email: nikt00@gazeta.pl. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Trial was not blinded.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Trial was not blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zeiderman 1989a

Methods	Randomised clinical trial, UK
Participants	30 hospitalised adults undergoing elective resection of a gastrointestinal cancer who had lost more than 5 kg in weight over the previous 3 months, at nutritional risk due to a weight loss of 5% during the last 3 months Male:Female = 21:9 Mean age = 69 years Exclusion criteria: weight loss of < 5 kg in the 3 months prior to admission or uncertainty about change in body weight
Interventions	Experimental group 1: Intravenous nutrition for 3 days before operation. The feeding regimen consisted of glucose infused at a rate of 126 kJ/kg body weight/day and amino acids (FreAmine III, Boots Co. plc, Nottingham, UK) infused at 0.18 g nitrogen/kg/24 hrs (1 g protein/kg/day). In addition, 10 ml of multivitamin solution (Multibionta, E. Merck, Hampshire, UK) and 5 ml of trace element solution (Pharmacy Department, Leeds General Infirmary) were infused daily. Electrolytes were provided as required, according to daily measurements of the plasma concentrations. In order to replete essential fatty acids, and in keeping with the standard hospital regimen, fat emulsion (500 ml of 20% 'Intralipid', KabiVitrum, Ealing, UK) was given on the 1st day only, with an equicaloric reduction in the amount of glucose provided. (n = 10) Control group: no intervention (n = 10) Co-interventions: Hospital diet (HD group): free access to routine diet for 7 days before operation
Outcomes	Weight, height, mid-arm circumference and hand-grip strength. Skin-fold thickness was measured at 3 sites (biceps, triceps and subcapsular). Haematological and immunological variables. Biochemical determinations. Preoperative determination of protein synthetic rate in vitro
Study dates	Not stated
Notes	Same as Zeiderman 1989a, comparing experimental group 1 and control group. We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.

Zeiderman 1989a *(Continued)*

Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was supported by Boots Company PLC.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zeiderman 1989b

Methods	Randomised clinical trial, UK
Participants	30 hospitalised adults undergoing elective resection of a gastrointestinal cancer who had lost more than 5 kg in weight over the previous 3 months, at nutritional risk due to a weight loss of 5% during the last 3 month. Male:Female = 21:9 Mean age = 69 years Exclusion criteria: Weight loss of < 5 kg in the 3 months prior to admission or uncertainty about change in body weight
Interventions	Experimental group 2: Intravenous nutrition for 7 days before operation. The feeding regimen consisted of glucose infused at a rate of 126 kJ/kg body weight/day and amino acids (FreAmine III, Boots Co. plc, Nottingham, UK) infused at 0.18 g nitrogen/kg/24 hrs (1 g protein/kg/day). In addition, 10 ml of multivitamin solution (Multibionta, E. Merck, Hampshire, UK) and 5 ml of trace element solution (Pharmacy Department, Leeds General Infirmary) were infused daily. Electrolytes were provided as required, according to daily measurements of the plasma concentrations. In order to replete essential fatty acids, and in keeping with the standard hospital regimen, fat emulsion (500 ml of 20% 'Intralipid', KabiVitrum, Ealing, UK) was given on the 1st day only, with an equicaloric reduction in the amount of glucose provided. (n = 10) Control group: no intervention(n = 10) Co-interventions: Hospital diet (HD group): free access to routine diet for 7 days before operation
Outcomes	Weight, height, mid-arm circumference and hand-grip strength. Skin-fold thickness was measured at 3 sites (biceps, triceps and subcapsular). Haematological and immunological variables. Biochemical determinations. Preoperative determination of protein synthetic rate in vitro
Study dates	Not stated
Notes	Same as Ziederman 1989a, comparing experimental group 2 and control group

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias)	Unclear risk	Not described

Zeiderman 1989b *(Continued)*

All outcomes		
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	High risk	The trial was supported by Boots Company PLC.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zelic 2012

Methods	Randomised clinical trial, Croatia
Participants	40 hospitalised adults with colon, upper rectal or rectosigmoid cancer undergoing surgery, at nutritional risk due to major abdominal surgery Male:Female = 24:16 Mean age = 69 years Exclusion criteria: Previous operations, metastatic disease, diabetes mellitus, BMI > 30, ASA grade III - IV, conditions that might impair gastrointestinal motility, gastro-oesophageal reflux, potential difficulty with airway management
Interventions	Experimental group: Carbohydrate-rich beverage (12.5 g/100 mL carbohydrate, 12% monosaccharide, 12% disaccharides, 76% polysaccharides, 285 mosmol/k;Nutricia Preop; Numico, Zoetermeer, Netherlands) ingested 800 mL the evening before surgery and 400 mL 2 hours before surgery(n = 20) Control group: Standard preoperative regime(n = 20)
Outcomes	IL-10, IL-6, morbidity
Study dates	
Notes	We contacted the authors on 14th October 2015 by email: zelicm@medri.hr. We received no reply.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	The trial was described as being randomised but only stated that it used the "closed envelope technique".
Allocation concealment (selection bias)	Unclear risk	The trial was described as being randomised but only stated it used the "closed envelope technique".
Blinding of participants and personnel (performance bias)	High risk	The trial stated it was blinded but "the investigator was informed of the allocation, being responsible for the preoperative information of the participants".

Zelic 2012 *(Continued)*

All outcomes		
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The trial gave the impression that the outcome assessors were blinded.
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	There was no protocol and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhang 2013

Methods	Randomised clinical trial, China
Participants	100 hospitalised adults with viral hepatitis, and alcoholic liver disease, at nutritional risk according to the trialist. Male:Female = 80:20 Mean age = 49 years Exclusion criteria: Upper gastro-intestinal haemorrhage within 2 weeks before admission, uncontrolled diabetes, malignant tumour, clinical manifestations of hepatic encephalopathy, clear infection, antiviral indications of hepatitis B cirrhosis in the prevention and treatment guidelines of chronic hepatitis (2010 version), but did not want to or could not receive nucleoside analogue antiviral treatment
Interventions	Experimental group: Enteral nutrition: Weekly recipes were prepared with 35 ~ 40 kcal/(kg/day) , 1.2 ~ 1.5 g/(kg/day) protein, 0.8 ~ 1.2 g/(kg/day) amino acid and 350 ~ 500 g/day carbohydrate. Additionally supplemented vitamins A, D, e, K, B and Se, were included on the 4th day in the daily meals. They were given yoghurt (or hot milk) of 100 ml and 15 g Noveliver compound protein granule (purchased from the Global Partner of Institute for Liver Cell Media, Myer Otec Co. California USA, which contained 18 kinds of amino acids including all essential amino acids, and folic acid, selenium, etc.) at bedtime. Nutrition intervention lasted for 4 weeks.(n = 50) Control group: Conventional diet(n = 50) Co-interventions: Protecting liver therapy and antiviral therapy
Outcomes	Triceps skin fold, BMI, mid-arm circumference, mid-arm muscle circumference, self-conscious symptoms, growth and decline of ascites, Albumin, pre-albumin, cholinesterase, transaminase and bilirubin, blood coagulation index, HBV DNA and complications
Study dates	Not stated
Notes	We contacted the author by phone and received information on mortality, follow-up length, and funding.

Zhang 2013 *(Continued)*

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	The author told us that he could not remember the specific method of randomisation.
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Low risk	The trial was funded by Major special projects of science and technology bureau of Changchun (10SF05).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhao 2014

Methods	Randomised clinical trial, China
Participants	64 hospitalised adults with acute non-lymphocytic leukaemia, at nutritional risk according to trialist indication Male:Female = not stated Mean age = 32.8 years Exclusion criteria: acute disease exacerbation; chronic diseases such as concomitant with diabetes, hypertension, liver and kidney dysfunction; concomitant with serious allergy and other immune system diseases; pregnant or lactating; within 6 months after surgery; end-stage leukaemia
Interventions	Experimental group: Standard nutrition support provided to the participants with established nutrition risk (NRS-2002 ≥ 3) during the next chemotherapy course. The participants should have high protein and high energy intake 3 days before and 1 week after chemotherapy, which was achieved with oral Enteral Nutritional Powder (TP) 40 g. The nutrition support protocol of “allowable intake inadequacy” of relatively lower energy (80% of required energy) should consist of oral Enteral Nutritional Powder (TP) 30 g, twice a day, as supplementation.(n = 32) Control group: Standard hospital diet(n = 32)

Zhao 2014 *(Continued)*

Outcomes	Prealbumin, haemoglobin, red blood cell, albumin, total protein, BMI
Study dates	Not stated
Notes	We had trouble understanding the language in this trial, hence limited descriptions. We contacted the authors on 25th September 2015 by email: zhuzhiming6542@sina.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Low risk	Trial was supported by the Creative Foundation of Navy General Hospital (CX201113).
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zheng 2001a

Methods	Randomised clinical trial, China
Participants	135 hospitalised adults with chronic damage in hepatic function receiving surgical treatment, at nutritional risk according to trialist classification. Male:Female = not reported Mean age = unknown Exclusion criteria: No other diease except the primary disease affecting the metabolism
Interventions	Experimental group: In the EN group, Nutrison Fibre was selected. After the participants had received PN for 2 days EN was started on the 3rd day post-operatively through the jejunostomy tube. 1st day was given 500 mL Nutrison fibre. If there was no malaise, 500 mL dose would be increased each day un-

Zheng 2001a *(Continued)*

	til the volume of 1500 mL/day was reached, while the PN was decreased until it was substituted by EN. This dose was given for at least 7 days. (n = 30)(n = 10)
Outcomes	Lactulose/mannitol ratio, weight, circumference of upper arm, liver function, kidney function and electrolyte markers
Study dates	Not stated
Notes	Same trial as Zheng 2001b but with the enteral group. We could obtain no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There was only 1 dropout.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zheng 2001b

Methods	Randomised clinical trial, China
Participants	76 hospitalised adults with chronic damage in hepatic function receiving surgical treatment, at nutritional risk according to trialist classification Male:female = Mean age = unknown
Interventions	Experimental group: In the PN group the participants received 30 kcal/kg/day and 0.16 g N/kg/day. 25 - 33% of nonprotein calories were fat and the remainder was given as carbohydrates. The solution was given through a peripheral vein from day 1 until at least day 7 (n = 26).

Zheng 2001b *(Continued)*

	Control group: No nutritional support(n = 10)
Outcomes	Lactulose/mannitol ratio, weight, circumference of upper arm, liver function, kidney function and electrolyte markers
Study dates	Not stated
Notes	Same trial as Zheng 2001a but with the parenteral group

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Low risk	There was only 1 dropout.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zheng 2015

Methods	Randomised clinical trial, China
Participants	146 hospitalised adult with acute stroke, at nutritional risk according to the trialist Male:Female = 85:61 Mean age = 71.6 years Exclusion criteria: Transient ischaemic attack, subarachnoid haemorrhage, severe endocrine or metabolic disorders, hematological disorders, malignancies, chronic lung and heart dysfunction, severe liver or kidney failure, stress ulcer of the digestive system, those who died within a week of admission, and received thrombolytic therapy
Interventions	Experimental group: Nutrison fibre (Nutricia; Groupe Danone, Paris France), Swiss High (RAE; 4.18– 6.27 kJ/ml), or a solution with high nutrition content made by nutritionists in the hospital and based on

Zheng 2015 *(Continued)*

	condition, body weight, and nutritional status. Energy requirements were in the range of 83.68 – 125.52 kJ/kg/day (1 kcalth = 4.184 kJ). These solutions were infused by gravity under the supervision of nurses with a starting speed of 40 – 60 ml/hr. If there were no adverse events such as reflux, diarrhoea or flatulence the speed was adjusted to 100 – 125 ml/hr. The total volume for the 1st day was 500 ml followed by an increase of 500 ml/day until the requirement was met. (n = 75) Control group: Regular food from their families which consisted of milk, soy milk, juice, vegetable juice, broth, congee and eggs(n = 71) Co-interventions: Similar pharmacological treatment and those who were confirmed to have dysphagia were supported with nasogastric nutrition within 72 hrs of admission, which lasted at least 10 days
Outcomes	Nutritional status and rate of malnutrition, nosocomial infection, mortality, and neurological evaluation
Study dates	Not stated
Notes	We contacted authors on 8th February 2016 by email: wangshaoshi@126.com. We received no reply.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The doctors performing measurements were blinded to the intervention.
Incomplete outcome data (attrition bias) All outcomes	Low risk	There were no dropouts.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained, and the trial did not report serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhong 1998

Methods	Randomised clinical trial, China
Participants	25 hospitalised adults with hepatobiliary cancer operation, at nutritional risk due to having major surgery

Zhong 1998 *(Continued)*

	Male:Female = 10:15 Mean age = 65 years
Interventions	Experimental group: Parenteral nutrition. Participants received infusion of nutrient solution (non-protein calorie 20 - 25 Kcal/kg/day, nitrogen 0.1 - 0.15 g/kg/day) and appropriate insulin and vitamin supplements from the 1st day of operation for 7 days. (n = 13) Control group: Conventional liquid infusion with non-protein calorie < 10 kcal/kg/day for 7 days after operation, and liquid or semi-liquid diets since the 4th day after operation (n = 12)
Outcomes	Nitrogen-related index (urinary urea nitrogen, nitrogen balance), nutrition and biochemistry index.
Study dates	Not stated
Notes	We tried but failed to contact the authors by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Not described
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhong 2006a

Methods	Randomised clinical trial, China
Participants	42 hospitalised adults admitted for colon/rectum cancer operation, at nutritional risk due to major surgery Male:Female = 28:14

Zhong 2006a *(Continued)*

	Mean age = 67 years Exclusion criteria: without obvious ileus, severe heart, lung or kidney disease
Interventions	Experimental group: Enteral nutrition support, consisted of 1500 - 2000 ml/day Nutrison Fibre, for 3 days before until 16 hrs before the surgery (n = 21) Control group: Oral nutrition support, consisted of semi-liquid diets, liquid diets, fasting and liquid infusion, for 3 days before the operation until the morning of the surgery (n = 21)
Outcomes	Side effects, times of intestinal lavage, nutritional parameters including weight.
Study dates	Not stated
Notes	We tried but failed to contact the authors by phone and email: zhiqiang.zhong@163.com.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained and the trial did not report on all-cause mortality or serious adverse event.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhong 2014

Methods	Randomised clinical trial, China
Participants	120 hospitalised adults with severe cerebrovascular disease, at nutritional risk due to stroke Male:Female = 67:53 Mean age = 59.1 years

Zhong 2014 *(Continued)*

	Exclusion criteria: no metabolic and endocrine disorders before onset, no organic disease of important organs
Interventions	Experimental group: Early enteral nutrition. Adopted perfusion of nutrient solution from low concentration and low speed, and gradually accelerated dosage to the full amount. On the 1st day the perfusion was about 20 ml/hr, and it was increased by 20 ml/hr each day, until the maximum speed of 125 ml/hr (the nutrient solution temperature should be moderate). The treatment duration was unclear. (n = 60) Control group: Conventional nutrition according to physical circumstances, and given enteral nutrition after 72 hrs(n = 60)
Outcomes	Dietary intakes, defaecation volume, cure condition, mortality, morbidity and sequellae
Study dates	Not stated
Notes	We contacted the authors by phone. The authors did not know when they would have time to provide information.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participantsand personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Unclear risk	No protocol could be obtained.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhu 2000

Methods	Randomised clinical trial, China
Participants	98 hospitalised adults undergoing gastric operation, at nutritional risk due to having major surgery Male:Female = 60:38

Zhu 2000 *(Continued)*

	Mean age = 47.8 years
Interventions	Experimental group: Enteral nutrition support. On the 1st day a half-dose, 66.9 Kj/kg/day, dripping speed of 60 - 100 ml/hr; increased on the 2nd day up to full dose, dripping speed of 120 - 150 ml/hr through nasal-jejunum tube for 7 days.(n = 48) Control group: Conventional infusion of 2494.4 Kj/day and without protein for 7 days after operation (n = 50)
Outcomes	Serum cytokine levels (IL-2, IFN-γ, IL-2Rα, sIL-2R)
Study dates	Not stated
Notes	We tried but failed to contact the authors were att by phone.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Not mentioned, but the trial compared fluid infusion with enteral nutrition, which can be judged as high risk of bias
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The numbers and reasons for withdrawals and dropouts were not clearly stated or not stated at all.
Selective reporting (reporting bias)	Unclear risk	There is no protocol and the outcomes all-cause mortality and serious adverse events are not reported on.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhu 2002a

Methods	Randomised clinical trial, China
Participants	42 hospitalised adults undergoing gastric operation, at nutritional risk due to major surgery Male:Female = 29:13 Mean age = 58.6 years Exclusion criteria: Metabolic and endocrine diseases, abnormal liver or kidney function

Zhu 2002a *(Continued)*

Interventions	Experimental group: Enteral nutrition support. The amount of calories was 125.5 kJ (30 kcal)/(kg/day), and nitrogen was 0.2 g/(kg/day). It was given through a nasal-duodenal tube for 7 days (half-dose for the first 2 days).The nutrition was provided by Nutrition Fiber (protein 20 g, fat 19.5 g,carbohydrate 61.5 g, minerals 3 g, food fibre 7.5 g, energy 4.18 Kj(1 kcal)/ml per 500ml).(n = 24) Control group: Conventional infusion which consisted of 5% - 10% glucose, electrolytes, and vitamins, about 2500 kJ (600 kcal)/day, without exogenous nitrogen (n = 18)
Outcomes	All-cause mortality, severe complications, adverse events, nutritive index including body weight, biochemical index, immune index (IgA, IgM, IgG,lymphocyte).
Study dates	Not stated
Notes	The authors were attempted contacted by phone. No contact was made.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	Participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained but the trial did report on all-cause mortality and serious adverse event.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhu 2012a

Methods	Randomised clinical trial, China
Participants	97 hospitalised adults admitted with stroke, at nutritional risk due to stroke Male:Female = 56:41 Mean age = 72 years

Zhu 2012a *(Continued)*

	Exclusion criteria: None
Interventions	Experimental group 1: Received both enteral and parenteral supplements.The energy was 84 - 105 kj/kg/day, and increased to the target volume 126 - 147 kj/kg/day, based on participant's recovery condition. Whole protein supplements (6.3 kJ/ml) were given through nasogastric tube, and the sugar, fat and protein were provided through vein tube.(n = 33) Experimental group 2: Received only enteral supplements. The energy was 84 - 105 kj/kg/day, and increased to the target volume 126 - 147 kj/kg/day based on participant's recovery condition. All the nutrition was provided through the nasogastric tube. (n = 32) Control group: The nutrition (6.3 kJ/ml)was given through nasogastric tube under the control of a specialist nurse(n = 32)
Outcomes	Triceps skinfold thickness, arm muscle circumference, haemoglobin, albumin, prealbumin, triglyceride, incidence rate of malnutrition; infection rate, mortality, NIHSS, Barthel Index
Study dates	Not stated
Notes	Same as Zhu 2012b, but with experimental group 1 vs control group. We found no contact information for the authors.

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained but the trial did report on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

Zhu 2012b

Methods	Randomised clinical trial, China

Zhu 2012b *(Continued)*

Participants	97 hospitalised adults admitted with stroke, at nutritional risk due to stroke Male:Female = 56:41 Mean age = 73 years Exclusion criteria: None
Interventions	Experimental group 1: Received both enteral and parenteral supplements.The energy was 84 - 105 kj/kg/day, and increased to the target volume 126 - 147 kj/kg/day based on participant's recovery condition. Whole protein supplements (6.3 kJ/ml) were given through nasogastric tube, and the sugar, fat and protein were provided through vein tube.(n = 33) Experimental group 2: Received only enteral supplements. The energy was 84 - 105 kj/kg/day, and increased to the target volume 126 - 147 kj/kg/day based on participant's recovery condition. All the nutrition was provided through the nasogastric tube.(n = 32) Control group: The nutrition (6.3 kJ/ml) was given through nasogastric tube under the control of a specialist nurse.(n = 32)
Outcomes	Triceps skinfold thickness, arm muscle circumference, haemoglobin, albumin, prealbumin, triglyceride, incidence rate of malnutrition;,infection rate, mortality, NIHSS, Barthel Index
Study dates	
Notes	Same as Zhu 2012a, but with experimental group 2 vs control group

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Not described
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias) All outcomes	High risk	The participants and personnel were not blinded.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Not described
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The number of participants with incomplete data was not reported.
Selective reporting (reporting bias)	Low risk	No protocol could be obtained but the trial did report on all-cause mortality and serious adverse events.
For-profit bias	Unclear risk	It was unclear how the trial was funded.
Other bias	Low risk	The trial appeared to be free of other components that could put it at risk of bias.

6-MWD: 6-minute walking distance

ABG: arterial blood gas
AD: Alhzeimer's disease
ADL: activities of daily living
AKP: alkaline phosphatase
ASCI(U): Acute Spinal Cord Injury (Unit)
BEE: basal energy expenditure
BMI: body mass index
BUN: blood urea nitrogen
CABG: coronary artery bypass graft
COPD: chronic obstructive pulmonary disease
CRP: C-reactive protein
ECOG: Eastern Co-operative Oncology Scale
EN: enteral nutrition
ESR: erythrocyte sedimentation rate
FCM: flow cytometry
FEV: forced expiratory volume
FIM: functional independence measure
FVC: forced volume capacity
GCS: Glasgow coma scale
GPT: glutamate pyruvate transaminase
IBW: ideal body weight
ICU: intensive care unit
i.v.: intravenous
IVH: intrravenous hyperalimentation
IVN: intravenous nutrition
KPS: Karnofsky performance score
MMSE: Mini metal state examination
MNA: mini nutritional assessment
MUST: Malnutrition Universal Screening Tool
NEFA: non-essential fatty acids
NIHSS: NIH stroke scale
NRS: Nutritional Risk Screening
NSAID: non-steroidal anti-inflammatory drug
NYHA: New York Heart Association
ONS: oral nutrition supplement
PEG: percutaneous endoscopic gastrotomy
PN: parenteral nutrition
QALYs: quality-adjusted life years
QoL: quality of life
REE: resting energy expenditure
RQ: respiratory quotient
SD: standard deviation
SFAA: serum-free amino acid
SGOT: serum glutamic oxaloacetic transaminase
SGPT: serum glutamate pyruvate transaminase
SIRS: sepsis inflammatory response syndrome
SPN: supplementary parenteral nutrition
TBSA: total body surface area
TPN: total parenteral nutrition
WBC: white blood cell

Characteristics of excluded studies *[ordered by study ID]*

Study	Reason for exclusion
Abbasinazari 2011	Wrong control group (enteral feeding)
Abitbol 1989	Wrong control (all 3 groups received total parenteral nutrition)

Study	Reason for exclusion
Achord 1987	Multi-intervention (experimental group received cortisol and heparin in addition to their nutrition intervention)
Aguilar-Nascimento 2002	Wrong intervention group (the intervention group did not receive nutritional support (early oral feeding))
Akizuki 2009	Not randomised
Albano 2003	Not adults
Aoki 2000	Wrong intervention group (The intervention is preoperative glutamine supplement)
Aoki 2001	Wrong intervention group (glutamine supplementation as primary intervention)
Arabi 2011	Wrong control group (control group not described as standard care)
Arcand 2005	Outpatients
Arnaud-Battandier 1999	Outpatients
Arnold 1989	Outpatients
Aronsson 2009	Not at nutritional risk (after correspondence with author)
Arustamyan 2011	Wrong control group (control group did not receive standard care)
Arutiunov 2009	Not randomised (the study was an observational study)
Ashworth 2006	Wrong control group (both the intervention and control group received oral nutrition support)
Askanazi 1986	Wrong control group (control group not described as standard care)
Bachmann 2008	Not randomised (clinical case study)
Bachrach-Lindström 2000	Not randomised
Baek 1975	Not randomised
Bakiner 2013	Wrong control group (control group receives parenteral nutrition)
Bakker 2011	Protocol to the trial Bakker 2014
Bar 2008	Participants were pregnant (elective C-section)
Barle 1997	Not at nutritional risk (undergoing elective laparoscopic surgery and the trialist does not describe participants as at nutritional risk)
Baron 1986	Not randomised
Barton 2000	Wrong intervention group (experimental group received both reduced portion size and fortifications)
Bastarache 2012	Wrong control group (the trial compared two different enteral feedings (trophic food))
Bastian 1999	Wrong intervention group (immunonutrition)

Study	Reason for exclusion
Bauer 2005a	Wrong intervention group (both the experimental group and control group received an isocaloric supplement. Not nutritional support)
Bauer 2005b	Wrong intervention group (both the experimental group and control group received an isocaloric supplement. Not nutritional support)
Bayer-Berger 1989	Not randomised (the control group were not randomised)
Beattie 2000	Outpatients
Beau 1986	Wrong control group (control group received enteral nutrition as standard care)
Benzineb 1995	Wrong intervention (experimental group received early oral feeding)
Bickel 1992	Wrong intervention group (the experimental group received early oral feeding)
Blackburn 1973	Wrong control group (there was no control group in this trial); not described as randomised
Bonetti 1988	Wrong control group (control group was not described as standard care)
Bories 1994	Participants were younger than 18 years old
Bos 2000	Not randomised
Bos 2001	Not randomised
Boultetreau 1978	Wrong control group (both groups receives parenteral nutrition)
Bourdel-Marchasson 2000	Cluster-randomised trial
Bozzetti 1974	Wrong control group (control group received parenteral nutrition)
Bozzetti 1976	Wrong control group (control group received parenteral nutrition)
Bozzetti 1998	Not randomised
Bozzetti 2000	The control group receives hypocaloric PN
Braga 2002	Wrong intervention (experimental group received diet enriched with arginine, omega-3 fatty acid and RNA)
Braunschweig 2015	Wrong control group (control group receives enteral or parenteral nutrition as part of standard care)
Britton 2012	Cluster-randomised trial
Brooks 1999	Wrong intervention group (the experimental group received immunonutrition)
Buchman 1969	Not randomised
Burden 2011	Outpatients
Buzby 1988	Protocol. The finished review could not be obtained, and may never have been conducted
Cabre 1990	Wrong control group

Study	Reason for exclusion
Cai 1999	Wrong control group (the comparison of the study is EN (dietary fibre + glucose + protein) versus EN (glucose + protein))
Cai 2000	Wrong control group (the comparison of the study is EN versus PN)
Cameron 2011	Wrong control group (the control group received an intervention the experimental group did not (milk))
Cao 1994	Outpatients (participants were with cancer and having chemotherapy)
Capparros 1982	Not randomised
Chadwick 2002	Wrong intervention group (not nutritional support)
Chatterjee 2012	Wrong intervention group (early oral feeding)
Chattophadhyay 2002	Not at nutritional risk (meeting abstract). Authors could not be found for further information.
Chen 1994	Wrong control group (the comparison of the study is early EN versus PN)
Chen 2000c	Wrong control group (the comparison of the study is EN versus PN)
Chen 2001	Wrong control group (the comparison of the study is EN versus PN)
Chen 2010	Not a randomised clinical trial, and the comparison is EN versus PN
Chen 2014	Not randomised
Cheng 1997	Not a randomised trial
Chiarelli 1990	The study said it had randomised participants according to the "case-control method". We could not be sure it was a randomised clinical trial.
Collins 1978	Not randomised
Consoli 2010	Wrong intervention group (the experimental group received early oral feeding (not nutritional support))
Cornu 2000	Outpatients
Csapo 2003	Not a randomised clinical trial
Cui 1994	Not a randomised clinical trial
Cui 2013	Wrong control group (EN (nasogastric tube) vs EN ((nasogastric tube) + PN (venous)) vs + PN (venous))
Dag 2011	Wrong intervention group (the experimental group received early oral feeding (not nutritional support))
Daly 1987	Not randomised
Davies 1998	Not randomised clinical trial
De Castro 2012	Wrong control group (control group receives isocaloric enteral nutrition)

Study	Reason for exclusion
De Luis 2003	Outpatients
De Lédinghen 1998	Wrong intervention group (the experimental group received early oral feeding (not nutritional support))
Dea 1996	Not at nutritional risk
Deligné 1974	Not randomised
Demetriou 1992	Comment on Kearns 1992
Dhanraj 1997	Wrong control group (control group received hospital-made enteral nutrition as standard care)
Dias 1999	Wrong intervention group (the experimental group did not receive nutritional support (glutamine))
Ding 1999	Participants were pregnant women.
Ding 2015	Wrong control group (control group receives enteral nutrition)
Dintinjana 2012	Multi-intervention (including megestrol acetate)
Dixon 1984	Outpatients
Djunet 2012	Wrong control group
Dock-Nascimento 2012	Glutatemine enriched nutritional support
Doglietto 2004	Wrong intervention (does not receive a nutrition intervention)
Dong 1997	Wrong control group (the comparison of the study is EN versus PN)
Driver 1990	Not randomised
Dupont 2012	Outpatients
Dutta 2004	Not randomised
Eckerwall 2007	Early oral feeding
Edstrom 1989	Not at nutritional risk. Trialists investigate tumor kinetics following TPN and do not indicate that their participants are at nutritional risk.
Efthimiou 1988	Outpatients
El Nakeeb 2009	Wrong intervention group (the experimental group received early oral feeding, not nutritional support)
Elke 2013	Not randomised
Elmore 1989	Wrong intervention group (the intervention group received elemental diet)
Eneroth 1997	Not randomised
Eneroth 2004	Outpatients

Study	Reason for exclusion
Esaki 2005	Not randomised
Evans 1987	Outpatients
Fairfull-Smith 1980	Not randomised
Feinstein 1981	Dialysis
Feldblum 2011	Wrong control group (there was no control group. The trial compared group 2 and 3 as one).
Feng 2008	Wrong intervention group (the experimental group received early oral feeding. Not nutritional support)
Feo 2004	Multiintervention (early oral feeding)
Fernandez-Estivariz 2006	Outpatients (not hospitalised. Both groups received parenteral nutrition)
Flynn 1987	Outpatients
Foltz 1987	Outpatients
Fonseca 2011	Wrong intervention group (experimental group receives early oral feeding (not nutrition support))
Foster 1980	Wrong intervention group (experimental group did not receive nutritional support)
Freund 1990	Not randomised
Fuenzalida 1990	Outpatients (the participants were not hospitalised, but were admitted to a Clinical Research Centre)
Förli 2001	Publication of the outpatient phase of Förli 2001
Ganzoni 1994	Outpatients
Garcia-Rodriguez 2013	Outpatients and control intervention not described as standard care
Genton 2004	Not randomised
Georgieff 1980	Not randomised
Gerasimidis 2014	Outpatients
Grahm 1989	Quasi-randomised
Greenberg 1982	Wrong control group (control group received parenteral feeding)
Grizas 2008	Wrong control group (the diet of the control group was not described as standard care but rather Early natural nutrition)
Grode 2014	Wrong control group (both groups receives nutritional intervention)
Gunnarsson 2009	Quasi-randomised
Gurgun 2013	Outpatients

Study	Reason for exclusion
Haffejee 1980	Not randomised
Han-Geurts 2001	Wrong control group (fixed oral diet versus patient-controlled oral diet)
Han-Geurts 2007	Wrong intervention group (experimental group was not described as nutritional support)
Harries 1983	Outpatients
Hasenberg 2010	The trial was retracted
Hasse 1997	Outpatients
He 2000	Not a randomised clinical trial
Heatley 1979	Quasi-randomised (participants were randomly allocated into 1 of 2 groups according to odd or even year of birth)
Hedberg 1999	Not randomised
Heslin 1997	Wrong intervention group (immunonutrition)
Hickey 1982	Not randomised to nutrition support (randomised to oral hygiene)
Hidding 1988	Wrong control group (2 different enteral solutions)
Hochwald 1997	Wrong intervention group (intervention group received immunonutrition containing arginine)
Honda 1990	Not randomised
Hosseini 2010	Early oral feeding
Hovels 1951	Not adults (infants)
Hu 1995	Not a randomised clinical trial
Hu 2003	Wrong control group (control group did not receive standard care)
Hur 2011	Wrong control group (both groups were intervention groups receiving the same intervention in different time periods)
Ibrahim 2002	Wrong control group (both groups were intervention groups, and both of them had enteral feeding)
Irvine 2004	Wrong control group (No participants received a control diet)
Isenring 2003a	Outpatients
Isenring 2003b	Outpatients
Isenring 2004	Outpatients
Ishiki 2015	No group received standard care (enteral nutrition versus oral nutrition versus enteral plus oral nutrition)
Jacob 1989	Wrong control group (all groups received different parenteral nutrition therapy)

Study	Reason for exclusion
Jacobson 2012	Not randomised (patients was chosen in consecutive manner and compared to patients during a preceeding 20-year period)
Jenkins 1994	Not adults
Jiang 1994a	Not a randomised clinical trial.
Jiang 1994b	Wrong control group (the comparison of the study is EN versus PN)
Jiang 2001	Wrong control group (the comparison of the study is EN versus PN)
Jiang 2002	Wrong control group (the comparison of the study is EN versus PN)
Jiang 2003	Wrong control group (the comparison of the study is hypocaloric PN vs traditional PN)
Jin 2002	Wrong control group (early EN versus PN plus EN)
Joosten 2001	Not randomised
Kang 1994	Not a randomised clinical trial
Kang 2011	Wrong control group (the control group receives PN)
Keller 1991	Wrong control group (2 intervention groups (hypercaloric vs hypocaloric))
Keohane 1983	Wrong control group (control group received enteral nutrition as standard care)
Kilgallen 1996	Outpatients
Kilic 2012	Not randomised
Kinsella 1981	Outpatients
Kirkil 2012	Wrong control group (control group received a different enteral formula)
Kirvela 1993	Outpatients
Kiss 2014a	Wrong control group (control group received nutrition support until 50% of energy requirements were met)
Kiss 2014b	Outpatients
Kiss 2014c	Outpatients
Klahr 1996	Trial to test the efficacy of providing less protein in diet
Klek 2011	Wrong control group. There were 4 intervention groups: standard enteral nutrition, immunmodulating enteral nutrition, standard parenteral nutrition, immunmodulating parenteral nutrition, and therefore no control group
Knowles 1988	Outpatients (ambulatory)
Kochar 2011	Not adults

Study	Reason for exclusion
Kompan 1999	Wrong control group (both groups were intervention groups receiving enteral nutrition at different times)
Kompan 2004	Wrong control group (control group receives total parenteral nutrition)
Konrad 1966	Not randomised
Kult 1975	Not randomised
Kwon Lee 2006	Outpatients
Laaban 1986	Not a randomised clinical trial (observational study)
Lapillonne 1995	Not adults
Lapp 2001	Not randomised (quasi-randomised according to birth date)
Lassen 2008	Early oral feeding
Lauque 2004	Outpatients
Lawson 2003	Not randomised
Le Cornu 2000	Outpatients
Ledinghen 1996	Not adults (neonatal patients)
Lee 2014	Outpatients
Lei 2011	Wrong intervention group (immunonutrition)
Li 2003	Wrong control group (comparison of the study is EN versus PN)
Li 2014	Multi-intervention
Liao 1996	Not a randomised clinical trial
Liao 1997	Not a randomised clinical trial, and the comparison is EN versus PN
Liao 2005	Not a randomised clinical trial
Lidder 2010	Wrong control group (the control group received 100% parenteral nutrition, while the intervention group received 70% parenteral nutrition, and 30% enteral nutrition)
Lier 2012	Outpatients
Lim 2010	Not at nutritional risk (healthy learning adults)
Lin 1997	Not a randomised clinical trial
Lindschinger 2000	Multi-intervention (PEG-sonde versus nasogastric tube)
Liu 1998	Not a randomised clinical trial

Study	Reason for exclusion
Liu 2000b	Wrong control group (the comparison of the study is (146kj/kg/day + glucose, protein, lipid + electrolyte + vitamins) versus (105 kj/kg/day + glucose, protein, lipid + electrolyte + vitamins))
Liu 2007	Wrong control group (control group receives enteral nutrition)
Liu 2010	Not a randomised clinical trial
Liu 2012	Wrong control group (control described as receiving nutrition support)
Lo 2005	Wrong control group (control groups received enteral nutrition)
Lobato 2010	Wrong intervention group (experimental group receives early oral feeding (not nutrition support))
Lopez 1980	Wrong control group
Lovik 1996	Outpatients
Lucha 2005	Wrong intervention group (early oral feeding)
Luder 2002	Not adults
Lundholm 2004	Outpatients
Luo 1996	Wrong control group (comparison of the study is EN versus PN)
Luo 1999	Wrong control group (comparison of the study is standard caloric PN versus hypercaloric PN)
Lv 2000	Not a randomised clinical trial
Lédinghen 1998	Wrong intervention group (experimental group received early oral feeding)
Löhlein 1981	Not randomised
Ma 1999	Not a randomised clinical trial
Ma 2014	Wrong control group
Maci 1991	Outpatients (participants were not hospitalised at time of randomisation)
Mackenzie 2005	Not a randomised clinical trial (prospective cohort study)
Madigan 2005	Outpatients
Marktl 1980	Wrong control group (control group received a different parenteral nutrition solution than experimental)
Martin 2004	Cluster-randomised trial
Mattioli 1993	Wrong control group (control group received parenteral nutrition)
Mault 2000	The trial compares nutrition support guided by energy expenditure compared with being blinded to energy expenditure. Both groups receive nutrition support.
McClave 2001	Not at nutritional risk

Study	Reason for exclusion
McCowen 2000	Wrong control group (both groups received total parenteral nutrition)
Mehringer 2001	Wrong control group (received trophic feeds of enteral nutrition)
Mehta 2010	Pregnant participants
Meisner 2008	Not a nutritional risk (participants received laparoscopic surgery, and the authors did not describe them as at nutritional risk)
Mendenhall 1985	Wrong intervention group (experimental group received a nutrition supplement high in calories, protein and branched-chain amino acids, hence is immunonutrition)
Mi 2012	Wrong control group (intervention were not comparable between groups)
Miao 2005	Multi-intervention (intervention group receives insulin in addition to the nutrition support)
Minard 2000	Wrong intervention group (additionally the experimental group received immunonutrition)
Minig 2009	Wrong intervention group (experimental group received early oral feeding)
Moghissi 1977	Not randomised
Moloney 1983	Not randomised
Moore 1983	Experimental group received elemental diet
Moore 1986	Wrong experimental intervention (received elemental diet)
Moore 1991	Wrong experimental intervention (received elemental diet)
Murphy 1992	Outpatients
Müller 1995	Wrong control group (there was no control group)
Nachtigal 2008	Outpatients
Nagata 2009	Wrong control group (EN vs PN + EN (different dosages))
Namulema 2008	Outpatients
Nataloni 1999	Wrong control group (control group receives parenteral feeding or enteral feeding)
Navratilova 2007	Outpatients (institutionalised)
Nayel 1992	Outpatients
Neander 2004	Outpatients
Neto 2012	Wrong control group (control group receives parenteral feeding or enteral feeding)
Norman 2008	Outpatients
Nørregaard 1987	Most likely not hospitalised (no contact information for first author could be found)
Oehler 1987	Not randomised

Study	Reason for exclusion
Ohura 2011	Wrong control group (control group receives enteral nutrition)
Olin 1996	Not randomised (non-randomised cluster study)
Olofsson 2007	Multi-intervention (intervention group received a list of multi-interventions that included ones that were not nutrition support)
Oloriz 1992	Wrong control group (control group receives enteral nutrition)
Otte 1989	Outpatients (ambulant)
Ouyang 2003	Wrong control (control group received nasogastric feeding)
Ovesen 1992	Wrong control group (supplement versus dense supplement)
Ovesen 1993	Outpatients
Pan 2000	Not a randomised clinical trial
Pandey 2002	Early oral feeding
Pantzaris 2012	Wrong intervention group (immunonutrition) and outpatients
Paton 2004	Outpatients
Pawlotsky 1987	Not randomised (cancer patients compared with healthy patients)
Pedersen 2005	Not randomised (quasi-randomised)
Peitsch 1982	Not randomised
Persson 2002	Outpatients
Persson 2007	Wrong control group (control group received another advice intervention) and trial was in outpatients
Pinilla 2001	Multi-intervention (both prokinetics and higher gastric threshold)
Pitkanen 1991	Wrong control group
Pivi 2011	Outpatients
Powell 2000	Not at nutritional risk (test if nutrition helps on inflammatory response)
Powers 1986	Not randomised
Praygod 2011	Outpatients
Preshaw 1979	Quasi-randomised (participants randomised by last digit in hospital registration number)
Prohaska 1977	Not randomised
Pronio 2008	Wrong intervention group (immunonutrition)
Qiu 1998	Not a randomised clinical trial

Study	Reason for exclusion
Rabeneck 1998	Outpatients
Rabinovitch 2006	Not a randomised clinical trial (retrospective study)
Ramirez 1979	Wrong control group (all groups received total parenteral nutrition)
Ravasco 2005a	Outpatients
Ravasco 2005b	Outpatients
Rice 2011	Wrong control group (2 intervention groups (trophic vs full). No standard care)
Rice 2012	Wrong control group (control received a different enteral nutrition than the experimental group (trophic))
Rickard 1983	Not adults
Rinaldi 2006	Not randomised
Riviere 2001	Outpatients, and not randomised
Rogers 1992	Control participants were not hospitalised
Rypkema 2004	Not randomised (intervention based on enrolment to specific hospital)
Rüfenacht 2010	Wrong control group (2 intervention groups: oral supplements and nutritional therapy group)
Safdari-Dehcheshmehi 2011	Wrong intervention group (early oral feeding)
Sakai 2015	Wrong intervention group (immunonutrition)
Sako 1981	Wrong control group (control group received enteral nutrition)
Sandstrøm 1993	Wrong control group (not standard care (10% or 20% glucose))
Savassi-Rocha 1992	Wrong intervention group (nasogastric decompression, versus no nasogastric decompression)
Savva 2013	Outpatients
Schega 1967	Wrong control group (4 different parenteral solutions)
Schilder 1997	Wrong intervention group (the experimental group received early oral nutrition)
Schneider 2000	Not a randomised clinical trial (article is a comment on Bozetti 1998)
Schols 1995	Outpatients
Schröter 1974	Wrong control group (control group were not described as standard care)
Schwarz 1998	Wrong control group (all 3 groups received total parenteral nutrition)
Schwenk 1999	Outpatients
Scott 2005	Primarily outpatients

Study	Reason for exclusion
Seguy 2006	Not randomised
Serclov 2009	Multi-intervention
Seri 1984	Outpatients (not all participants were hospitalised)
Serrou 1981b	Not at nutritional risk
Serrou 1982b	Not at nutritional risk
Serrou 1983	Wrong intervention group (no nutrition)
Seven 2003	Wrong control group (not described as standard care)
Sha 1998	Not a randomised clinical trial
Shamberger 1983	Not adults (We wrote to the author (Robert.Shamberger@childrens.harvard.edu) for separate data for the adults. The author did not have separate data).
Shan 1997	Wrong control group (both groups received EN and PN in different volumes)
Shang 2006	The trial was retracted
Shaw 1983	Wrong control group (control group receives TPN)
Shen 1994	Not a randomised clinical trial
Shepherd 1988	Not adults
Shi 2000	Wrong control group (participants with inflammatory bowel disease in intervention group received PN containing lipids, while control group received PN without lipids)
Shi 2001a	Wrong control group (EN vs PN)
Shi 2001b	Wrong control group (EN vs PN)
Shi 2002	Outpatients
Shizgal 1976	Not randomised
Shukla 1984	Wrong intervention group (elemental diet)
Silander 2012	Wrong intervention group (intervention is a prophylatic PEG)
Silander 2013	Outpatients
Silva 2010	Outpatients
Silvers 2014	Outpatients
Singer 2011	Wrong control group (both groups received different enteral nutrition)
Singh 2008	Outpatients
Smith 1982	Wrong control group (control group received parenteral nutrition)

Study	Reason for exclusion
Smith 2008	Wrong control group (both groups received nutritional support)
Snyderman 1999	Wrong intervention group (immunonutrition vs standard nutrition). We contacted the authors in September 2015 by email to get specific information on groups 3 and 4: CSNYD+@Pitt.edu. We received no reply.
Somanchi 2011	Not randomised
Song 2003	Wrong control group (oral feeding 48 to 72 hours after surgery versus oral feeding 10 to 12 days after surgery)
Song 2009	Wrong intervention group (participants in intervention group reveived EN contains 2 types of nutritious supplementary while control group received EN contains only 1 type)
Sorrentino 2012	Wrong intervention group (immunonutrition)
Spain 1998	Wrong control group (control group receives enteral nutrition)
Stein 1981	Not randomised
Stewart 1998	Wrong intervention group (early oral feeding)
Sudarsanam 2011	Outpatients
Sultan 2012	Wrong control group (control group receives enteral nutrition)
Tabei 2004	Not described as randomised
Tai 2011	Wrong control group (control group receives an oral nutritional intervention in addition to standard hospital diet)
Tan 2002	Not a randomised clinical trial
Tandon 1984	Outpatients
Tang 1999	Wrong control group (PN vs EN)
Tang 2003	Wrong control group (PN vs EN)
Tang 2010	This study aims to find out the relationship between education and nutrition support.
Tanuwihardja 2010	Wrong intervention group (experimental group received immunonutrition)
Taylor 1998	Wrong control group (control group received enteral nutrition)
Teich 2009	Wrong intervention group (early oral feeding)
Tesinsky 1999	Outpatients
Thomas 2005	Outpatients
Tjäder 1996	Not randomised
Tkatch 1992	Controls received oral supplement that differed only in the amount of protein

Study	Reason for exclusion
Touger Decker 1997	Not at nutritional risk
Toyoda 1999	Wrong control group (EN vs PN)
Trinidad Ruiz 2005	Not randomised
Uzunkoy 2012	Early oral feeding
Valerio 1978	Wrong control group (both groups received nutritional intervention)
Vargas 1995	Outpatients
Vermeeren 2001	Wrong control group (control group not standard care, high carbohydrate versus high fat content supplements)
Vivanti 2015	Outpatients
Vizia 1998	Not adults
Vomel 2000	Not randomised
Wang 1995	Wrong control group (PN vs EN)
Wang 1997c	Not a randomised clinical trial
Wang 1998a	Wrong control group (discontinued PN vs continued PN)
Wang 1998b	Wrong control group (PN vs EN)
Wang 2000a	Not a randomised clinical trial
Wang 2000b	Not a randomised clinical trial
Wang 2000c	Not a randomised clinical trial
Wang 2006	Outpatients
Wang 2011a	Wrong control group
Wang 2012	Multi-intervention (both nutrition and early mobilisation)
Wang 2013b	Outpatients
Wang 2015	Wrong intervention group (elemental diet)
Warnold 1988	Wrong control group (2 intervention groups)
Way 1975	Not randomised
Wei 1998	Wrong control group (control group does not receive standard care)
Weiner 1985	Outpatients
Weisdorf 1987	Not adults

Study	Reason for exclusion
Williams 1976	Not a randomised clinical trial (quasi-randomised)
Wong 2004	Outpatients
Woo 1994	Outpatients
Woolley 1996	Wrong control group (control group receives enteral nutrition)
Wouters-Wesseling 2002	Outpatients
Wright 2006	Not a randomised clinical trial (quasi-randomised)
Wu 1996b	Wrong control group (portal vein nutrition in intervention group versus peripheral vein nutrition in control group)
Wu 1999	Wrong control group (EN vs PN)
Wu 2006	Wrong control group (control group did not receive standard care (hypocalorisk + protein postoperatively))
Xiao 2000	No information on experimental group or control group
Xu 1995	Not a randomised clinical trial (observational study)
Xu 1998b	Not a randomised clinical trial
Xu 1998c	Not a randomised clinical trial
Xu 2000	Not a randomised clinical trial
Yang 1997	Wrong control group (EN vs PN)
Yao 2013	Not at nutritional risk
Ye 2011	Wrong intervention group
Yetimalar 2010	Not a randomised clinical trial (quasi-randomised)
Yu 1999	Wrong intervention group (this type of comparison could not find which kind of intervention worked. Clinical intervention combined with food intake as wishes in intervention group versus clinical intervention combined with intake of high-energy high protein food in control group)
Yu 2007	Wrong intervention group (stomach tube homogenate diets and yogurt in intervention group versus stomach tube homogenate diets in control group)
Yu 2012	Wrong control group (EN vs. PN)
Yuan 2003	This study is on the effectiveness of rehabilitation not nutritional support. Rehabilitation treatment plus oral feeding of Nutren versus rehabilitation plus oral feeding of normal food like poridge versus oral feeding of normal food like poridge.
Yun 1993	Wrong control group (food with different calories and protein and intravenous nutrition were performed in 2 different groups)
Zandier 1998	Not described as randomised

Study	Reason for exclusion
Zavertailo 2010	Wrong control group (control group received enteral nutrition)
Zelic 2013	Not at nutritional risk
Zhang 1996	Wrong control group (PN in different ways in 2 groups, one is portal vein nutrition, the other is central vein nutrition)
Zhang 2000a	Wrong control group (EN vs PN): (PN (after 48 hrs) plus EN (after 1 week replaced with EN) vs PN (after 48 hrs normal feeding resumes, at least 2 weeks) vs EN)
Zhang 2000b	Not a randomised clinical trial
Zhang 2004	Wrong control group (control group receives enteral nutrition)
Zhang 2006	Wrong control group (EN of different nutrition (different ratio of protein, lipid))
Zhang 2011	Wrong control group (control group receives EN or TPN)
Zhao 1995	Not a randomised clinical trial
Zhao 2012	Wrong intervention group (early oral feeding)
Zhao 2015	Retracted
Zhen 2002	Wrong control group (EN vs TPN)
Zheng 2006	Wrong control group (control group receives enteral nutrition)
Zhong 2006b	Not a randomised clinical trial
Zhou 2006	Multi-intervention (both experimental groups had removal of nasogastric tube, and oral feeding, while the control group had no feeding, and kept the nasogastric tube until flatus)
Zhu 2002b	Wrong control group (EN vs PN)
Zhuang 1997	Wrong control group (EN vs PN)
Zingirenko 2007	Wrong control group (control group receives enteral nutrition)
Zou 2014	Wrong control group (early EN+PN vs TPN+EN)
Zwaluw 2014	Outpatients

EN: enteral nutrition
PN: parenteral nutrition
TPN: total parenteral nutrition

Characteristics of studies awaiting assessment *[ordered by study ID]*

Anonymous 2003

Methods	Could not be found
Participants	

Anonymous 2003 *(Continued)*

Interventions	
Outcomes	
Notes	

Cao 1995

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Cardona 1986

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Chai 1998

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Dai 1993

Methods	Could not be found
Participants	

Dai 1993 *(Continued)*

Interventions	
Outcomes	
Notes	

Driver 1994

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Eckart 1992

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Guo 1998

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Hu 1996

Methods	Could not be found
Participants	

Hu 1996 *(Continued)*

Interventions	
Outcomes	
Notes	

Huang 1990

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Huo 1998

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Jin 2000

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Kolacinski 1993

Methods	Could not be found
Participants	

Kolacinski 1993 *(Continued)*

Interventions	
Outcomes	
Notes	

Li 1993

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Li 2013

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Liu 1989

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Liu 1996

Methods	Could not be found
Participants	

Liu 1996 *(Continued)*

Interventions	
Outcomes	
Notes	

Liu 1996a

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Lu 1997

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Lv 1995

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Mori 1992

Methods	Could not be found
Participants	

Mori 1992 *(Continued)*

Interventions	
Outcomes	
Notes	

Rovera 1989

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Serrou 1982a

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Volkert 1996

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Wenzel 1968

Methods	Could not be found
Participants	

Wenzel 1968 *(Continued)*

Interventions	
Outcomes	
Notes	

Wu 1995

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Wu 1996a

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Xue 1996

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Yoichi 1996

Methods	Could not be found
Participants	

Yoichi 1996 *(Continued)*

Interventions	
Outcomes	
Notes	

Yu 1995

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Yu 1996

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Zeng 1997

Methods	Could not be found
Participants	
Interventions	
Outcomes	
Notes	

Zhen 1997

Methods	Could not be found
Participants	

Zhen 1997 *(Continued)*

Interventions	
Outcomes	
Notes	

Characteristics of ongoing studies *[ordered by study ID]*

Alim-K

Trial name or title	Efficacy of parenteral nutrition in patients at the palliative phase of cancer (Alim-K)
Methods	Multicenter randomised clinical trial, France
Participants	Hospitalised adults, aged > 18 years suffering from cancer at the palliative stage, i.e. patients in whom the main aim of treatment is to limit pain and discomfort, curative treatment has either been discontinued, or may still be ongoing but with little expected benefit in terms of overall survival. Life expectancy must be > 2 months, participants must have a functional digestive tract, present malnutrition defined as a BMI < 18.5 kg/m^2 in those aged < 70 years or < 21 kg/m^2 in those aged ≥70 years; or weight loss of 2% in 1 week, 5% in 1 month, or 10% in 6 months, participants with antalgic radiotherapy or scheduled to undergo palliative surgery; participants must already have a functional central venous catheter in place. Exclusion criteria: non-functional digestive tract (intestinal occlusion, tumour compression, subocclusive peritoneal carcinosis), any disorder preventing oral ingestion (cancer of the upper aerodigestive tract, oesophagus or stomach); parenteral nutrition that is ongoing or dating from < 1 month; intravenous chemotherapy through a pump lasting > 48 hours, as this is incompatible with administration of parenteral nutritional through the central venous line; presence of gastrostomy or jejunostomy; persisting sensation of hunger in aphagic patients with haematological cancers undergoing bone marrow transplant, acute renal failure (defined as creatinine clearance < 30 ml/min) or heart failure (defined as a left ventricular ejection fraction < 30%); adult patients under legal guardianship unable to respond to the 'quality of life' questionnaire (due to psychiatric disorders, attention disorders, or cognitive disorders). Patients participating in another ongoing clinical trial
Interventions	Experimental group: Parenteral nutrition Control group: Standard care
Outcomes	Quality of life, survival, body weight, albumin, C-Reactive Protein
Starting date	May 2014
Contact information	raubry@chu-besancon.fr
Notes	Status: Currently recruiting. Expected finish June 2016 NCT02151214

Games-Lopez 2014

Trial name or title	Nutritional intervention program in malnourished patients admitted for heart failure (PICNIC)
Methods	Multicentre, randomised, blinded, controlled study

Games-Lopez 2014 *(Continued)*

Participants	Hospitalised adults aged over 18 years who are admitted for acute heart failure, whether chronic and uncompensated or of new onset, in a state of malnutrition (score on the MNA < 17 points) at nutritional risk due to MNA. Expected number: 182
Interventions	Experimental group: Diet optimisation, specific recommendations, nutritional supplements Control group: No intervention Co-intervention: conventional treatment for heart failure
Outcomes	Quality of life (Minnesota living with heart failure questionnaire), morbidity, mortality, readmission
Starting date	11th November 2011
Contact information	jnlsbnll@hotmail.com
Notes	Status: terminated due to beneficial effect of the experimental group, no data has yet been reported. NCT01472237

NCT02517476

Trial name or title	Effect of early nutritional therapy on frailty, functional outcomes and recovery of undernourished medical inpatients trial (EFFORT)
Methods	Multicentre randomised clinical trial, Switzerland
Participants	Hospitalised adults at risk for undernutrition defined by the nutritional risk score (NRS 2002) and an expected hospital length of stay > 5 days, at nutritional risk according to screening tools. Expected number: 2000 - 3000. Exclusion criteria: Initially admitted to critical care units (except intermediate care), scheduled for surgery or in an immediate postoperative state, unable to ingest oral nutrition and thus need for enteral or parenteral nutrition, admitted with, or scheduled for, total parenteral nutrition or tube-feeding, currently under nutritional therapy (defined by at least 1 visit with a dietician in the last month), who are hospitalised because of anorexia nervosa, in terminal condition (end-of-life situation), hospitalised due to acute pancreatitis, hospitalised due to acute liver failure, earlier inclusion into this trial, cystic fibrosis, patients after gastric bypass operations, stem cell transplantation, any contraindication against nutritional therapy (i.e. enteral or parenteral or both)
Interventions	Experimental group: These guidelines specify a reinforced nutritional therapy strategy to cover nutritional requirements, focusing on nutritional targets based on the specific nutritional diagnoses defined by the IDNT. The nutritional guidelines may vary according to important medical diagnoses (e.g. renal failure). They specify not only nutritional targets, but also escalation of the route (e.g. food fortification, oral, enteral, parenteral) if targets cannot be achieved (≤ 75%) every 5 hours. Nutritional goals are being assessed daily in participants in the intervention group. Control group: Usual care ("appetite-guided") controls
Outcomes	All-cause mortality, admission to the ICU from the medical ward, major complications, unplanned hospital readmissions, decline in functional outcome from admission to day 30 assessed by Barthel`s index (-10%); each single component of the primary endpoint, short-term nutritional and functional outcomes from inclusion to day 10 or hospital discharge; hospital outcomes; 30-day and 180-day outcomes, Other safety endpoints including adverse gastrointestinal effects associated with nutritional therapy assessed daily until hospital discharge.

NCT02517476 *(Continued)*

Starting date	July 30, 2015
Contact information	schuetzph@gmail.com
Notes	Status: Recruiting NCT02517476

NCT02624752

Trial name or title	Oral nutrition supplementation in hospitalized patients (NutriSuP Oral)
Methods	Randomised clinical trial, Switzerland
Participants	Hospitalised adults admitted to a general medical ward and recruited within 48 hours, over the age of 65 years, and malnourished (subjective global assessment categories B or C patients), at nutritional risk according to a screening tool. Expected number: 60 participants Exclusion criteria: have an allergy or intolerance to any component of the oral supplement, are designated palliative care, are currently suffering from refeeding syndrome, have a pre-existing medical condition that prevents oral intake of full fluids, or a contraindication to administration of fluid (i.e. are in volume overloaded state, are being given IV furosemide, or have end-stage renal disease requiring renal replacement therapy with haemodialysis or peritoneal dialysis), have a diagnosis or suspicion of septic shock, have an expected length of stay of < 48 hours from the time of assessment, have suspected ischaemic stroke as cause for admission, reside in a residential care home, are unable to walk prior to current illness, are pregnant/breastfeeding, have a current diagnosis of diabetic ketoacidosis or hyperglycemic hyperosmolar syndrome
Interventions	Experimental group: 2 cans of Ensure (or similar product) a day while in hospital and will continue 2 cans a day of Ensure when discharged home until they have been receiving the enhanced ONS for a total of 90 days Control group: No intervention Co-intervention: Standard care
Outcomes	Readmission rate, adherence to treatment
Starting date	December 4th 2015
Contact information	stephanie.handsor@lhsc.on.ca
Notes	Status: not yet recruiting NCT02624752

NCT02632630

Trial name or title	Nutritional supplementation in hospitalized patients (NutriSuP)
Methods	Randomised clinical trial, Canada
Participants	Hospitalised adults with a Subjective Global Assessment (SGA) category B or C and have been hospitalised for < 48 hours, at nutritional risk according to a screening tool. Expected number: 100

NCT02632630 *(Continued)*

	Exclusion criteria: Have an allergy or intolerance to any component of the oral supplement or parenteral nutrition, have a contraindication to administration of IV fluid (i.e. are in volume overloaded state, are being given IV furosemide), are currently suffering from refeeding syndrome, have a pre-existing medical condition that prevents oral intake of full fluids, have a diagnosis or suspicion of septic shock, have an expected length of stay of < 48 hours from the time of assessment, or have a current diagnosis of diabetic ketoacidosis or hyperglycaemic hyperosmolar syndrome
Interventions	Experimental group 1: Peripheral parenteral nutrition and enhanced oral supplementation Control group 1: Peripheral parenteral nutrition and standard care for oral supplementation Experimental group 2: Standard care for parenteral fluid administration and enhanced oral supplementation; Control group 2: Standard care for parenteral fluid administration and standard of care for oral supplementation
Outcomes	Quality of life, physical function, and nutrition-related variables
Starting date	December 3rd 2015
Contact information	stephanie.handsor@lhsc.on.ca
Notes	Status: Not yet recruiting NCT02632630

Ridley 2015

Trial name or title	Supplemental parenteral nutrition in critically ill adults: a pilot randomised controlled trial
Methods	Stratified prospective multicentre unblinded randomised phase II study
Participants	Hospitalised adults Admitted to intensive care between 48 hours and 72 hours previously. Mechanically ventilated at the time of enrolment and expected to remain ventilated until the day after tomorrow. At least 16 years of age. Have central venous access suitable for PN solution administration. Have one or more organ system failure related to their acute illness, defined as: (a) PaO2/FiO2 ≤ 300 mmHg; b) Currently on one or more continuous vasopressor infusions which were started at least 4 hours ago at a minimum dose of: dopamine ≥ 5 mcg/kg/min, noradrenaline ≥ 0.1 mcg/kg/min, adrenaline ≥ 0.1 mcg/kg/min, any dose of vasopressin, milrinone > 0.25 mcg/kg/min). With r without renal dysfunction but currently has an intracranial pressure monitor or ventricular drain in situ, currently receiving extracorporeal membrane oxygenation. Currently has a ventricular assist device
Interventions	Experimental group: supplementary parenteral nutrition Control group: no intervention Co-intervention: standard enteral nutrition
Outcomes	Energy amount in calories, antibiotic usage, sequential organ failure assessment score, mechanical ventilation duration, length of hospital stay, mortality, quality of life
Starting date	April 22nd 2013
Contact information	emma.ridley@monash.edu
Notes	Last updated October 13th 2015 (still recruiting)

Ridley 2015 *(Continued)*

NCT01847534

IDNT: Internation Dietetics and Nutrition Terminology

DATA AND ANALYSES

Comparison 1. All-cause mortality - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All-cause mortality - overall	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
2 All-cause mortality - bias	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
2.1 High risk of bias	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 All-cause mortality - mode of delivery	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
3.1 General nutrition support	6	1420	Risk Ratio (M-H, Random, 95% CI)	1.18 [0.74, 1.87]
3.2 Fortified foods	2	290	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.61, 2.54]
3.3 Oral nutrition	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
3.4 Enteral nutrition	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
3.5 Parenteral nutrition	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
3.6 Mixed	7	484	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.29, 1.55]
4 All-cause mortality - medical specialty	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
4.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Medical gastro-enterology and hepatology	13	627	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.58, 1.38]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.3 Geriatrics	13	2554	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.66, 1.08]
4.4 Pulmonary disease	3	118	Risk Ratio (M-H, Random, 95% CI)	0.44 [0.15, 1.28]
4.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.6 Infectious diseases	1	56	Risk Ratio (M-H, Random, 95% CI)	1.61 [0.66, 3.92]
4.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.10 Gastro-enterologic surgery	46	3943	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.62, 1.09]
4.11 Trauma surgery	4	184	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.55, 1.57]
4.12 Orthopaedics	12	1210	Risk Ratio (M-H, Random, 95% CI)	1.39 [0.87, 2.22]
4.13 Plastic, reconstructive and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.14 Vascular surgery	2	28	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.15 Transplant surgery	3	84	Risk Ratio (M-H, Random, 95% CI)	0.58 [0.23, 1.50]
4.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.17 Thoracic surgery	3	592	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.16, 3.22]
4.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.19 Oro-maxillo-facial surgery	1	32	Risk Ratio (M-H, Random, 95% CI)	3.38 [0.15, 77.12]
4.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

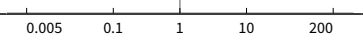
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.21 Emergency medicine	7	5198	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.80, 1.22]
4.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.23 Neurology	7	5168	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.60, 1.11]
4.24 Oncology	5	313	Risk Ratio (M-H, Random, 95% CI)	1.19 [0.44, 3.21]
4.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.27 Mixed	7	1651	Risk Ratio (M-H, Random, 95% CI)	1.22 [0.88, 1.70]
5 All-cause mortality - based on adequacy of the amount of calories	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
5.1 Clearly adequate in experimental group and clearly inadequate in control group	25	7371	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.81, 1.16]
5.2 Inadequate in the experimental group or adequate in the control group	26	6711	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.83, 1.19]
5.3 Experimental group is overfed	5	267	Risk Ratio (M-H, Random, 95% CI)	0.57 [0.27, 1.17]
5.4 Unclear intake in experimental group or control group	71	7409	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.81, 1.03]
6 All-cause mortality - different screening tools	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
6.1 NRS 2002	4	5064	Risk Ratio (M-H, Random, 95% CI)	1.04 [0.84, 1.29]
6.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.3 MNA	2	117	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.12, 3.18]
6.4 SGA	3	1171	Risk Ratio (M-H, Random, 95% CI)	1.41 [0.94, 2.10]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
6.5 Other means	118	15406	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.81, 0.99]
7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
7.1 Major surgery	60	5618	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.65, 1.01]
7.2 Stroke	3	4922	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.83, 1.12]
7.3 ICU participants including trauma	11	5382	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.81, 1.19]
7.4 Frail elderly participants with less severe conditions known to increase protein requirements	19	1937	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.56, 1.40]
7.5 Participants do not fall into one of the categories above	34	3899	Risk Ratio (M-H, Random, 95% CI)	1.01 [0.83, 1.22]
8 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
8.1 BMI less than 20.5 kg/m^2	2	247	Risk Ratio (M-H, Random, 95% CI)	1.19 [0.58, 2.45]
8.2 Weight loss of at least 5% during the last three months	1	32	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.3 Weight loss of at least 10% during the last six months	1	32	Risk Ratio (M-H, Random, 95% CI)	3.38 [0.15, 77.12]
8.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.5 Participants characterised as 'at nutritional risk' by other means	123	21447	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.02]
9 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
9.1 Biomarkers	5	657	Risk Ratio (M-H, Random, 95% CI)	0.43 [0.16, 1.19]
9.2 Anthropometric measures	12	1402	Risk Ratio (M-H, Random, 95% CI)	0.80 [0.56, 1.15]

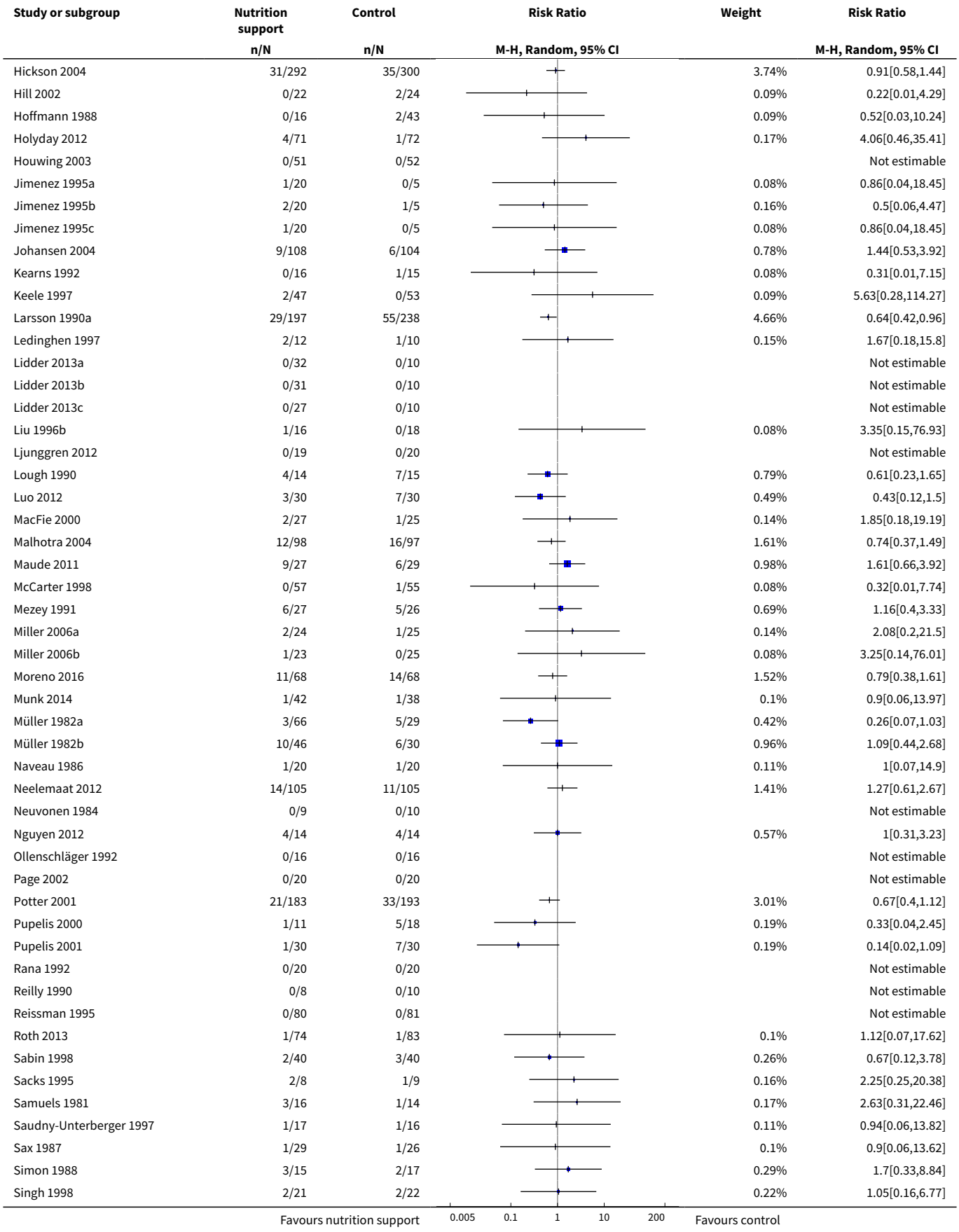
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
9.3 Characterised by other means	110	19699	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.87, 1.05]
10 All-cause mortality - randomisation year	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
10.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
10.2 1960 to 1979	5	181	Risk Ratio (M-H, Random, 95% CI)	1.11 [0.50, 2.46]
10.3 1980 to 1999	79	11350	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.81, 1.02]
10.4 After 1999	43	10227	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.80, 1.12]
11 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	127	21758	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.03]
11.1 Three days or more	111	20434	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.84, 1.01]
11.2 Fewer than three days	13	722	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.39, 1.45]
11.3 Unknown	3	602	Risk Ratio (M-H, Random, 95% CI)	1.16 [0.33, 4.06]
12 All-cause mortality - 'best-worst case' scenario	127	22207	Risk Ratio (M-H, Random, 95% CI)	0.74 [0.65, 0.84]
13 All-cause mortality - 'worst-best case' scenario	127	22207	Risk Ratio (M-H, Random, 95% CI)	1.13 [0.97, 1.31]
14 All-cause mortality co-interventions	127	21758	Risk Ratio (M-H, Fixed, 95% CI)	0.93 [0.86, 1.02]
14.1 received nutrition support as co-intervention	12	5361	Risk Ratio (M-H, Fixed, 95% CI)	0.94 [0.78, 1.14]
14.2 did not receive nutrition support as co-intervention	108	15974	Risk Ratio (M-H, Fixed, 95% CI)	0.93 [0.84, 1.03]
14.3 delayed versus early nutrition support	7	423	Risk Ratio (M-H, Fixed, 95% CI)	0.94 [0.53, 1.66]

Analysis 1.1. Comparison 1 All-cause mortality - end of intervention, Outcome 1 All-cause mortality - overall.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.09%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Fan 1989	3/20	3/20		0.36%	1[0.23,4.37]
Fan 1994	5/64	9/60		0.73%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.93%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.21%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]

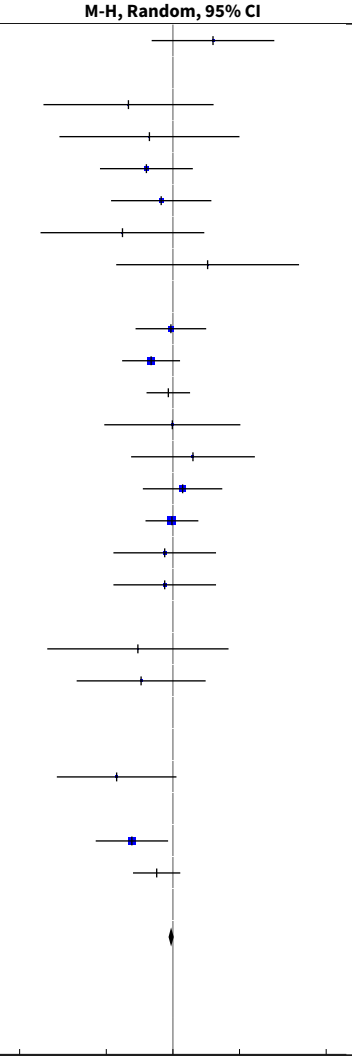


Favours nutrition support — Favours control



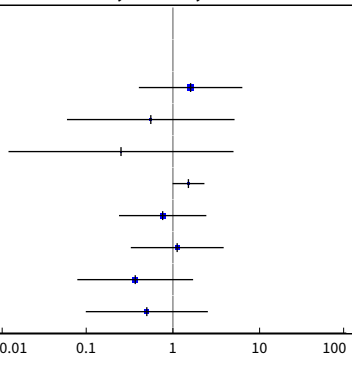
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Johansen 2004	9/108	6/104		0.78%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.49%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Miller 2006a	2/24	1/25		0.14%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.08%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.52%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.1%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neelemaat 2012	14/105	11/105		1.41%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.57%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Potter 2001	21/183	33/193		3.01%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.1%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]

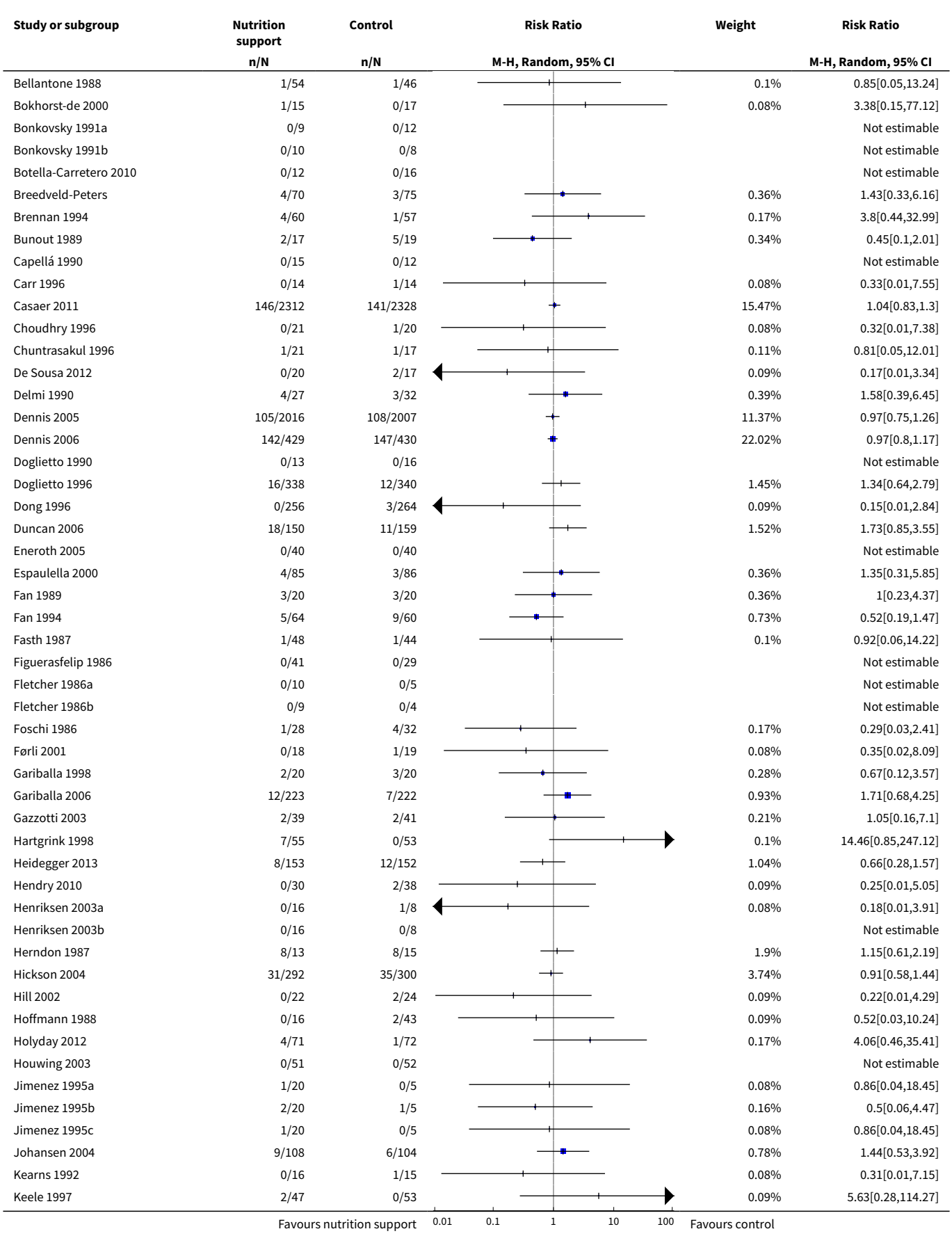
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Starke 2011	2/66	5/66		0.3%	0.4[0.08,1.99]
Stein 2002	2/40	3/40		0.26%	0.67[0.12,3.78]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.08%	3.32[0.14,78.25]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.78%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.37%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]
Williams 1985	4/21	3/22		0.41%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.25%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.25%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.08%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.16%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	1/60	7/60		0.18%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.5%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.16%	0.57[0.25,1.29]
Total (95% CI)	**11088**	**10670**		**100%**	**0.94[0.86,1.03]**
Total events: 831 (Nutrition support), 885 (Control)					
Heterogeneity: Tau²=0; Chi²=80.48, df=98(P=0.9); I²=0%					
Test for overall effect: Z=1.4(P=0.16)					



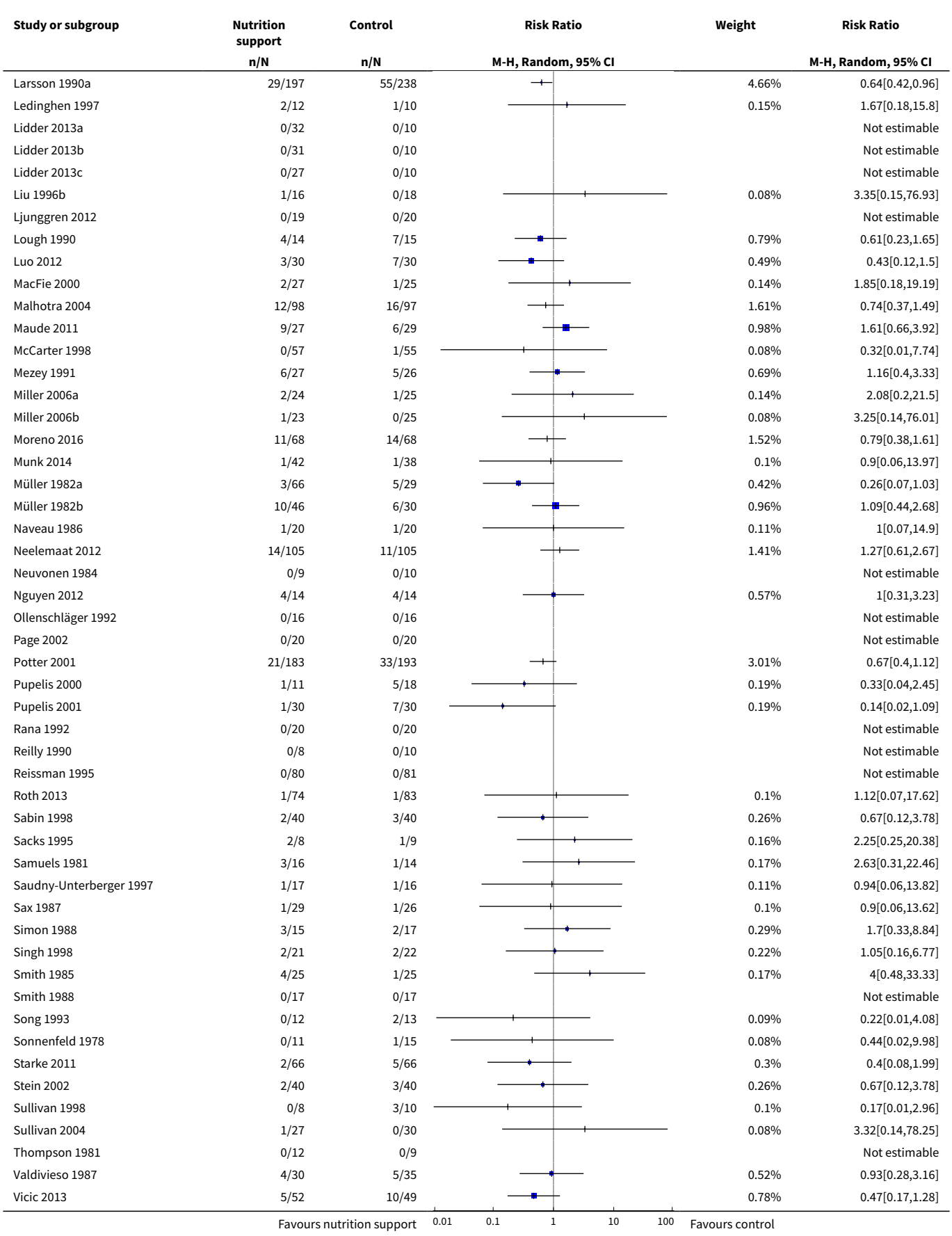
Analysis 1.2. Comparison 1 All-cause mortality - end of intervention, Outcome 2 All-cause mortality - bias.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
1.2.1 High risk of bias					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]





Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.09%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Fan 1989	3/20	3/20		0.36%	1[0.23,4.37]
Fan 1994	5/64	9/60		0.73%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.93%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.21%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Johansen 2004	9/108	6/104		0.78%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]



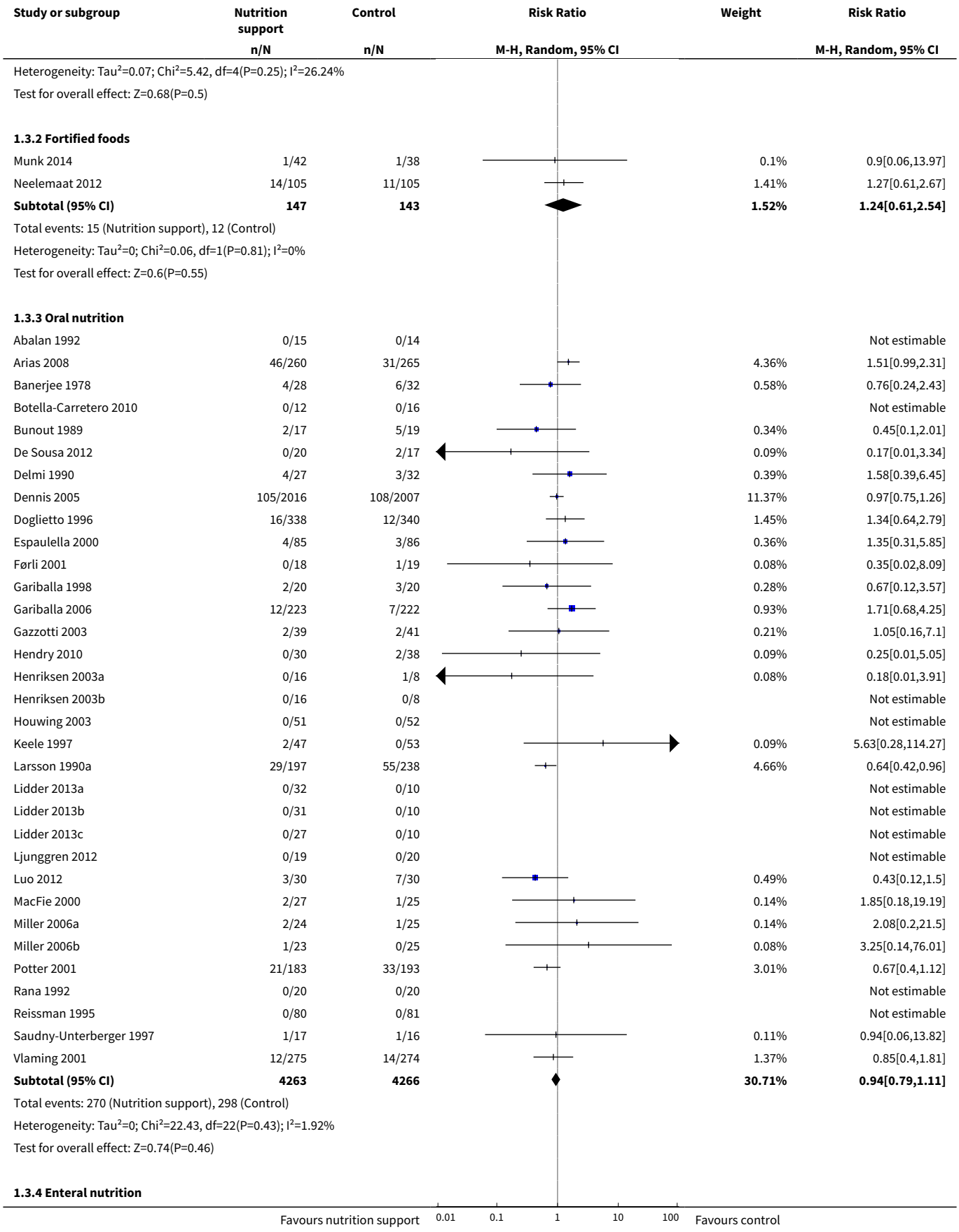
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Vlaming 2001	12/275	14/274		1.37%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]
Williams 1985	4/21	3/22		0.41%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.25%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.25%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.08%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.16%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	1/60	7/60		0.18%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.5%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.16%	0.57[0.25,1.29]
Subtotal (95% CI)	**11088**	**10670**		**100%**	**0.94[0.86,1.03]**
Total events: 831 (Nutrition support), 885 (Control)					
Heterogeneity: Tau²=0; Chi²=80.48, df=98(P=0.9); I²=0%					
Test for overall effect: Z=1.4(P=0.16)					
1.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**11088**	**10670**		**100%**	**0.94[0.86,1.03]**
Total events: 831 (Nutrition support), 885 (Control)					
Heterogeneity: Tau²=0; Chi²=80.48, df=98(P=0.9); I²=0%					
Test for overall effect: Z=1.4(P=0.16)					
Test for subgroup differences: Not applicable					

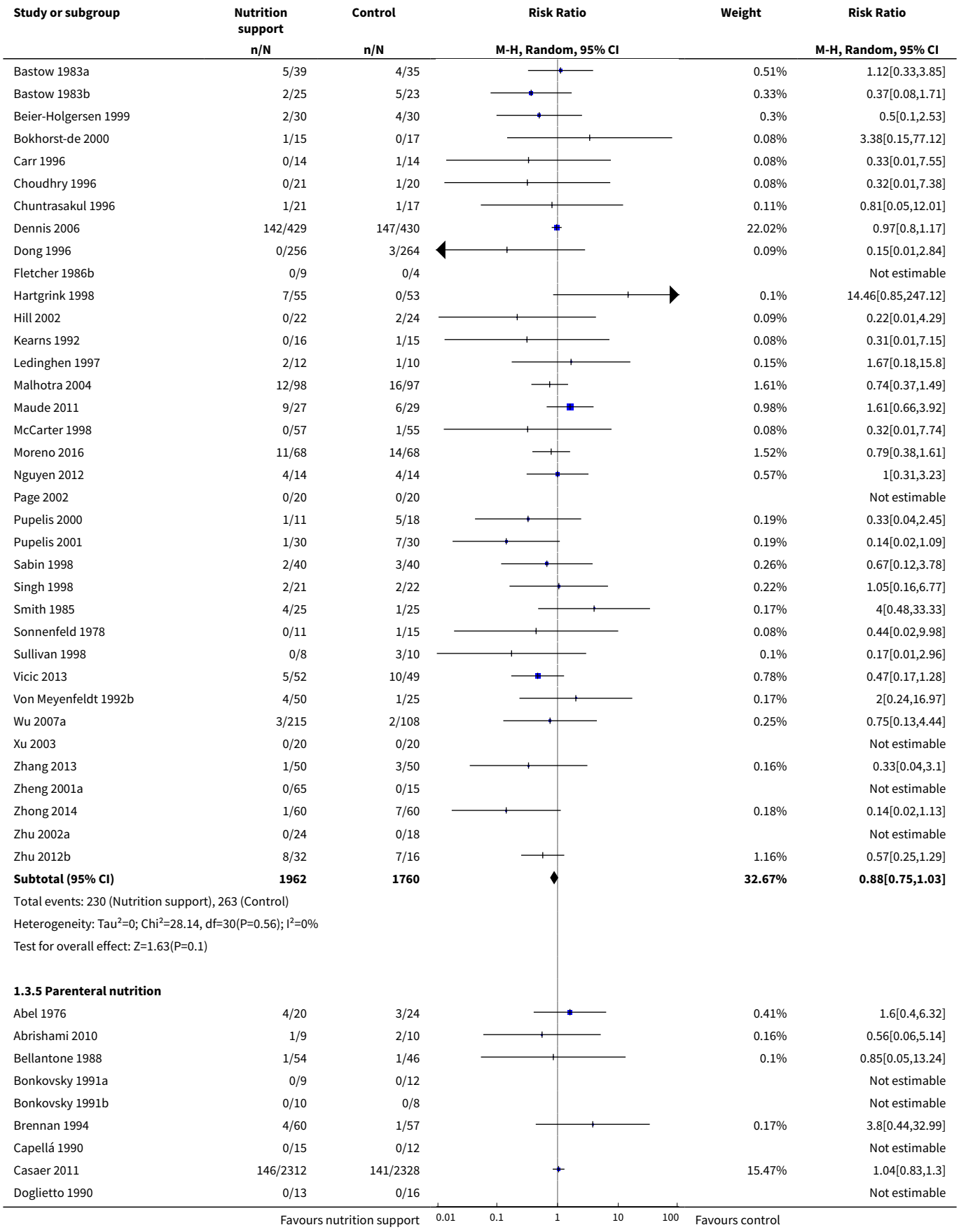
Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 1.3. Comparison 1 All-cause mortality - end of intervention, Outcome 3 All-cause mortality - mode of delivery.

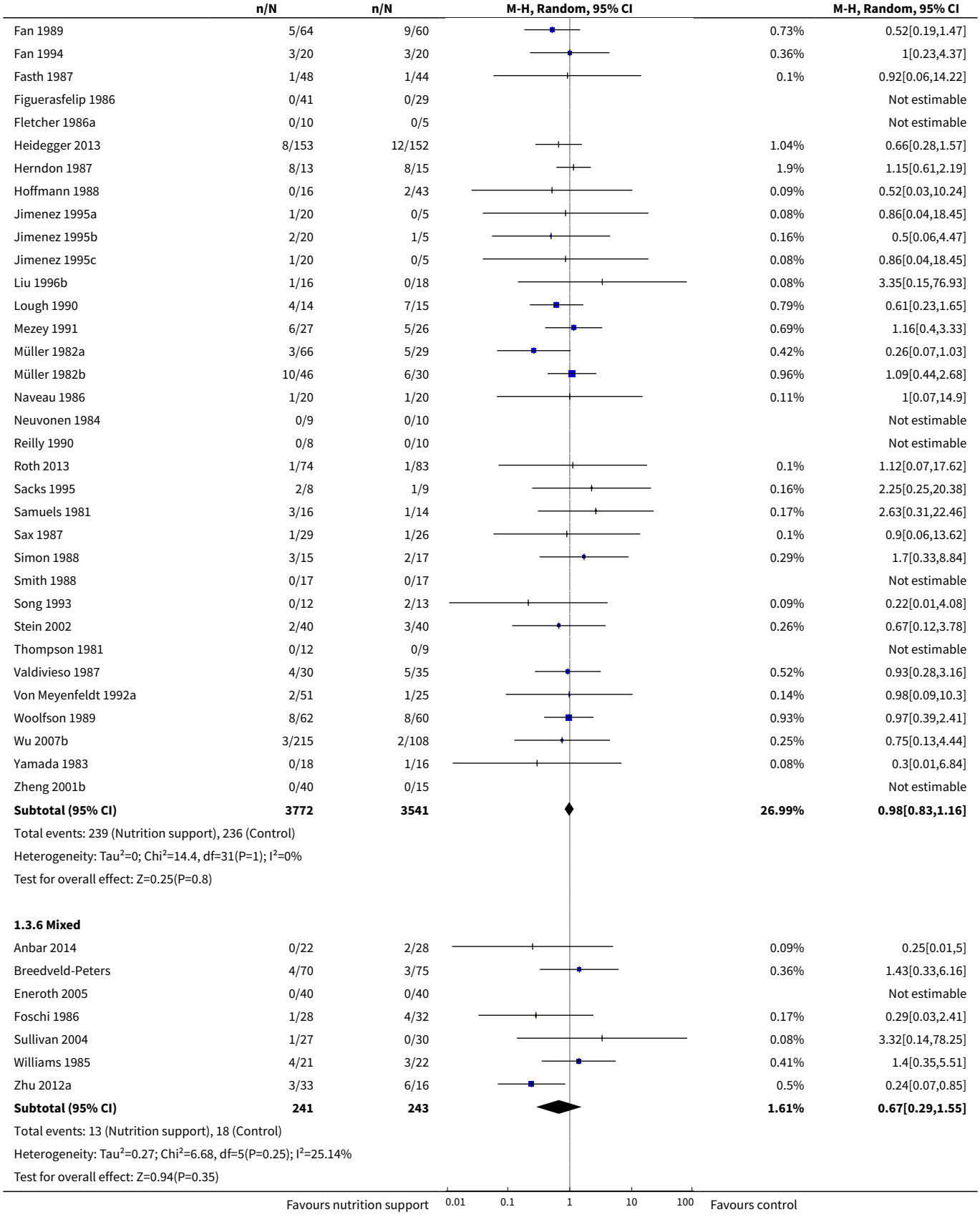
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
1.3.1 General nutrition support					
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]
Johansen 2004	9/108	6/104		0.78%	1.44[0.53,3.92]
Ollenschläger 1992	0/16	0/16			Not estimable
Starke 2011	2/66	5/66		0.3%	0.4[0.08,1.99]
Subtotal (95% CI)	**703**	**717**		**6.51%**	**1.18[0.74,1.87]**
Total events: 64 (Nutrition support), 58 (Control)					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

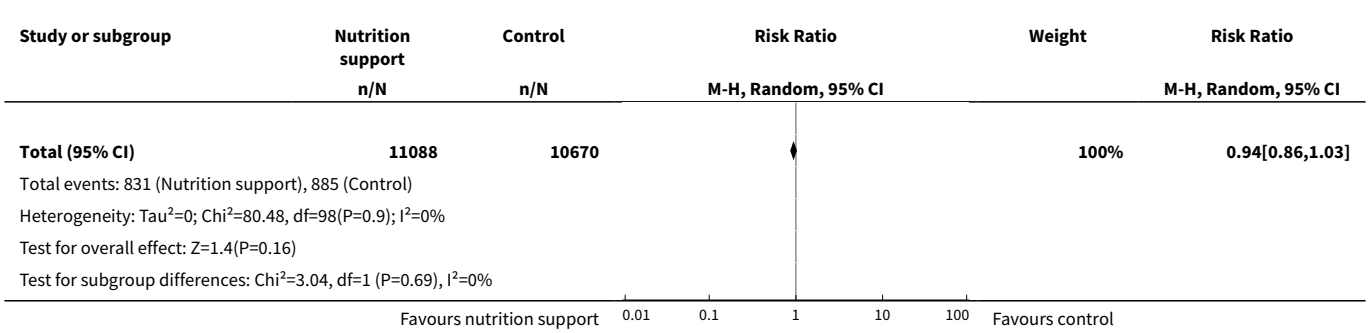




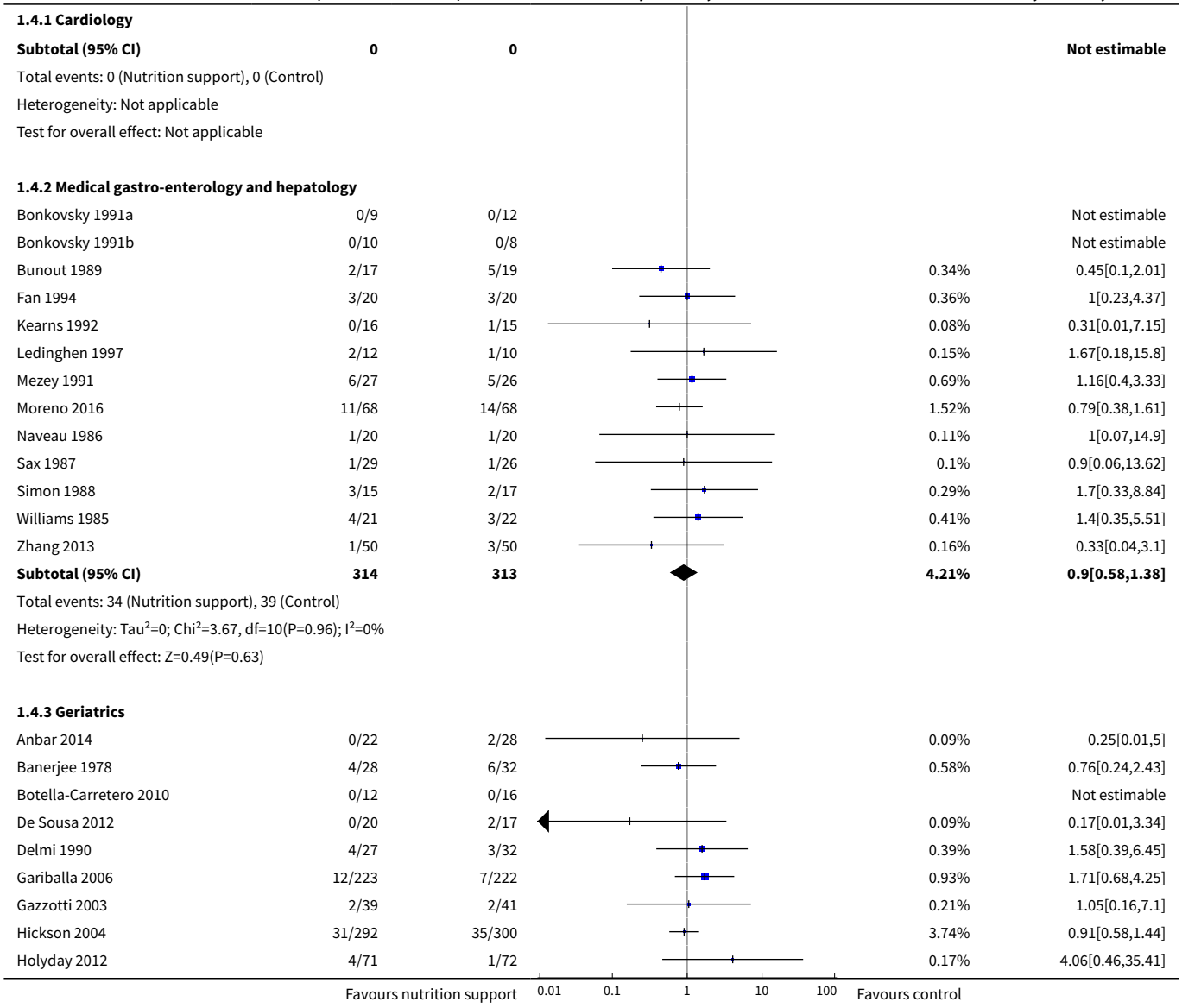
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		1.52%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		0.57%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Vicic 2013	5/52	10/49		0.78%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.25%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.16%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	1/60	7/60		0.18%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		1.16%	0.57[0.25,1.29]
Subtotal (95% CI)	**1962**	**1760**		**32.67%**	**0.88[0.75,1.03]**
Total events: 230 (Nutrition support), 263 (Control)					
Heterogeneity: Tau^2=0; Chi^2=28.14, df=30(P=0.56); I^2=0%					
Test for overall effect: Z=1.63(P=0.1)					
1.3.5 Parenteral nutrition					
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]
Doglietto 1990	0/13	0/16			Not estimable

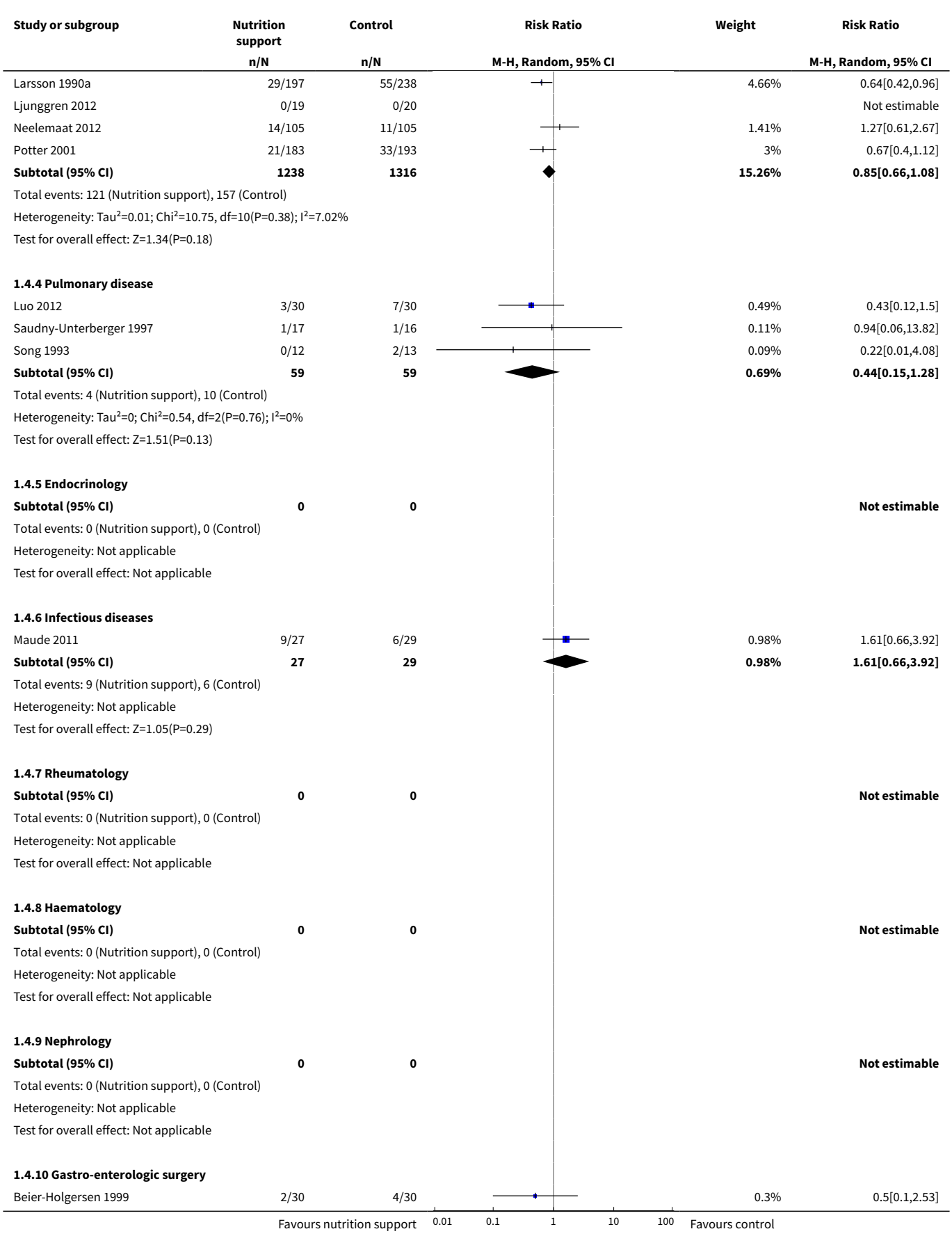


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Fan 1989	5/64	9/60		0.73%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		0.36%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Roth 2013	1/74	1/83		0.1%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.26%	0.67[0.12,3.78]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.25%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.08%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3772**	**3541**		**26.99%**	**0.98[0.83,1.16]**
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: Tau^2=0; Chi^2=14.4, df=31(P=1); I^2=0%					
Test for overall effect: Z=0.25(P=0.8)					
1.3.6 Mixed					
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Eneroth 2005	0/40	0/40			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Sullivan 2004	1/27	0/30		0.08%	3.32[0.14,78.25]
Williams 1985	4/21	3/22		0.41%	1.4[0.35,5.51]
Zhu 2012a	3/33	6/16		0.5%	0.24[0.07,0.85]
Subtotal (95% CI)	**241**	**243**		**1.61%**	**0.67[0.29,1.55]**
Total events: 13 (Nutrition support), 18 (Control)					
Heterogeneity: Tau^2=0.27; Chi^2=6.68, df=5(P=0.25); I^2=25.14%					
Test for overall effect: Z=0.94(P=0.35)					



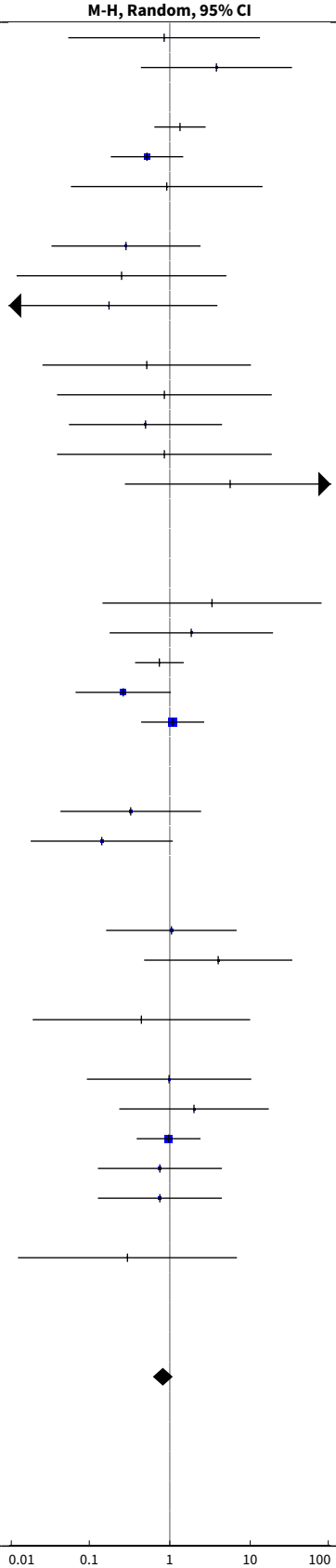
Analysis 1.4. Comparison 1 All-cause mortality - end of intervention, Outcome 4 All-cause mortality - medical specialty.



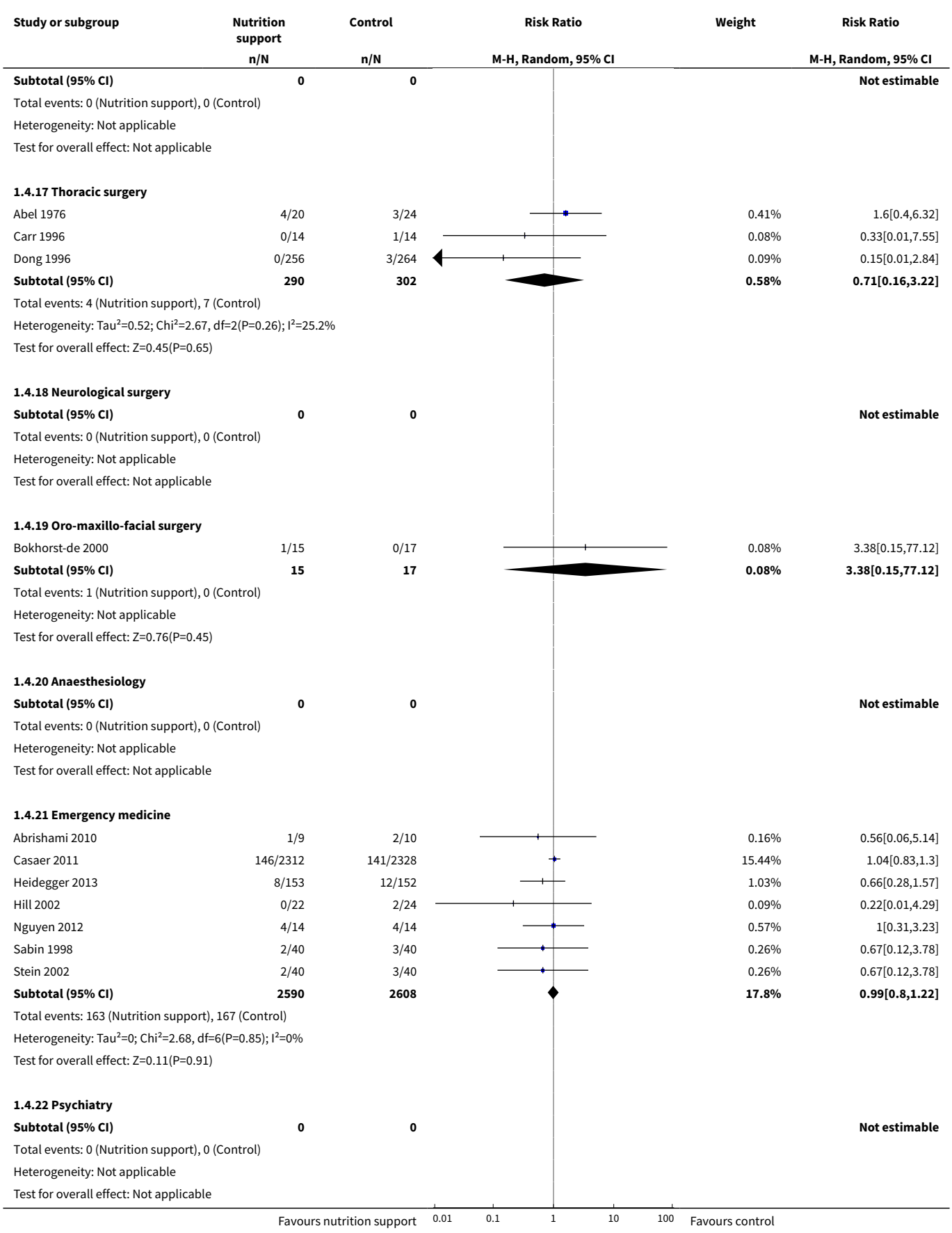


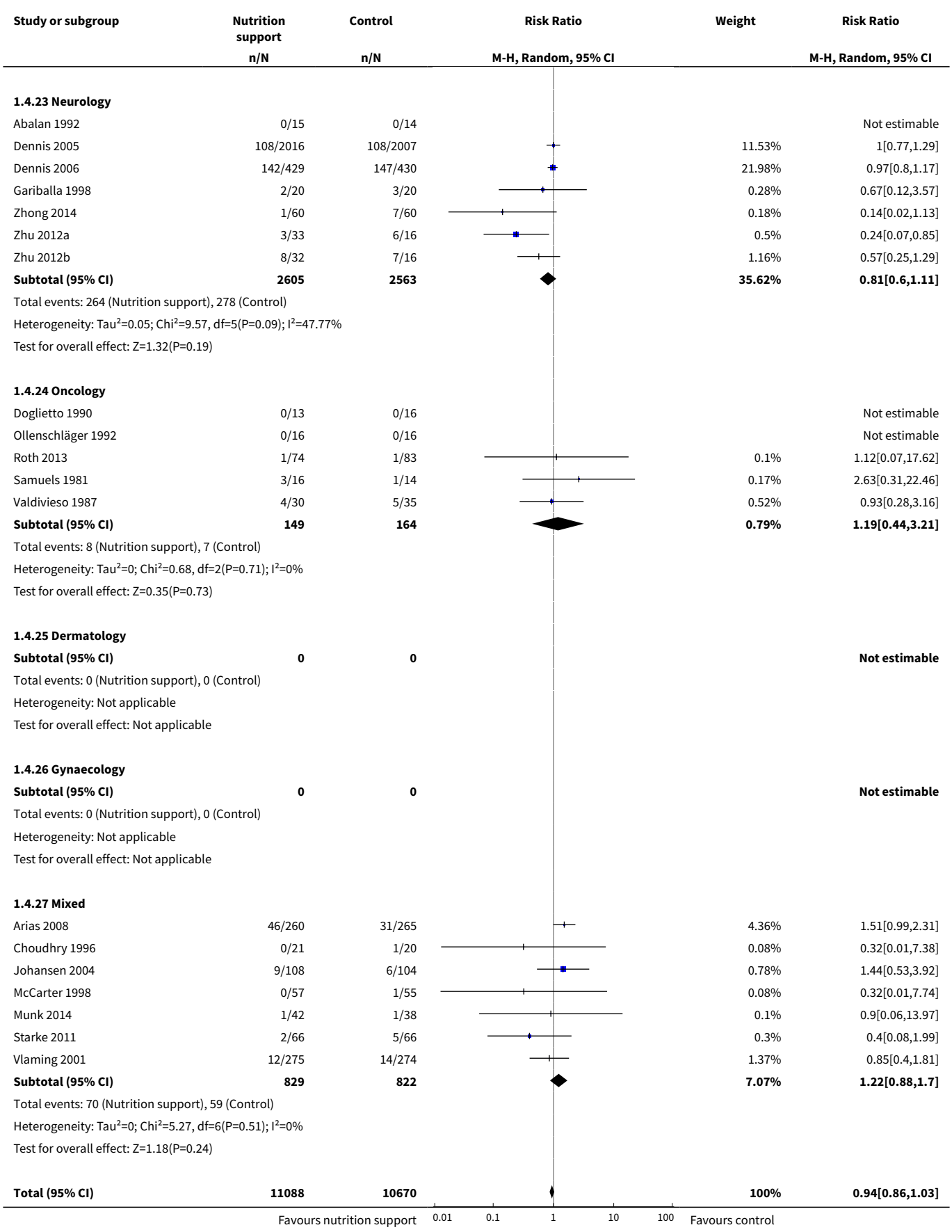
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Ljunggren 2012	0/19	0/20			Not estimable
Neelemaat 2012	14/105	11/105		1.41%	1.27[0.61,2.67]
Potter 2001	21/183	33/193		3%	0.67[0.4,1.12]
Subtotal (95% CI)	**1238**	**1316**		**15.26%**	**0.85[0.66,1.08]**
Total events: 121 (Nutrition support), 157 (Control)					
Heterogeneity: Tau²=0.01; Chi²=10.75, df=10(P=0.38); I²=7.02%					
Test for overall effect: Z=1.34(P=0.18)					
1.4.4 Pulmonary disease					
Luo 2012	3/30	7/30		0.49%	0.43[0.12,1.5]
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Subtotal (95% CI)	**59**	**59**		**0.69%**	**0.44[0.15,1.28]**
Total events: 4 (Nutrition support), 10 (Control)					
Heterogeneity: Tau²=0; Chi²=0.54, df=2(P=0.76); I²=0%					
Test for overall effect: Z=1.51(P=0.13)					
1.4.5 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
1.4.6 Infectious diseases					
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
Subtotal (95% CI)	**27**	**29**		**0.98%**	**1.61[0.66,3.92]**
Total events: 9 (Nutrition support), 6 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.05(P=0.29)					
1.4.7 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
1.4.8 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
1.4.9 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
1.4.10 Gastro-enterologic surgery					
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1996	16/338	12/340		1.44%	1.34[0.64,2.79]
Fan 1989	5/64	9/60		0.72%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.95%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Thompson 1981	0/12	0/9			Not estimable
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.25%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.25%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.08%	0.3[0.01,6.84]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**2222**	**1721**		**9.54%**	**0.82[0.62,1.09]**
Total events: 92 (Nutrition support), 97 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.7, df=29(P=0.87); I^2=0%					
Test for overall effect: Z=1.37(P=0.17)					
1.4.11 Trauma surgery					



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Vicic 2013	5/52	10/49		0.78%	0.47[0.17,1.28]
Subtotal (95% CI)	**94**	**90**		**2.94%**	**0.93[0.55,1.57]**
Total events: 16 (Nutrition support), 20 (Control)					
Heterogeneity: Tau²=0; Chi²=3.03, df=3(P=0.39); I²=1.11%					
Test for overall effect: Z=0.27(P=0.79)					
1.4.12 Orthopaedics					
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Duncan 2006	18/150	11/159		1.51%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Houwing 2003	0/51	0/52			Not estimable
Miller 2006a	2/24	1/25		0.14%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.08%	3.25[0.14,76.01]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.08%	3.32[0.14,78.25]
Subtotal (95% CI)	**597**	**613**		**3.57%**	**1.39[0.87,2.22]**
Total events: 44 (Nutrition support), 30 (Control)					
Heterogeneity: Tau²=0; Chi²=8.77, df=9(P=0.46); I²=0%					
Test for overall effect: Z=1.39(P=0.16)					
1.4.13 Plastic, reconstructive and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
1.4.14 Vascular surgery					
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Subtotal (95% CI)	**19**	**9**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
1.4.15 Transplant surgery					
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Reilly 1990	0/8	0/10			Not estimable
Subtotal (95% CI)	**40**	**44**		**0.87%**	**0.58[0.23,1.5]**
Total events: 4 (Nutrition support), 8 (Control)					
Heterogeneity: Tau²=0; Chi²=0.11, df=1(P=0.74); I²=0%					
Test for overall effect: Z=1.12(P=0.26)					
1.4.16 Urology					



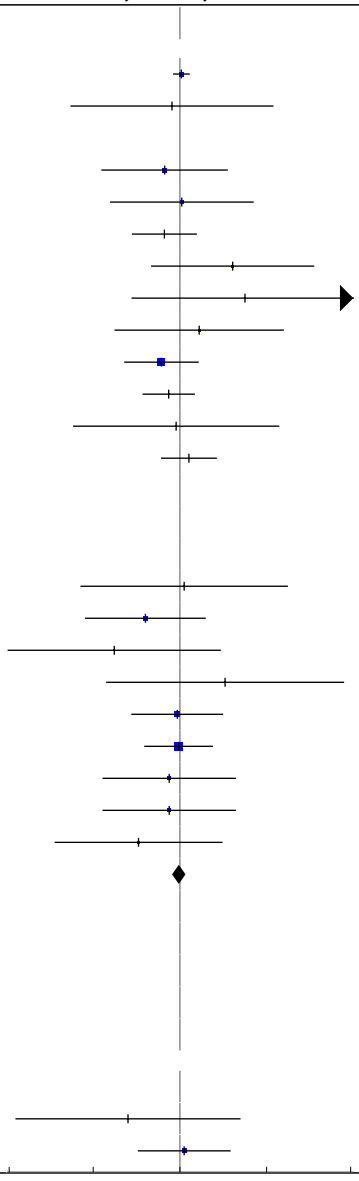


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 834 (Nutrition support), 885 (Control)					
Heterogeneity: Tau²=0; Chi²=80.62, df=98(P=0.9); I²=0%					
Test for overall effect: Z=1.33(P=0.18)					
Test for subgroup differences: Chi²=13.16, df=1 (P=0.44), I²=1.22%					

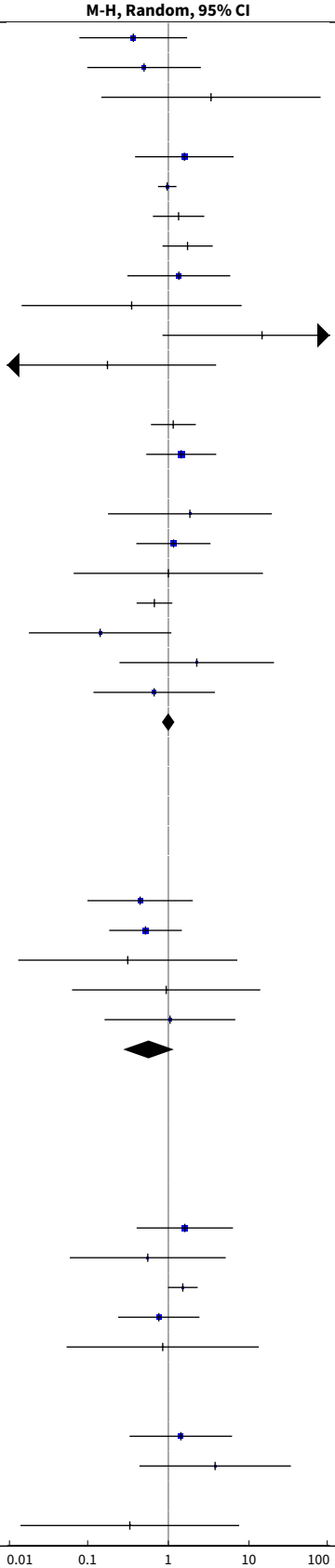
Favours nutrition support — Favours control

Analysis 1.5. Comparison 1 All-cause mortality - end of intervention, Outcome 5 All-cause mortality - based on adequacy of the amount of calories.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
1.5.1 Clearly adequate in experimental group and clearly inadequate in control group					
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
Eneroth 2005	0/40	0/40			Not estimable
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gazzotti 2003	2/39	2/41		0.21%	1.05[0.16,7.1]
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Munk 2014	1/42	1/38		0.1%	0.9[0.06,13.97]
Neelemaat 2012	14/105	11/105		1.41%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Rana 1992	0/20	0/20			Not estimable
Roth 2013	1/74	1/83		0.1%	1.12[0.07,17.62]
Starke 2011	2/66	5/66		0.3%	0.4[0.08,1.99]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.08%	3.32[0.14,78.25]
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.25%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.25%	0.75[0.13,4.44]
Zhang 2013	1/50	3/50		0.16%	0.33[0.04,3.1]
Subtotal (95% CI)	**3777**	**3594**		**24.11%**	**0.97[0.81,1.16]**
Total events: 221 (Nutrition support), 225 (Control)					
Heterogeneity: Tau²=0; Chi²=10.71, df=20(P=0.95); I²=0%					
Test for overall effect: Z=0.32(P=0.75)					
1.5.2 Inadequate in the experimental group or adequate in the control group					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]

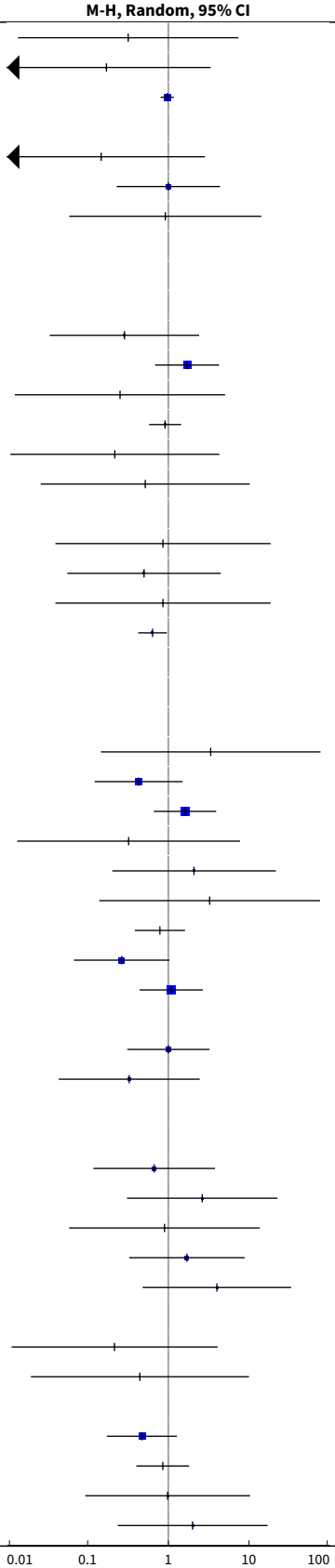


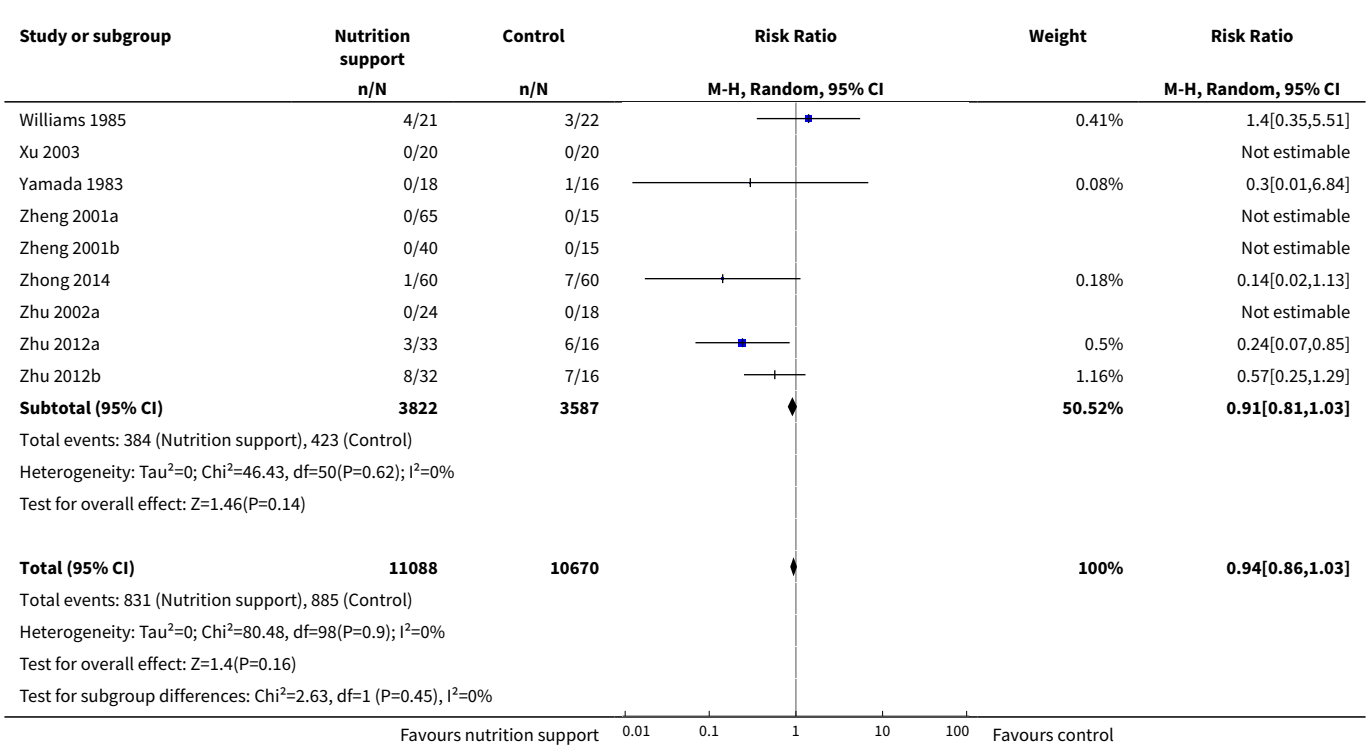
Favours nutrition support — Favours control



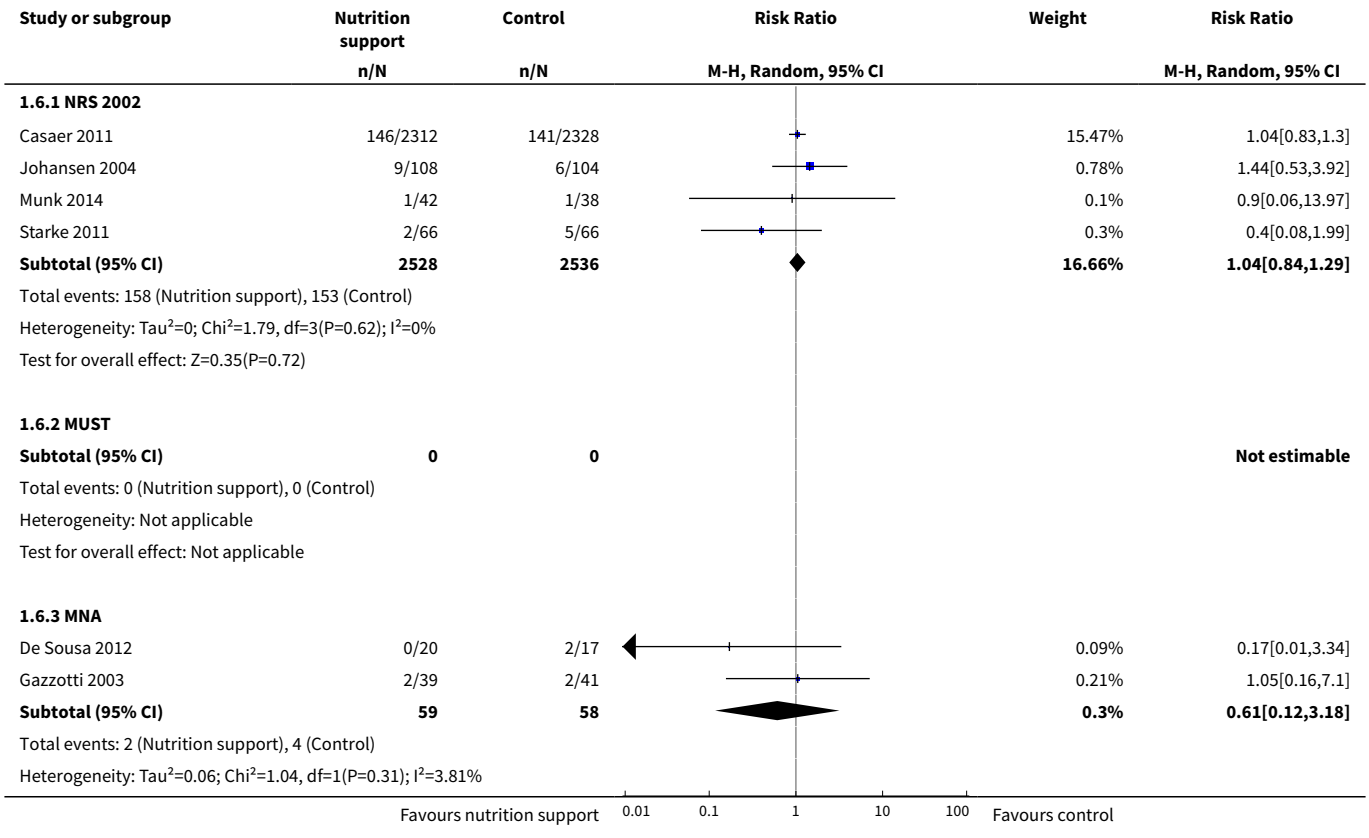
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Johansen 2004	9/108	6/104		0.78%	1.44[0.53,3.92]
Ljunggren 2012	0/19	0/20			Not estimable
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Potter 2001	21/183	33/193		3.01%	0.67[0.4,1.12]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Stein 2002	2/40	3/40		0.26%	0.67[0.12,3.78]
Subtotal (95% CI)	**3354**	**3357**		**23.89%**	**1[0.83,1.19]**
Total events: 216 (Nutrition support), 219 (Control)					
Heterogeneity: Tau^2=0; Chi^2=19.97, df=21(P=0.52); I^2=0%					
Test for overall effect: Z=0.04(P=0.97)					
1.5.3 Experimental group is overfed					
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Fan 1989	5/64	9/60		0.73%	0.52[0.19,1.47]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Subtotal (95% CI)	**135**	**132**		**1.48%**	**0.57[0.27,1.17]**
Total events: 10 (Nutrition support), 18 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.81, df=4(P=0.94); I^2=0%					
Test for overall effect: Z=1.53(P=0.13)					
1.5.4 Unclear intake in experimental group or control group					
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]

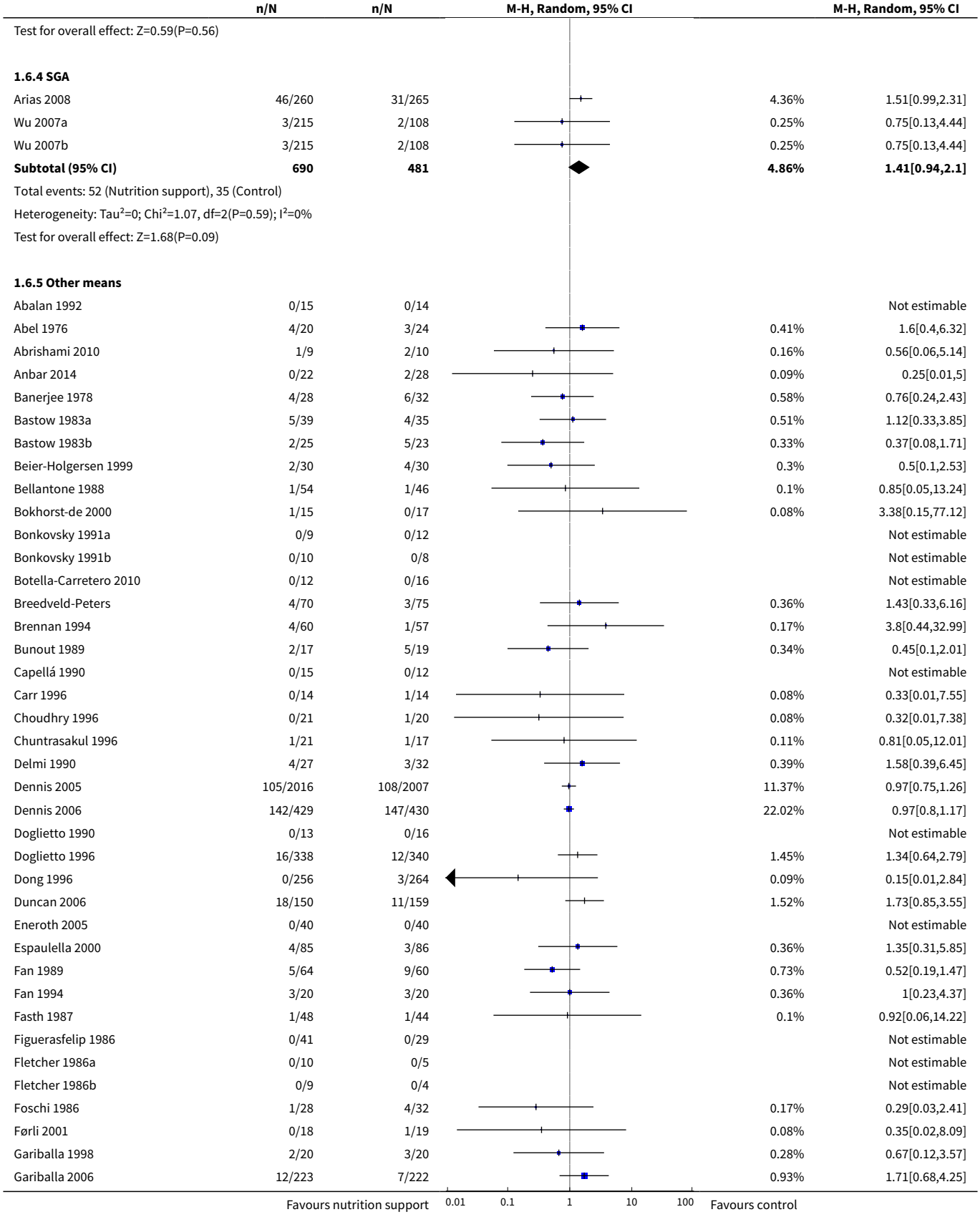
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
De Sousa 2012	0/20	2/17		0.09%	0.17[0.01,3.34]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Fan 1994	3/20	3/20		0.36%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Gariballa 2006	12/223	7/222		0.93%	1.71[0.68,4.25]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
Luo 2012	3/30	7/30		0.49%	0.43[0.12,1.5]
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Miller 2006a	2/24	1/25		0.14%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.08%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.52%	0.79[0.38,1.61]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.57%	1[0.31,3.23]
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Thompson 1981	0/12	0/9			Not estimable
Vicic 2013	5/52	10/49		0.78%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.37%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]



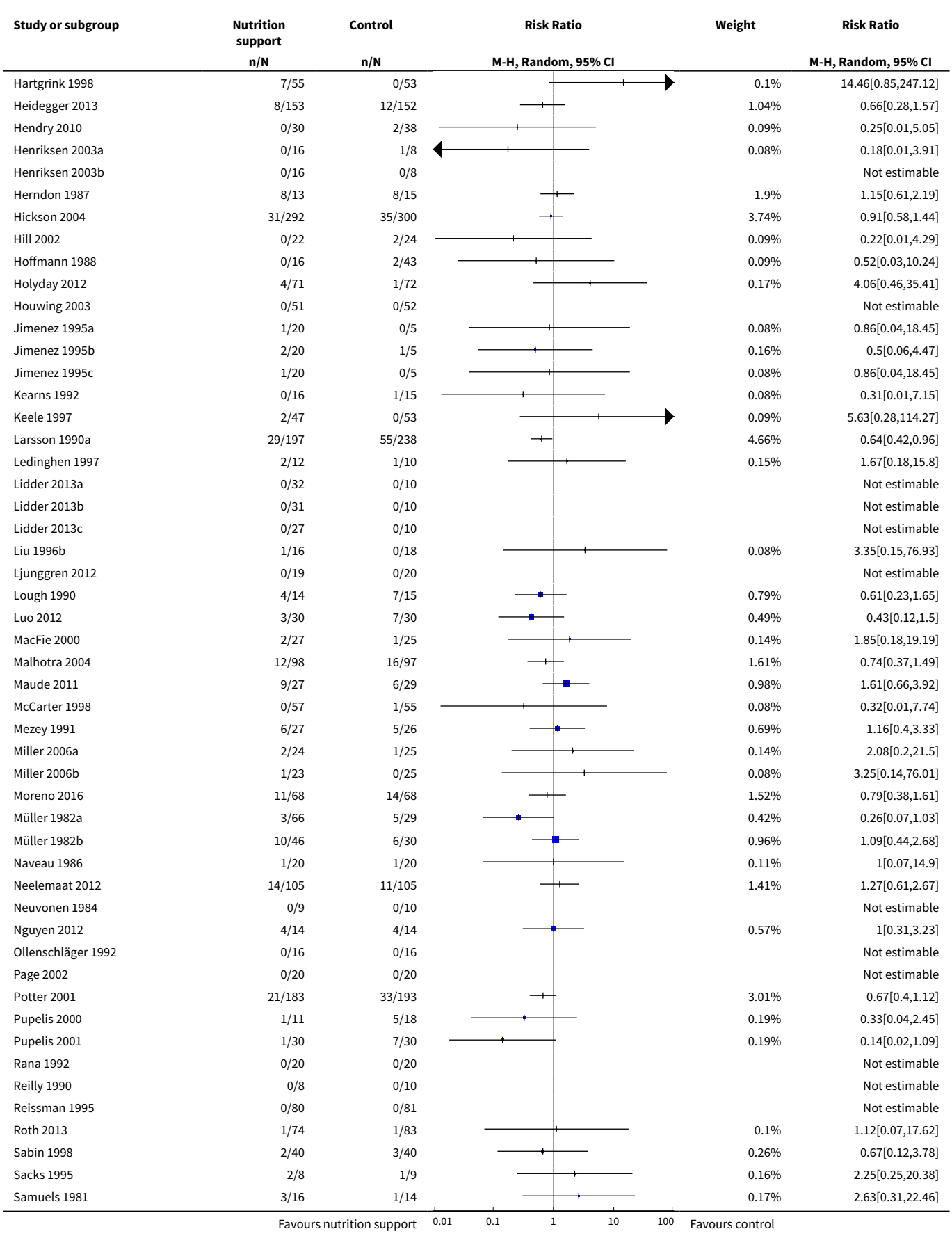


Analysis 1.6. Comparison 1 All-cause mortality - end of intervention, Outcome 6 All-cause mortality - different screening tools.





Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.59(P=0.56)					
1.6.4 SGA					
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Wu 2007a	3/215	2/108		0.25%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.25%	0.75[0.13,4.44]
Subtotal (95% CI)	**690**	**481**		**4.86%**	**1.41[0.94,2.1]**
Total events: 52 (Nutrition support), 35 (Control)					
Heterogeneity: Tau²=0; Chi²=1.07, df=2(P=0.59); I²=0%					
Test for overall effect: Z=1.68(P=0.09)					
1.6.5 Other means					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.73%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		0.36%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.93%	1.71[0.68,4.25]



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.49%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Miller 2006a	2/24	1/25		0.14%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.08%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.52%	0.79[0.38,1.61]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neelemaat 2012	14/105	11/105		1.41%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.57%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Potter 2001	21/183	33/193		3.01%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.1%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]

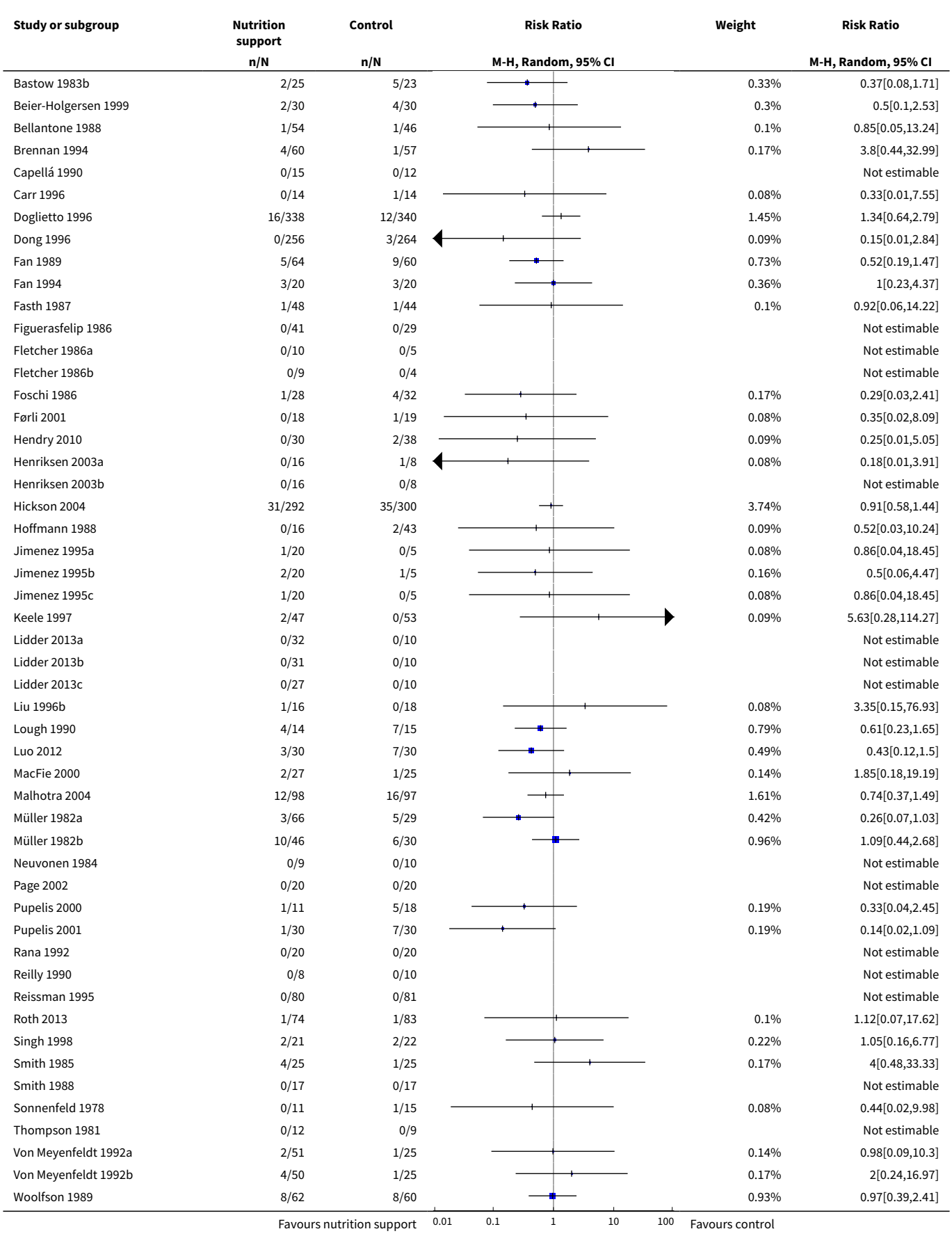
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Stein 2002	2/40	3/40		0.26%	0.67[0.12,3.78]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.08%	3.32[0.14,78.25]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.78%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.37%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]
Williams 1985	4/21	3/22		0.41%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.08%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.16%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	1/60	7/60		0.18%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.5%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.16%	0.57[0.25,1.29]
Subtotal (95% CI)	**7811**	**7595**		**78.19%**	**0.9[0.81,0.99]**
Total events: 619 (Nutrition support), 693 (Control)					
Heterogeneity: Tau^2=0; Chi^2=70.76, df=89(P=0.92); I^2=0%					
Test for overall effect: Z=2.13(P=0.03)					
Total (95% CI)	**11088**	**10670**		**100%**	**0.94[0.86,1.03]**
Total events: 831 (Nutrition support), 885 (Control)					
Heterogeneity: Tau^2=0; Chi^2=80.48, df=98(P=0.9); I^2=0%					
Test for overall effect: Z=1.4(P=0.16)					
Test for subgroup differences: Chi^2=5.87, df=1 (P=0.12), I^2=48.85%					

Favours nutrition support — Favours control

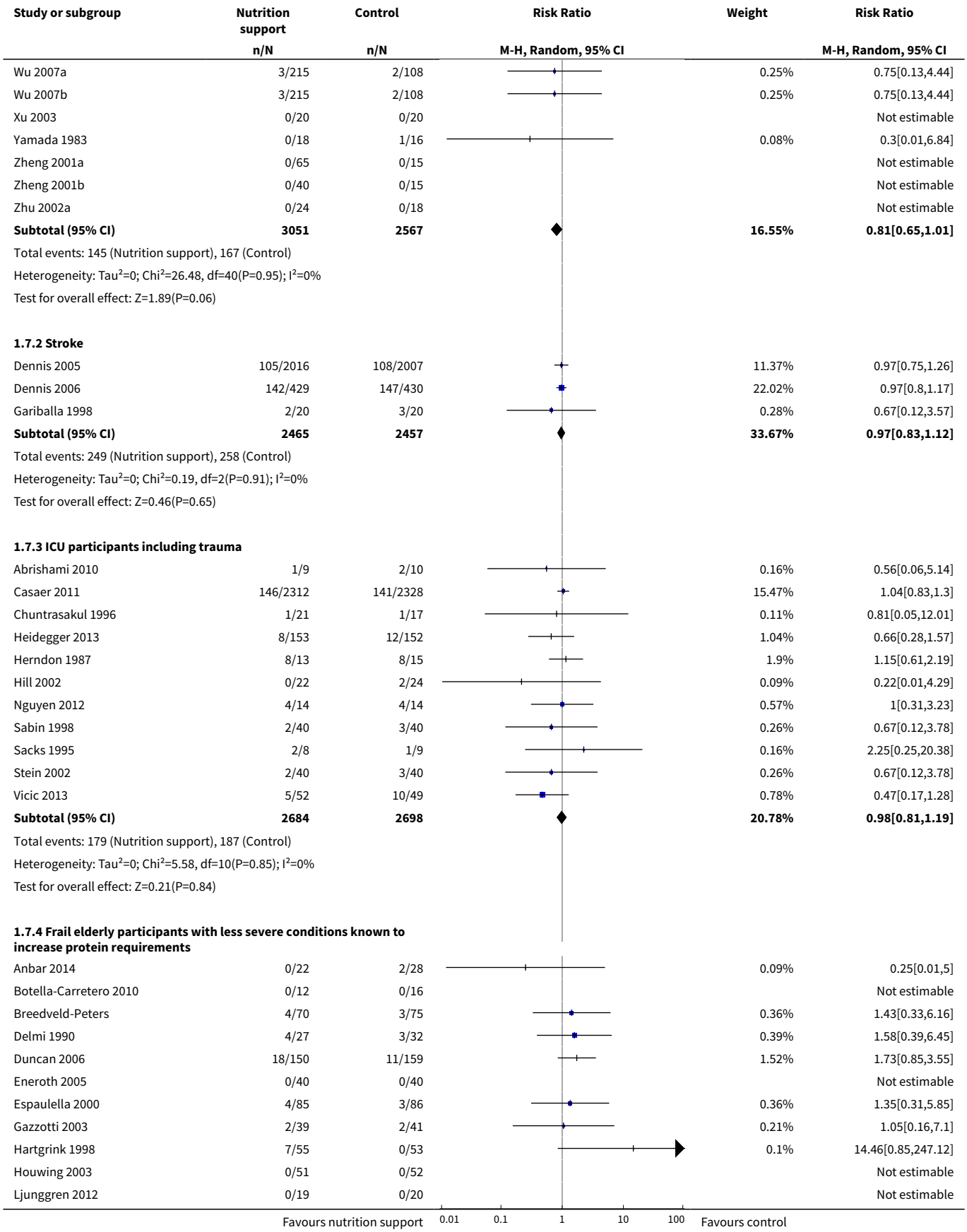
Analysis 1.7. Comparison 1 All-cause mortality - end of intervention, Outcome 7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
1.7.1 Major surgery					
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]

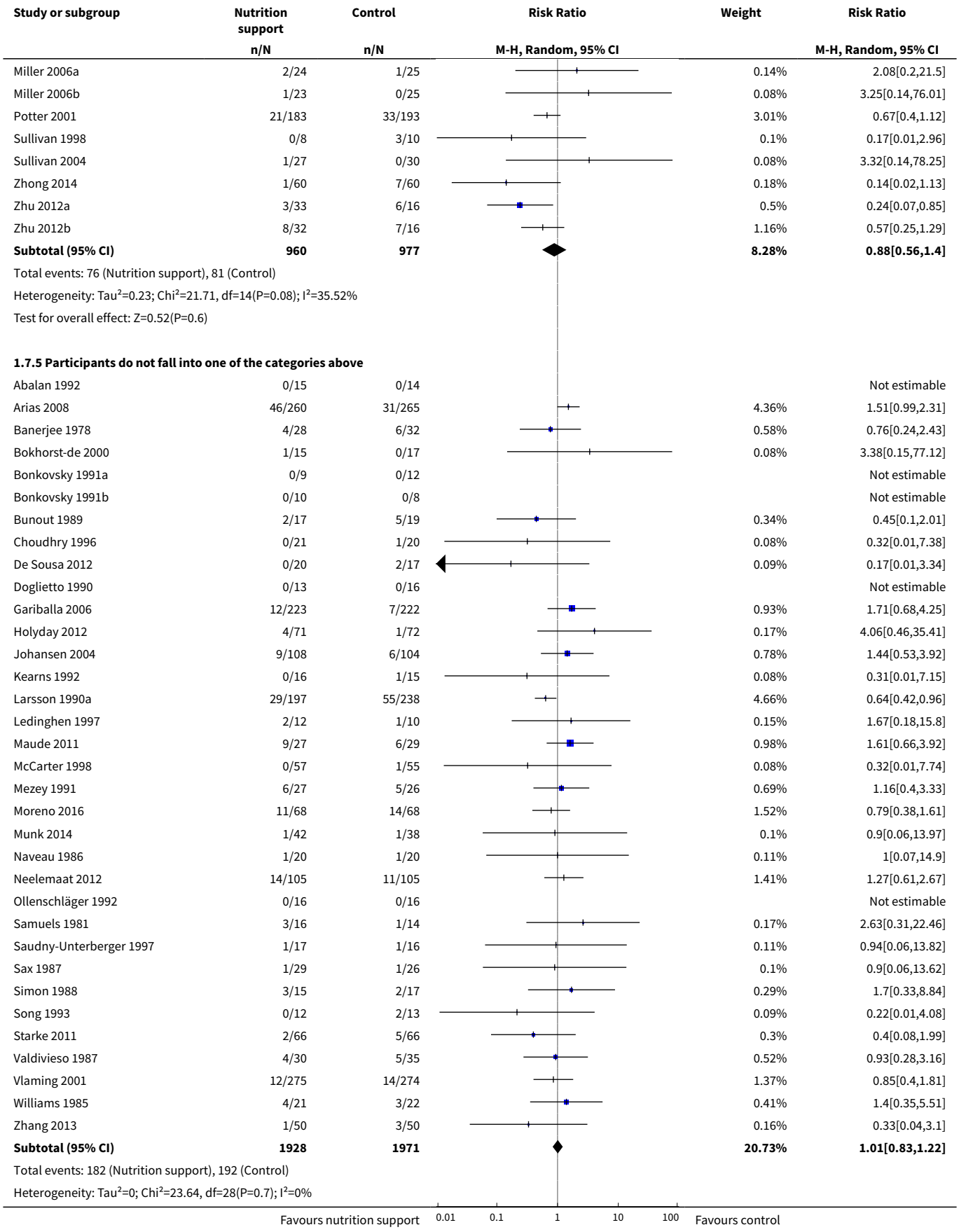
Favours nutrition support — Favours control



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Fan 1989	5/64	9/60		0.73%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		0.36%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.49%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.1%	1.12[0.07,17.62]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Thompson 1981	0/12	0/9			Not estimable
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Wu 2007a	3/215	2/108		0.25%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.25%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.08%	0.3[0.01,6.84]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**3051**	**2567**		**16.55%**	**0.81[0.65,1.01]**
Total events: 145 (Nutrition support), 167 (Control)					
Heterogeneity: Tau²=0; Chi²=26.48, df=40(P=0.95); I²=0%					
Test for overall effect: Z=1.89(P=0.06)					
1.7.2 Stroke					
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Subtotal (95% CI)	**2465**	**2457**		**33.67%**	**0.97[0.83,1.12]**
Total events: 249 (Nutrition support), 258 (Control)					
Heterogeneity: Tau²=0; Chi²=0.19, df=2(P=0.91); I²=0%					
Test for overall effect: Z=0.46(P=0.65)					
1.7.3 ICU participants including trauma					
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Nguyen 2012	4/14	4/14		0.57%	1[0.31,3.23]
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Stein 2002	2/40	3/40		0.26%	0.67[0.12,3.78]
Vicic 2013	5/52	10/49		0.78%	0.47[0.17,1.28]
Subtotal (95% CI)	**2684**	**2698**		**20.78%**	**0.98[0.81,1.19]**
Total events: 179 (Nutrition support), 187 (Control)					
Heterogeneity: Tau²=0; Chi²=5.58, df=10(P=0.85); I²=0%					
Test for overall effect: Z=0.21(P=0.84)					
1.7.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Gazzotti 2003	2/39	2/41		0.21%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Houwing 2003	0/51	0/52			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Miller 2006a	2/24	1/25		0.14%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.08%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		3.01%	0.67[0.4,1.12]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.08%	3.32[0.14,78.25]
Zhong 2014	1/60	7/60		0.18%	0.14[0.02,1.13]
Zhu 2012a	3/33	6/16		0.5%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.16%	0.57[0.25,1.29]
Subtotal (95% CI)	**960**	**977**		**8.28%**	**0.88[0.56,1.4]**
Total events: 76 (Nutrition support), 81 (Control)					
Heterogeneity: Tau²=0.23; Chi²=21.71, df=14(P=0.08); I²=35.52%					
Test for overall effect: Z=0.52(P=0.6)					
1.7.5 Participants do not fall into one of the categories above					
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
De Sousa 2012	0/20	2/17		0.09%	0.17[0.01,3.34]
Doglietto 1990	0/13	0/16			Not estimable
Gariballa 2006	12/223	7/222		0.93%	1.71[0.68,4.25]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]
Johansen 2004	9/108	6/104		0.78%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Moreno 2016	11/68	14/68		1.52%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.1%	0.9[0.06,13.97]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neelemaat 2012	14/105	11/105		1.41%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Starke 2011	2/66	5/66		0.3%	0.4[0.08,1.99]
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]
Vlaming 2001	12/275	14/274		1.37%	0.85[0.4,1.81]
Williams 1985	4/21	3/22		0.41%	1.4[0.35,5.51]
Zhang 2013	1/50	3/50		0.16%	0.33[0.04,3.1]
Subtotal (95% CI)	**1928**	**1971**		**20.73%**	**1.01[0.83,1.22]**
Total events: 182 (Nutrition support), 192 (Control)					
Heterogeneity: Tau²=0; Chi²=23.64, df=28(P=0.7); I²=0%					

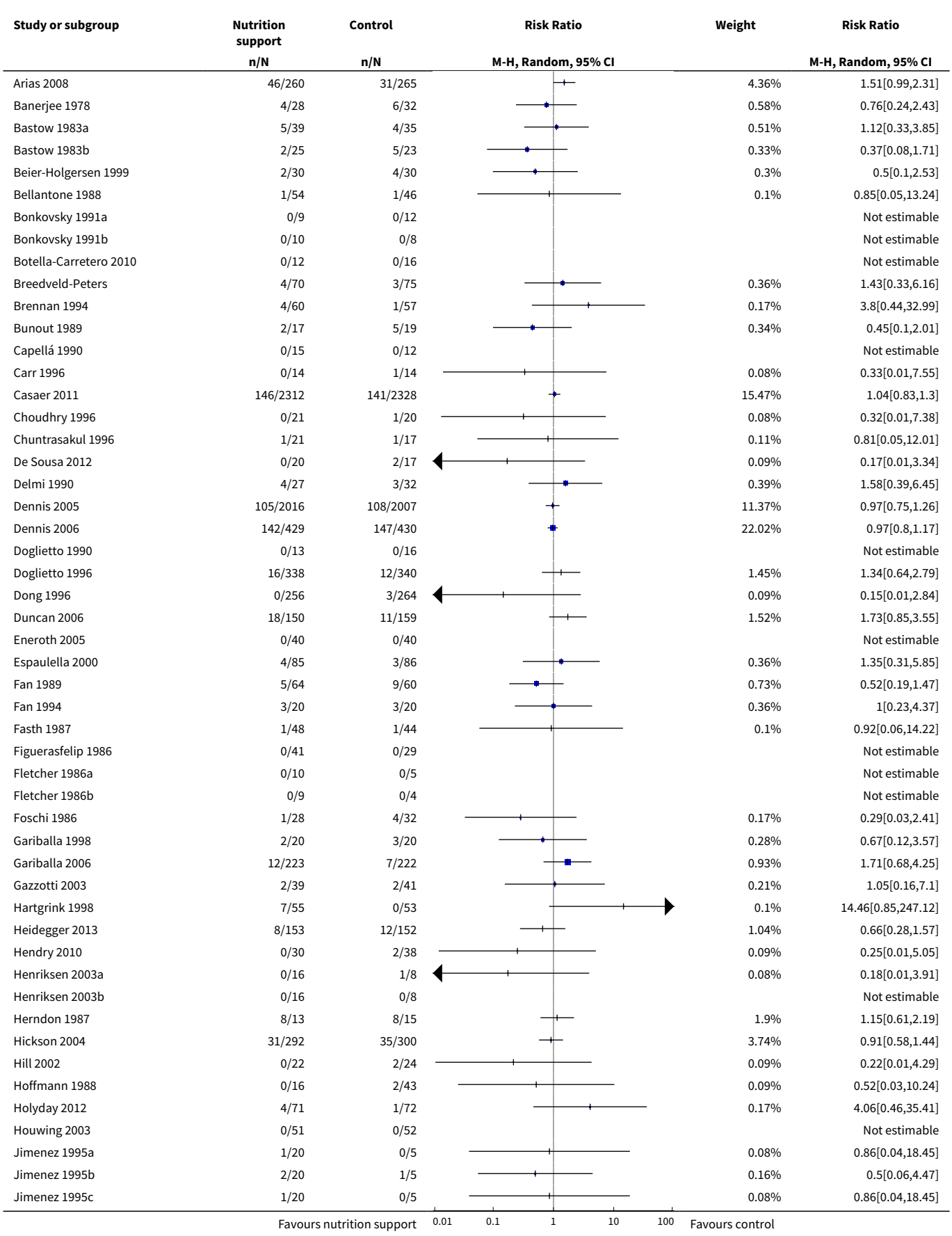
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.08(P=0.94)					
Total (95% CI)	**11088**	**10670**		**100%**	**0.94[0.86,1.03]**
Total events: 831 (Nutrition support), 885 (Control)					
Heterogeneity: Tau^2=0; Chi^2=80.48, df=98(P=0.9); I^2=0%					
Test for overall effect: Z=1.4(P=0.16)					
Test for subgroup differences: Chi^2=2.63, df=1 (P=0.62), I^2=0%					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 1.8. Comparison 1 All-cause mortality - end of intervention, Outcome 8 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria.

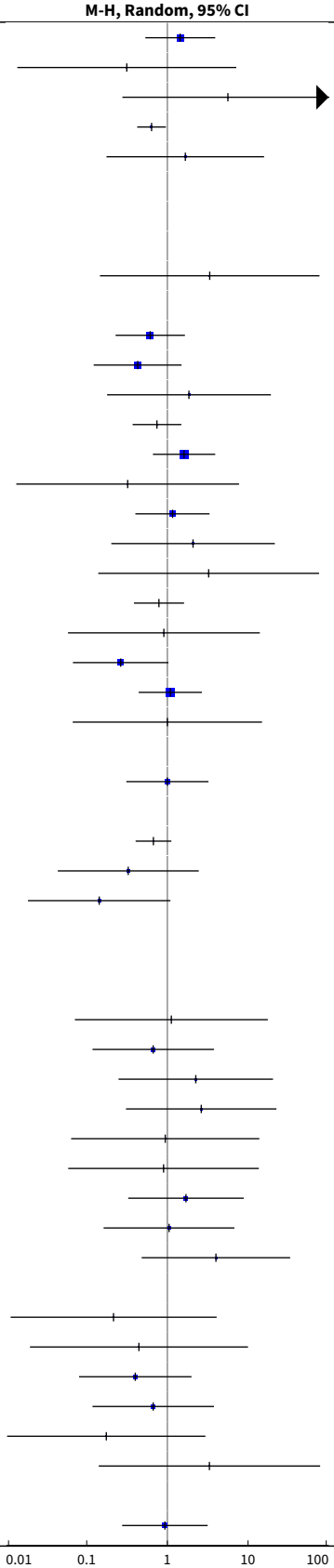
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
1.8.1 BMI less than 20.5 kg/m2					
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Neelemaat 2012	14/105	11/105		1.41%	1.27[0.61,2.67]
Subtotal (95% CI)	**123**	**124**		**1.49%**	**1.19[0.58,2.45]**
Total events: 14 (Nutrition support), 12 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.62, df=1(P=0.43); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					
1.8.2 Weight loss of at least 5% during the last three months					
Ollenschläger 1992	0/16	0/16			Not estimable
Subtotal (95% CI)	**16**	**16**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
1.8.3 Weight loss of at least 10% during the last six months					
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Subtotal (95% CI)	**15**	**17**		**0.08%**	**3.38[0.15,77.12]**
Total events: 1 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.76(P=0.45)					
1.8.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
1.8.5 Participants characterised as 'at nutritional risk' by other means					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]

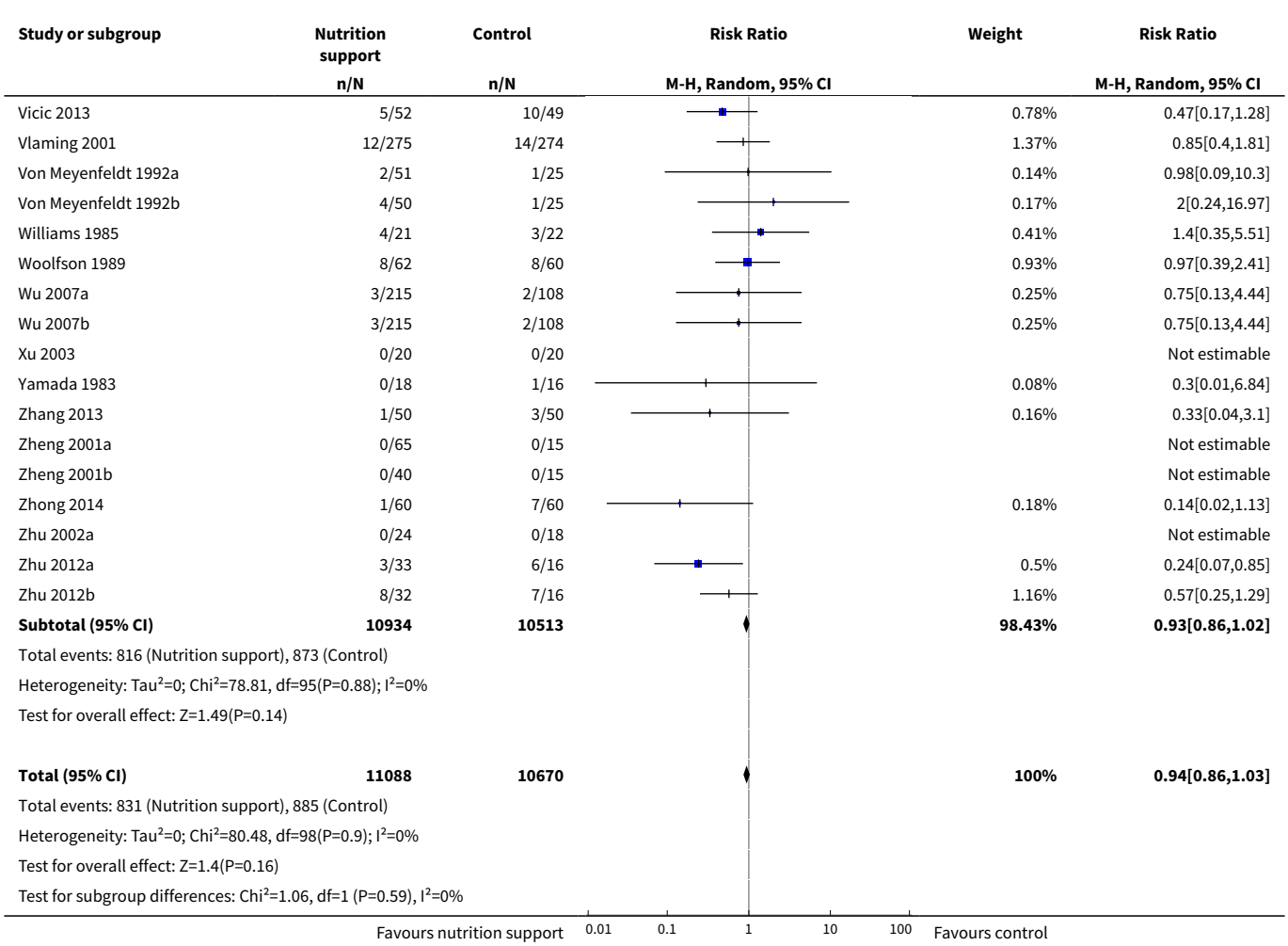
Favours nutrition support 0.01 0.1 1 10 100 Favours control



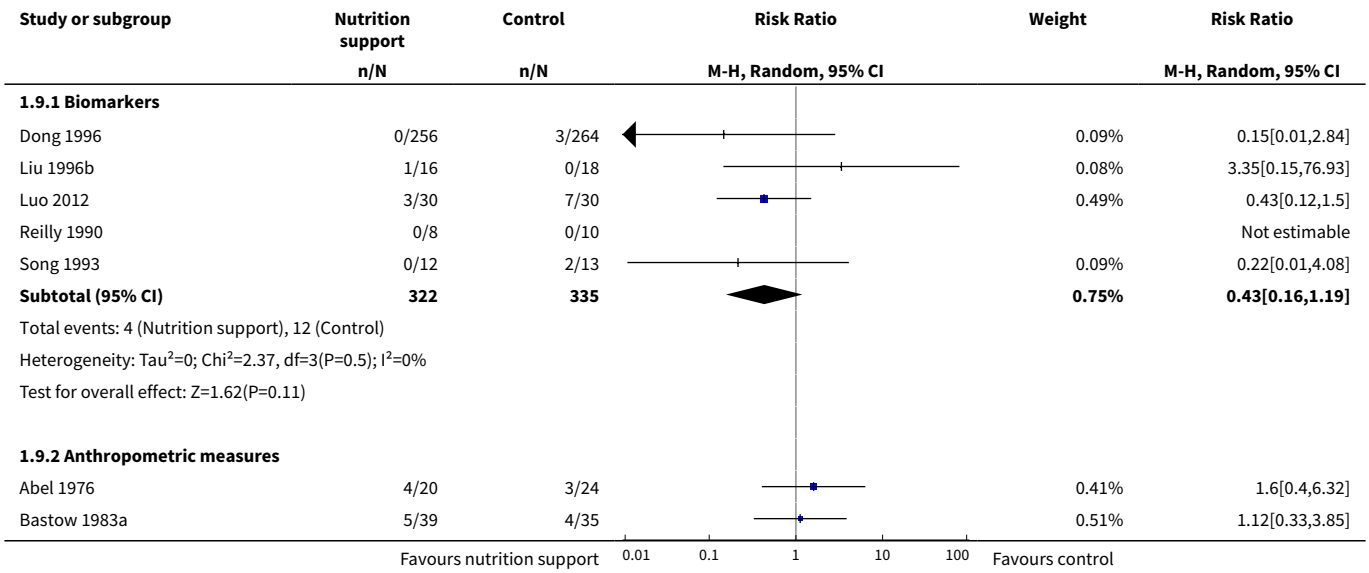
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.09%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.73%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		0.36%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.93%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.21%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]

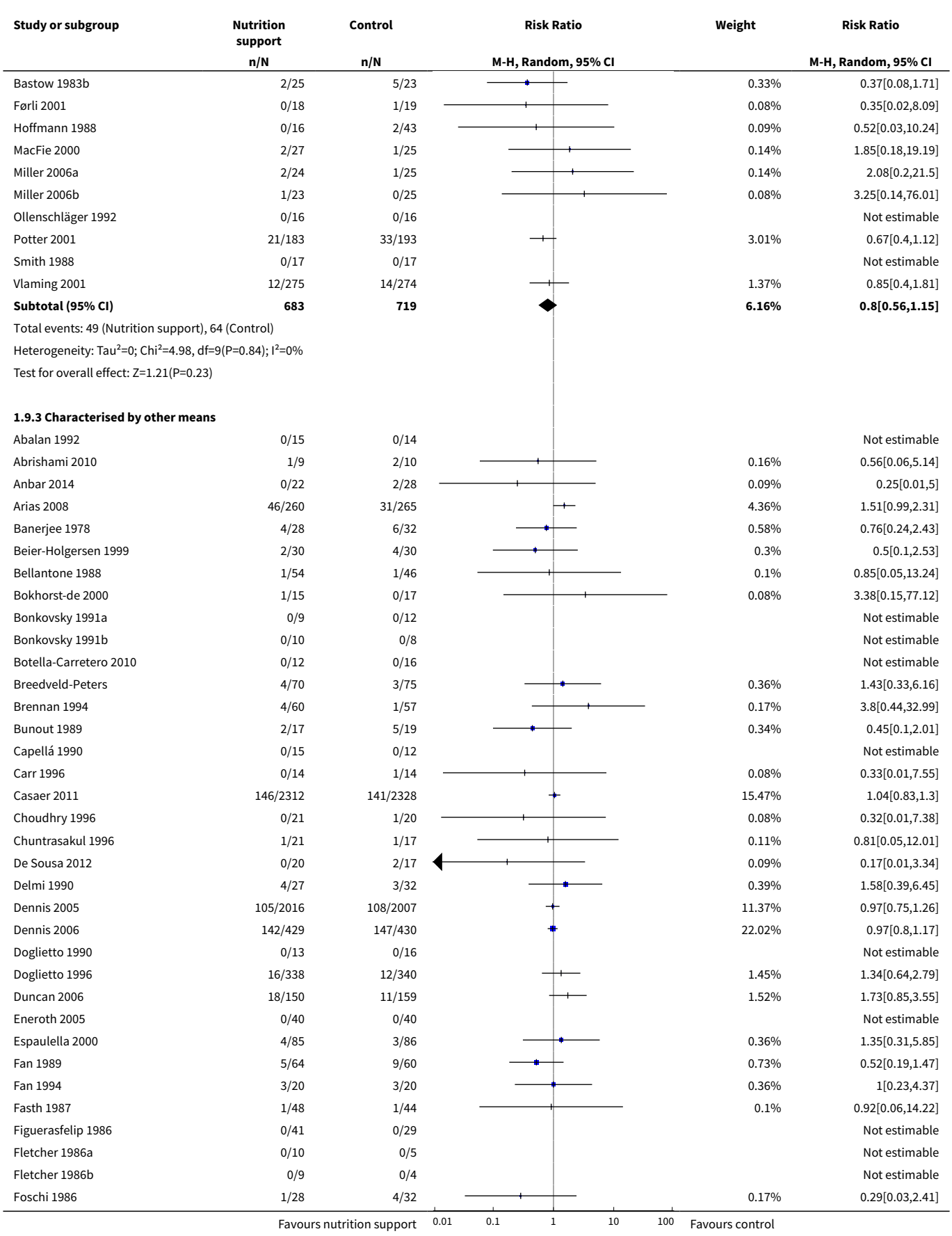
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Johansen 2004	9/108	6/104		0.78%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.49%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Miller 2006a	2/24	1/25		0.14%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.08%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.52%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.1%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.57%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Potter 2001	21/183	33/193		3.01%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.1%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Starke 2011	2/66	5/66		0.3%	0.4[0.08,1.99]
Stein 2002	2/40	3/40		0.26%	0.67[0.12,3.78]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.08%	3.32[0.14,78.25]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]



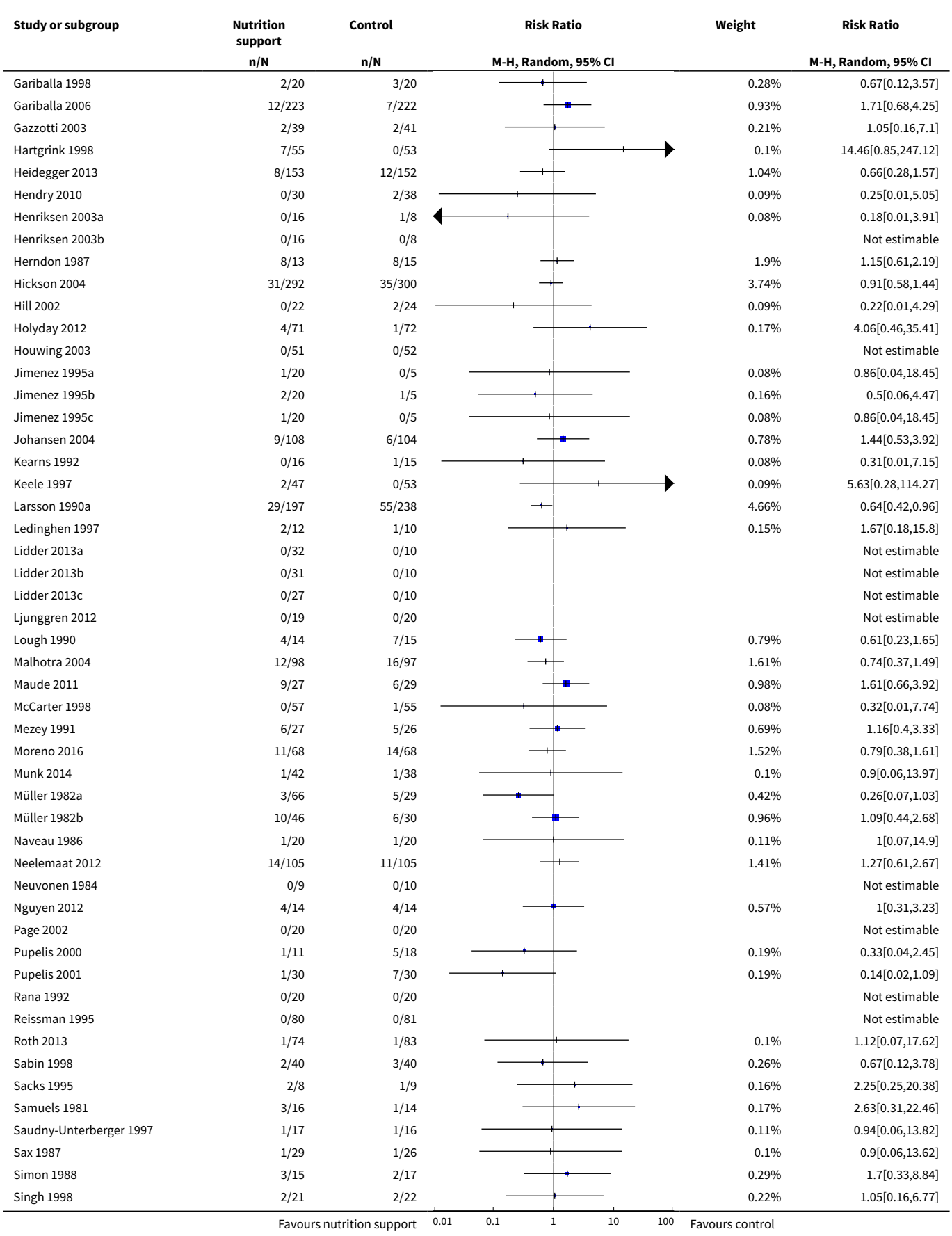


Analysis 1.9. Comparison 1 All-cause mortality - end of intervention, Outcome 9 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

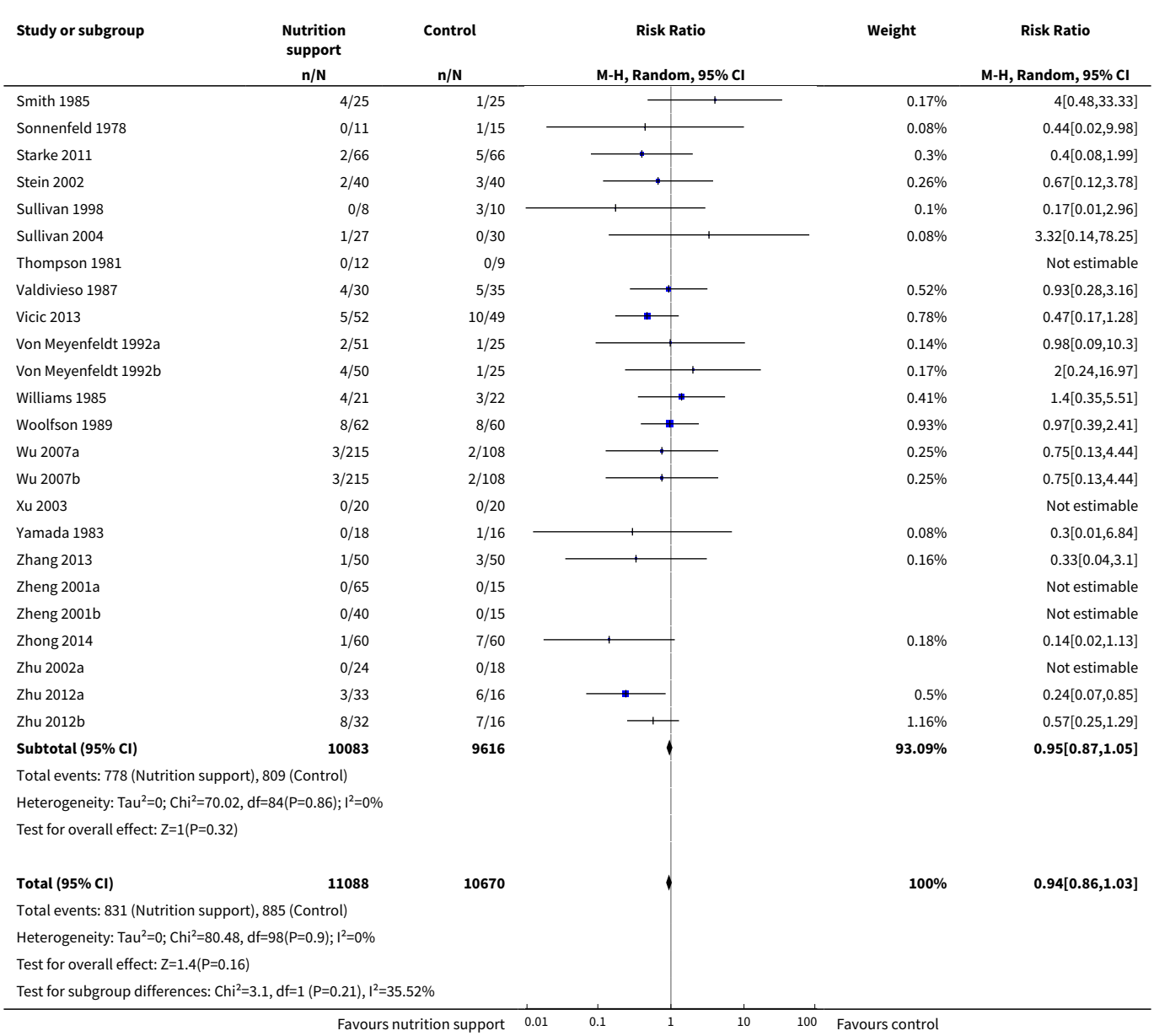




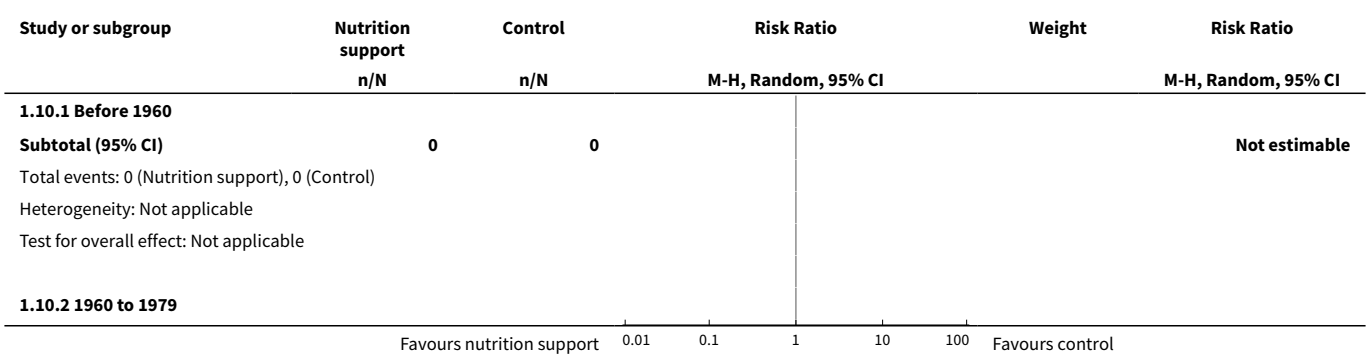
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.14%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.08%	3.25[0.14,76.01]
Ollenschläger 1992	0/16	0/16			Not estimable
Potter 2001	21/183	33/193		3.01%	0.67[0.4,1.12]
Smith 1988	0/17	0/17			Not estimable
Vlaming 2001	12/275	14/274		1.37%	0.85[0.4,1.81]
Subtotal (95% CI)	**683**	**719**		**6.16%**	**0.8[0.56,1.15]**
Total events: 49 (Nutrition support), 64 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.98, df=9(P=0.84); I^2=0%					
Test for overall effect: Z=1.21(P=0.23)					
1.9.3 Characterised by other means					
Abalan 1992	0/15	0/14			Not estimable
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.09%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.73%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		0.36%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]

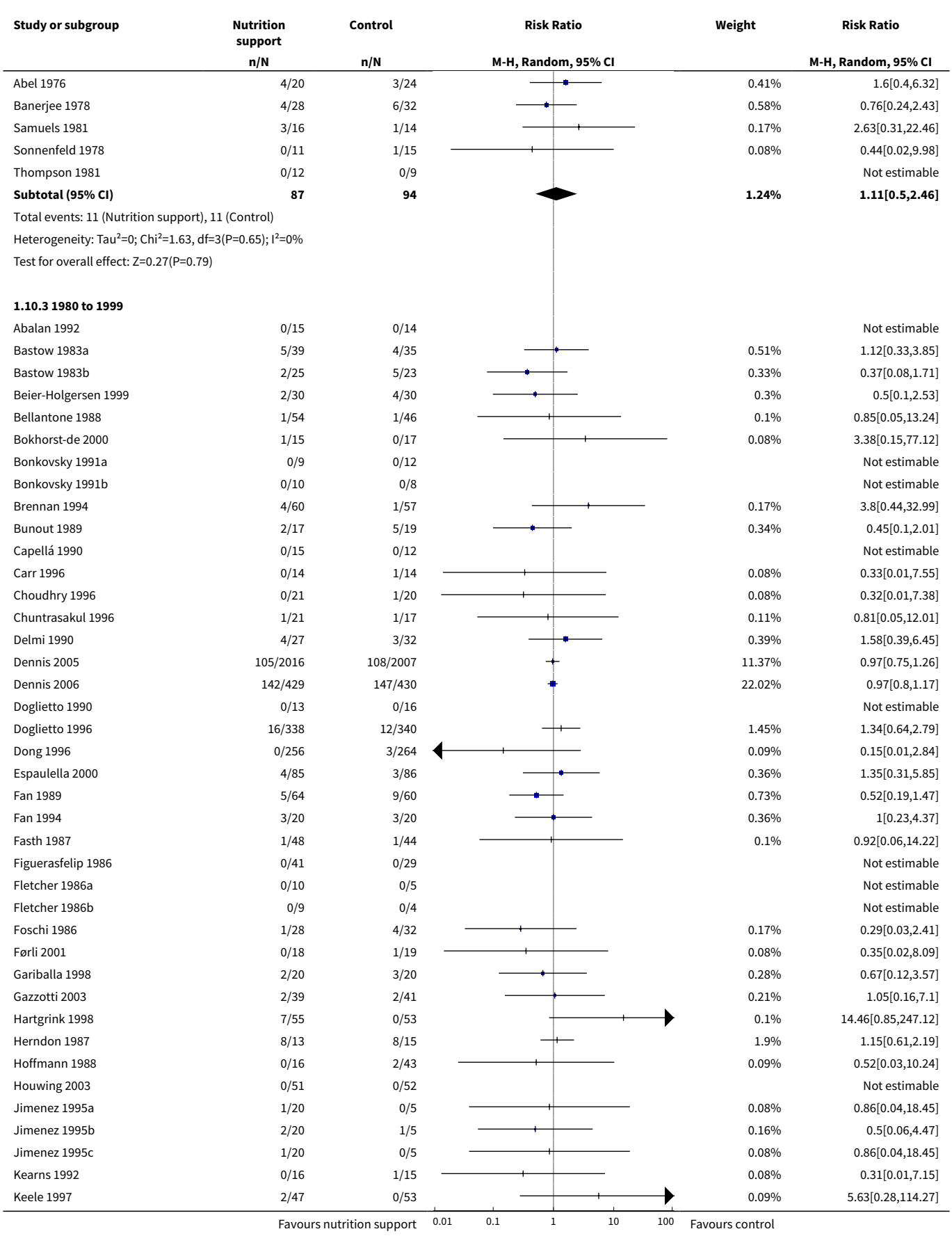


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.93%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.21%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Johansen 2004	9/108	6/104		0.78%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Moreno 2016	11/68	14/68		1.52%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.1%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neelemaat 2012	14/105	11/105		1.41%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.57%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.1%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]



Analysis 1.10. Comparison 1 All-cause mortality - end of intervention, Outcome 10 All-cause mortality - randomisation year.

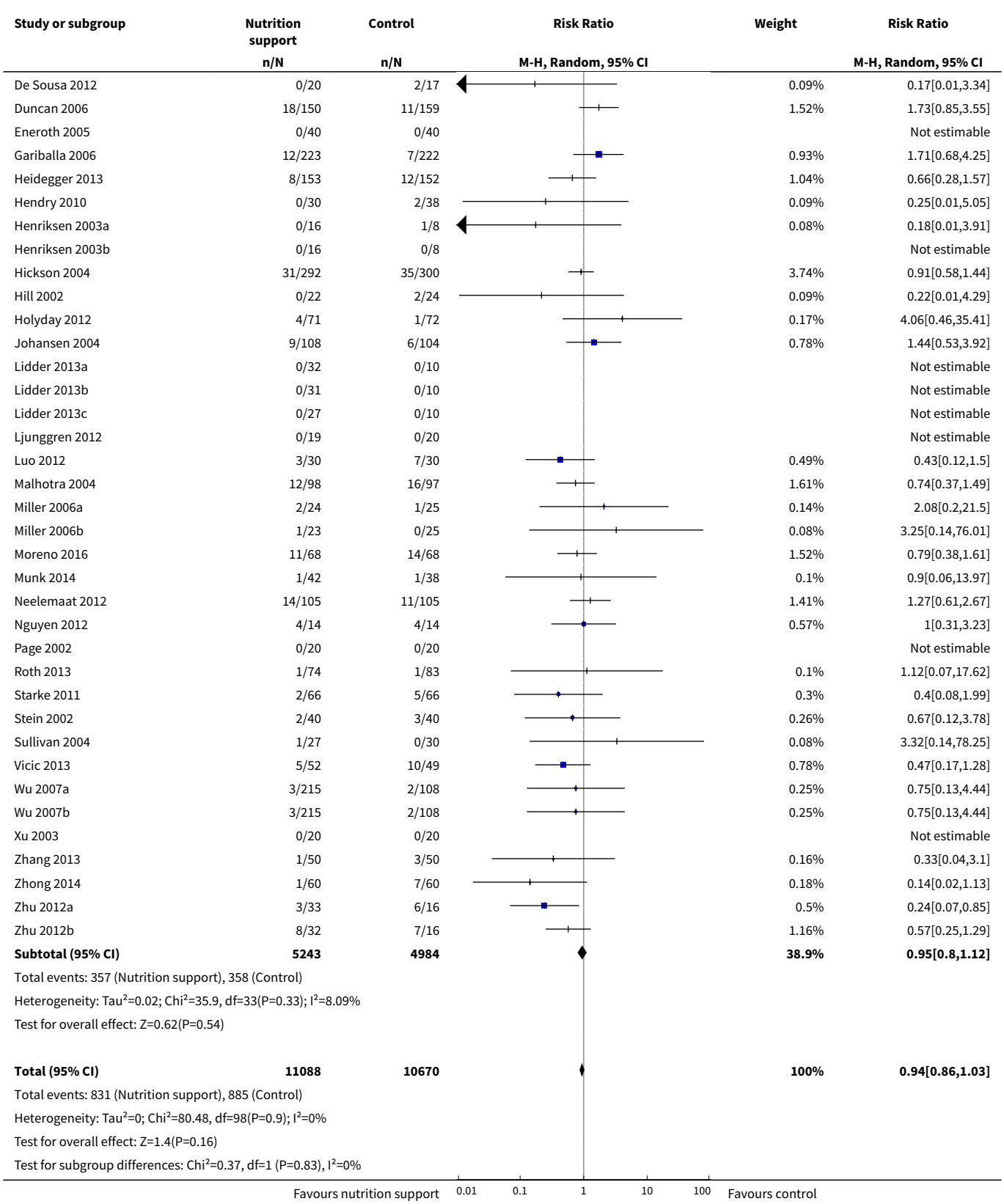




Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Thompson 1981	0/12	0/9			Not estimable
Subtotal (95% CI)	**87**	**94**		**1.24%**	**1.11[0.5,2.46]**
Total events: 11 (Nutrition support), 11 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.63, df=3(P=0.65); I^2=0%					
Test for overall effect: Z=0.27(P=0.79)					
1.10.3 1980 to 1999					
Abalan 1992	0/15	0/14			Not estimable
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.73%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		0.36%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gazzotti 2003	2/39	2/41		0.21%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]

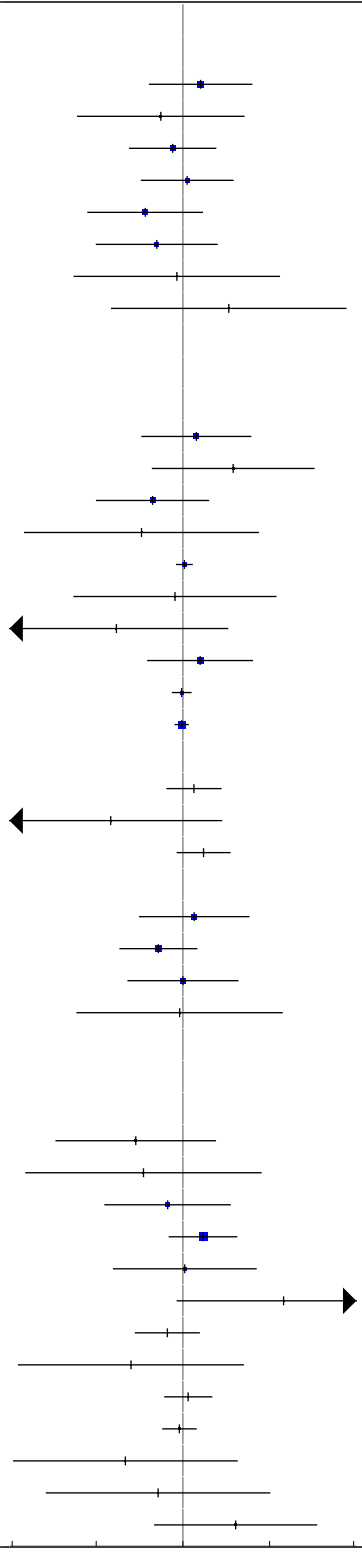
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Ollenschläger 1992	0/16	0/16			Not estimable
Potter 2001	21/183	33/193		3.01%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]
Vlaming 2001	12/275	14/274		1.37%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]
Williams 1985	4/21	3/22		0.41%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]
Yamada 1983	0/18	1/16		0.08%	0.3[0.01,6.84]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**5758**	**5592**		**59.86%**	**0.91[0.81,1.02]**
Total events: 463 (Nutrition support), 516 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.1, df=60(P=0.96); I^2=0%					
Test for overall effect: Z=1.64(P=0.1)					
1.10.4 After 1999					
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]

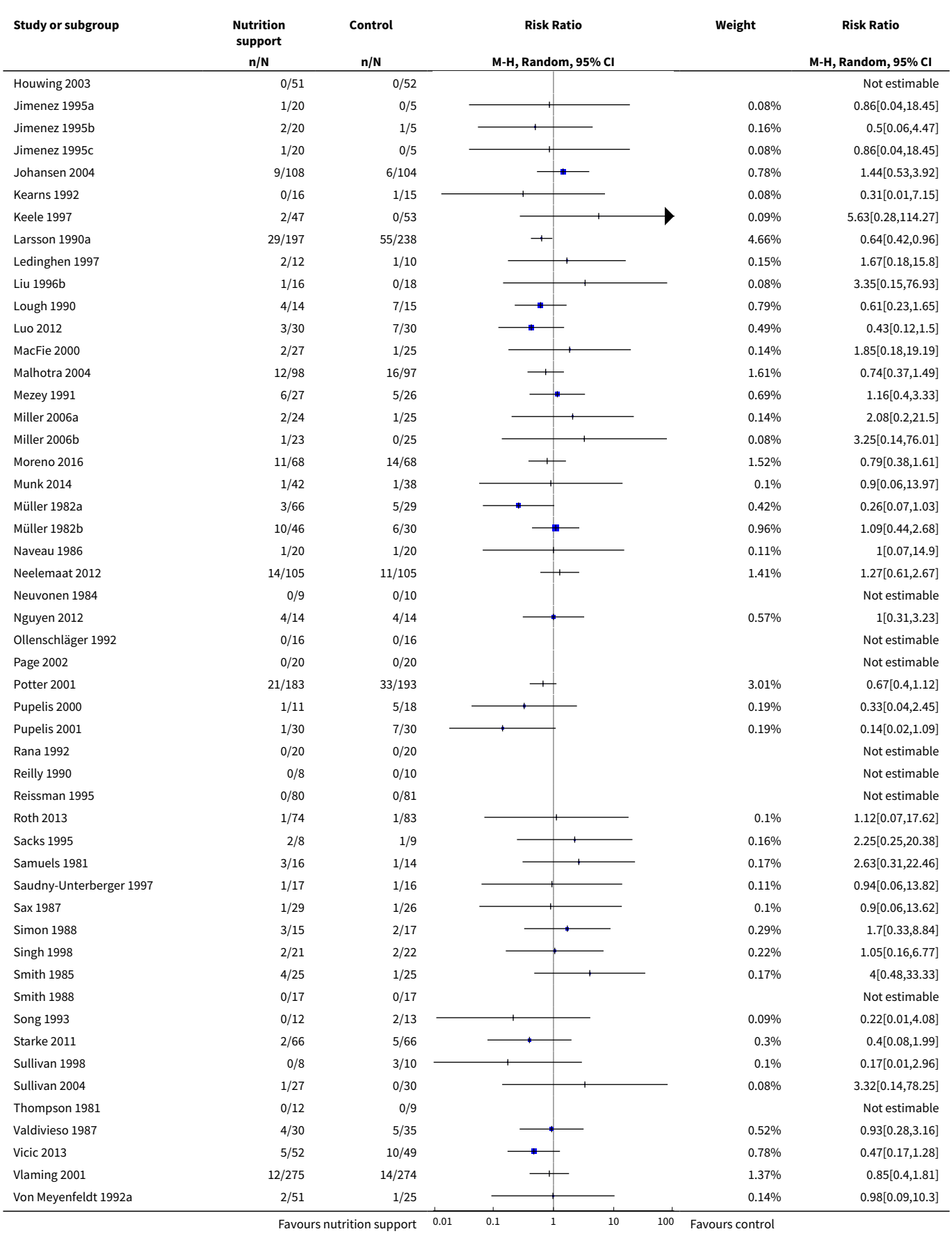
Favours nutrition support — Favours control



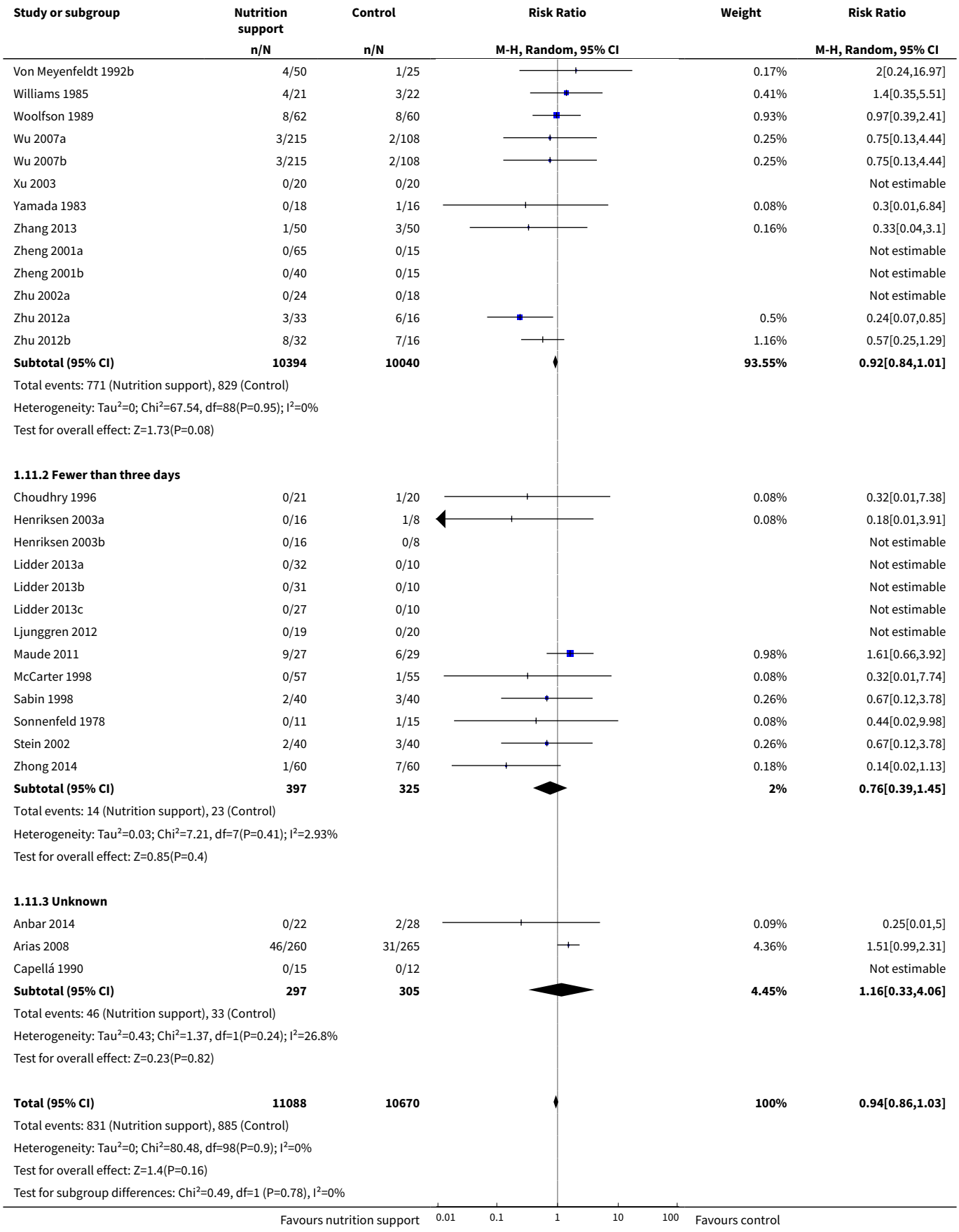
Analysis 1.11. Comparison 1 All-cause mortality - end of intervention, Outcome 11 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
1.11.1 Three days or more					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.41%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Banerjee 1978	4/28	6/32		0.58%	0.76[0.24,2.43]
Bastow 1983a	5/39	4/35		0.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.33%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.3%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.1%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.08%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.36%	1.43[0.33,6.16]
Brennan 1994	4/60	1/57		0.17%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.34%	0.45[0.1,2.01]
Carr 1996	0/14	1/14		0.08%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		15.47%	1.04[0.83,1.3]
Chuntrasakul 1996	1/21	1/17		0.11%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.09%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.39%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		11.37%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		22.02%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.45%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.09%	0.15[0.01,2.84]
Duncan 2006	18/150	11/159		1.52%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.36%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.73%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		0.36%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.17%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.93%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.21%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.1%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		1.04%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.09%	0.25[0.01,5.05]
Herndon 1987	8/13	8/15		1.9%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.74%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.09%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Holyday 2012	4/71	1/72		0.17%	4.06[0.46,35.41]





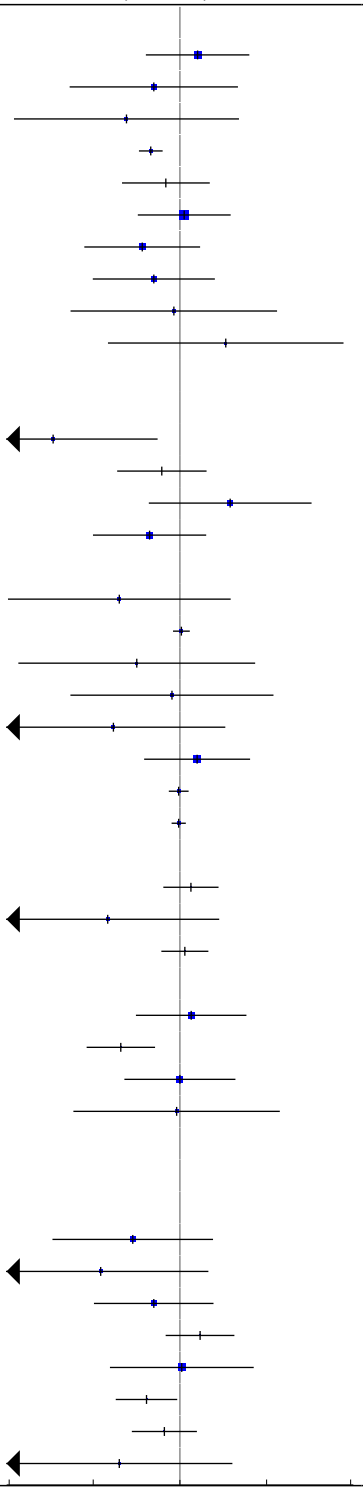
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.16%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Johansen 2004	9/108	6/104		0.78%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.08%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.09%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		4.66%	0.64[0.42,0.96]
Ledinghen 1997	2/12	1/10		0.15%	1.67[0.18,15.8]
Liu 1996b	1/16	0/18		0.08%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.79%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.49%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.14%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.61%	0.74[0.37,1.49]
Mezey 1991	6/27	5/26		0.69%	1.16[0.4,3.33]
Miller 2006a	2/24	1/25		0.14%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.08%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.52%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.1%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.42%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.96%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neelemaat 2012	14/105	11/105		1.41%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.57%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Potter 2001	21/183	33/193		3.01%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.19%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.19%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.1%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.17%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.11%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.29%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.17%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Starke 2011	2/66	5/66		0.3%	0.4[0.08,1.99]
Sullivan 1998	0/8	3/10		0.1%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.08%	3.32[0.14,78.25]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.78%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.37%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]

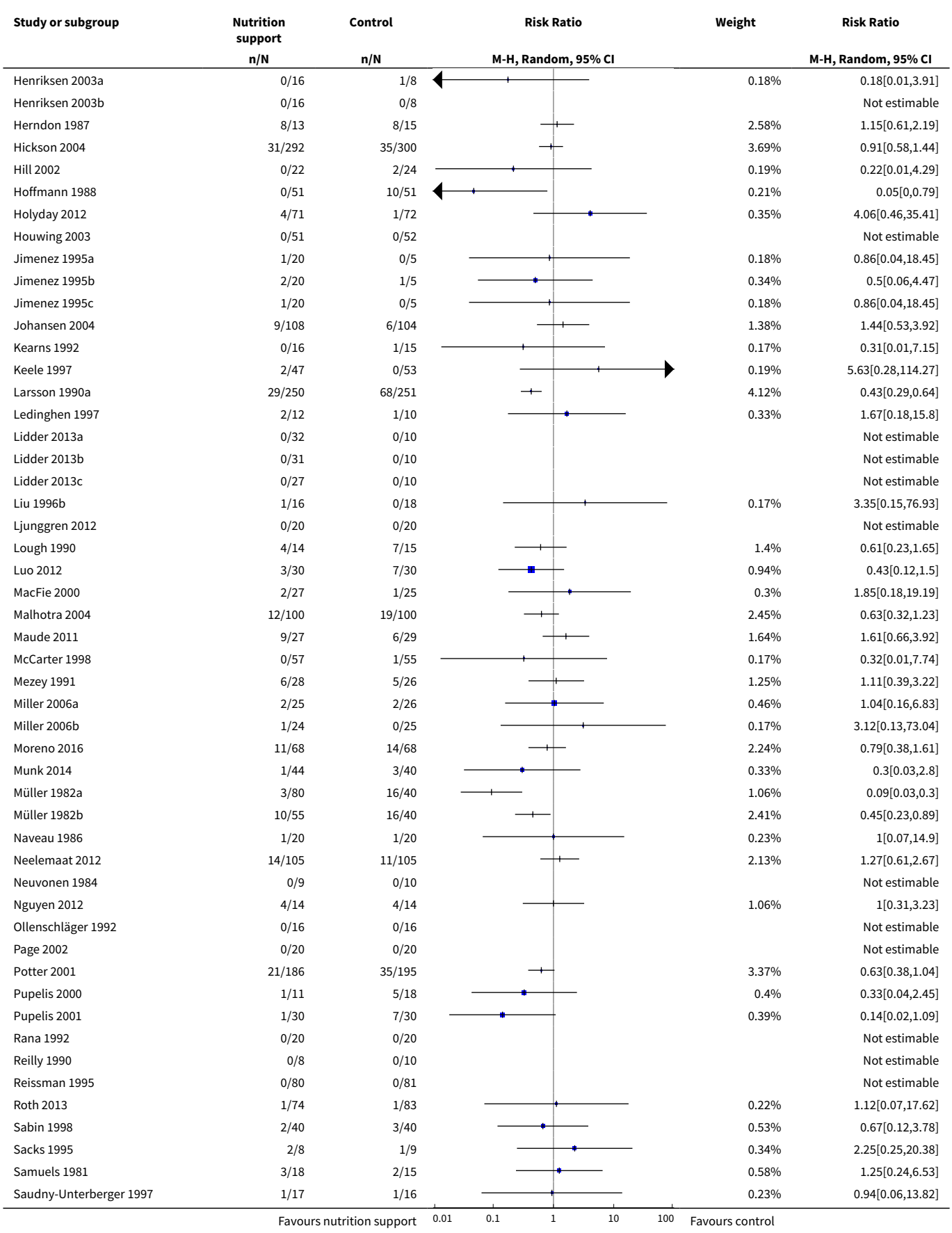


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Von Meyenfeldt 1992b	4/50	1/25		0.17%	2[0.24,16.97]
Williams 1985	4/21	3/22		0.41%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.93%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.25%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.25%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.08%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.16%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.5%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.16%	0.57[0.25,1.29]
Subtotal (95% CI)	**10394**	**10040**		**93.55%**	**0.92[0.84,1.01]**
Total events: 771 (Nutrition support), 829 (Control)					
Heterogeneity: Tau²=0; Chi²=67.54, df=88(P=0.95); I²=0%					
Test for overall effect: Z=1.73(P=0.08)					
1.11.2 Fewer than three days					
Choudhry 1996	0/21	1/20		0.08%	0.32[0.01,7.38]
Henriksen 2003a	0/16	1/8		0.08%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Maude 2011	9/27	6/29		0.98%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.08%	0.32[0.01,7.74]
Sabin 1998	2/40	3/40		0.26%	0.67[0.12,3.78]
Sonnenfeld 1978	0/11	1/15		0.08%	0.44[0.02,9.98]
Stein 2002	2/40	3/40		0.26%	0.67[0.12,3.78]
Zhong 2014	1/60	7/60		0.18%	0.14[0.02,1.13]
Subtotal (95% CI)	**397**	**325**		**2%**	**0.76[0.39,1.45]**
Total events: 14 (Nutrition support), 23 (Control)					
Heterogeneity: Tau²=0.03; Chi²=7.21, df=7(P=0.41); I²=2.93%					
Test for overall effect: Z=0.85(P=0.4)					
1.11.3 Unknown					
Anbar 2014	0/22	2/28		0.09%	0.25[0.01,5]
Arias 2008	46/260	31/265		4.36%	1.51[0.99,2.31]
Capellá 1990	0/15	0/12			Not estimable
Subtotal (95% CI)	**297**	**305**		**4.45%**	**1.16[0.33,4.06]**
Total events: 46 (Nutrition support), 33 (Control)					
Heterogeneity: Tau²=0.43; Chi²=1.37, df=1(P=0.24); I²=26.8%					
Test for overall effect: Z=0.23(P=0.82)					
Total (95% CI)	**11088**	**10670**		**100%**	**0.94[0.86,1.03]**
Total events: 831 (Nutrition support), 885 (Control)					
Heterogeneity: Tau²=0; Chi²=80.48, df=98(P=0.9); I²=0%					
Test for overall effect: Z=1.4(P=0.16)					
Test for subgroup differences: Chi²=0.49, df=1 (P=0.78), I²=0%					

Analysis 1.12. Comparison 1 All-cause mortality - end of intervention, Outcome 12 All-cause mortality - 'best-worst case' scenario.

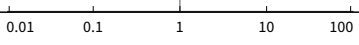
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.81%	1.6[0.4,6.32]
Abrishami 2010	1/10	2/10		0.33%	0.5[0.05,4.67]
Anbar 2014	0/23	2/28		0.19%	0.24[0.01,4.8]
Arias 2008	46/333	100/334		4.8%	0.46[0.34,0.63]
Banerjee 1978	4/31	6/32		1.07%	0.69[0.21,2.21]
Bastow 1983a	5/39	4/35		0.97%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.66%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.6%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.22%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.17%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/30	14/30		0.22%	0.03[0,0.55]
Breedveld-Peters	4/73	7/79		1.04%	0.62[0.19,2.03]
Brennan 1994	4/60	1/57		0.35%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.69%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/15	2/15		0.19%	0.2[0.01,3.85]
Casaer 2011	146/2312	141/2328		5.55%	1.04[0.83,1.3]
Choudhry 1996	0/21	1/20		0.17%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.23%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.19%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.77%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		5.25%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		5.83%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		2.17%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.19%	0.15[0.01,2.84]
Duncan 2006	18/153	17/165		2.65%	1.14[0.61,2.13]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.72%	1.35[0.31,5.85]
Fan 1989	5/75	24/75		1.59%	0.21[0.08,0.52]
Fan 1994	3/20	3/20		0.71%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.22%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.36%	0.29[0.03,2.41]
Førli 2001	0/20	4/22		0.2%	0.12[0.01,2.13]
Gariballa 1998	2/21	4/21		0.62%	0.5[0.1,2.44]
Gariballa 2006	12/223	7/222		1.58%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.44%	1.05[0.16,7.1]
Hartgrink 1998	7/70	17/70		1.87%	0.41[0.18,0.93]
Heidegger 2013	8/153	12/152		1.71%	0.66[0.28,1.57]
Hendry 2010	0/38	2/38		0.19%	0.2[0.01,4.03]





Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Henriksen 2003a	0/16	1/8		0.18%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		2.58%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.69%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.19%	0.22[0.01,4.29]
Hoffmann 1988	0/51	10/51		0.21%	0.05[0,0.79]
Holyday 2012	4/71	1/72		0.35%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.18%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.34%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.18%	0.86[0.04,18.45]
Johansen 2004	9/108	6/104		1.38%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.17%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.19%	5.63[0.28,114.27]
Larsson 1990a	29/250	68/251		4.12%	0.43[0.29,0.64]
Ledinghen 1997	2/12	1/10		0.33%	1.67[0.18,15.8]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.17%	3.35[0.15,76.93]
Ljunggren 2012	0/20	0/20			Not estimable
Lough 1990	4/14	7/15		1.4%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.94%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.3%	1.85[0.18,19.19]
Malhotra 2004	12/100	19/100		2.45%	0.63[0.32,1.23]
Maude 2011	9/27	6/29		1.64%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.17%	0.32[0.01,7.74]
Mezey 1991	6/28	5/26		1.25%	1.11[0.39,3.22]
Miller 2006a	2/25	2/26		0.46%	1.04[0.16,6.83]
Miller 2006b	1/24	0/25		0.17%	3.12[0.13,73.04]
Moreno 2016	11/68	14/68		2.24%	0.79[0.38,1.61]
Munk 2014	1/44	3/40		0.33%	0.3[0.03,2.8]
Müller 1982a	3/80	16/40		1.06%	0.09[0.03,0.3]
Müller 1982b	10/55	16/40		2.41%	0.45[0.23,0.89]
Naveau 1986	1/20	1/20		0.23%	1[0.07,14.9]
Neelemaat 2012	14/105	11/105		2.13%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		1.06%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Potter 2001	21/186	35/195		3.37%	0.63[0.38,1.04]
Pupelis 2000	1/11	5/18		0.4%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.39%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.22%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.53%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.34%	2.25[0.25,20.38]
Samuels 1981	3/18	2/15		0.58%	1.25[0.24,6.53]
Saudny-Unterberger 1997	1/17	1/16		0.23%	0.94[0.06,13.82]

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sax 1987	1/29	1/26		0.23%	0.9[0.06,13.62]
Simon 1988	3/16	3/18		0.73%	1.13[0.26,4.8]
Singh 1998	2/21	2/22		0.46%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.36%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.19%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.17%	0.44[0.02,9.98]
Starke 2011	2/67	6/67		0.64%	0.33[0.07,1.59]
Stein 2002	2/40	3/40		0.53%	0.67[0.12,3.78]
Sullivan 1998	0/8	3/10		0.21%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.17%	3.32[0.14,78.25]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		0.99%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		1.37%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		2.09%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.3%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.36%	2[0.24,16.97]
Williams 1985	4/21	3/22		0.81%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		1.58%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.51%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.51%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.17%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.33%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	1/60	7/60		0.38%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.95%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.86%	0.57[0.25,1.29]
Total (95% CI)	**11354**	**10853**		**100%**	**0.74[0.65,0.84]**
Total events: 831 (Nutrition support), 1068 (Control)					
Heterogeneity: Tau²=0.07; Chi²=131.96, df=99(P=0.02); I²=24.98%					
Test for overall effect: Z=4.48(P<0.0001)					

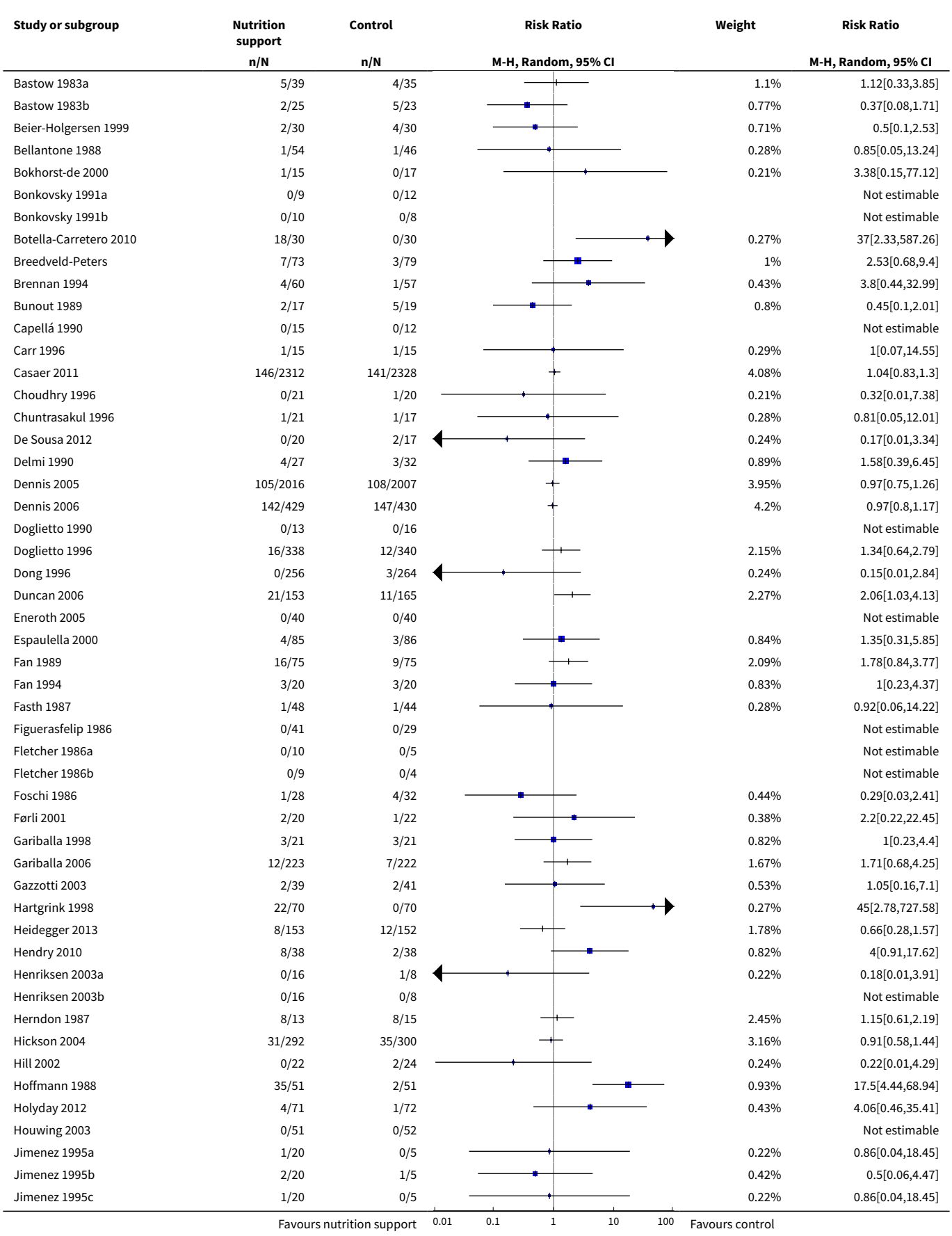


Favours nutrition support — Favours control

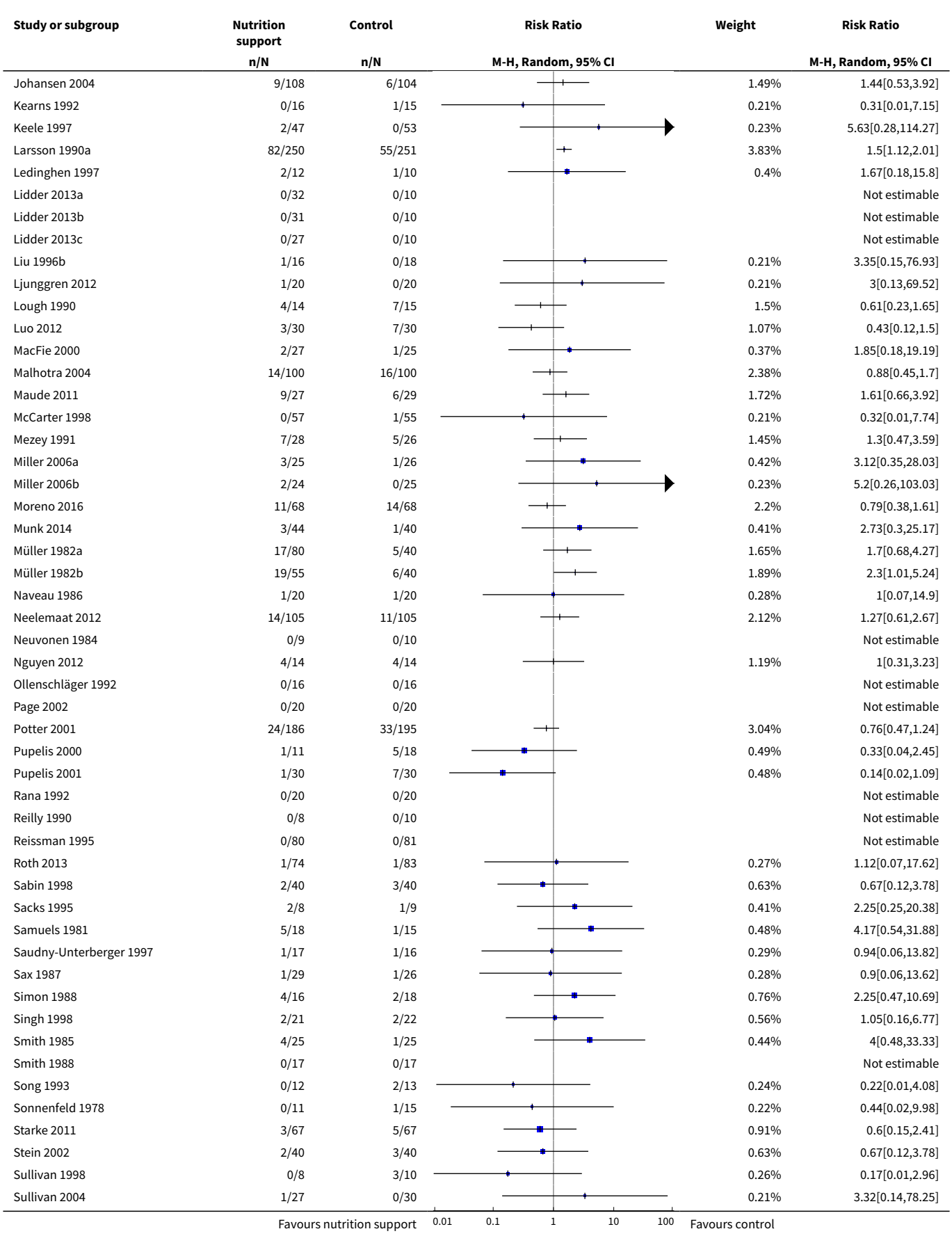
Analysis 1.13. Comparison 1 All-cause mortality - end of intervention, Outcome 13 All-cause mortality - 'worst-best case' scenario.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.93%	1.6[0.4,6.32]
Abrishami 2010	2/10	2/10		0.62%	1[0.17,5.77]
Anbar 2014	1/23	2/28		0.37%	0.61[0.06,6.3]
Arias 2008	119/333	31/334		3.54%	3.85[2.67,5.55]
Banerjee 1978	7/31	6/32		1.54%	1.2[0.46,3.18]

Favours nutrition support — Favours control

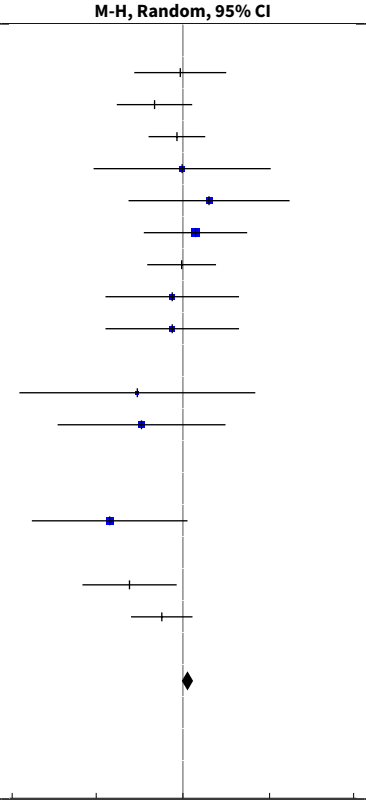


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983a	5/39	4/35		1.1%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.77%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.71%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.28%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.21%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	18/30	0/30		0.27%	37[2.33,587.26]
Breedveld-Peters	7/73	3/79		1%	2.53[0.68,9.4]
Brennan 1994	4/60	1/57		0.43%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.8%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	1/15	1/15		0.29%	1[0.07,14.55]
Casaer 2011	146/2312	141/2328		4.08%	1.04[0.83,1.3]
Choudhry 1996	0/21	1/20		0.21%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.28%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.24%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.89%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		3.95%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		4.2%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		2.15%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.24%	0.15[0.01,2.84]
Duncan 2006	21/153	11/165		2.27%	2.06[1.03,4.13]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.84%	1.35[0.31,5.85]
Fan 1989	16/75	9/75		2.09%	1.78[0.84,3.77]
Fan 1994	3/20	3/20		0.83%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.28%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.44%	0.29[0.03,2.41]
Førli 2001	2/20	1/22		0.38%	2.2[0.22,22.45]
Gariballa 1998	3/21	3/21		0.82%	1[0.23,4.4]
Gariballa 2006	12/223	7/222		1.67%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.53%	1.05[0.16,7.1]
Hartgrink 1998	22/70	0/70		0.27%	45[2.78,727.58]
Heidegger 2013	8/153	12/152		1.78%	0.66[0.28,1.57]
Hendry 2010	8/38	2/38		0.82%	4[0.91,17.62]
Henriksen 2003a	0/16	1/8		0.22%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		2.45%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.16%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.24%	0.22[0.01,4.29]
Hoffmann 1988	35/51	2/51		0.93%	17.5[4.44,68.94]
Holyday 2012	4/71	1/72		0.43%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.22%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.42%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.22%	0.86[0.04,18.45]



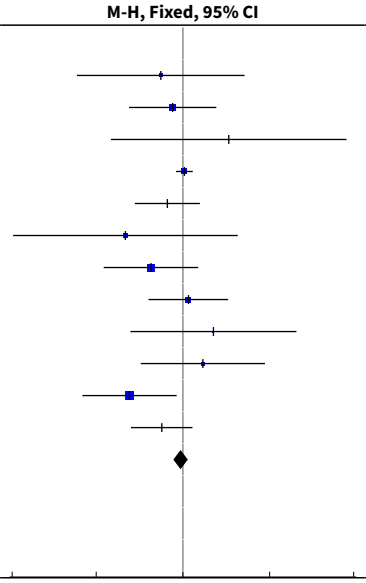
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Johansen 2004	9/108	6/104		1.49%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.21%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.23%	5.63[0.28,114.27]
Larsson 1990a	82/250	55/251		3.83%	1.5[1.12,2.01]
Ledinghen 1997	2/12	1/10		0.4%	1.67[0.18,15.8]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.21%	3.35[0.15,76.93]
Ljunggren 2012	1/20	0/20		0.21%	3[0.13,69.52]
Lough 1990	4/14	7/15		1.5%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		1.07%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.37%	1.85[0.18,19.19]
Malhotra 2004	14/100	16/100		2.38%	0.88[0.45,1.7]
Maude 2011	9/27	6/29		1.72%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.21%	0.32[0.01,7.74]
Mezey 1991	7/28	5/26		1.45%	1.3[0.47,3.59]
Miller 2006a	3/25	1/26		0.42%	3.12[0.35,28.03]
Miller 2006b	2/24	0/25		0.23%	5.2[0.26,103.03]
Moreno 2016	11/68	14/68		2.2%	0.79[0.38,1.61]
Munk 2014	3/44	1/40		0.41%	2.73[0.3,25.17]
Müller 1982a	17/80	5/40		1.65%	1.7[0.68,4.27]
Müller 1982b	19/55	6/40		1.89%	2.3[1.01,5.24]
Naveau 1986	1/20	1/20		0.28%	1[0.07,14.9]
Neelemaat 2012	14/105	11/105		2.12%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		1.19%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Potter 2001	24/186	33/195		3.04%	0.76[0.47,1.24]
Pupelis 2000	1/11	5/18		0.49%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.27%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.63%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.41%	2.25[0.25,20.38]
Samuels 1981	5/18	1/15		0.48%	4.17[0.54,31.88]
Saudny-Unterberger 1997	1/17	1/16		0.29%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.28%	0.9[0.06,13.62]
Simon 1988	4/16	2/18		0.76%	2.25[0.47,10.69]
Singh 1998	2/21	2/22		0.56%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.44%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.24%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.22%	0.44[0.02,9.98]
Starke 2011	3/67	5/67		0.91%	0.6[0.15,2.41]
Stein 2002	2/40	3/40		0.63%	0.67[0.12,3.78]
Sullivan 1998	0/8	3/10		0.26%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.21%	3.32[0.14,78.25]

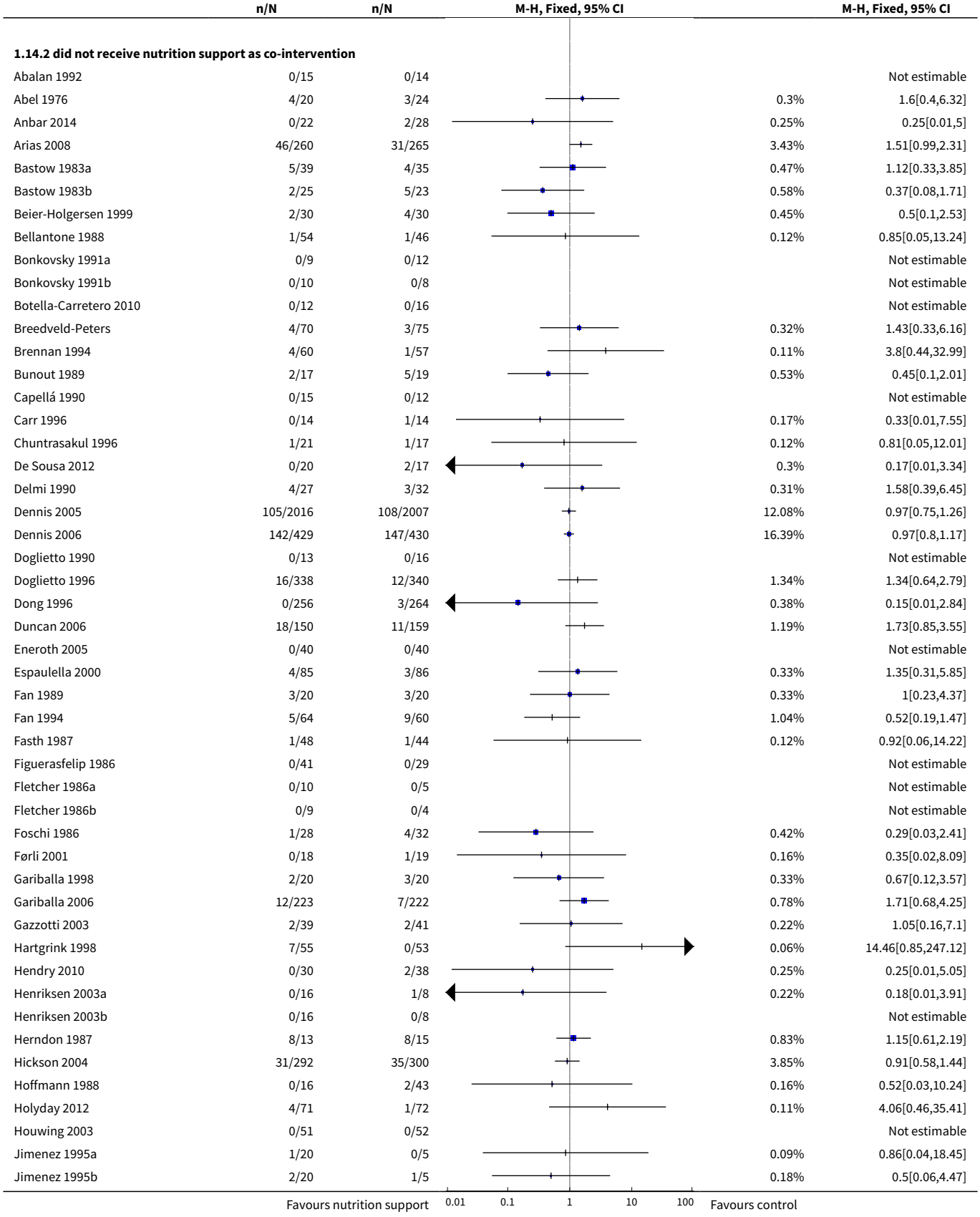
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		1.11%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		1.48%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		2.09%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.37%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.44%	2[0.24,16.97]
Williams 1985	4/21	3/22		0.93%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		1.67%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.61%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.61%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.21%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.4%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	1/60	7/60		0.46%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		1.07%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.9%	0.57[0.25,1.29]
Total (95% CI)	**11354**	**10853**		**100%**	**1.13[0.97,1.31]**
Total events: 1097 (Nutrition support), 885 (Control)					
Heterogeneity: Tau²=0.13; Chi²=163.15, df=100(P<0.0001); I²=38.71%					
Test for overall effect: Z=1.58(P=0.12)					



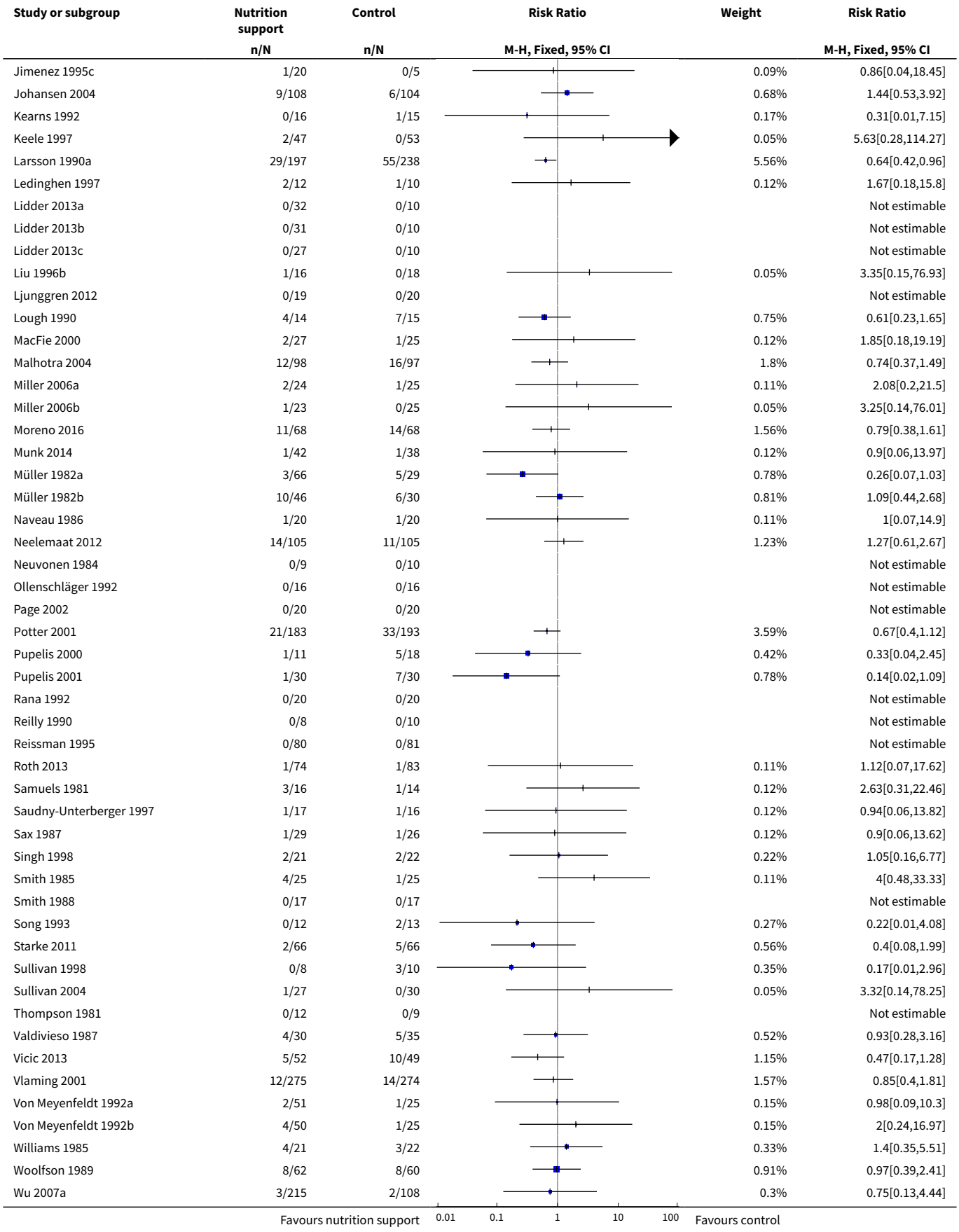
Analysis 1.14. Comparison 1 All-cause mortality - end of intervention, Outcome 14 All-cause mortality co-interventions.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
1.14.1 received nutrition support as co-intervention					
Abrishami 2010	1/9	2/10		0.21%	0.56[0.06,5.14]
Banerjee 1978	4/28	6/32		0.63%	0.76[0.24,2.43]
Bokhorst-de 2000	1/15	0/17		0.05%	3.38[0.15,77.12]
Casaer 2011	146/2312	141/2328		15.69%	1.04[0.83,1.3]
Heidegger 2013	8/153	12/152		1.34%	0.66[0.28,1.57]
Hill 2002	0/22	2/24		0.27%	0.22[0.01,4.29]
Luo 2012	3/30	7/30		0.78%	0.43[0.12,1.5]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Sacks 1995	2/8	1/9		0.11%	2.25[0.25,20.38]
Simon 1988	3/15	2/17		0.21%	1.7[0.33,8.84]
Zhu 2012a	3/33	6/16		0.9%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.04%	0.57[0.25,1.29]
Subtotal (95% CI)	**2684**	**2677**		**21.8%**	**0.94[0.78,1.14]**
Total events: 185 (Nutrition support), 191 (Control)					
Heterogeneity: Tau²=0; Chi²=12.04, df=11(P=0.36); I²=8.63%					
Test for overall effect: Z=0.64(P=0.52)					

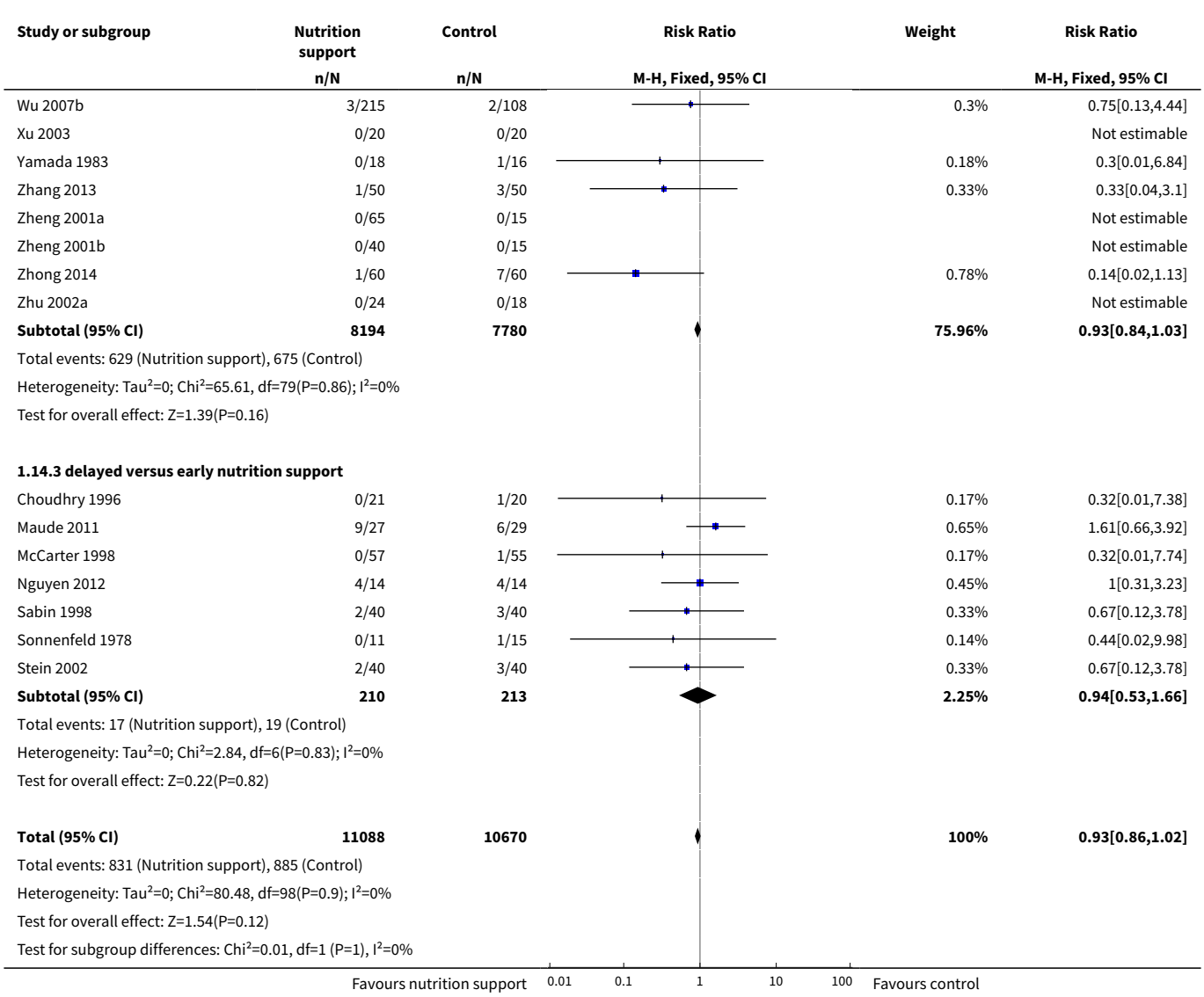




Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
1.14.2 did not receive nutrition support as co-intervention					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.3%	1.6[0.4,6.32]
Anbar 2014	0/22	2/28		0.25%	0.25[0.01,5]
Arias 2008	46/260	31/265		3.43%	1.51[0.99,2.31]
Bastow 1983a	5/39	4/35		0.47%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.45%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.12%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.32%	1.43[0.33,6.16]
Brennan 1994	4/60	1/57		0.11%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.53%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.17%	0.33[0.01,7.55]
Chuntrasakul 1996	1/21	1/17		0.12%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.3%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.31%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		12.08%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		16.39%	0.97[0.8,1.17]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.34%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.38%	0.15[0.01,2.84]
Duncan 2006	18/150	11/159		1.19%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.33%	1.35[0.31,5.85]
Fan 1989	3/20	3/20		0.33%	1[0.23,4.37]
Fan 1994	5/64	9/60		1.04%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.12%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.42%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.16%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.33%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.78%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.22%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.06%	14.46[0.85,247.12]
Hendry 2010	0/30	2/38		0.25%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.22%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.83%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.85%	0.91[0.58,1.44]
Hoffmann 1988	0/16	2/43		0.16%	0.52[0.03,10.24]
Holyday 2012	4/71	1/72		0.11%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.09%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.18%	0.5[0.06,4.47]



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Jimenez 1995c	1/20	0/5		0.09%	0.86[0.04,18.45]
Johansen 2004	9/108	6/104		0.68%	1.44[0.53,3.92]
Kearns 1992	0/16	1/15		0.17%	0.31[0.01,7.15]
Keele 1997	2/47	0/53		0.05%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		5.56%	0.64[0.42,0.96]
Ledinghen 1997	2/12	1/10		0.12%	1.67[0.18,15.8]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Liu 1996b	1/16	0/18		0.05%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.75%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.8%	0.74[0.37,1.49]
Miller 2006a	2/24	1/25		0.11%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.05%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.56%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.12%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.78%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.81%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.11%	1[0.07,14.9]
Neelemaat 2012	14/105	11/105		1.23%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Potter 2001	21/183	33/193		3.59%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.42%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.78%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Samuels 1981	3/16	1/14		0.12%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.12%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.12%	0.9[0.06,13.62]
Singh 1998	2/21	2/22		0.22%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.11%	4[0.48,33.33]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.27%	0.22[0.01,4.08]
Starke 2011	2/66	5/66		0.56%	0.4[0.08,1.99]
Sullivan 1998	0/8	3/10		0.35%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.05%	3.32[0.14,78.25]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		0.52%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		1.15%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.57%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.15%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.15%	2[0.24,16.97]
Williams 1985	4/21	3/22		0.33%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.91%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.3%	0.75[0.13,4.44]



Comparison 2. All-cause mortality - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All-cause mortality - overall	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
2 All-cause mortality - bias	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
2.1 High risk of bias	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3 All-cause mortality - mode of delivery	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
3.1 General nutrition support	7	1566	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.71, 1.36]
3.2 Fortified nutrition	2	290	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.61, 2.54]
3.3 Oral nutrition support	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
3.4 Enteral nutrition	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
3.5 Parenteral nutrition	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
3.6 Mixed	7	480	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.37, 1.37]
4 All-cause mortality - medical specialty	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
4.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Medical gastro-enterology and hepatology	13	622	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.77, 1.19]
4.3 Geriatrics	13	2547	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.67, 1.17]
4.4 Pulmonary disease	3	118	Risk Ratio (M-H, Random, 95% CI)	0.44 [0.15, 1.28]
4.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.6 Infectious diseases	1	56	Risk Ratio (M-H, Random, 95% CI)	1.61 [0.66, 3.92]
4.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.10 Gastroenterologic surgery	50	4715	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.70, 1.12]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.11 Trauma surgery	6	249	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.55, 1.34]
4.12 Ortopaedics	12	1196	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.61, 1.62]
4.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.14 Vascular surgery	2	28	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.15 Transplant surgery	3	84	Risk Ratio (M-H, Random, 95% CI)	0.54 [0.22, 1.31]
4.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.17 Thoracic surgery	3	592	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.16, 3.22]
4.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.19 Oro-maxillo-facial surgery	1	32	Risk Ratio (M-H, Random, 95% CI)	3.38 [0.15, 77.12]
4.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.21 Emergency medicine	11	5421	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.85, 1.12]
4.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.23 Neurology	9	5448	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.59, 0.99]
4.24 Oncology	7	411	Risk Ratio (M-H, Random, 95% CI)	1.03 [0.87, 1.21]
4.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.27 Mixed	7	1651	Risk Ratio (M-H, Random, 95% CI)	1.28 [0.94, 1.75]
5 All-cause mortality - based on adequacy of the amount of calories	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5.1 Clearly adequate in intervention and clearly inadequate in control	28	7589	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.88, 1.09]
5.2 Inadequate in the experimental or adequate in the control	27	6824	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.82, 1.10]
5.3 Experimental group is overfed	10	974	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.69, 1.41]
5.4 Unclear intake in control or experimental	76	7783	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.81, 0.98]
6 All-cause mortality - different screening tools	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
6.1 NRS 2002	4	5064	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.87, 1.19]
6.2 MUST	1	146	Risk Ratio (M-H, Random, 95% CI)	1.30 [0.60, 2.82]
6.3 MNA	2	117	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.12, 3.18]
6.4 SGA	3	1171	Risk Ratio (M-H, Random, 95% CI)	1.41 [0.94, 2.10]
6.5 Other means	131	16672	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
7.1 Major surgery	62	5712	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.68, 1.04]
7.2 Stroke	4	5056	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.79, 1.05]
7.3 ICU participants including trauma	15	5626	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.85, 1.11]
7.4 Frail elderly participants with less severe conditions known to increase protein requirements	19	2385	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.65, 1.11]
7.5 Participants do not fall into one of the categories above	41	4391	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.84, 1.14]
8 All-cause mortality - participants characterised as 'at nutritional	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]

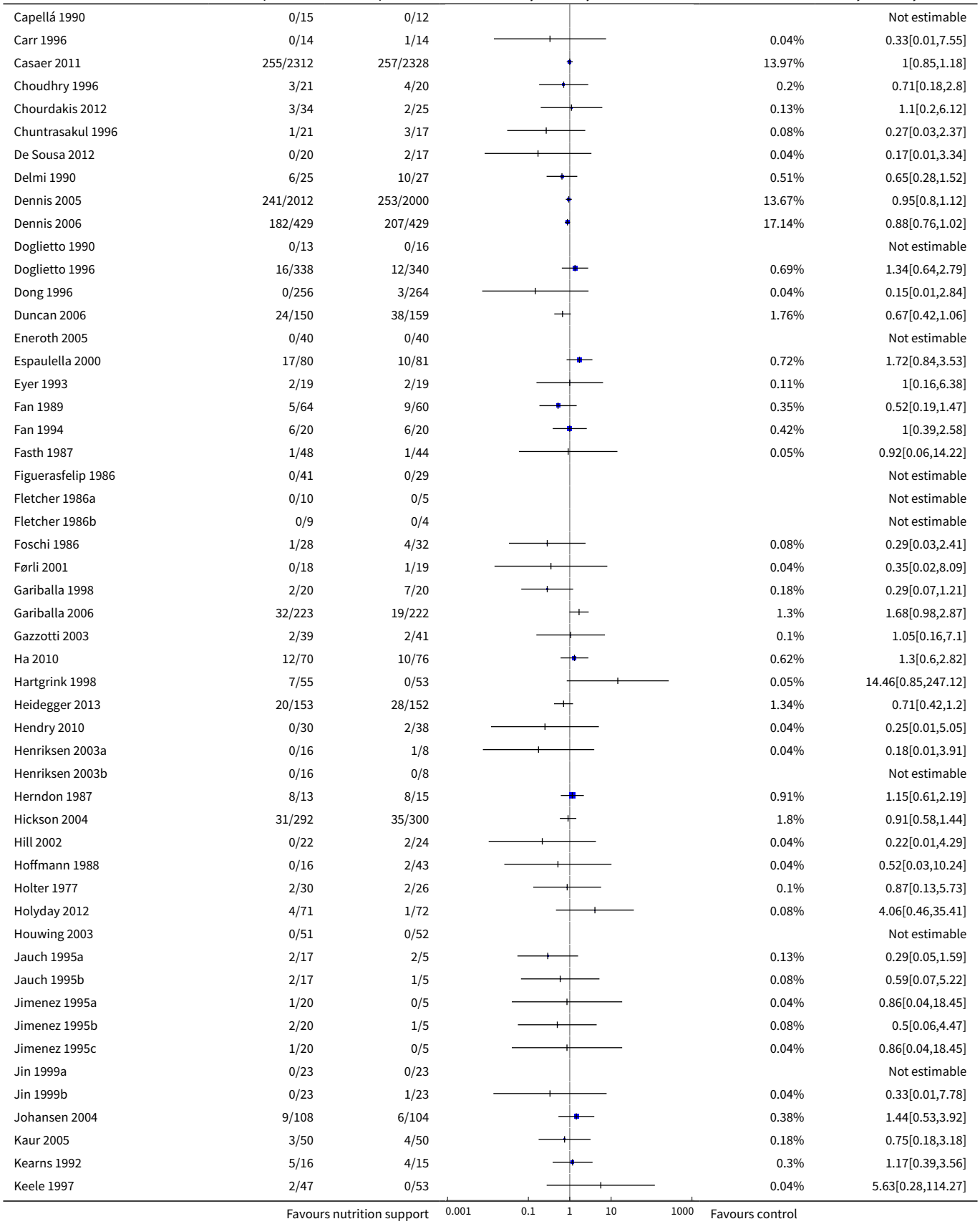
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
risk' due to one of the following criteria				
8.1 BMI less than 20.5 kg/m^2	2	247	Risk Ratio (M-H, Random, 95% CI)	1.19 [0.58, 2.45]
8.2 Weight loss of at least 5% during the last three months	1	32	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.3 Weight loss of at least 10% during the last six months	3	124	Risk Ratio (M-H, Random, 95% CI)	1.07 [0.11, 10.33]
8.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.5 Participants characterised as 'at nutritional risk' by other means	135	22767	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
9 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
9.1 Biomarkers	7	749	Risk Ratio (M-H, Random, 95% CI)	0.40 [0.16, 1.00]
9.2 Anthropometric measures	12	1402	Risk Ratio (M-H, Random, 95% CI)	0.79 [0.55, 1.11]
9.3 Both anthropometrics and biomarkers	3	75	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.14, 3.07]
9.4 Characterised by other means	119	20944	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.89, 1.00]
10 All-cause mortality - randomisation year	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
10.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
10.2 1960 to 1979	6	237	Risk Ratio (M-H, Random, 95% CI)	1.07 [0.52, 2.23]
10.3 1980 to 1999	86	12055	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.86, 1.00]
10.4 After 1999	49	10878	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.81, 1.06]
11 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	141	23170	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
11.1 Three days or more	127	22394	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.88, 0.99]
11.2 Fewer than three days	12	699	Risk Ratio (M-H, Random, 95% CI)	1.05 [0.72, 1.54]
11.3 Unknown	2	77	Risk Ratio (M-H, Random, 95% CI)	0.25 [0.01, 5.00]
12 All-cause mortality - 'best-worst case' scenario	141	23700	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.69, 0.85]
13 All-cause mortality - 'worst-best case' scenario	141	23700	Risk Ratio (M-H, Random, 95% CI)	1.09 [0.98, 1.23]
14 All-cause mortality co-interventions	141	23170	Risk Ratio (M-H, Fixed, 95% CI)	0.92 [0.86, 0.98]
14.1 received nutrition support as co-intervention	13	5475	Risk Ratio (M-H, Fixed, 95% CI)	0.95 [0.82, 1.08]
14.2 did not receive nutrition support as co-intervention	125	17462	Risk Ratio (M-H, Fixed, 95% CI)	0.91 [0.85, 0.98]
14.3 delayed versus early nutrition support	3	233	Risk Ratio (M-H, Fixed, 95% CI)	0.99 [0.53, 1.83]

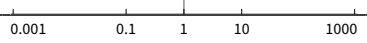
Analysis 2.1. Comparison 2 All-cause mortality - maximum follow-up, Outcome 1 All-cause mortality - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Arias 2008	46/260	31/265		2.09%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.28%	0.76[0.24,2.43]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.16%	0.45[0.1,2.01]

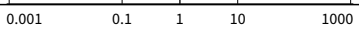
Favours nutrition support | Favours control



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Larsson 1990a	29/197	55/238		2.24%	0.64[0.42,0.96]
Ledinghen 1997	3/12	2/10		0.15%	1.25[0.26,6.07]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]
Liu 1996b	1/16	0/18		0.04%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.38%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.24%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.47%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		1.92%	0.95[0.61,1.48]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.99%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.05%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		0.87%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.68%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.45%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.44%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.04%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.05%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.05%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.21%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.04%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Starke 2011	9/66	6/66		0.39%	1.5[0.57,3.98]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.28%	0.74[0.23,2.35]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		13.14%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Vlaming 2001	12/275	14/274		0.66%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Williams 1985	9/21	7/22		0.6%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.08%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.24%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Total (95% CI)	**11788**	**11382**		**100%**	**0.93[0.88,0.99]**
Total events: 1382 (Experimental), 1494 (Control)					
Heterogeneity: Tau²=0; Chi²=106.77, df=117(P=0.74); I²=0%					
Test for overall effect: Z=2.17(P=0.03)					



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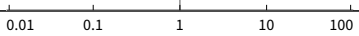
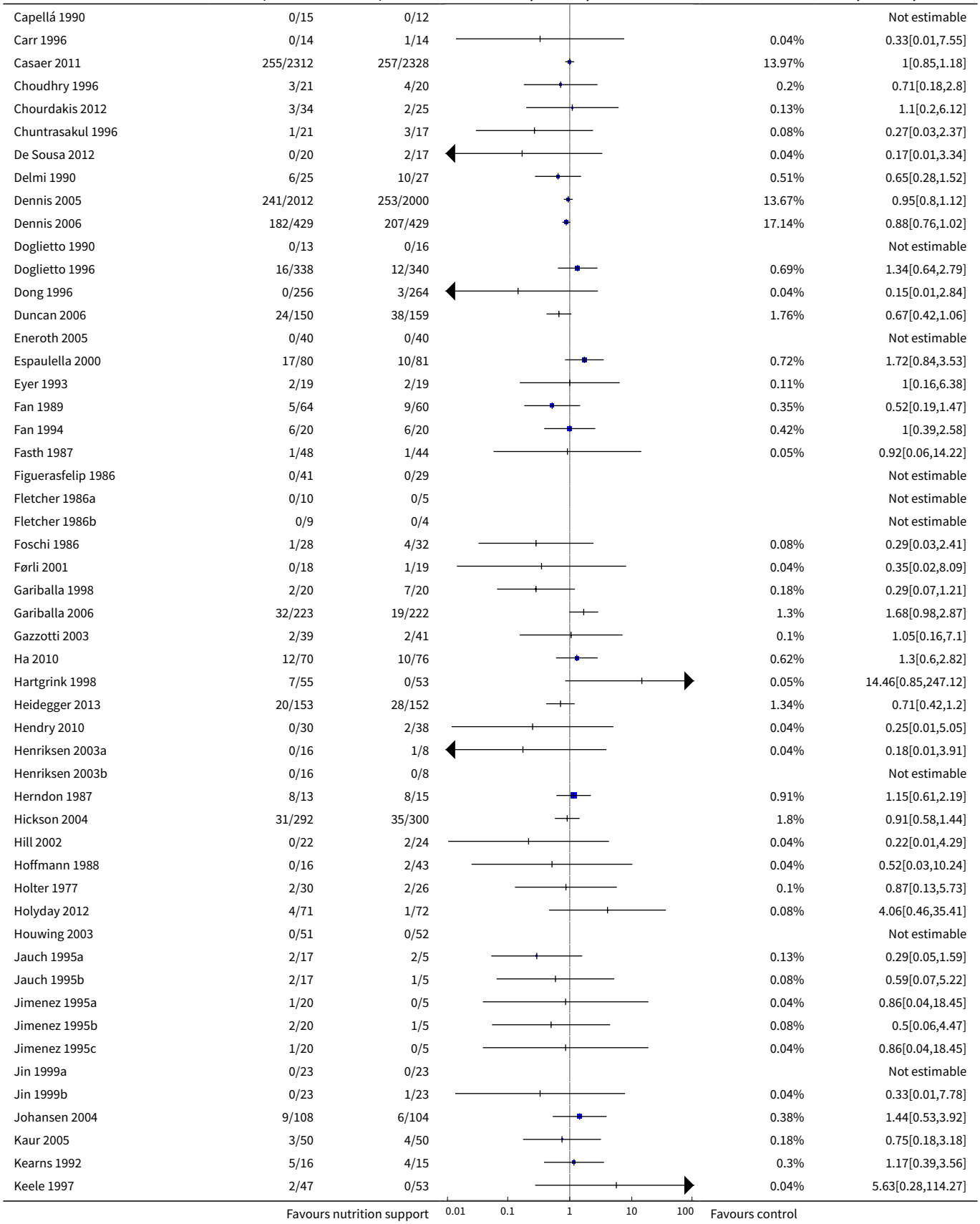
Analysis 2.2. Comparison 2 All-cause mortality - maximum follow-up, Outcome 2 All-cause mortality - bias.

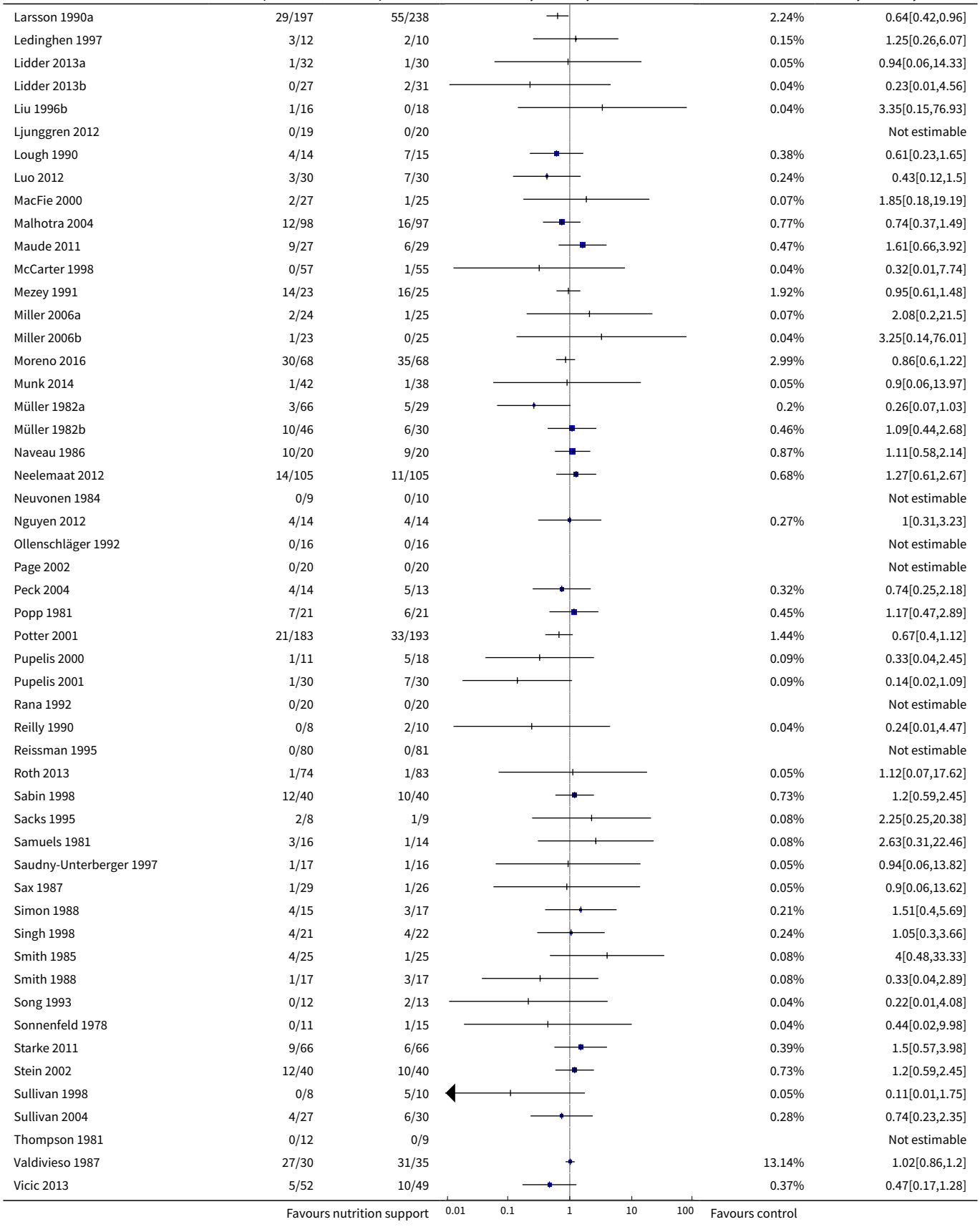
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
2.2.1 High risk of bias					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Arias 2008	46/260	31/265		2.09%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.28%	0.76[0.24,2.43]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.16%	0.45[0.1,2.01]



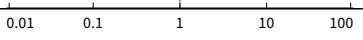
Favours nutrition support — Favours control



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		13.97%	1[0.85,1.18]
Choudhry 1996	3/21	4/20		0.2%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.13%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.04%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.51%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		0.69%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.04%	0.15[0.01,2.84]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.72%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.11%	1[0.16,6.38]
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.42%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.08%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.18%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.3%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.1%	1.05[0.16,7.1]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Holyday 2012	4/71	1/72		0.08%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Johansen 2004	9/108	6/104		0.38%	1.44[0.53,3.92]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.3%	1.17[0.39,3.56]
Keele 1997	2/47	0/53		0.04%	5.63[0.28,114.27]

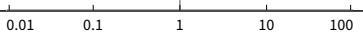


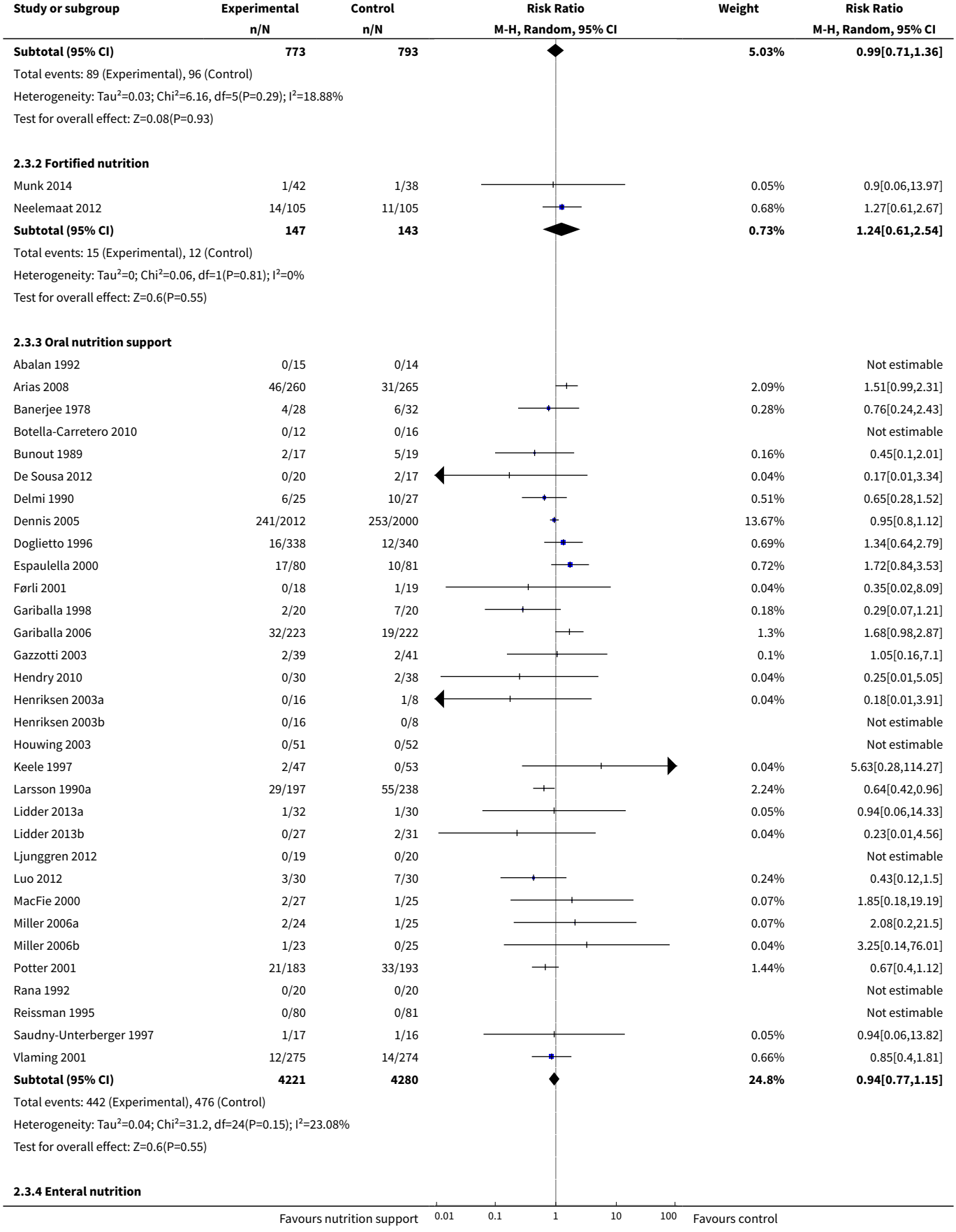
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Vlaming 2001	12/275	14/274		0.66%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Williams 1985	9/21	7/22		0.6%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.08%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.24%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**11788**	**11382**		**100%**	**0.93[0.88,0.99]**
Total events: 1382 (Experimental), 1494 (Control)					
Heterogeneity: Tau^2=0; Chi^2=106.77, df=117(P=0.74); I^2=0%					
Test for overall effect: Z=2.17(P=0.03)					
2.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**11788**	**11382**		**100%**	**0.93[0.88,0.99]**
Total events: 1382 (Experimental), 1494 (Control)					
Heterogeneity: Tau^2=0; Chi^2=106.77, df=117(P=0.74); I^2=0%					
Test for overall effect: Z=2.17(P=0.03)					
Test for subgroup differences: Not applicable					

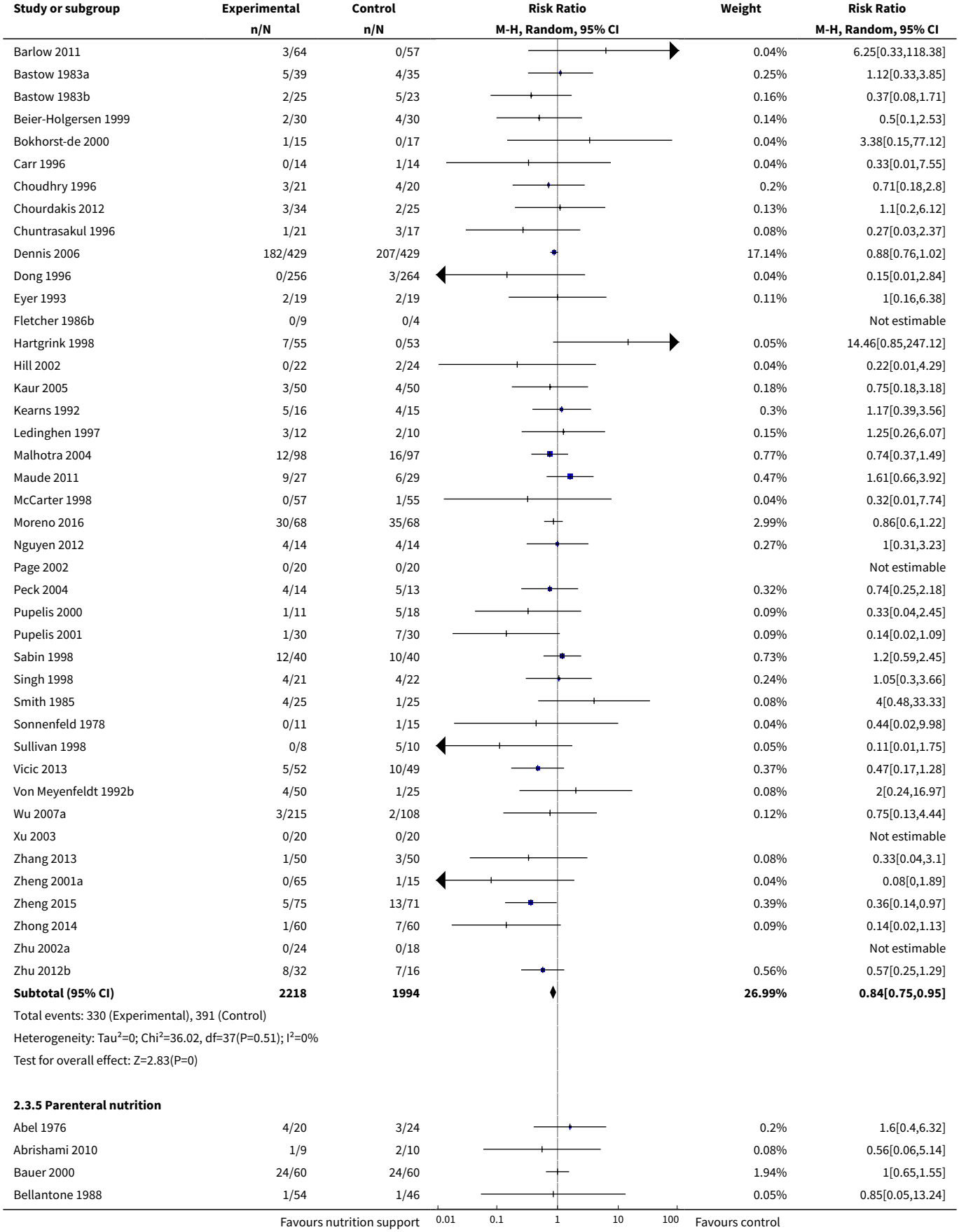


Analysis 2.3. Comparison 2 All-cause mortality - maximum follow-up, Outcome 3 All-cause mortality - mode of delivery.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
2.3.1 General nutrition support					
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Holyday 2012	4/71	1/72		0.08%	4.06[0.46,35.41]
Johansen 2004	9/108	6/104		0.38%	1.44[0.53,3.92]
Ollenschläger 1992	0/16	0/16			Not estimable
Starke 2011	9/66	6/66		0.39%	1.5[0.57,3.98]

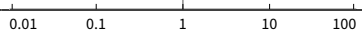




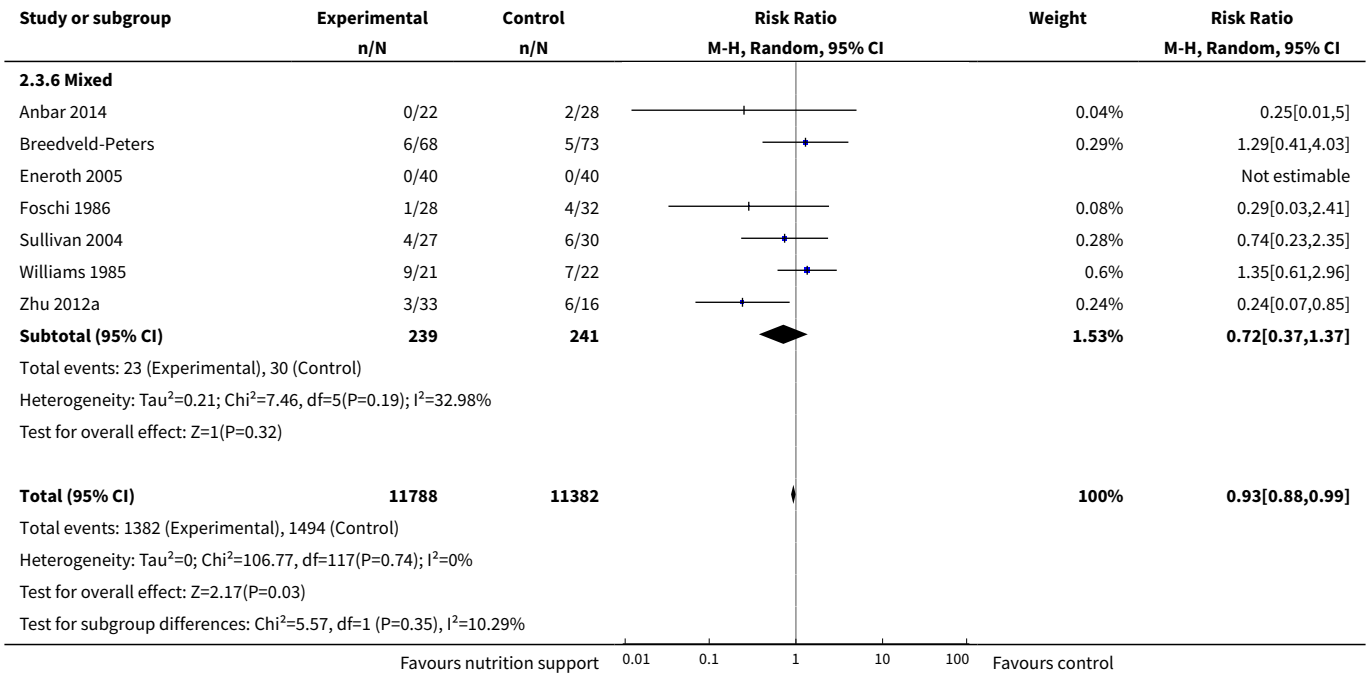


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		0.2%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.13%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.04%	0.15[0.01,2.84]
Eyer 1993	2/19	2/19		0.11%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.3%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		0.15%	1.25[0.26,6.07]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.47%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		2.99%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.08%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**2218**	**1994**		**26.99%**	**0.84[0.75,0.95]**
Total events: 330 (Experimental), 391 (Control)					
Heterogeneity: Tau²=0; Chi²=36.02, df=37(P=0.51); I²=0%					
Test for overall effect: Z=2.83(P=0)					
2.3.5 Parenteral nutrition					
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]

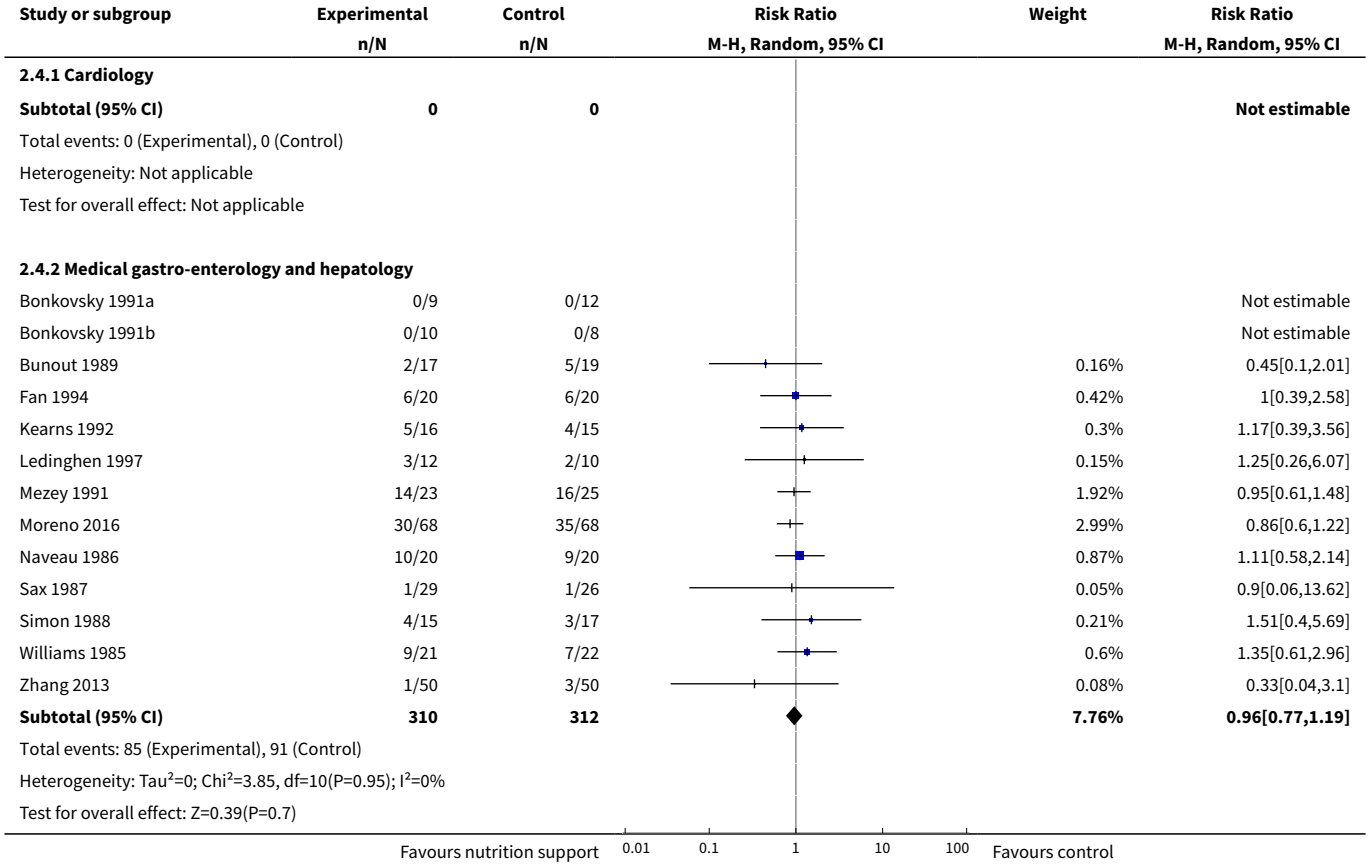
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		13.97%	1[0.85,1.18]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.42%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.04%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.38%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		1.92%	0.95[0.61,1.48]
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		0.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		0.45%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.04%	0.24[0.01,4.47]
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.05%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.21%	1.51[0.4,5.69]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.04%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		13.14%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**4190**	**3931**		**40.92%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau²=0; Chi²=20.89, df=40(P=0.99); I²=0%					
Test for overall effect: Z=0.23(P=0.82)					

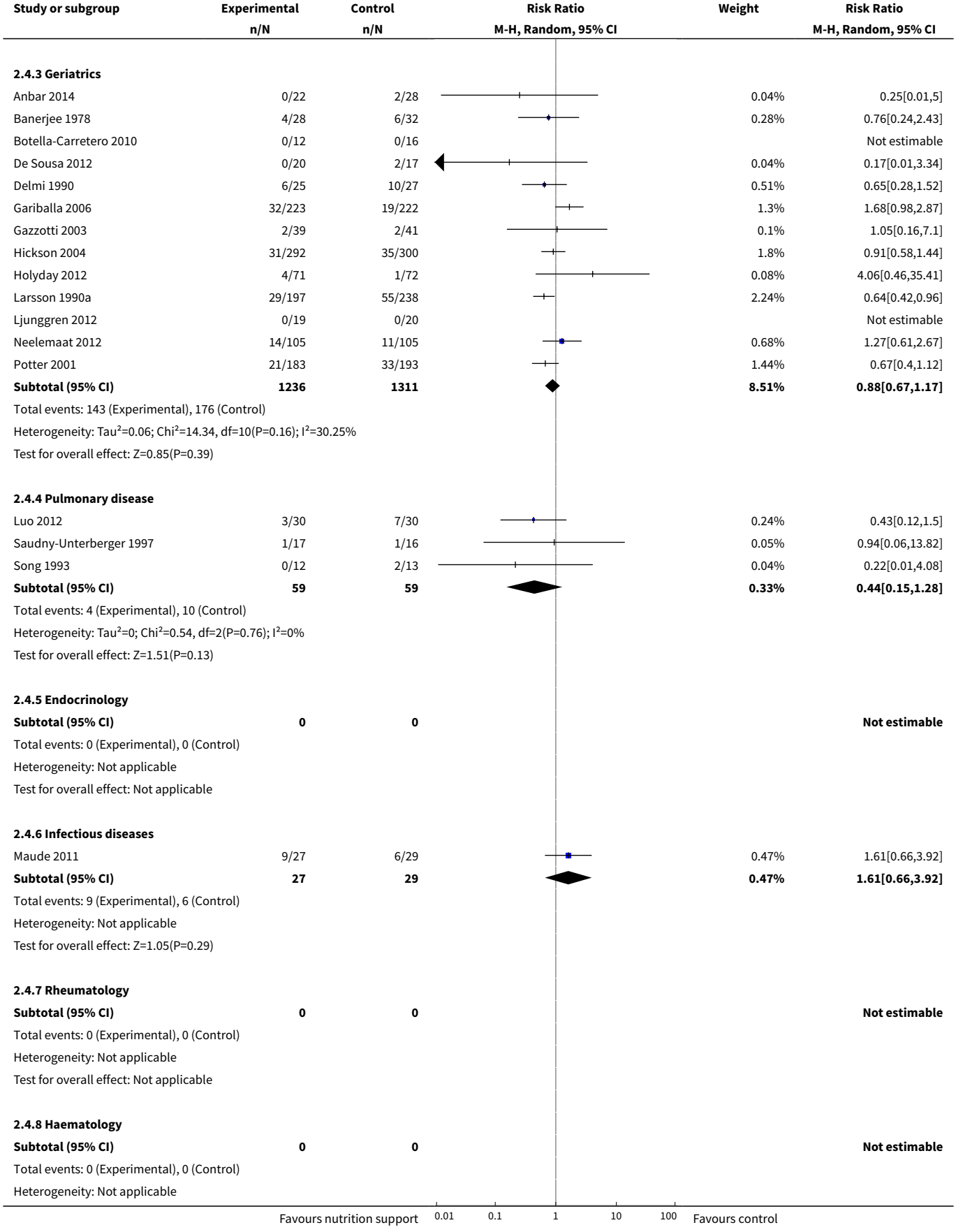


Favours nutrition support — Favours control

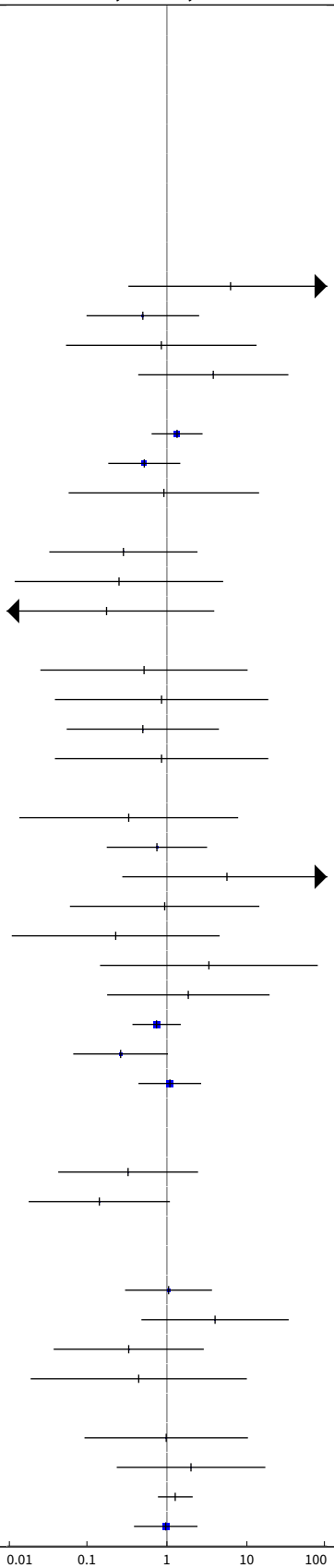


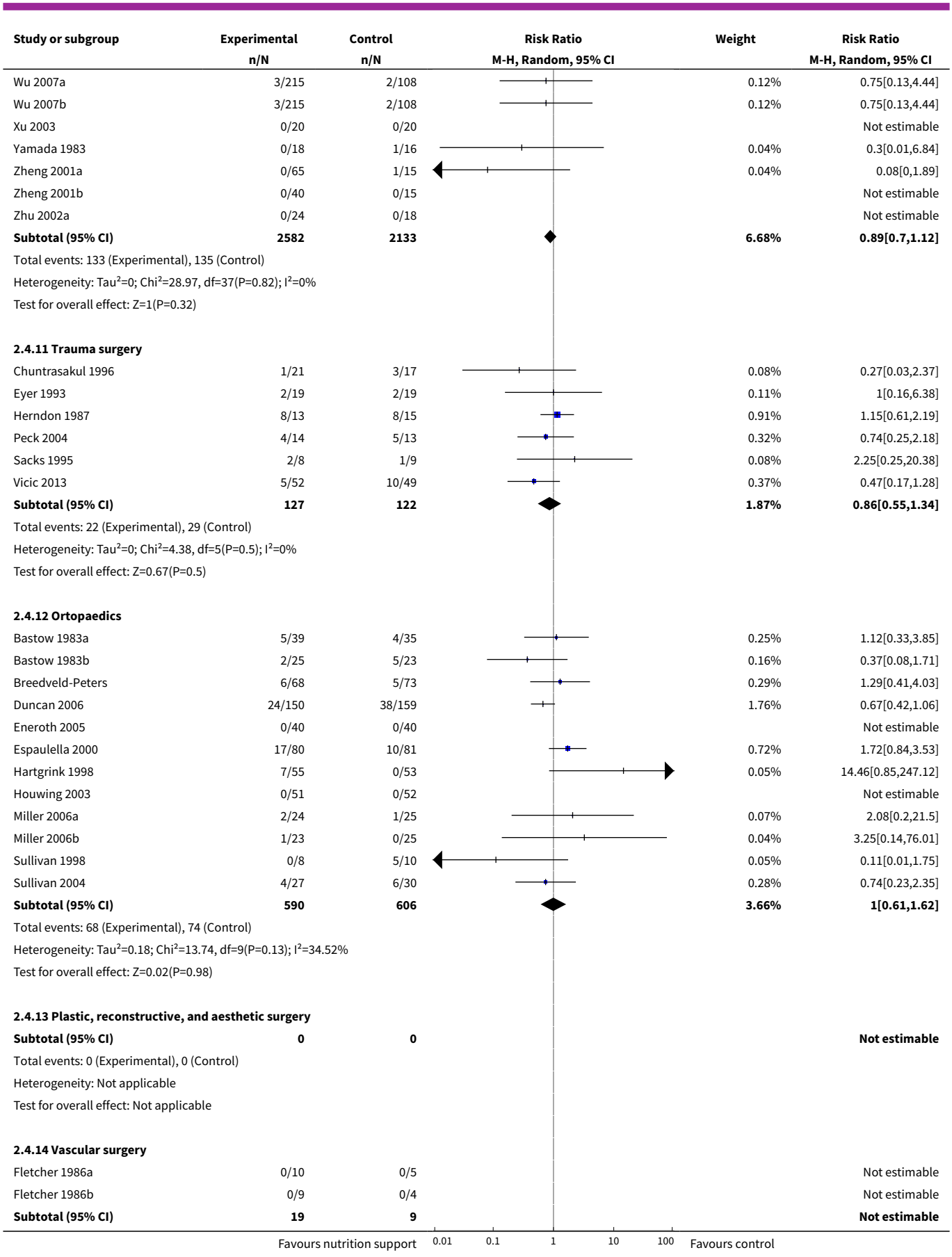
Analysis 2.4. Comparison 2 All-cause mortality - maximum follow-up, Outcome 4 All-cause mortality - medical specialty.



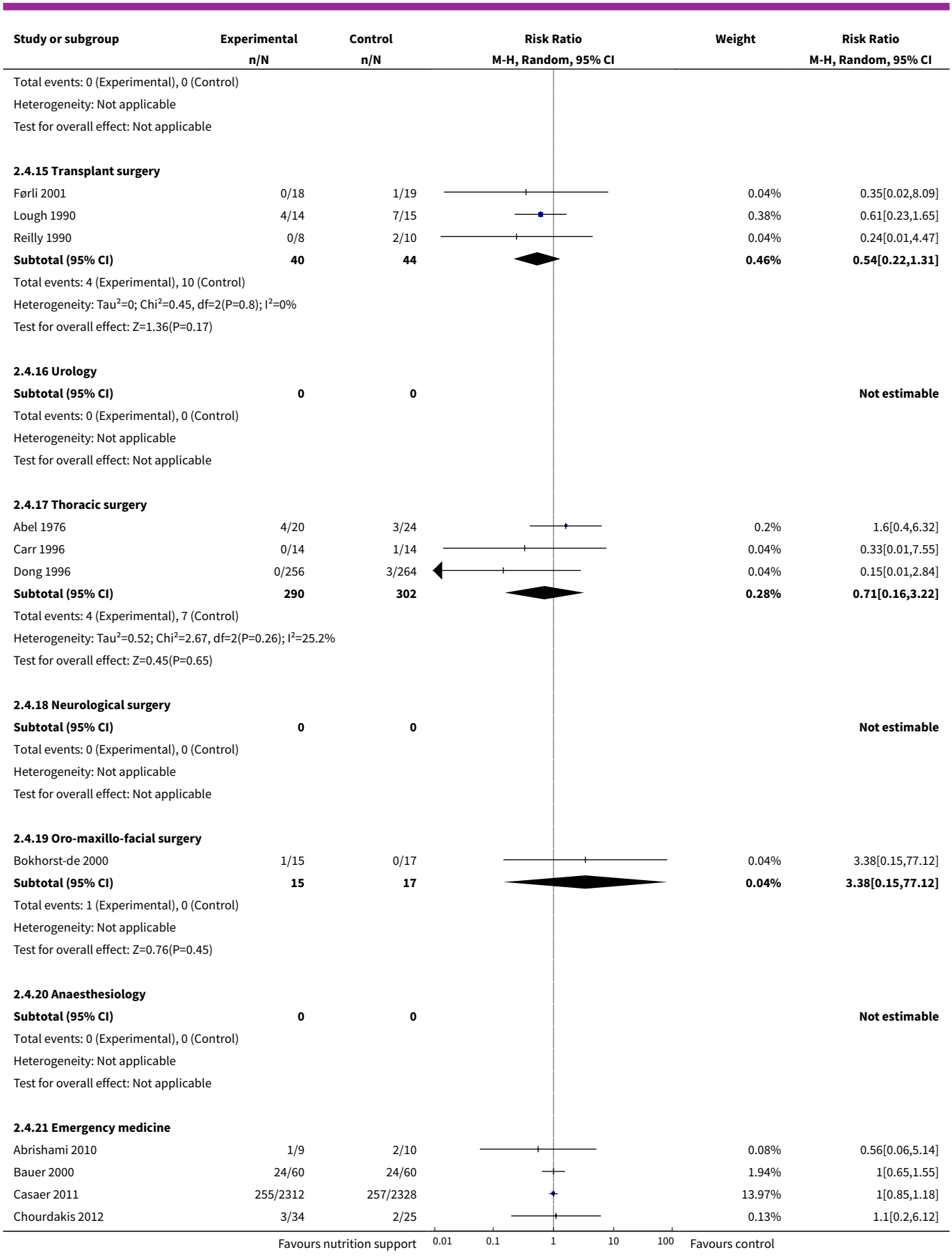


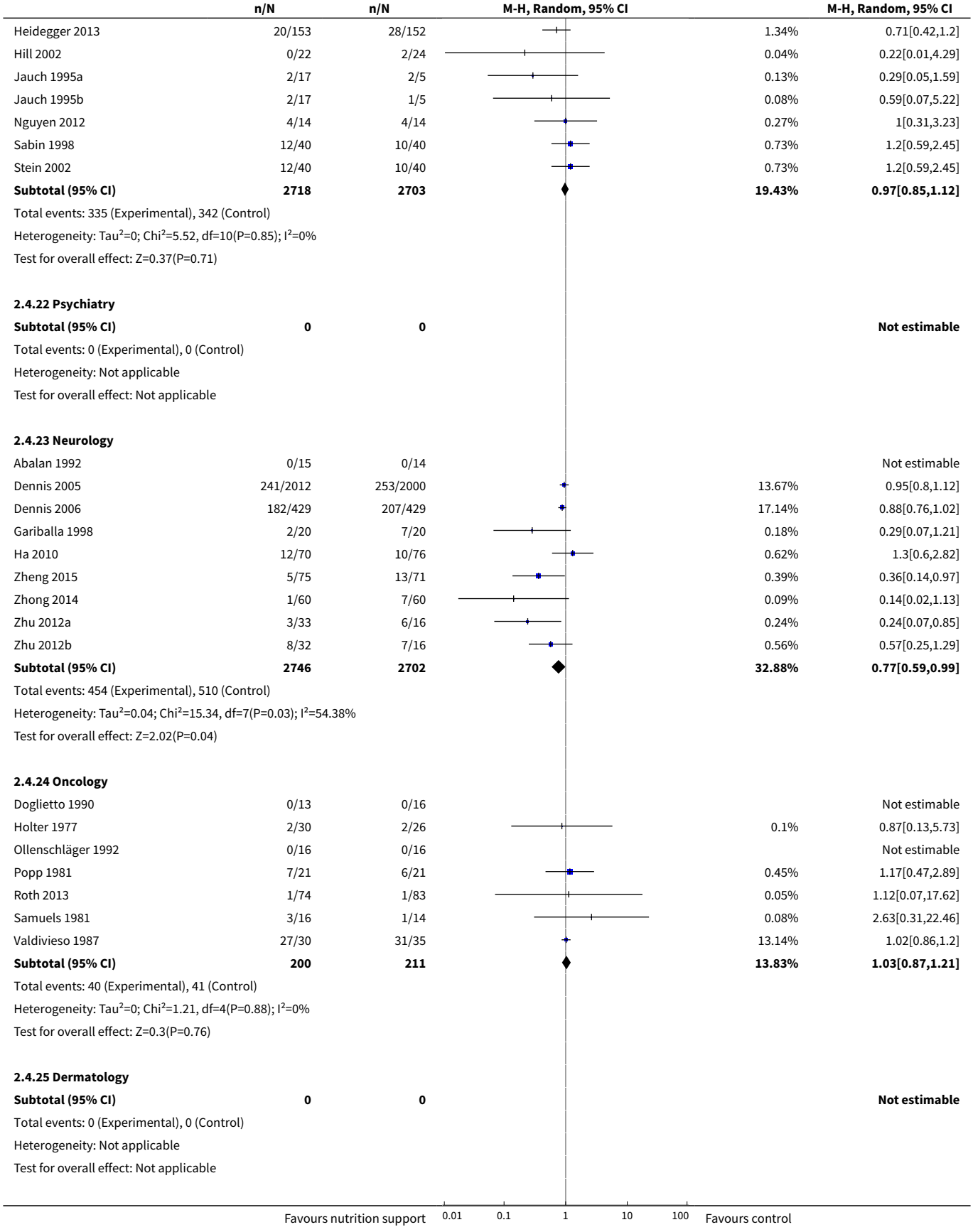
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Not applicable					
2.4.9 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
2.4.10 Gastroenterologic surgery					
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1996	16/338	12/340		0.69%	1.34[0.64,2.79]
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Foschi 1986	1/28	4/32		0.08%	0.29[0.03,2.41]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Keele 1997	2/47	0/53		0.04%	5.63[0.28,114.27]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]
Liu 1996b	1/16	0/18		0.04%	3.35[0.15,76.93]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Thompson 1981	0/12	0/9			Not estimable
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]



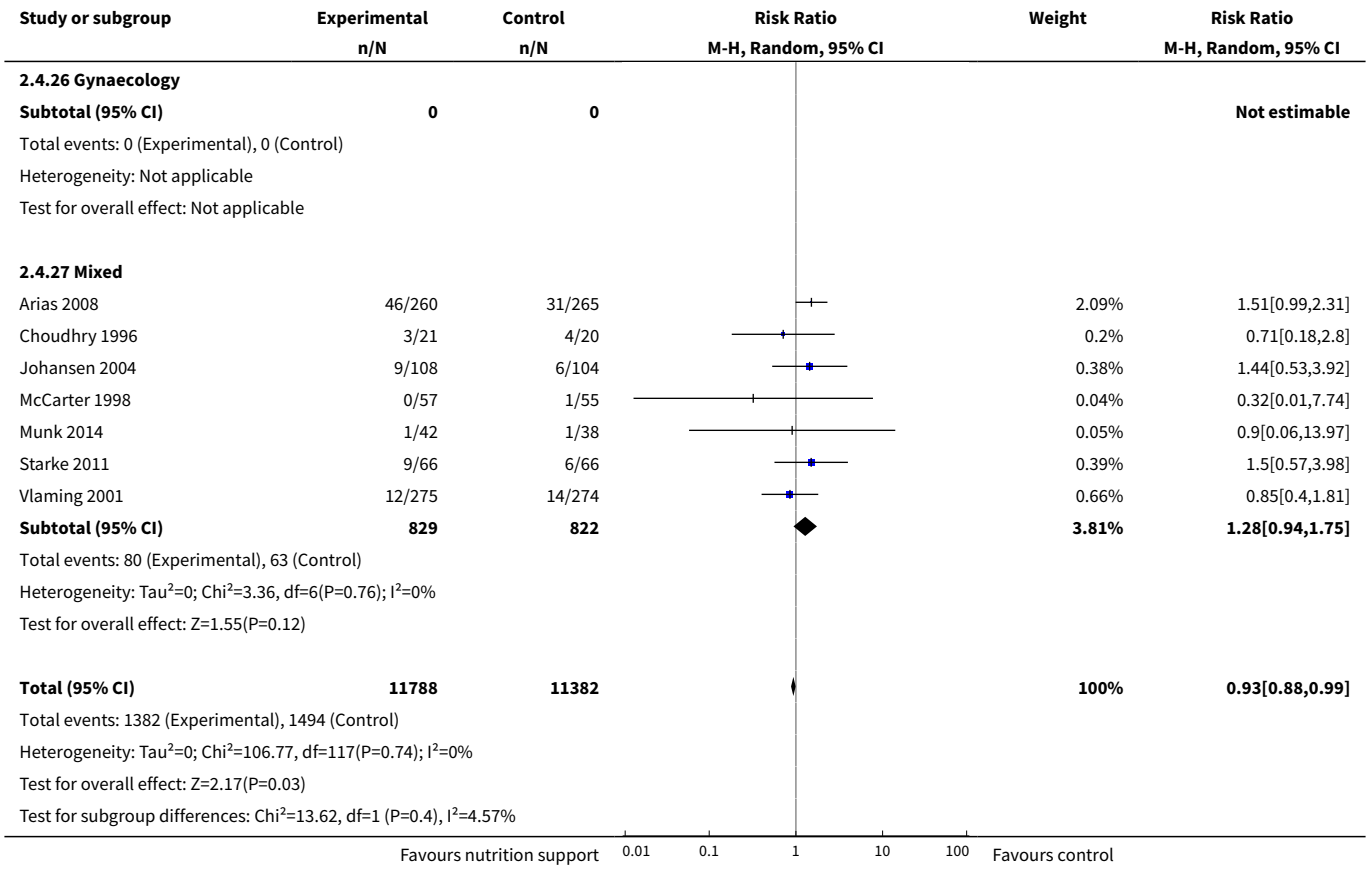


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**2582**	**2133**		**6.68%**	**0.89[0.7,1.12]**
Total events: 133 (Experimental), 135 (Control)					
Heterogeneity: Tau^2=0; Chi^2=28.97, df=37(P=0.82); I^2=0%					
Test for overall effect: Z=1(P=0.32)					
2.4.11 Trauma surgery					
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.11%	1[0.16,6.38]
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]
Subtotal (95% CI)	**127**	**122**		**1.87%**	**0.86[0.55,1.34]**
Total events: 22 (Experimental), 29 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.38, df=5(P=0.5); I^2=0%					
Test for overall effect: Z=0.67(P=0.5)					
2.4.12 Ortopaedics					
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.72%	1.72[0.84,3.53]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Houwing 2003	0/51	0/52			Not estimable
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.28%	0.74[0.23,2.35]
Subtotal (95% CI)	**590**	**606**		**3.66%**	**1[0.61,1.62]**
Total events: 68 (Experimental), 74 (Control)					
Heterogeneity: Tau^2=0.18; Chi^2=13.74, df=9(P=0.13); I^2=34.52%					
Test for overall effect: Z=0.02(P=0.98)					
2.4.13 Plastic, reconstructive, and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
2.4.14 Vascular surgery					
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Subtotal (95% CI)	**19**	**9**			**Not estimable**

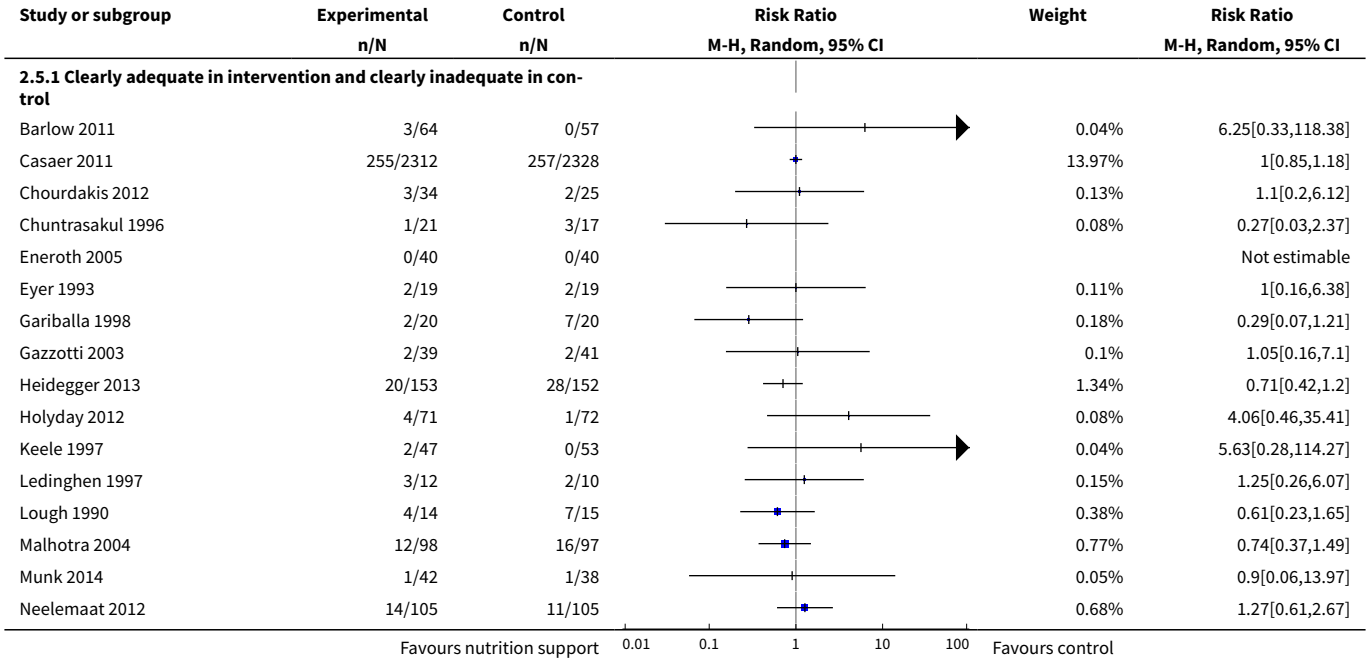




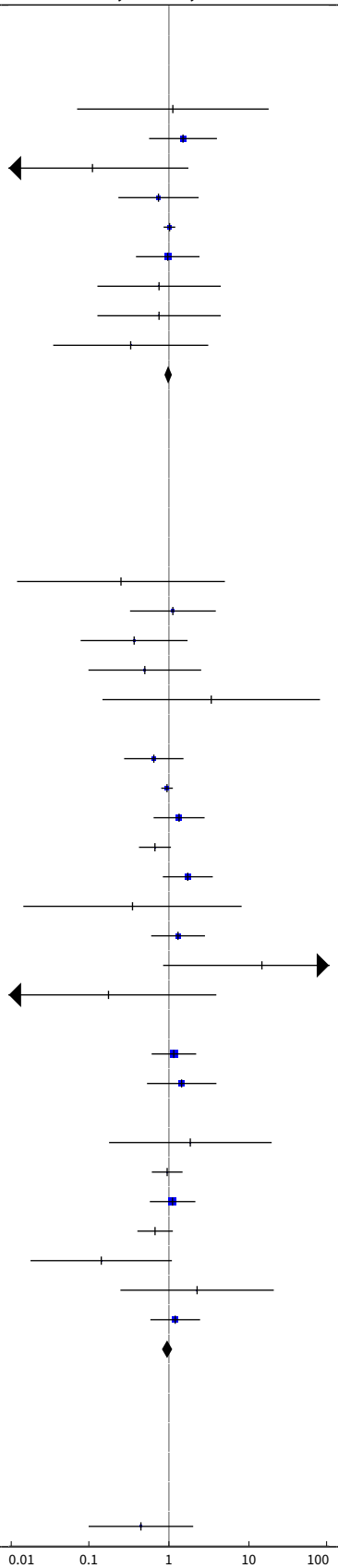
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Subtotal (95% CI)	**2718**	**2703**		**19.43%**	**0.97[0.85,1.12]**
Total events: 335 (Experimental), 342 (Control)					
Heterogeneity: Tau²=0; Chi²=5.52, df=10(P=0.85); I²=0%					
Test for overall effect: Z=0.37(P=0.71)					
2.4.22 Psychiatry					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
2.4.23 Neurology					
Abalan 1992	0/15	0/14			Not estimable
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]
Gariballa 1998	2/20	7/20		0.18%	0.29[0.07,1.21]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Zhu 2012a	3/33	6/16		0.24%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**2746**	**2702**		**32.88%**	**0.77[0.59,0.99]**
Total events: 454 (Experimental), 510 (Control)					
Heterogeneity: Tau²=0.04; Chi²=15.34, df=7(P=0.03); I²=54.38%					
Test for overall effect: Z=2.02(P=0.04)					
2.4.24 Oncology					
Doglietto 1990	0/13	0/16			Not estimable
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Ollenschläger 1992	0/16	0/16			Not estimable
Popp 1981	7/21	6/21		0.45%	1.17[0.47,2.89]
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Valdivieso 1987	27/30	31/35		13.14%	1.02[0.86,1.2]
Subtotal (95% CI)	**200**	**211**		**13.83%**	**1.03[0.87,1.21]**
Total events: 40 (Experimental), 41 (Control)					
Heterogeneity: Tau²=0; Chi²=1.21, df=4(P=0.88); I²=0%					
Test for overall effect: Z=0.3(P=0.76)					
2.4.25 Dermatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					



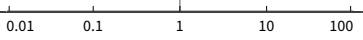
Analysis 2.5. Comparison 2 All-cause mortality - maximum follow-up, Outcome 5 All-cause mortality - based on adequacy of the amount of calories.



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Rana 1992	0/20	0/20			Not estimable
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Starke 2011	9/66	6/66		0.39%	1.5[0.57,3.98]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.28%	0.74[0.23,2.35]
Valdivieso 1987	27/30	31/35		13.14%	1.02[0.86,1.2]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Zhang 2013	1/50	3/50		0.08%	0.33[0.04,3.1]
Subtotal (95% CI)	**3894**	**3695**		**32.77%**	**0.98[0.88,1.09]**
Total events: 384 (Experimental), 403 (Control)					
Heterogeneity: Tau^2=0; Chi^2=16.93, df=23(P=0.81); I^2=0%					
Test for overall effect: Z=0.41(P=0.68)					
2.5.2 Inadequate in the experimental or adequate in the control					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	6/25	10/27		0.51%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Doglietto 1996	16/338	12/340		0.69%	1.34[0.64,2.79]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Espaulella 2000	17/80	10/81		0.72%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Johansen 2004	9/108	6/104		0.38%	1.44[0.53,3.92]
Ljunggren 2012	0/19	0/20			Not estimable
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Mezey 1991	14/23	16/25		1.92%	0.95[0.61,1.48]
Naveau 1986	10/20	9/20		0.87%	1.11[0.58,2.14]
Potter 2001	21/183	33/193		1.44%	0.67[0.4,1.12]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Subtotal (95% CI)	**3409**	**3415**		**25.22%**	**0.95[0.82,1.1]**
Total events: 412 (Experimental), 441 (Control)					
Heterogeneity: Tau^2=0.01; Chi^2=23.4, df=22(P=0.38); I^2=5.96%					
Test for overall effect: Z=0.69(P=0.49)					
2.5.3 Experimental group is overfed					
Bunout 1989	2/17	5/19		0.16%	0.45[0.1,2.01]



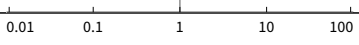
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.3%	1.17[0.39,3.56]
Saudny-Unterberger 1997	1/17	1/16		0.05%	0.94[0.06,13.82]
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Subtotal (95% CI)	**492**	**482**		**2.92%**	**0.98[0.69,1.41]**
Total events: 53 (Experimental), 54 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.26, df=8(P=0.83); I^2=0%					
Test for overall effect: Z=0.09(P=0.93)					
2.5.4 Unclear intake in control or experimental					
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Arias 2008	46/260	31/265		2.09%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.28%	0.76[0.24,2.43]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		0.2%	0.71[0.18,2.8]
De Sousa 2012	0/20	2/17		0.04%	0.17[0.01,3.34]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Dong 1996	0/256	3/264		0.04%	0.15[0.01,2.84]
Fan 1994	6/20	6/20		0.42%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.08%	0.29[0.03,2.41]
Gariballa 2006	32/223	19/222		1.3%	1.68[0.98,2.87]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Larsson 1990a	29/197	55/238		2.24%	0.64[0.42,0.96]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]



Favours nutrition support

Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Liu 1996b	1/16	0/18		0.04%	3.35[0.15,76.93]
Luo 2012	3/30	7/30		0.24%	0.43[0.12,1.5]
Maude 2011	9/27	6/29		0.47%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.99%	0.86[0.6,1.22]
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.45%	1.17[0.47,2.89]
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Reilly 1990	0/8	2/10		0.04%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.05%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.21%	1.51[0.4,5.69]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.04%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Thompson 1981	0/12	0/9			Not estimable
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.66%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Williams 1985	9/21	7/22		0.6%	1.35[0.61,2.96]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.24%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**3993**	**3790**		**39.1%**	**0.89[0.81,0.98]**
Total events: 533 (Experimental), 596 (Control)					
Heterogeneity: Tau^2=0; Chi^2=60.4, df=61(P=0.5); I^2=0%					
Test for overall effect: Z=2.36(P=0.02)					
Total (95% CI)	**11788**	**11382**		**100%**	**0.93[0.88,0.99]**
Total events: 1382 (Experimental), 1494 (Control)					
Heterogeneity: Tau^2=0; Chi^2=106.77, df=117(P=0.74); I^2=0%					
Test for overall effect: Z=2.17(P=0.03)					
Test for subgroup differences: Chi^2=1.82, df=1 (P=0.61), I^2=0%					

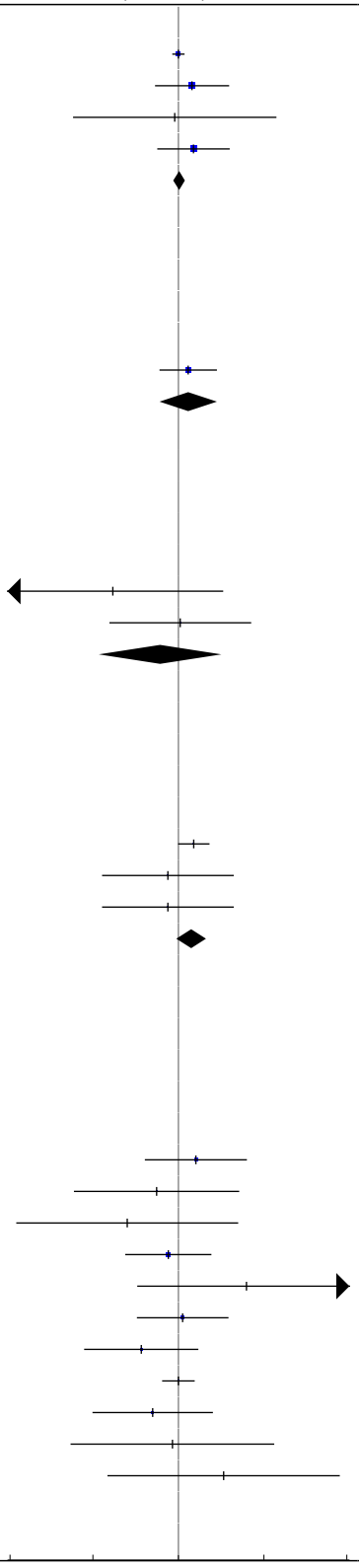


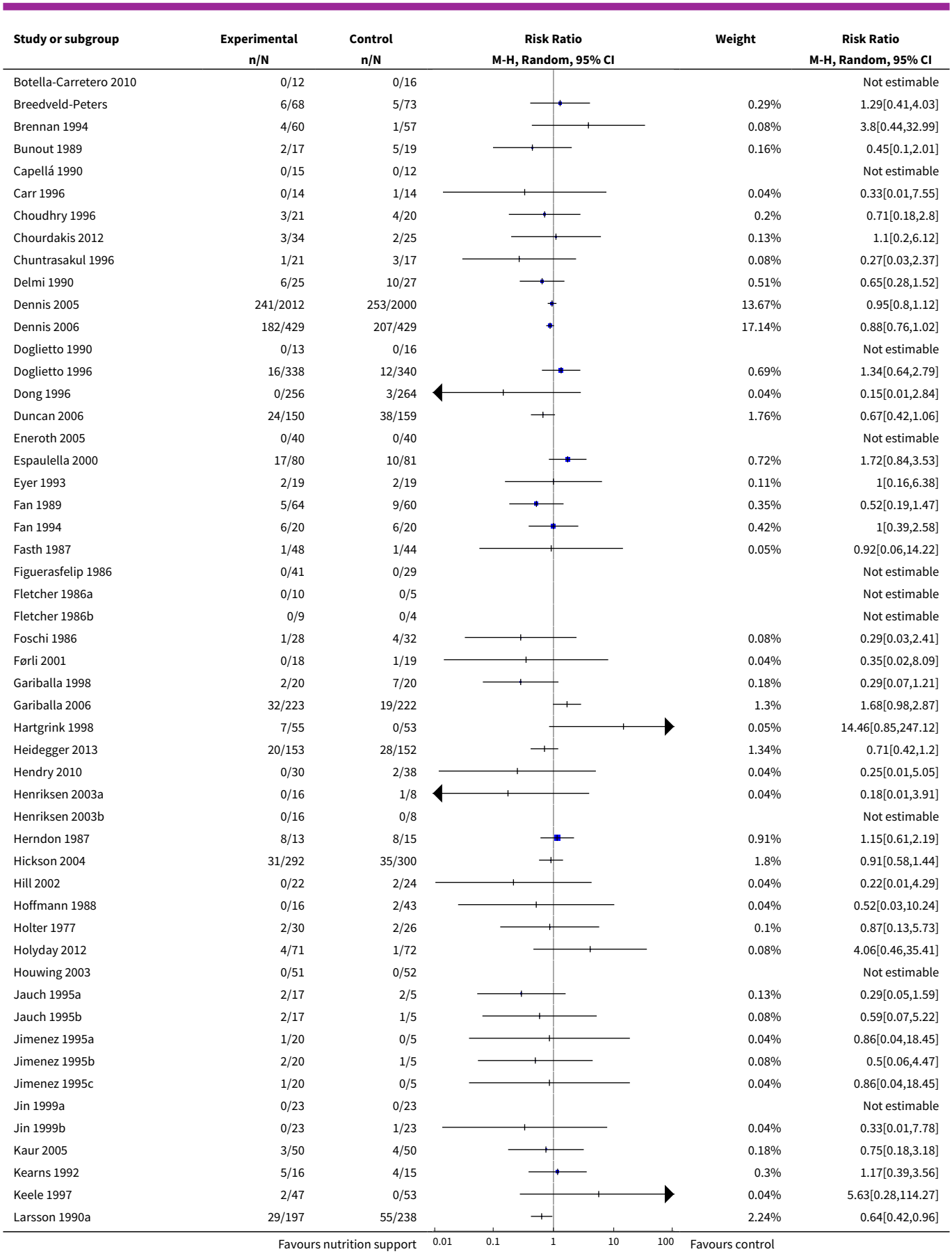
Favours nutrition support

Favours control

Analysis 2.6. Comparison 2 All-cause mortality - maximum follow-up, Outcome 6 All-cause mortality - different screening tools.

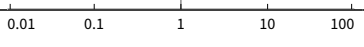
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
2.6.1 NRS 2002					
Casaer 2011	255/2312	257/2328		13.97%	1[0.85,1.18]
Johansen 2004	9/108	6/104		0.38%	1.44[0.53,3.92]
Munk 2014	1/42	1/38		0.05%	0.9[0.06,13.97]
Starke 2011	9/66	6/66		0.39%	1.5[0.57,3.98]
Subtotal (95% CI)	**2528**	**2536**		**14.79%**	**1.02[0.87,1.19]**
Total events: 274 (Experimental), 270 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.14, df=3(P=0.77); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
2.6.2 MUST					
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Subtotal (95% CI)	**70**	**76**		**0.62%**	**1.3[0.6,2.82]**
Total events: 12 (Experimental), 10 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.67(P=0.5)					
2.6.3 MNA					
De Sousa 2012	0/20	2/17		0.04%	0.17[0.01,3.34]
Gazzotti 2003	2/39	2/41		0.1%	1.05[0.16,7.1]
Subtotal (95% CI)	**59**	**58**		**0.14%**	**0.61[0.12,3.18]**
Total events: 2 (Experimental), 4 (Control)					
Heterogeneity: Tau^2=0.06; Chi^2=1.04, df=1(P=0.31); I^2=3.81%					
Test for overall effect: Z=0.59(P=0.56)					
2.6.4 SGA					
Arias 2008	46/260	31/265		2.09%	1.51[0.99,2.31]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Subtotal (95% CI)	**690**	**481**		**2.33%**	**1.41[0.94,2.1]**
Total events: 52 (Experimental), 35 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.07, df=2(P=0.59); I^2=0%					
Test for overall effect: Z=1.68(P=0.09)					
2.6.5 Other means					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Banerjee 1978	4/28	6/32		0.28%	0.76[0.24,2.43]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable





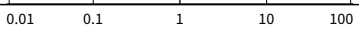
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.16%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		0.2%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.13%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
Delmi 1990	6/25	10/27		0.51%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		0.69%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.04%	0.15[0.01,2.84]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.72%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.11%	1[0.16,6.38]
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.42%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.08%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.18%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.3%	1.68[0.98,2.87]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Holyday 2012	4/71	1/72		0.08%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.3%	1.17[0.39,3.56]
Keele 1997	2/47	0/53		0.04%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		2.24%	0.64[0.42,0.96]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Ledinghen 1997	3/12	2/10		0.15%	1.25[0.26,6.07]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]
Liu 1996b	1/16	0/18		0.04%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.38%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.24%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.47%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		1.92%	0.95[0.61,1.48]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.99%	0.86[0.6,1.22]
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		0.87%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.68%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.45%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.44%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.04%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.05%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.05%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.21%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.04%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.28%	0.74[0.23,2.35]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		13.14%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.66%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]



Favours nutrition support | Favours control

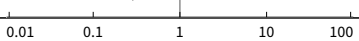
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Williams 1985	9/21	7/22		0.6%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.08%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.24%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**8441**	**8231**		**82.12%**	**0.91[0.85,0.97]**
Total events: 1042 (Experimental), 1175 (Control)					
Heterogeneity: Tau^2=0; Chi^2=97.14, df=107(P=0.74); I^2=0%					
Test for overall effect: Z=2.81(P=0)					
Total (95% CI)	**11788**	**11382**		**100%**	**0.93[0.88,0.99]**
Total events: 1382 (Experimental), 1494 (Control)					
Heterogeneity: Tau^2=0; Chi^2=106.77, df=117(P=0.74); I^2=0%					
Test for overall effect: Z=2.17(P=0.03)					
Test for subgroup differences: Chi^2=6.86, df=1 (P=0.14), I^2=41.7%					



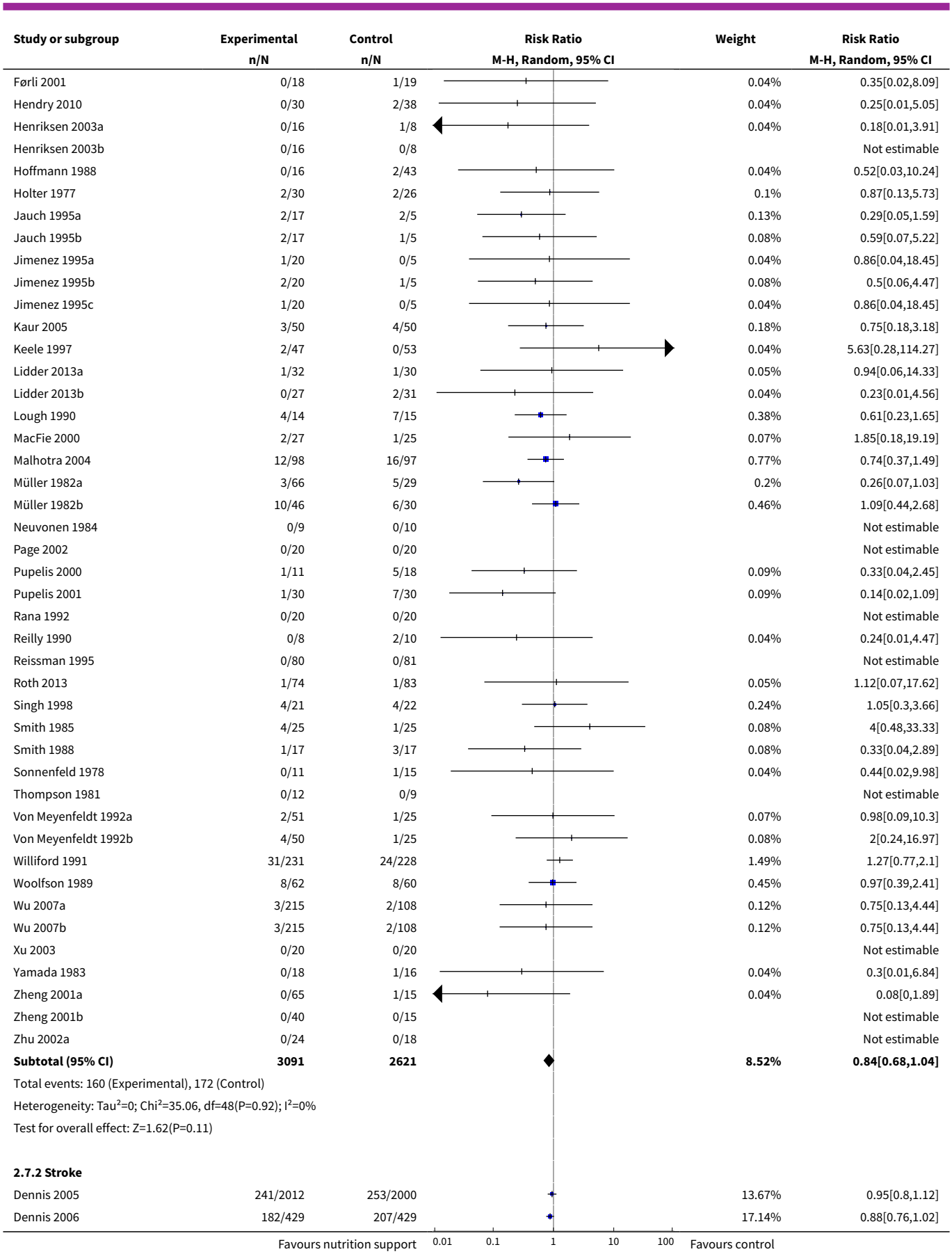
Favours nutrition support — Favours control

Analysis 2.7. Comparison 2 All-cause mortality - maximum follow-up, Outcome 7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions.

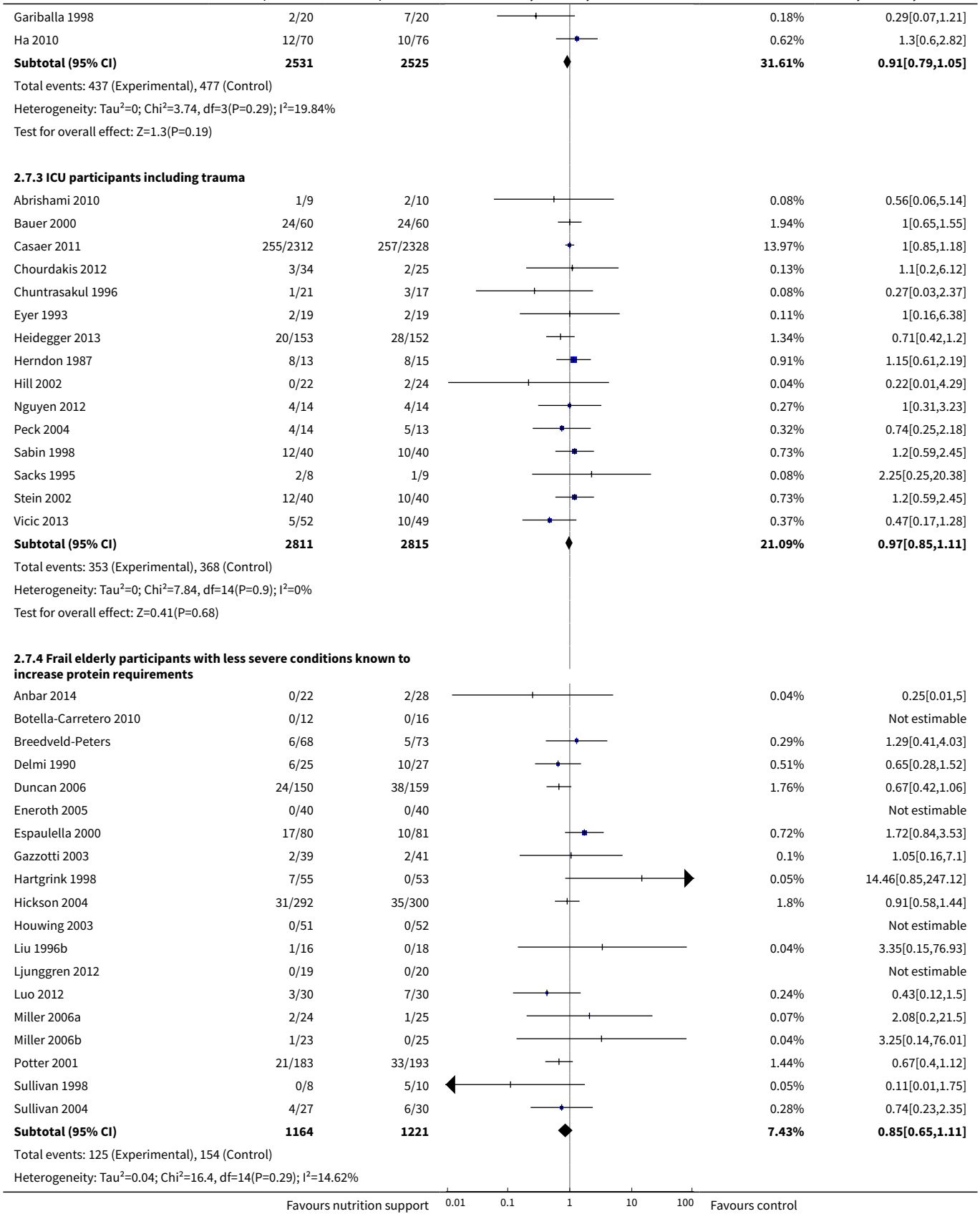
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
2.7.1 Major surgery					
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Doglietto 1996	16/338	12/340		0.69%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.04%	0.15[0.01,2.84]
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.42%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.08%	0.29[0.03,2.41]



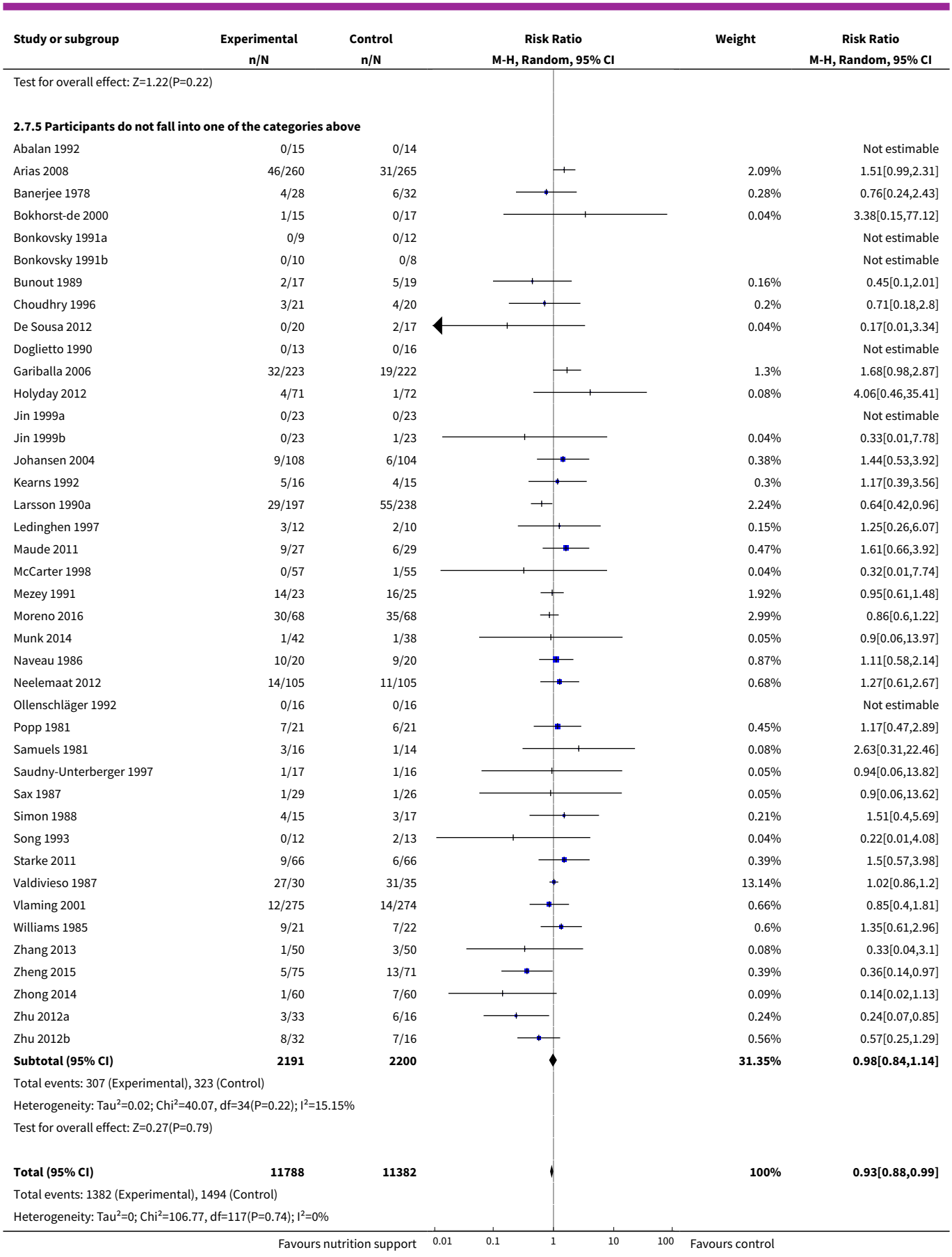
Favours nutrition support — Favours control



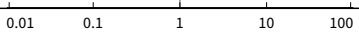
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Keele 1997	2/47	0/53		0.04%	5.63[0.28,114.27]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]
Lough 1990	4/14	7/15		0.38%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.04%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Thompson 1981	0/12	0/9			Not estimable
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**3091**	**2621**		**8.52%**	**0.84[0.68,1.04]**
Total events: 160 (Experimental), 172 (Control)					
Heterogeneity: Tau^2=0; Chi^2=35.06, df=48(P=0.92); I^2=0%					
Test for overall effect: Z=1.62(P=0.11)					
2.7.2 Stroke					
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Gariballa 1998	2/20	7/20		0.18%	0.29[0.07,1.21]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Subtotal (95% CI)	**2531**	**2525**		**31.61%**	**0.91[0.79,1.05]**
Total events: 437 (Experimental), 477 (Control)					
Heterogeneity: Tau²=0; Chi²=3.74, df=3(P=0.29); I²=19.84%					
Test for overall effect: Z=1.3(P=0.19)					
2.7.3 ICU participants including trauma					
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Casaer 2011	255/2312	257/2328		13.97%	1[0.85,1.18]
Chourdakis 2012	3/34	2/25		0.13%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.11%	1[0.16,6.38]
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]
Subtotal (95% CI)	**2811**	**2815**		**21.09%**	**0.97[0.85,1.11]**
Total events: 353 (Experimental), 368 (Control)					
Heterogeneity: Tau²=0; Chi²=7.84, df=14(P=0.9); I²=0%					
Test for overall effect: Z=0.41(P=0.68)					
2.7.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Delmi 1990	6/25	10/27		0.51%	0.65[0.28,1.52]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.72%	1.72[0.84,3.53]
Gazzotti 2003	2/39	2/41		0.1%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Houwing 2003	0/51	0/52			Not estimable
Liu 1996b	1/16	0/18		0.04%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		0.24%	0.43[0.12,1.5]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		1.44%	0.67[0.4,1.12]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.28%	0.74[0.23,2.35]
Subtotal (95% CI)	**1164**	**1221**		**7.43%**	**0.85[0.65,1.11]**
Total events: 125 (Experimental), 154 (Control)					
Heterogeneity: Tau²=0.04; Chi²=16.4, df=14(P=0.29); I²=14.62%					



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=2.17(P=0.03)					
Test for subgroup differences: Chi²=2.35, df=1 (P=0.67), I²=0%					



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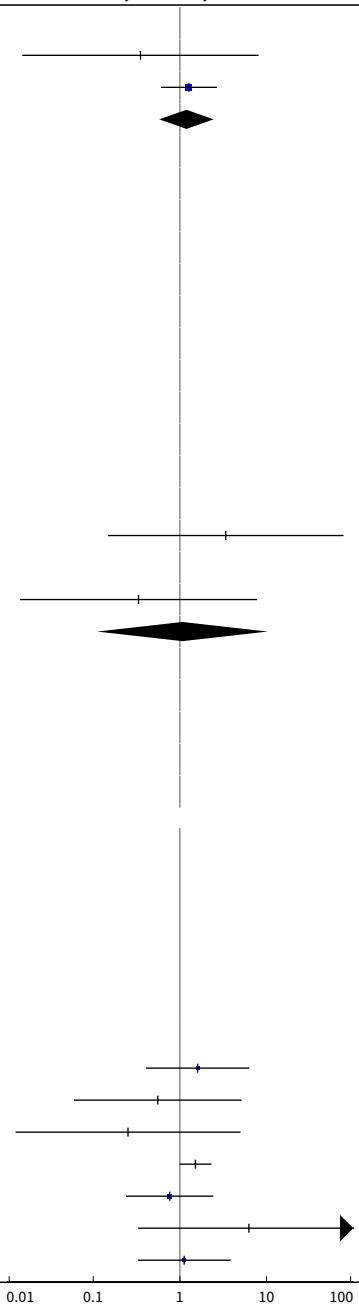
Analysis 2.8. Comparison 2 All-cause mortality - maximum follow-up, Outcome 8 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
2.8.1 BMI less than 20.5 kg/m2					
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Neelemaat 2012	14/105	11/105		0.68%	1.27[0.61,2.67]
Subtotal (95% CI)	**123**	**124**		**0.72%**	**1.19[0.58,2.45]**
Total events: 14 (Experimental), 12 (Control)					
Heterogeneity: Tau²=0; Chi²=0.62, df=1(P=0.43); I²=0%					
Test for overall effect: Z=0.47(P=0.64)					
2.8.2 Weight loss of at least 5% during the last three months					
Ollenschläger 1992	0/16	0/16			Not estimable
Subtotal (95% CI)	**16**	**16**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
2.8.3 Weight loss of at least 10% during the last six months					
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Subtotal (95% CI)	**61**	**63**		**0.08%**	**1.07[0.11,10.33]**
Total events: 1 (Experimental), 1 (Control)					
Heterogeneity: Tau²=0.11; Chi²=1.04, df=1(P=0.31); I²=4.25%					
Test for overall effect: Z=0.06(P=0.95)					
2.8.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
2.8.5 Participants characterised as 'at nutritional risk' by other means					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Arias 2008	46/260	31/265		2.09%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.28%	0.76[0.24,2.43]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]



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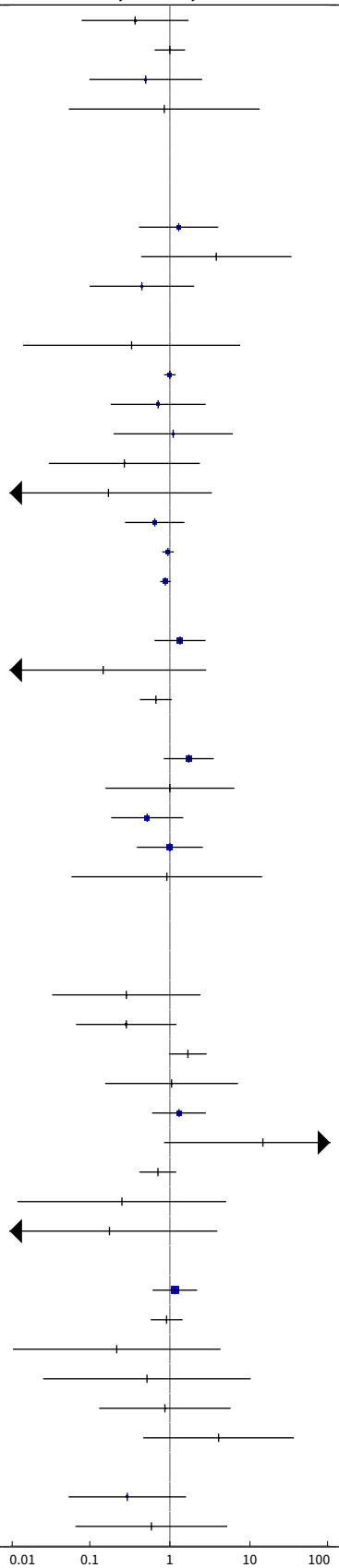
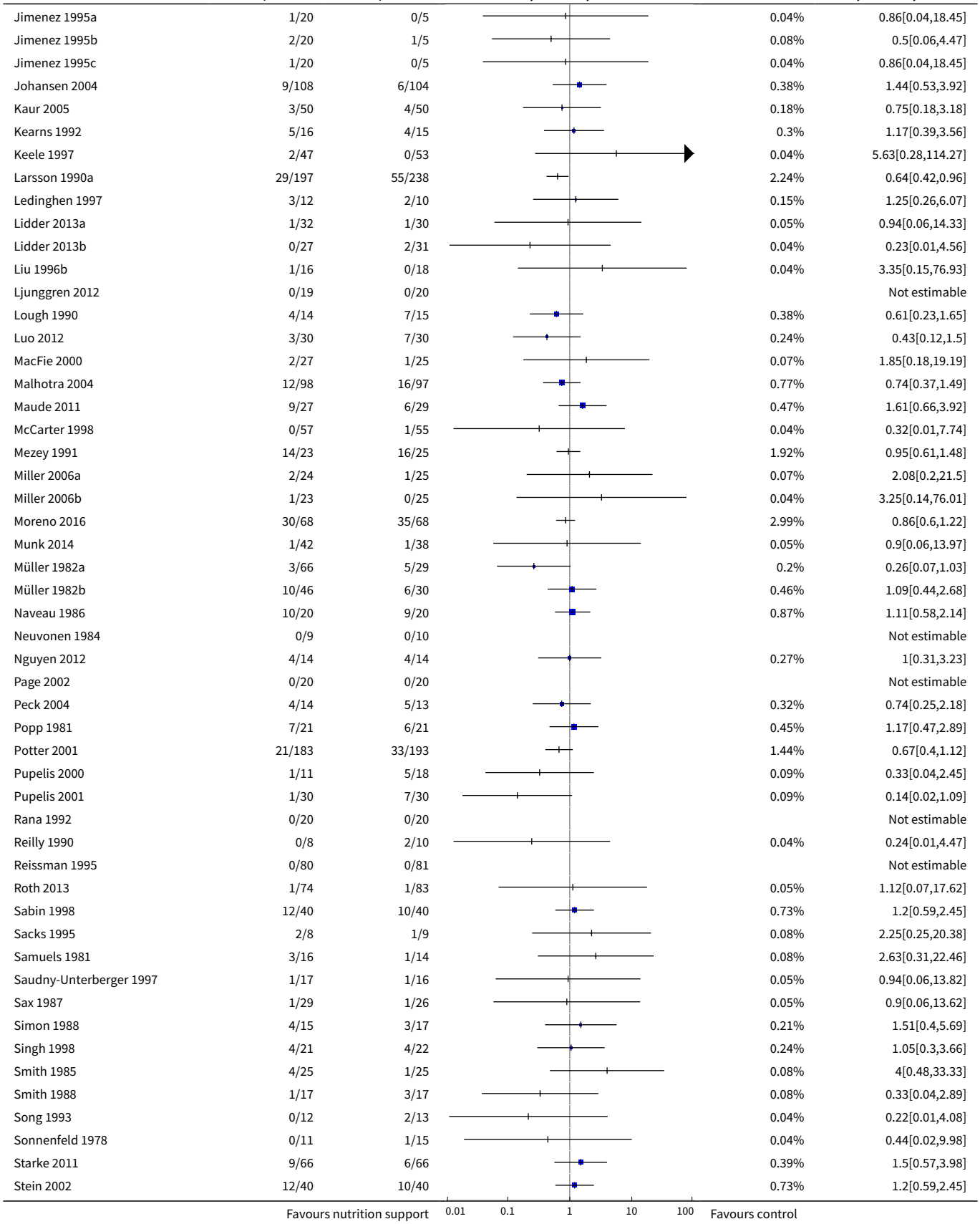
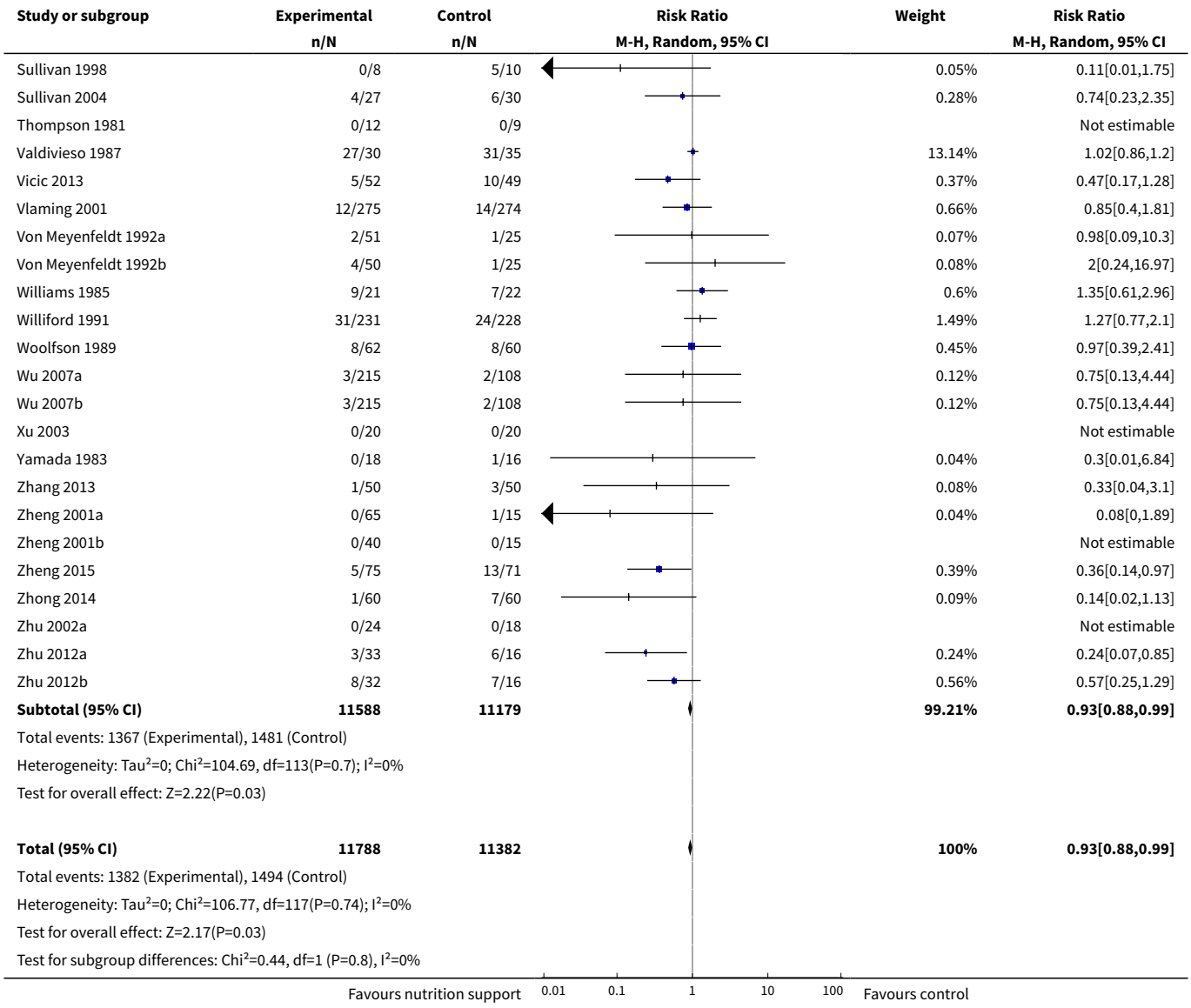
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.16%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		13.97%	1[0.85,1.18]
Choudhry 1996	3/21	4/20		0.2%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.13%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.04%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.51%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		0.69%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.04%	0.15[0.01,2.84]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.72%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.11%	1[0.16,6.38]
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.42%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.08%	0.29[0.03,2.41]
Gariballa 1998	2/20	7/20		0.18%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.3%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.1%	1.05[0.16,7.1]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Holyday 2012	4/71	1/72		0.08%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]

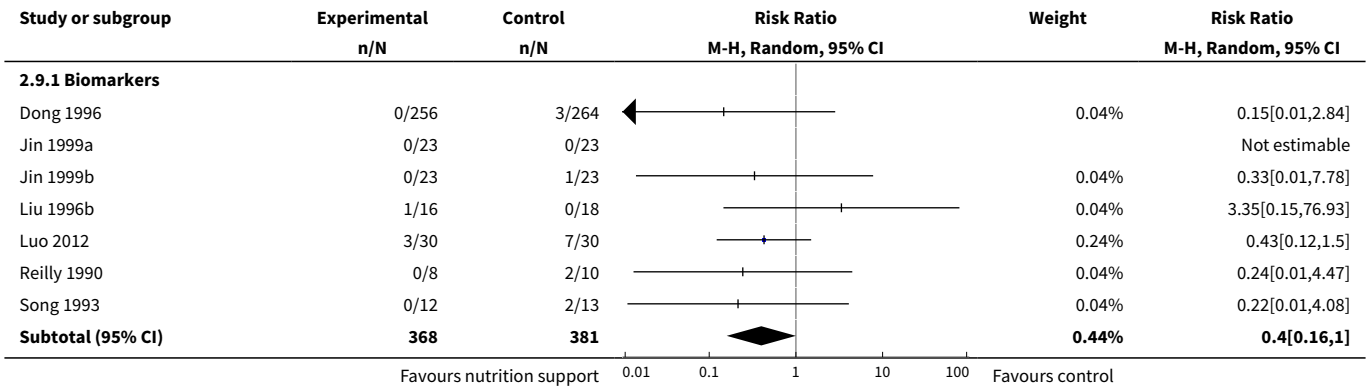


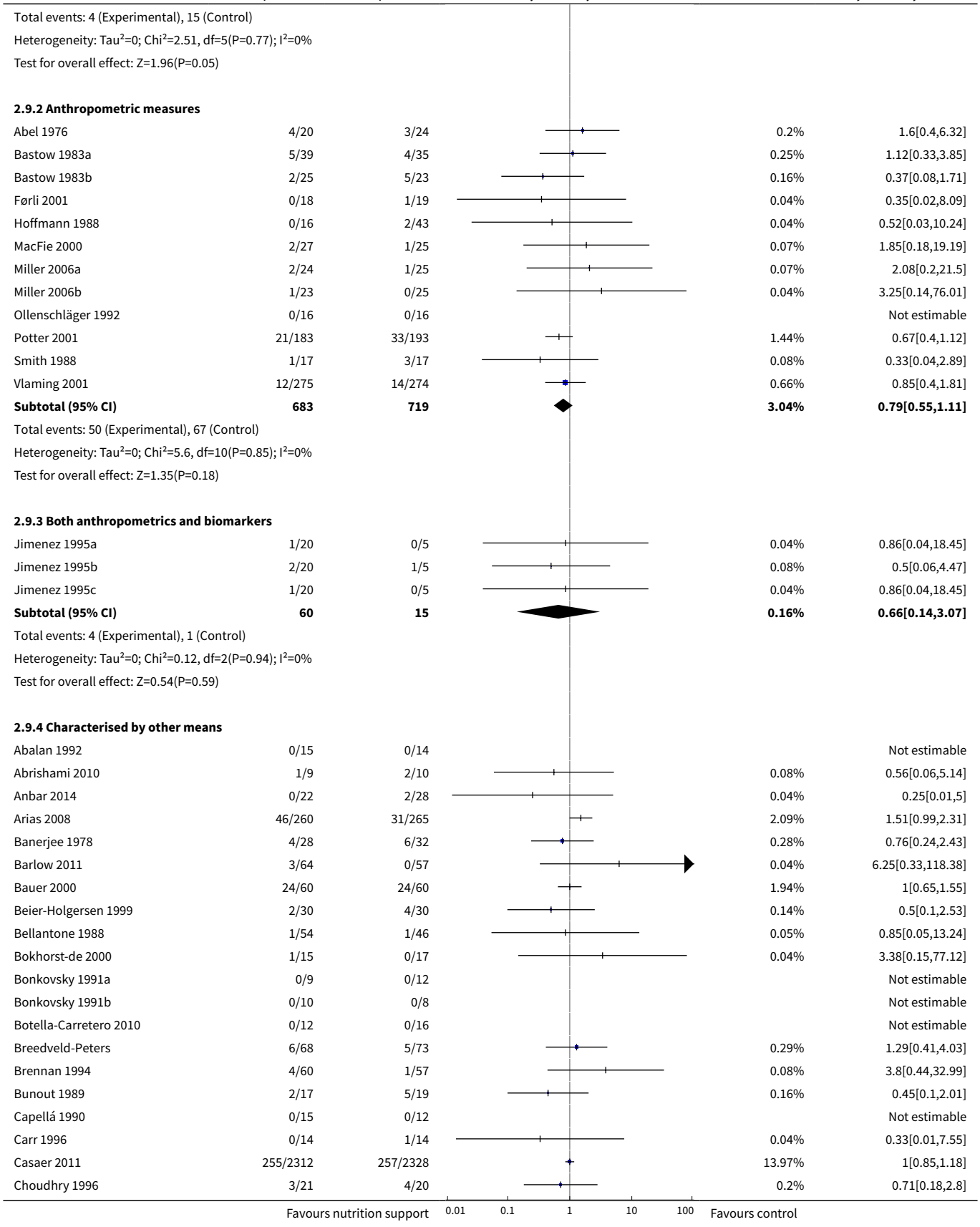


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Johansen 2004	9/108	6/104		0.38%	1.44[0.53,3.92]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.3%	1.17[0.39,3.56]
Keele 1997	2/47	0/53		0.04%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		2.24%	0.64[0.42,0.96]
Ledinghen 1997	3/12	2/10		0.15%	1.25[0.26,6.07]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]
Liu 1996b	1/16	0/18		0.04%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.38%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.24%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.47%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		1.92%	0.95[0.61,1.48]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.99%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.05%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		0.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.45%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.44%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.04%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.05%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.05%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.21%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.04%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Starke 2011	9/66	6/66		0.39%	1.5[0.57,3.98]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]



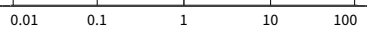
Analysis 2.9. Comparison 2 All-cause mortality - maximum follow-up, Outcome 9 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 4 (Experimental), 15 (Control)					
Heterogeneity: Tau²=0; Chi²=2.51, df=5(P=0.77); I²=0%					
Test for overall effect: Z=1.96(P=0.05)					
2.9.2 Anthropometric measures					
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Ollenschläger 1992	0/16	0/16			Not estimable
Potter 2001	21/183	33/193		1.44%	0.67[0.4,1.12]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Vlaming 2001	12/275	14/274		0.66%	0.85[0.4,1.81]
Subtotal (95% CI)	**683**	**719**		**3.04%**	**0.79[0.55,1.11]**
Total events: 50 (Experimental), 67 (Control)					
Heterogeneity: Tau²=0; Chi²=5.6, df=10(P=0.85); I²=0%					
Test for overall effect: Z=1.35(P=0.18)					
2.9.3 Both anthropometrics and biomarkers					
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Subtotal (95% CI)	**60**	**15**		**0.16%**	**0.66[0.14,3.07]**
Total events: 4 (Experimental), 1 (Control)					
Heterogeneity: Tau²=0; Chi²=0.12, df=2(P=0.94); I²=0%					
Test for overall effect: Z=0.54(P=0.59)					
2.9.4 Characterised by other means					
Abalan 1992	0/15	0/14			Not estimable
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Arias 2008	46/260	31/265		2.09%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.28%	0.76[0.24,2.43]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.16%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		13.97%	1[0.85,1.18]
Choudhry 1996	3/21	4/20		0.2%	0.71[0.18,2.8]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chourdakis 2012	3/34	2/25		0.13%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.04%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.51%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		0.69%	1.34[0.64,2.79]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.72%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.11%	1[0.16,6.38]
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.42%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.08%	0.29[0.03,2.41]
Gariballa 1998	2/20	7/20		0.18%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.3%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.1%	1.05[0.16,7.1]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Holyday 2012	4/71	1/72		0.08%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Johansen 2004	9/108	6/104		0.38%	1.44[0.53,3.92]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.3%	1.17[0.39,3.56]
Keele 1997	2/47	0/53		0.04%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		2.24%	0.64[0.42,0.96]
Ledinghen 1997	3/12	2/10		0.15%	1.25[0.26,6.07]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.38%	0.61[0.23,1.65]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.47%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		1.92%	0.95[0.61,1.48]
Moreno 2016	30/68	35/68		2.99%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.05%	0.9[0.06,13.97]



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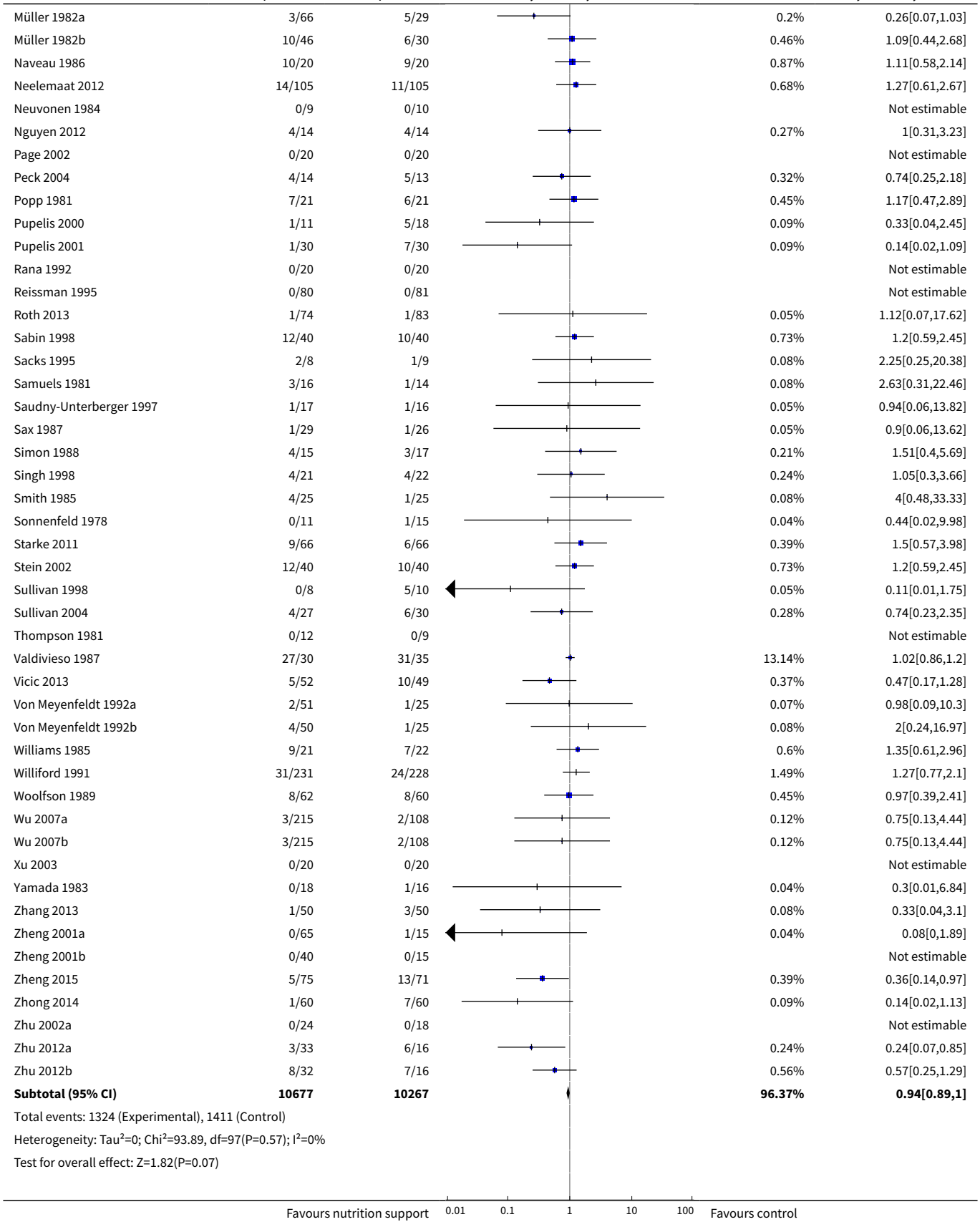
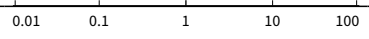


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		0.87%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.68%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.45%	1.17[0.47,2.89]
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.05%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.05%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.21%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Starke 2011	9/66	6/66		0.39%	1.5[0.57,3.98]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.28%	0.74[0.23,2.35]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		13.14%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Williams 1985	9/21	7/22		0.6%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.08%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.24%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**10677**	**10267**		**96.37%**	**0.94[0.89,1]**
Total events: 1324 (Experimental), 1411 (Control)					
Heterogeneity: Tau^2=0; Chi^2=93.89, df=97(P=0.57); I^2=0%					
Test for overall effect: Z=1.82(P=0.07)					

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total (95% CI)	**11788**	**11382**		**100%**	**0.93[0.88,0.99]**
Total events: 1382 (Experimental), 1494 (Control)					
Heterogeneity: Tau^2=0; Chi^2=106.77, df=117(P=0.74); I^2=0%					
Test for overall effect: Z=2.17(P=0.03)					
Test for subgroup differences: Chi^2=4.55, df=1 (P=0.21), I^2=34.01%					



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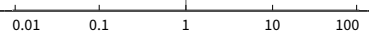
Analysis 2.10. Comparison 2 All-cause mortality - maximum follow-up, Outcome 10 All-cause mortality - randomisation year.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
2.10.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
2.10.2 1960 to 1979					
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Banerjee 1978	4/28	6/32		0.28%	0.76[0.24,2.43]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Thompson 1981	0/12	0/9			Not estimable
Subtotal (95% CI)	**117**	**120**		**0.7%**	**1.07[0.52,2.23]**
Total events: 13 (Experimental), 13 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.68, df=4(P=0.79); I^2=0%					
Test for overall effect: Z=0.19(P=0.85)					
2.10.3 1980 to 1999					
Abalan 1992	0/15	0/14			Not estimable
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.16%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		0.2%	0.71[0.18,2.8]
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
Delmi 1990	6/25	10/27		0.51%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]



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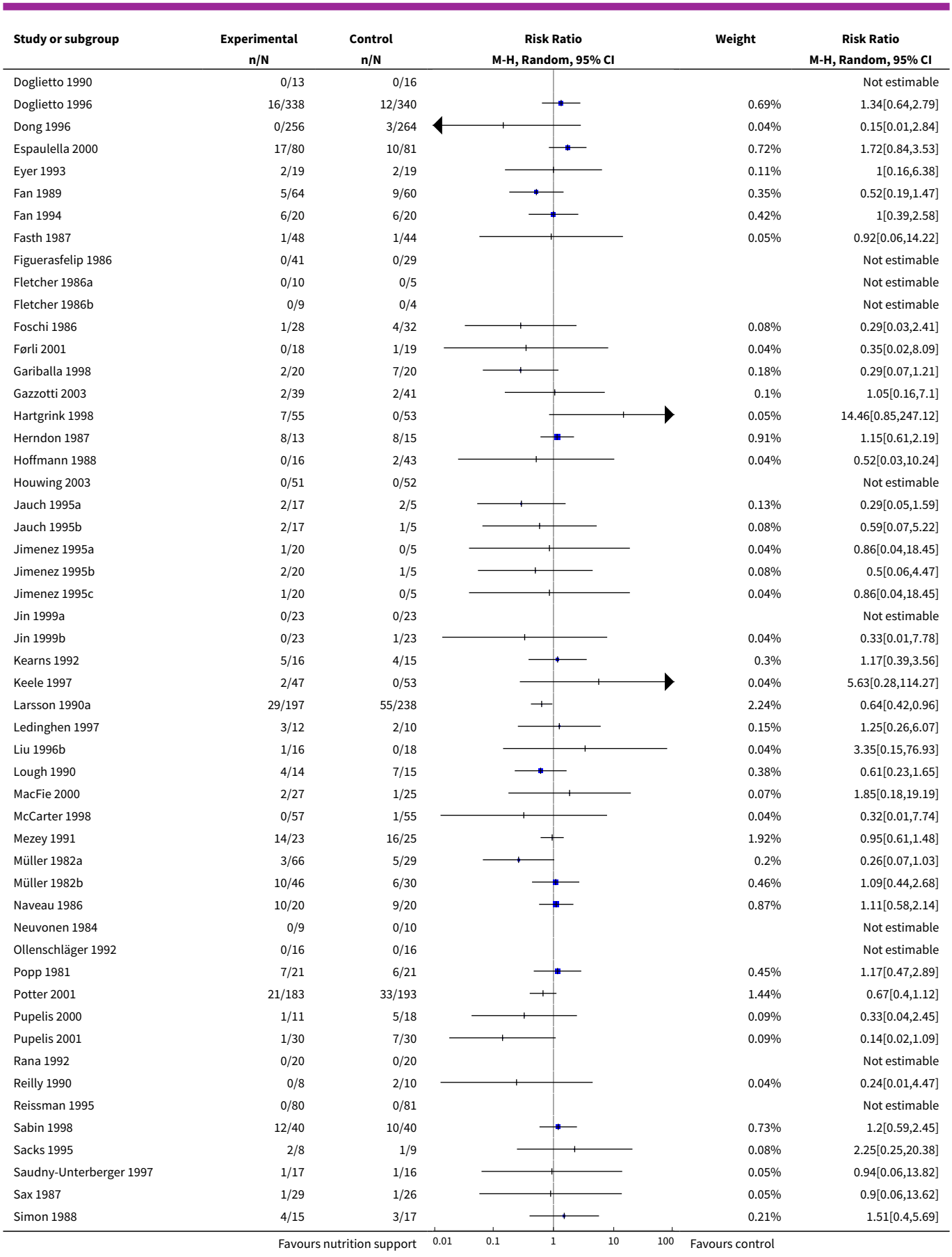
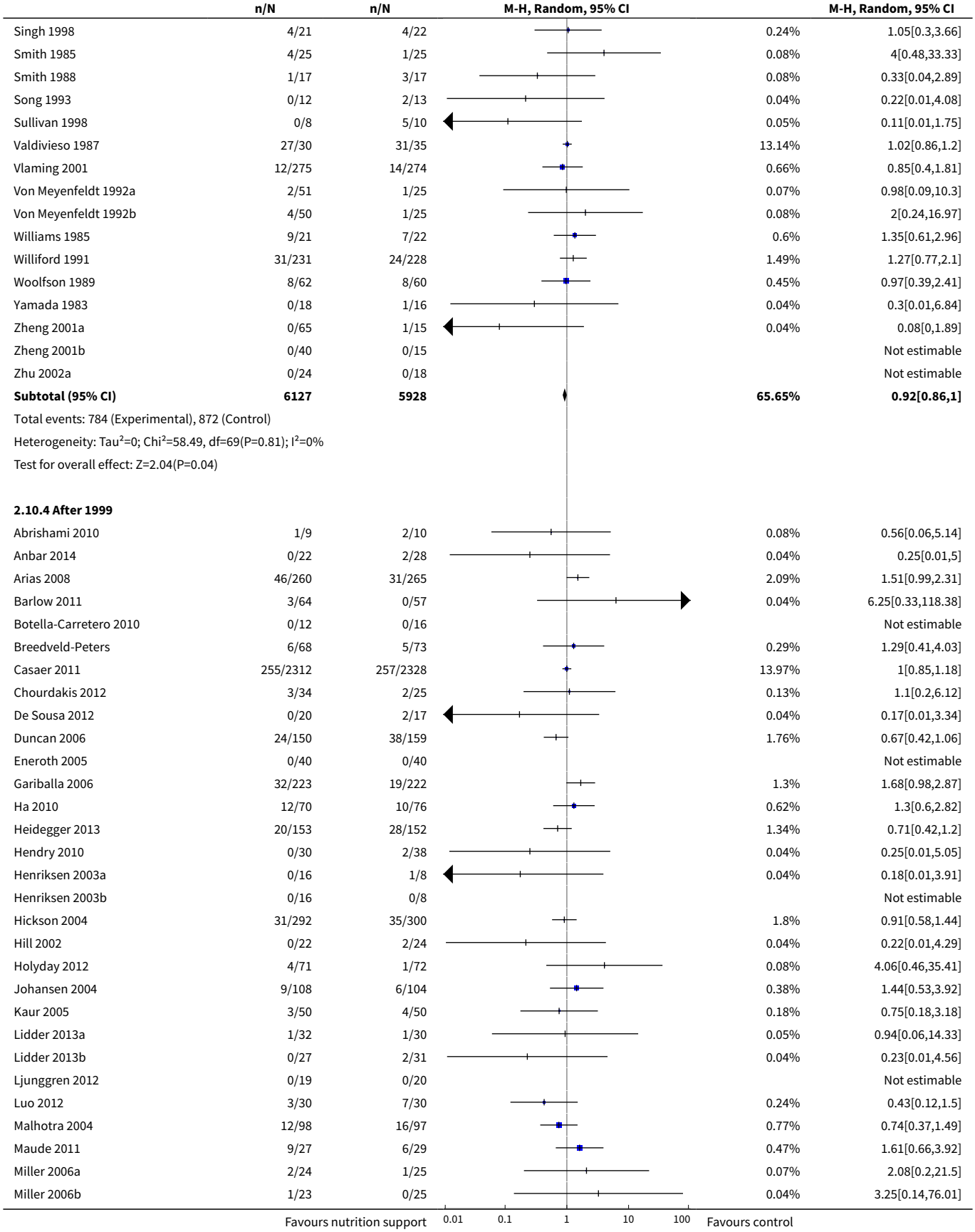
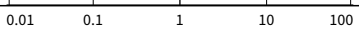




Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.04%	0.22[0.01,4.08]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Valdivieso 1987	27/30	31/35		13.14%	1.02[0.86,1.2]
Vlaming 2001	12/275	14/274		0.66%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Williams 1985	9/21	7/22		0.6%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**6127**	**5928**		**65.65%**	**0.92[0.86,1]**
Total events: 784 (Experimental), 872 (Control)					
Heterogeneity: Tau^2=0; Chi^2=58.49, df=69(P=0.81); I^2=0%					
Test for overall effect: Z=2.04(P=0.04)					
2.10.4 After 1999					
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Arias 2008	46/260	31/265		2.09%	1.51[0.99,2.31]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Casaer 2011	255/2312	257/2328		13.97%	1[0.85,1.18]
Chourdakis 2012	3/34	2/25		0.13%	1.1[0.2,6.12]
De Sousa 2012	0/20	2/17		0.04%	0.17[0.01,3.34]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Gariballa 2006	32/223	19/222		1.3%	1.68[0.98,2.87]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Holyday 2012	4/71	1/72		0.08%	4.06[0.46,35.41]
Johansen 2004	9/108	6/104		0.38%	1.44[0.53,3.92]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		0.24%	0.43[0.12,1.5]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		0.47%	1.61[0.66,3.92]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]

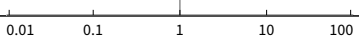
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Moreno 2016	30/68	35/68		2.99%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.05%	0.9[0.06,13.97]
Neelemaat 2012	14/105	11/105		0.68%	1.27[0.61,2.67]
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Starke 2011	9/66	6/66		0.39%	1.5[0.57,3.98]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Sullivan 2004	4/27	6/30		0.28%	0.74[0.23,2.35]
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.08%	0.33[0.04,3.1]
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Zhu 2012a	3/33	6/16		0.24%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**5544**	**5334**		**33.65%**	**0.93[0.81,1.06]**
Total events: 585 (Experimental), 609 (Control)					
Heterogeneity: Tau^2=0.02; Chi^2=46.58, df=42(P=0.29); I^2=9.84%					
Test for overall effect: Z=1.07(P=0.28)					
Total (95% CI)	**11788**	**11382**		**100%**	**0.93[0.88,0.99]**
Total events: 1382 (Experimental), 1494 (Control)					
Heterogeneity: Tau^2=0; Chi^2=106.77, df=117(P=0.74); I^2=0%					
Test for overall effect: Z=2.17(P=0.03)					
Test for subgroup differences: Chi^2=0.16, df=1 (P=0.92), I^2=0%					



Favours nutrition support — Favours control

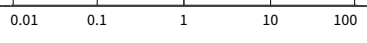
Analysis 2.11. Comparison 2 All-cause mortality - maximum follow-up, Outcome 11 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
2.11.1 Three days or more					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.2%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Arias 2008	46/260	31/265		2.09%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.28%	0.76[0.24,2.43]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.16%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.94%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.14%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.05%	0.85[0.05,13.24]



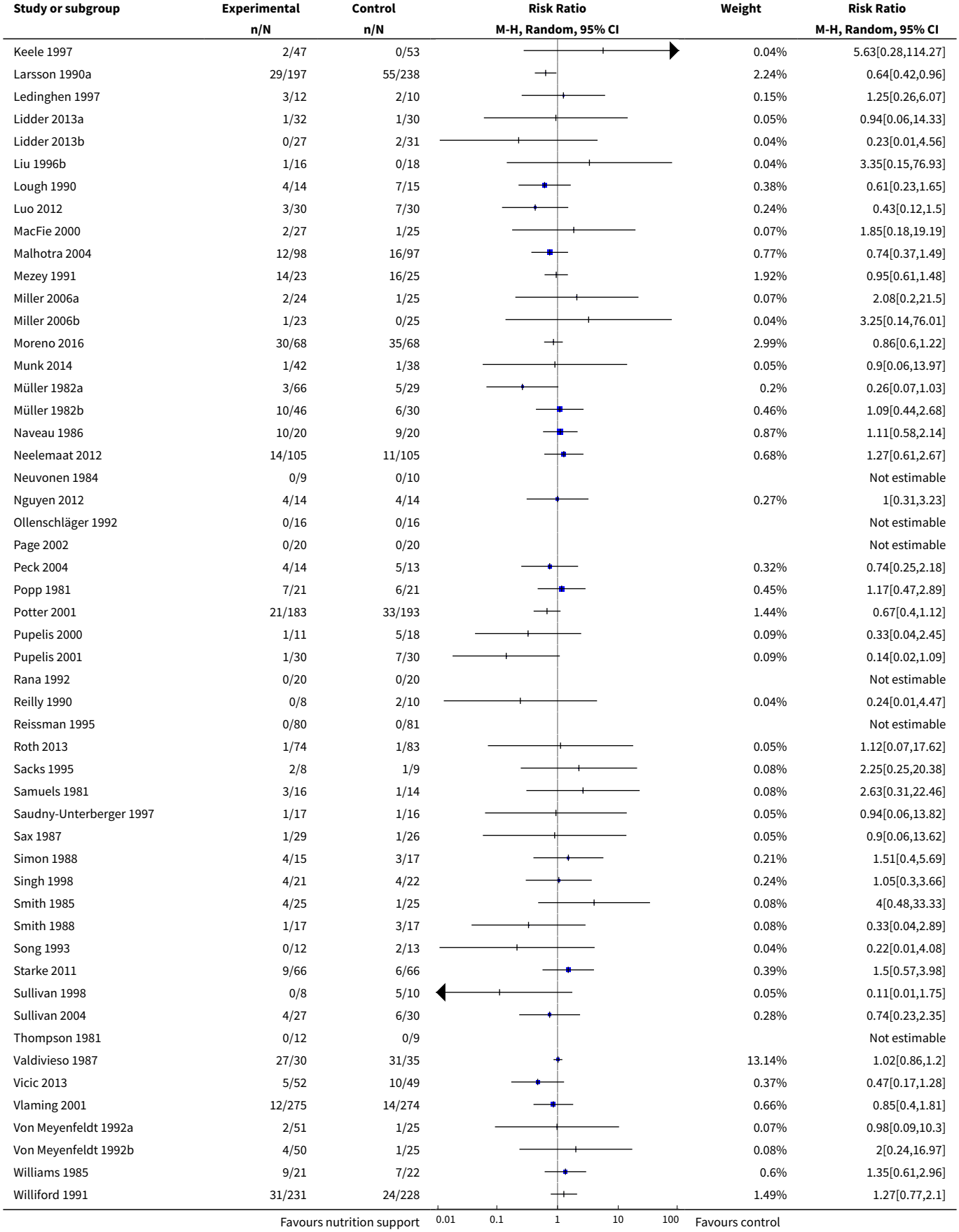
Favours nutrition support — Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bokhorst-de 2000	1/15	0/17		0.04%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.29%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.08%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.16%	0.45[0.1,2.01]
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		13.97%	1[0.85,1.18]
Chuntrasakul 1996	1/21	3/17		0.08%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.04%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.51%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		13.67%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		17.14%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		0.69%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.04%	0.15[0.01,2.84]
Duncan 2006	24/150	38/159		1.76%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.72%	1.72[0.84,3.53]
Fan 1989	5/64	9/60		0.35%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.42%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.08%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.18%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.3%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.1%	1.05[0.16,7.1]
Ha 2010	12/70	10/76		0.62%	1.3[0.6,2.82]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.34%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.04%	0.25[0.01,5.05]
Herndon 1987	8/13	8/15		0.91%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.8%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.04%	0.22[0.01,4.29]
Hoffmann 1988	0/16	2/43		0.04%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.1%	0.87[0.13,5.73]
Holyday 2012	4/71	1/72		0.08%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.13%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Johansen 2004	9/108	6/104		0.38%	1.44[0.53,3.92]
Kaur 2005	3/50	4/50		0.18%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.3%	1.17[0.39,3.56]

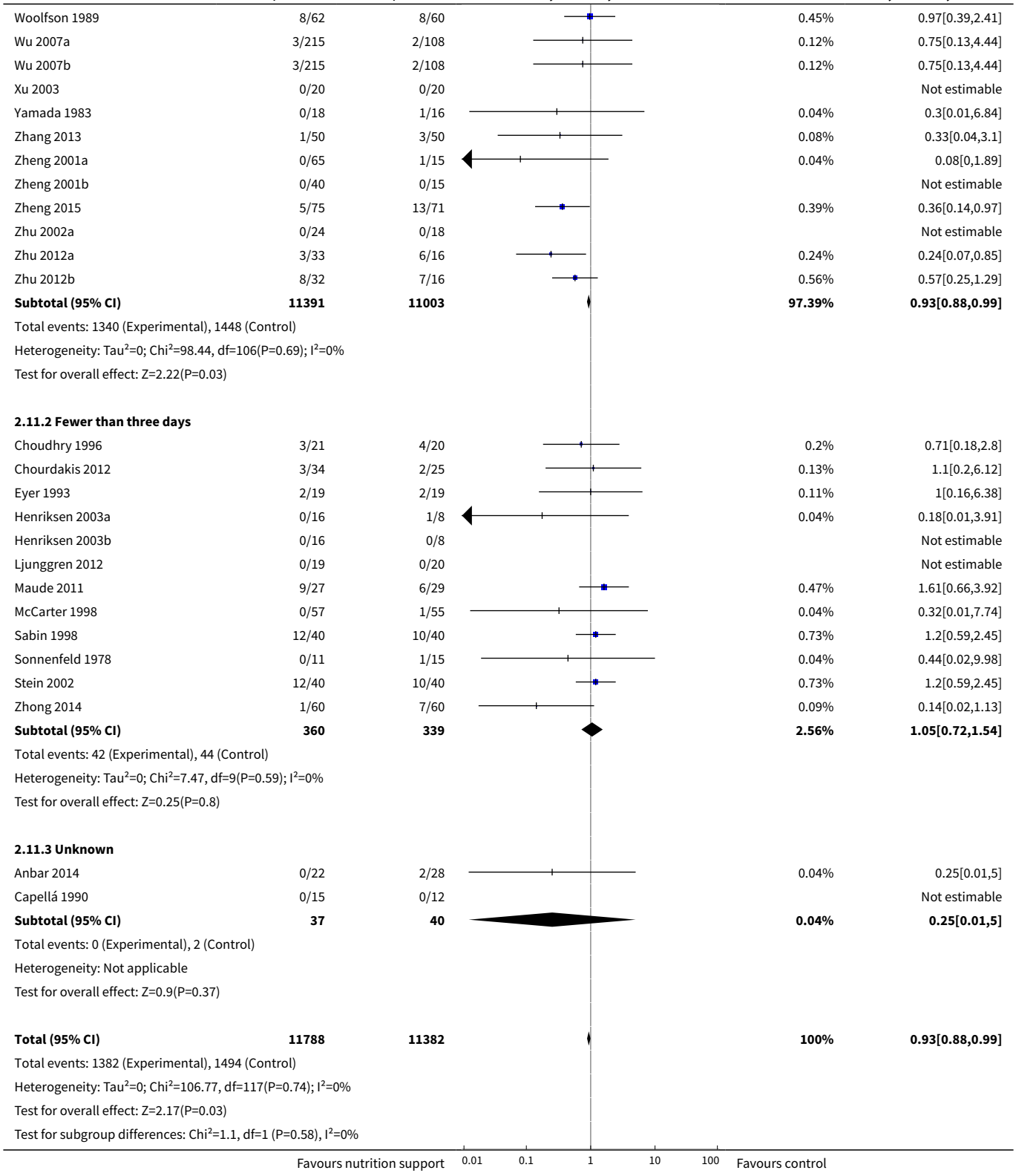


Favours nutrition support

Favours control



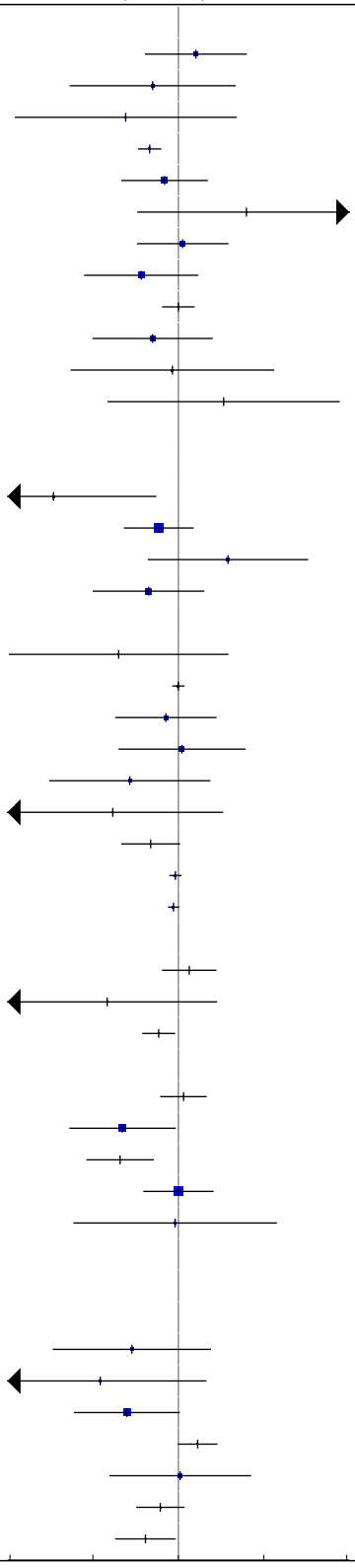
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Keele 1997	2/47	0/53		0.04%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		2.24%	0.64[0.42,0.96]
Ledinghen 1997	3/12	2/10		0.15%	1.25[0.26,6.07]
Lidder 2013a	1/32	1/30		0.05%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.04%	0.23[0.01,4.56]
Liu 1996b	1/16	0/18		0.04%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.38%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.24%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		0.77%	0.74[0.37,1.49]
Mezey 1991	14/23	16/25		1.92%	0.95[0.61,1.48]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.99%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.05%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.2%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.46%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		0.87%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.68%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.32%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.45%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.44%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.09%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.09%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.04%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.08%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.05%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.05%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.21%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.24%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.08%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.08%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.04%	0.22[0.01,4.08]
Starke 2011	9/66	6/66		0.39%	1.5[0.57,3.98]
Sullivan 1998	0/8	5/10		0.05%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.28%	0.74[0.23,2.35]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		13.14%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.37%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.66%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Williams 1985	9/21	7/22		0.6%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		1.49%	1.27[0.77,2.1]

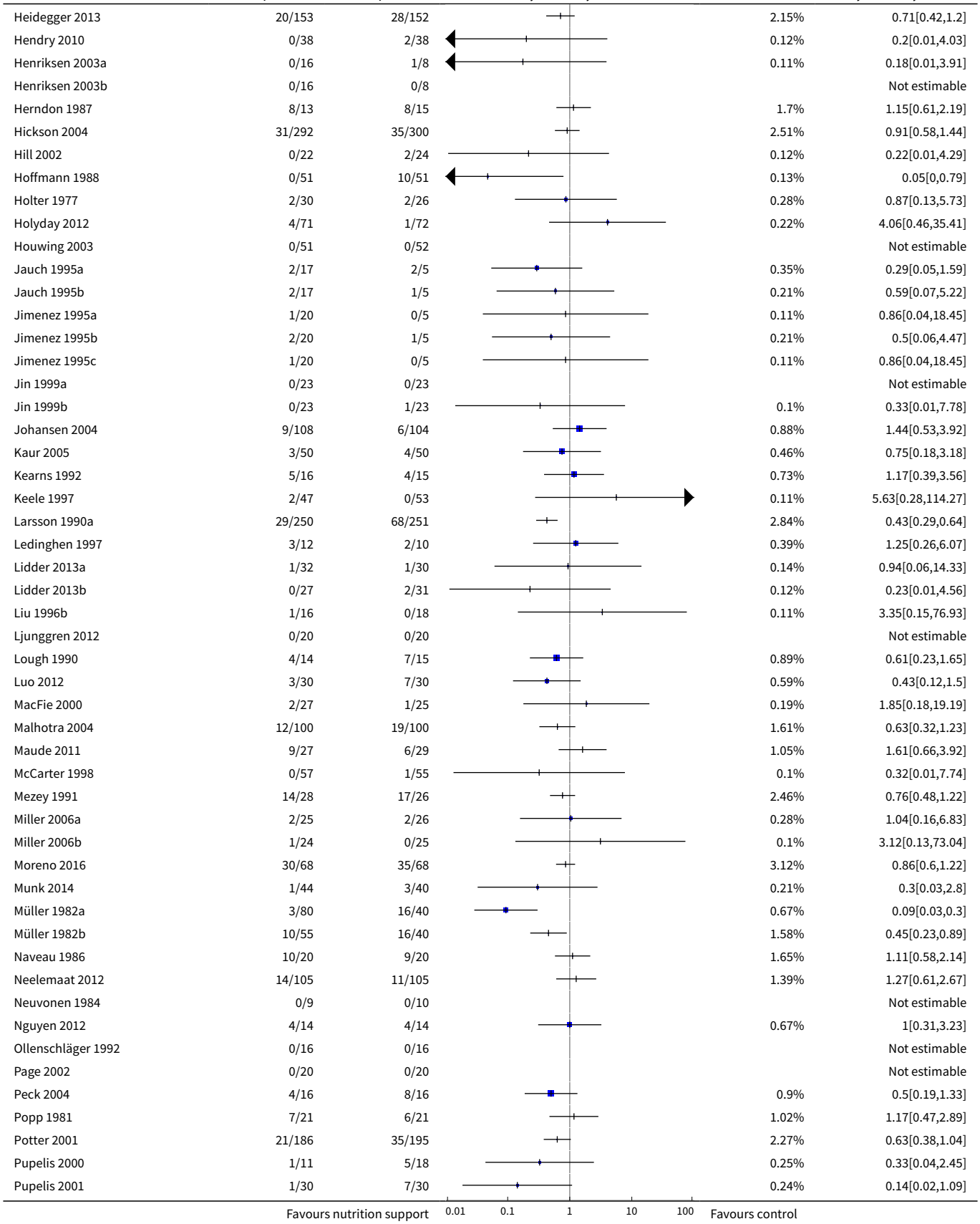


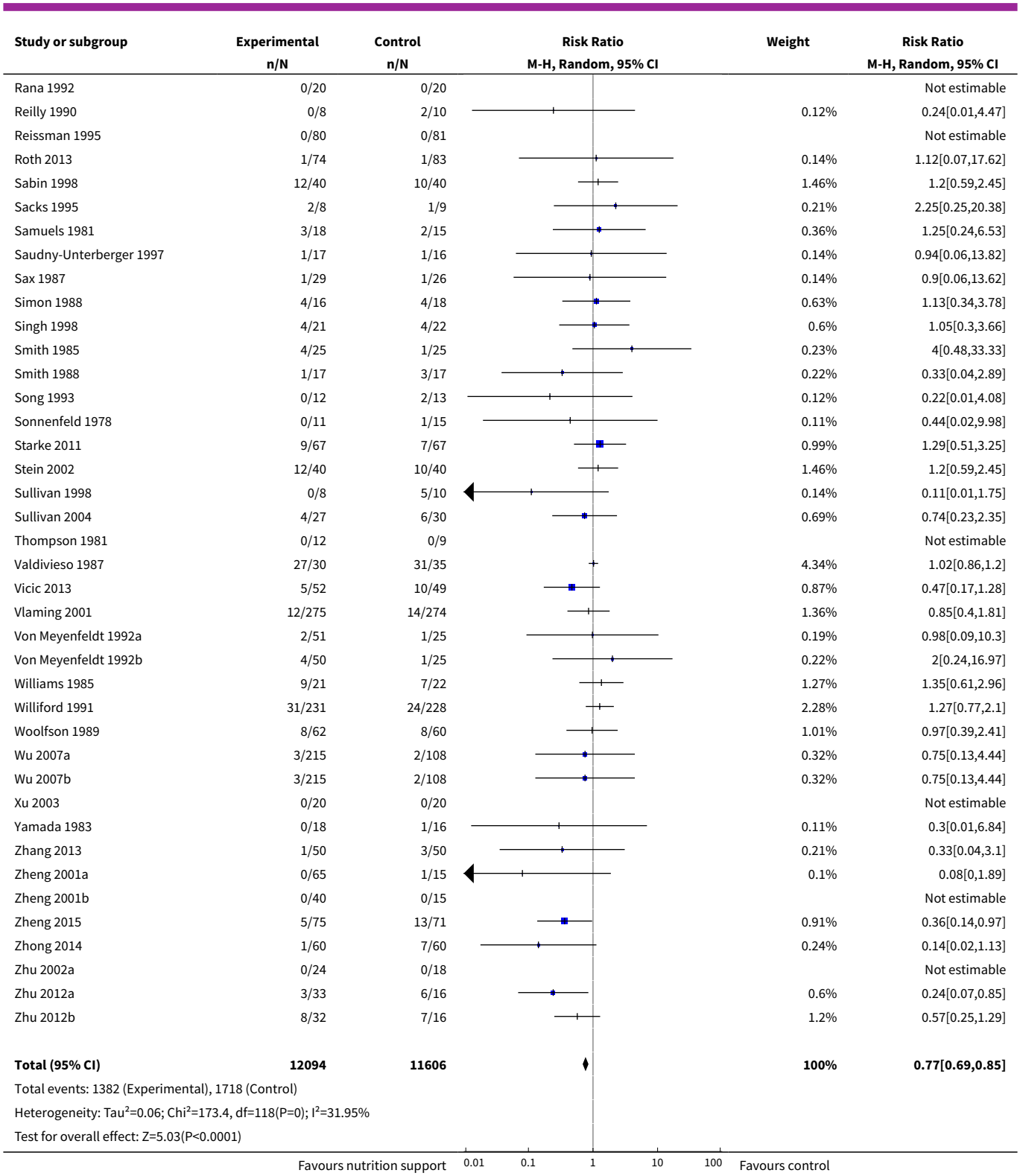
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Woolfson 1989	8/62	8/60		0.45%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.12%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.12%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.04%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.08%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.39%	0.36[0.14,0.97]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.24%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**11391**	**11003**		**97.39%**	**0.93[0.88,0.99]**
Total events: 1340 (Experimental), 1448 (Control)					
Heterogeneity: Tau²=0; Chi²=98.44, df=106(P=0.69); I²=0%					
Test for overall effect: Z=2.22(P=0.03)					
2.11.2 Fewer than three days					
Choudhry 1996	3/21	4/20		0.2%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.13%	1.1[0.2,6.12]
Eyer 1993	2/19	2/19		0.11%	1[0.16,6.38]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Maude 2011	9/27	6/29		0.47%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Sabin 1998	12/40	10/40		0.73%	1.2[0.59,2.45]
Sonnenfeld 1978	0/11	1/15		0.04%	0.44[0.02,9.98]
Stein 2002	12/40	10/40		0.73%	1.2[0.59,2.45]
Zhong 2014	1/60	7/60		0.09%	0.14[0.02,1.13]
Subtotal (95% CI)	**360**	**339**		**2.56%**	**1.05[0.72,1.54]**
Total events: 42 (Experimental), 44 (Control)					
Heterogeneity: Tau²=0; Chi²=7.47, df=9(P=0.59); I²=0%					
Test for overall effect: Z=0.25(P=0.8)					
2.11.3 Unknown					
Anbar 2014	0/22	2/28		0.04%	0.25[0.01,5]
Capellá 1990	0/15	0/12			Not estimable
Subtotal (95% CI)	**37**	**40**		**0.04%**	**0.25[0.01,5]**
Total events: 0 (Experimental), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.9(P=0.37)					
Total (95% CI)	**11788**	**11382**		**100%**	**0.93[0.88,0.99]**
Total events: 1382 (Experimental), 1494 (Control)					
Heterogeneity: Tau²=0; Chi²=106.77, df=117(P=0.74); I²=0%					
Test for overall effect: Z=2.17(P=0.03)					
Test for subgroup differences: Chi²=1.1, df=1 (P=0.58), I²=0%					

Analysis 2.12. Comparison 2 All-cause mortality - maximum follow-up, Outcome 12 All-cause mortality - 'best-worst case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.51%	1.6[0.4,6.32]
Abrishami 2010	1/10	2/10		0.2%	0.5[0.05,4.67]
Anbar 2014	0/23	2/28		0.12%	0.24[0.01,4.8]
Arias 2008	46/333	100/334		3.37%	0.46[0.34,0.63]
Banerjee 1978	4/31	6/32		0.68%	0.69[0.21,2.21]
Barlow 2011	3/64	0/57		0.12%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.61%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.41%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		2.6%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.37%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.14%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.11%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/30	14/30		0.13%	0.03[0,0.55]
Breedveld-Peters	6/73	11/79		0.96%	0.59[0.23,1.51]
Brennan 1994	4/60	1/57		0.22%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.43%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/15	2/15		0.12%	0.2[0.01,3.85]
Casaer 2011	255/2312	257/2328		4.37%	1[0.85,1.18]
Choudhry 1996	3/21	4/20		0.51%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.34%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.22%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.12%	0.17[0.01,3.34]
Delmi 1990	6/27	15/32		1.25%	0.47[0.21,1.05]
Dennis 2005	241/2016	260/2007		4.37%	0.92[0.78,1.09]
Dennis 2006	182/429	208/430		4.47%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.41%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.12%	0.15[0.01,2.84]
Duncan 2006	24/153	44/165		2.56%	0.59[0.38,0.92]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/85	15/86		1.75%	1.15[0.61,2.14]
Eyer 1993	2/26	9/26		0.47%	0.22[0.05,0.93]
Fan 1989	5/75	24/75		1.02%	0.21[0.08,0.52]
Fan 1994	6/20	6/20		0.96%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.14%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.22%	0.29[0.03,2.41]
Førli 2001	0/20	4/22		0.13%	0.12[0.01,2.13]
Gariballa 1998	2/21	8/21		0.47%	0.25[0.06,1.04]
Gariballa 2006	32/223	19/222		2.11%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.28%	1.05[0.16,7.1]
Ha 2010	12/84	20/86		1.67%	0.61[0.32,1.18]
Hartgrink 1998	7/70	17/70		1.21%	0.41[0.18,0.93]



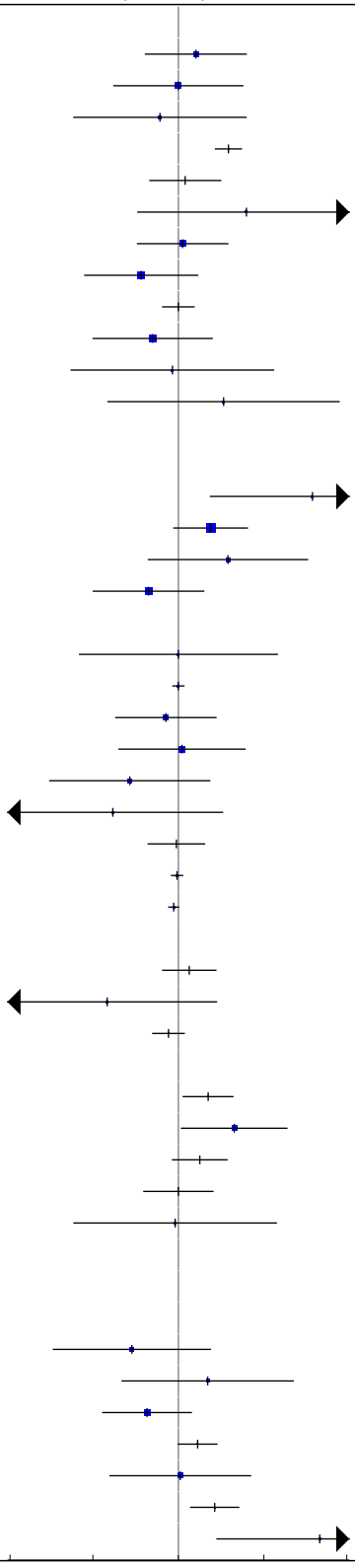




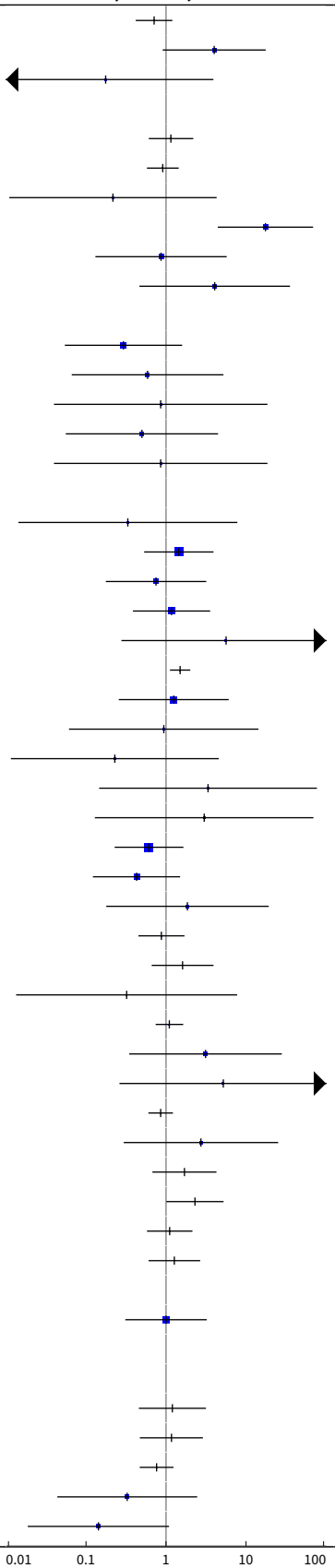
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.12%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.14%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		1.46%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.21%	2.25[0.25,20.38]
Samuels 1981	3/18	2/15		0.36%	1.25[0.24,6.53]
Saudny-Unterberger 1997	1/17	1/16		0.14%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.14%	0.9[0.06,13.62]
Simon 1988	4/16	4/18		0.63%	1.13[0.34,3.78]
Singh 1998	4/21	4/22		0.6%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.23%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.22%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.12%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.11%	0.44[0.02,9.98]
Starke 2011	9/67	7/67		0.99%	1.29[0.51,3.25]
Stein 2002	12/40	10/40		1.46%	1.2[0.59,2.45]
Sullivan 1998	0/8	5/10		0.14%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.69%	0.74[0.23,2.35]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		4.34%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.87%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.36%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.19%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.22%	2[0.24,16.97]
Williams 1985	9/21	7/22		1.27%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		2.28%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.01%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.32%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.32%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.11%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.21%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.1%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.91%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.24%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.6%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.2%	0.57[0.25,1.29]
Total (95% CI)	**12094**	**11606**		**100%**	**0.77[0.69,0.85]**
Total events: 1382 (Experimental), 1718 (Control)					
Heterogeneity: Tau²=0.06; Chi²=173.4, df=118(P=0); I²=31.95%					
Test for overall effect: Z=5.03(P<0.0001)					

Analysis 2.13. Comparison 2 All-cause mortality - maximum follow-up, Outcome 13 All-cause mortality - 'worst-best case' scenario.

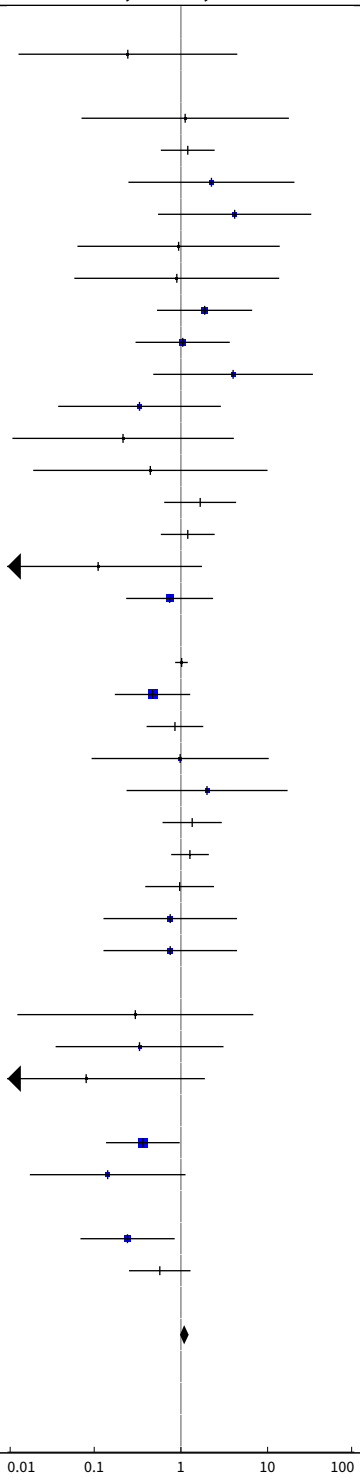
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.58%	1.6[0.4,6.32]
Abrishami 2010	2/10	2/10		0.38%	1[0.17,5.77]
Anbar 2014	1/23	2/28		0.22%	0.61[0.06,6.3]
Arias 2008	119/333	31/334		2.68%	3.85[2.67,5.55]
Banerjee 1978	7/31	6/32		1.01%	1.2[0.46,3.18]
Barlow 2011	3/64	0/57		0.15%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.7%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.48%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		2.39%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.44%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.17%	0.85[0.05,13.24]
Bokhorst-de 2000	1/15	0/17		0.13%	3.38[0.15,77.12]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	18/30	0/30		0.16%	37[2.33,587.26]
Breedveld-Peters	11/73	5/79		0.95%	2.38[0.87,6.52]
Brennan 1994	4/60	1/57		0.26%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.5%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	1/15	1/15		0.17%	1[0.07,14.55]
Casaer 2011	255/2312	257/2328		3.43%	1[0.85,1.18]
Choudhry 1996	3/21	4/20		0.59%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.4%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.26%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.14%	0.17[0.01,3.34]
Delmi 1990	8/27	10/32		1.37%	0.95[0.44,2.06]
Dennis 2005	245/2016	253/2007		3.43%	0.96[0.82,1.14]
Dennis 2006	182/429	207/430		3.47%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		1.47%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.14%	0.15[0.01,2.84]
Duncan 2006	27/153	38/165		2.38%	0.77[0.49,1.19]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	22/85	10/86		1.59%	2.23[1.12,4.41]
Eyer 1993	9/26	2/26		0.54%	4.5[1.07,18.85]
Fan 1989	16/75	9/75		1.42%	1.78[0.84,3.77]
Fan 1994	6/20	6/20		1.04%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.17%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.27%	0.29[0.03,2.41]
Førli 2001	2/20	1/22		0.23%	2.2[0.22,22.45]
Gariballa 1998	3/21	7/21		0.72%	0.43[0.13,1.44]
Gariballa 2006	32/223	19/222		2.04%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.33%	1.05[0.16,7.1]
Ha 2010	26/84	10/86		1.64%	2.66[1.37,5.17]
Hartgrink 1998	22/70	0/70		0.16%	45[2.78,727.58]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heidegger 2013	20/153	28/152		2.06%	0.71[0.42,1.2]
Hendry 2010	8/38	2/38		0.51%	4[0.91,17.62]
Henriksen 2003a	0/16	1/8		0.13%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.71%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		2.32%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.14%	0.22[0.01,4.29]
Hoffmann 1988	35/51	2/51		0.58%	17.5[4.44,68.94]
Holter 1977	2/30	2/26		0.33%	0.87[0.13,5.73]
Holyday 2012	4/71	1/72		0.26%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.41%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.26%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.13%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.25%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.13%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.13%	0.33[0.01,7.78]
Johansen 2004	9/108	6/104		0.97%	1.44[0.53,3.92]
Kaur 2005	3/50	4/50		0.54%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.82%	1.17[0.39,3.56]
Keele 1997	2/47	0/53		0.14%	5.63[0.28,114.27]
Larsson 1990a	82/250	55/251		2.97%	1.5[1.12,2.01]
Ledinghen 1997	3/12	2/10		0.46%	1.25[0.26,6.07]
Lidder 2013a	1/32	1/30		0.17%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.14%	0.23[0.01,4.56]
Liu 1996b	1/16	0/18		0.13%	3.35[0.15,76.93]
Ljunggren 2012	1/20	0/20		0.13%	3[0.13,69.52]
Lough 1990	4/14	7/15		0.98%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.68%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.22%	1.85[0.18,19.19]
Malhotra 2004	14/100	16/100		1.65%	0.88[0.45,1.7]
Maude 2011	9/27	6/29		1.14%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.12%	0.32[0.01,7.74]
Mezey 1991	19/28	16/26		2.55%	1.1[0.74,1.64]
Miller 2006a	3/25	1/26		0.25%	3.12[0.35,28.03]
Miller 2006b	2/24	0/25		0.14%	5.2[0.26,103.03]
Moreno 2016	30/68	35/68		2.73%	0.86[0.6,1.22]
Munk 2014	3/44	1/40		0.25%	2.73[0.3,25.17]
Müller 1982a	17/80	5/40		1.08%	1.7[0.68,4.27]
Müller 1982b	19/55	6/40		1.27%	2.3[1.01,5.24]
Naveau 1986	10/20	9/20		1.67%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		1.44%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.76%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Peck 2004	6/16	5/16		1.02%	1.2[0.46,3.15]
Popp 1981	7/21	6/21		1.11%	1.17[0.47,2.89]
Potter 2001	24/186	33/195		2.21%	0.76[0.47,1.24]
Pupelis 2000	1/11	5/18		0.3%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.29%	0.14[0.02,1.09]

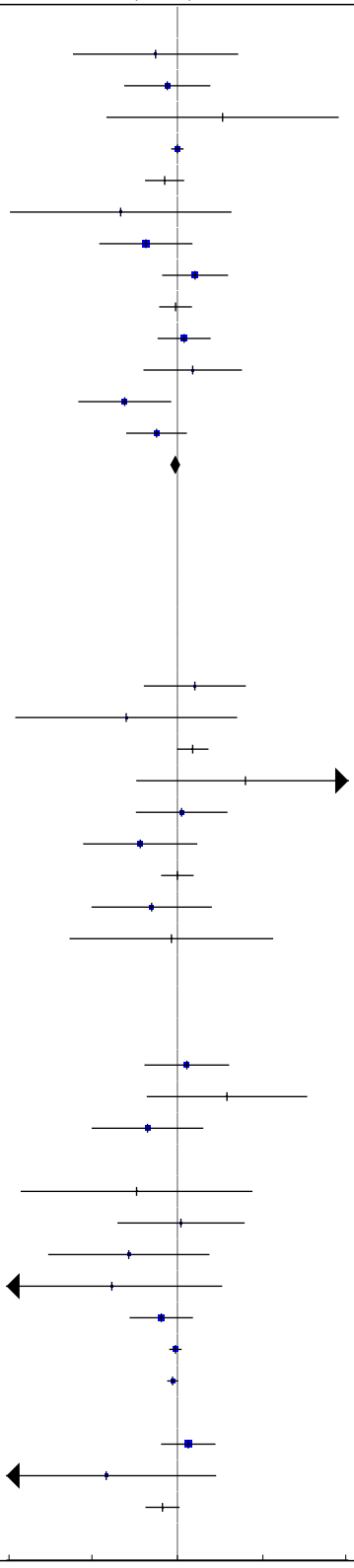


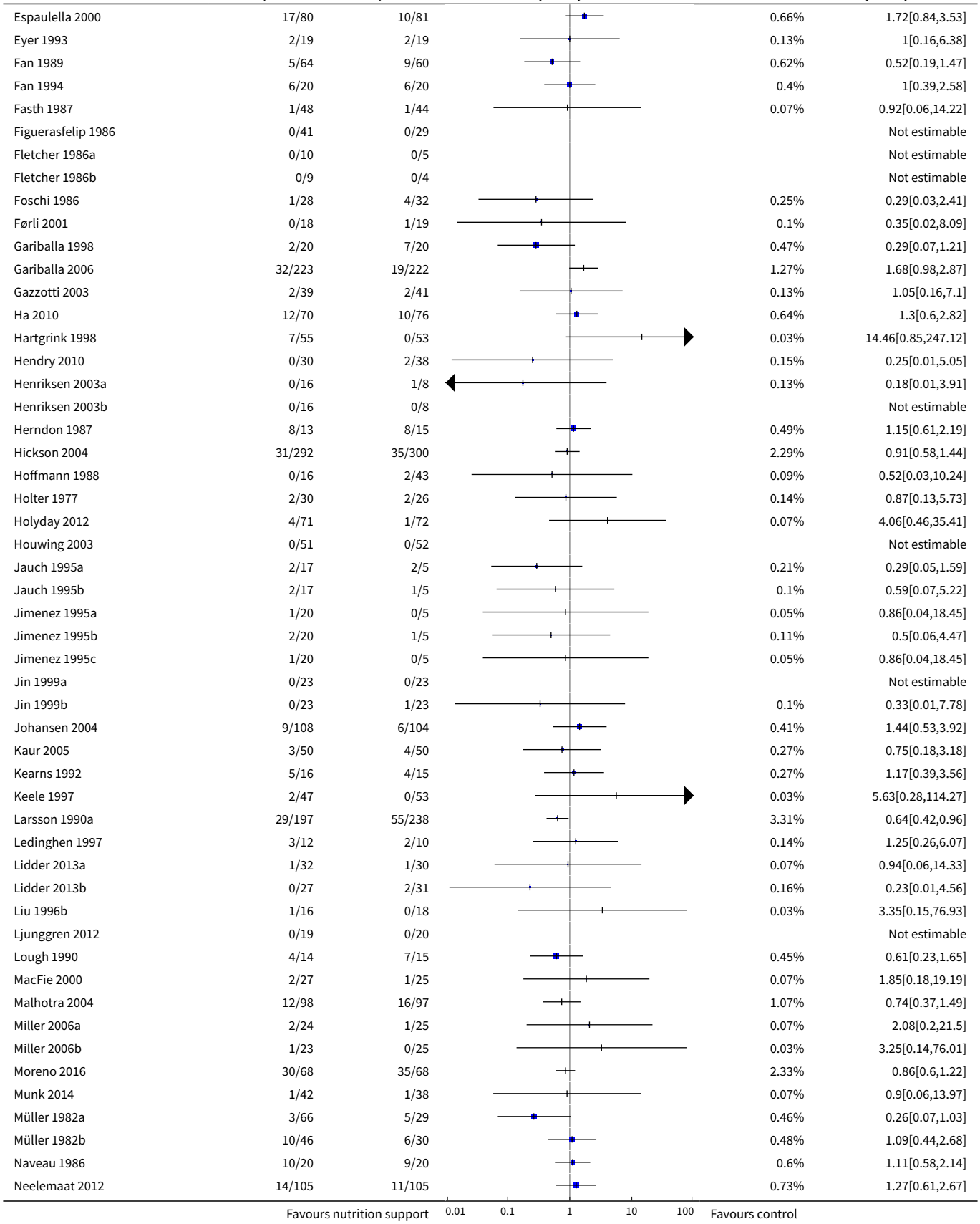
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.15%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.16%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		1.51%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.25%	2.25[0.25,20.38]
Samuels 1981	5/18	1/15		0.29%	4.17[0.54,31.88]
Saudny-Unterberger 1997	1/17	1/16		0.17%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.17%	0.9[0.06,13.62]
Simon 1988	5/16	3/18		0.67%	1.88[0.53,6.63]
Singh 1998	4/21	4/22		0.68%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.27%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.26%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.15%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.13%	0.44[0.02,9.98]
Starke 2011	10/67	6/67		1.03%	1.67[0.64,4.33]
Stein 2002	12/40	10/40		1.51%	1.2[0.59,2.45]
Sullivan 1998	0/8	5/10		0.16%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.78%	0.74[0.23,2.35]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		3.41%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.96%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.42%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.22%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.27%	2[0.24,16.97]
Williams 1985	9/21	7/22		1.34%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		2.16%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.1%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.37%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.37%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.13%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.25%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.13%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		1%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.28%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.68%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.28%	0.57[0.25,1.29]
Total (95% CI)	**12094**	**11606**		**100%**	**1.09[0.98,1.23]**
Total events: 1688 (Experimental), 1494 (Control)					
Heterogeneity: Tau²=0.09; Chi²=211.21, df=119(P<0.0001); I²=43.66%					
Test for overall effect: Z=1.55(P=0.12)					



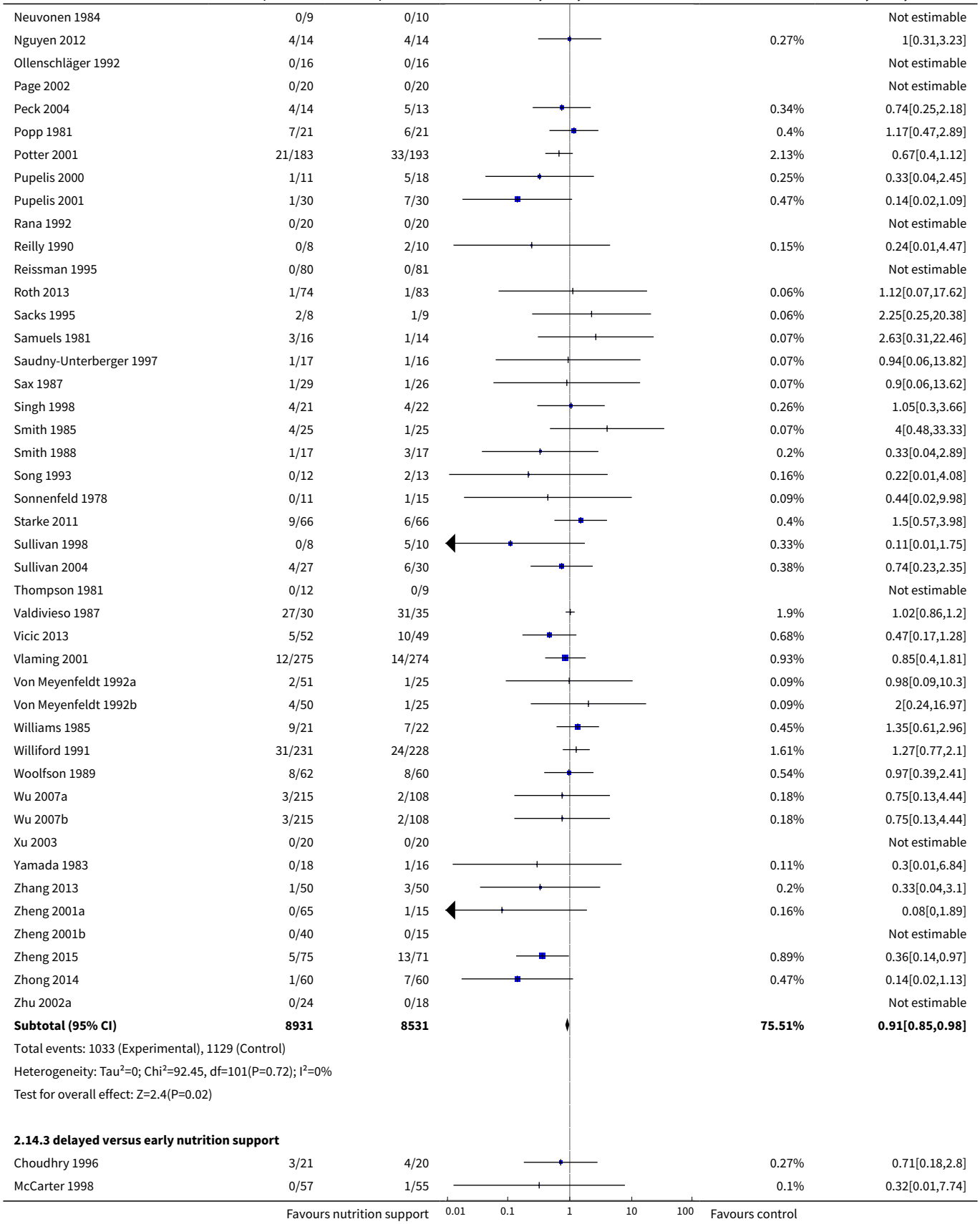
Analysis 2.14. Comparison 2 All-cause mortality - maximum follow-up, Outcome 14 All-cause mortality co-interventions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
2.14.1 received nutrition support as co-intervention					
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Banerjee 1978	4/28	6/32		0.37%	0.76[0.24,2.43]
Bokhorst-de 2000	1/15	0/17		0.03%	3.38[0.15,77.12]
Casaer 2011	255/2312	257/2328		17.02%	1[0.85,1.18]
Heidegger 2013	20/153	28/152		1.87%	0.71[0.42,1.2]
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Luo 2012	3/30	7/30		0.47%	0.43[0.12,1.5]
Maude 2011	9/27	6/29		0.38%	1.61[0.66,3.92]
Mezey 1991	14/23	16/25		1.02%	0.95[0.61,1.48]
Sabin 1998	12/40	10/40		0.66%	1.2[0.59,2.45]
Simon 1988	4/15	3/17		0.19%	1.51[0.4,5.69]
Zhu 2012a	3/33	6/16		0.54%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.62%	0.57[0.25,1.29]
Subtotal (95% CI)	**2739**	**2736**		**23.45%**	**0.95[0.82,1.08]**
Total events: 334 (Experimental), 350 (Control)					
Heterogeneity: Tau^2=0; Chi^2=13.31, df=12(P=0.35); I^2=9.85%					
Test for overall effect: Z=0.8(P=0.42)					
2.14.2 did not receive nutrition support as co-intervention					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.18%	1.6[0.4,6.32]
Anbar 2014	0/22	2/28		0.15%	0.25[0.01,5]
Arias 2008	46/260	31/265		2.04%	1.51[0.99,2.31]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.28%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.35%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.59%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.27%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.07%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.32%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.07%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.31%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.1%	0.33[0.01,7.55]
Chourdakis 2012	3/34	2/25		0.15%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.22%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.18%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.64%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		16.86%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		13.75%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		0.8%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.23%	0.15[0.01,2.84]
Duncan 2006	24/150	38/159		2.45%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable

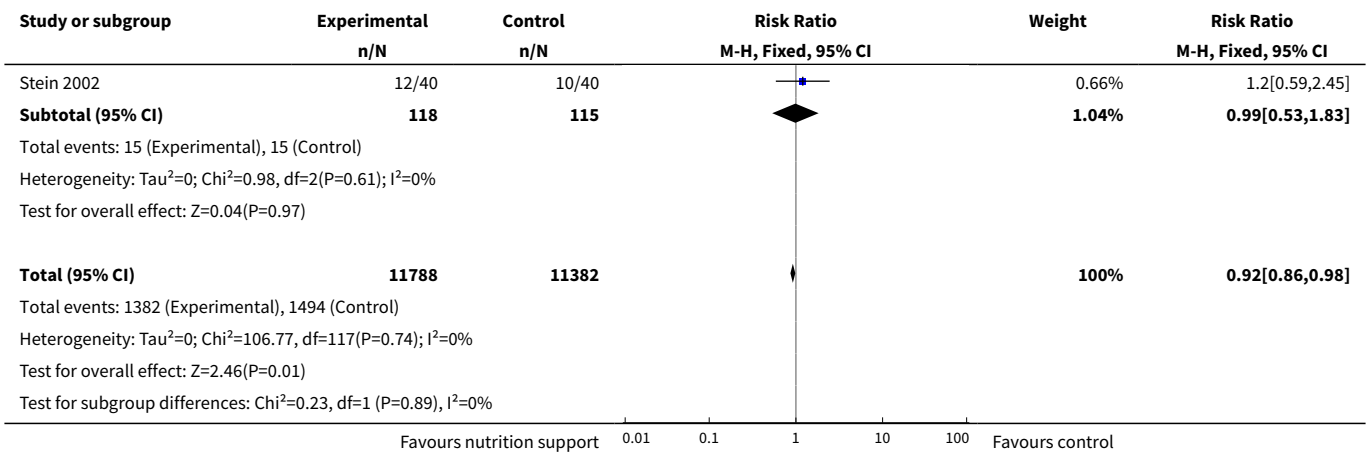




Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Espaulella 2000	17/80	10/81		0.66%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.13%	1[0.16,6.38]
Fan 1989	5/64	9/60		0.62%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.4%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.07%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.25%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.1%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.47%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.27%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.13%	1.05[0.16,7.1]
Ha 2010	12/70	10/76		0.64%	1.3[0.6,2.82]
Hartgrink 1998	7/55	0/53		0.03%	14.46[0.85,247.12]
Hendry 2010	0/30	2/38		0.15%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.13%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.49%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		2.29%	0.91[0.58,1.44]
Hoffmann 1988	0/16	2/43		0.09%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.14%	0.87[0.13,5.73]
Holyday 2012	4/71	1/72		0.07%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.21%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.1%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.05%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.11%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.05%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.1%	0.33[0.01,7.78]
Johansen 2004	9/108	6/104		0.41%	1.44[0.53,3.92]
Kaur 2005	3/50	4/50		0.27%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.27%	1.17[0.39,3.56]
Keele 1997	2/47	0/53		0.03%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		3.31%	0.64[0.42,0.96]
Ledinghen 1997	3/12	2/10		0.14%	1.25[0.26,6.07]
Lidder 2013a	1/32	1/30		0.07%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.16%	0.23[0.01,4.56]
Liu 1996b	1/16	0/18		0.03%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.45%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.07%	0.74[0.37,1.49]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.03%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.33%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.07%	0.9[0.06,13.97]
Müller 1982a	3/66	5/29		0.46%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		0.48%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		0.6%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.73%	1.27[0.61,2.67]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Neuvonen 1984	0/9	0/10			Not estimable
Nguyen 2012	4/14	4/14		0.27%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.34%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.4%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		2.13%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.25%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.47%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.15%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.06%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.07%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.07%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.07%	0.9[0.06,13.62]
Singh 1998	4/21	4/22		0.26%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.07%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.16%	0.22[0.01,4.08]
Sonnenfeld 1978	0/11	1/15		0.09%	0.44[0.02,9.98]
Starke 2011	9/66	6/66		0.4%	1.5[0.57,3.98]
Sullivan 1998	0/8	5/10		0.33%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		0.38%	0.74[0.23,2.35]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		1.9%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.68%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.93%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.09%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Williams 1985	9/21	7/22		0.45%	1.35[0.61,2.96]
Williford 1991	31/231	24/228		1.61%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		0.54%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.18%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.18%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	0/18	1/16		0.11%	0.3[0.01,6.84]
Zhang 2013	1/50	3/50		0.2%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.16%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.89%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.47%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**8931**	**8531**		**75.51%**	**0.91[0.85,0.98]**
Total events: 1033 (Experimental), 1129 (Control)					
Heterogeneity: Tau²=0; Chi²=92.45, df=101(P=0.72); I²=0%					
Test for overall effect: Z=2.4(P=0.02)					
2.14.3 delayed versus early nutrition support					
Choudhry 1996	3/21	4/20		0.27%	0.71[0.18,2.8]
McCarter 1998	0/57	1/55		0.1%	0.32[0.01,7.74]



Comparison 3. Serious adverse event end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Serious adverse events - overall	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
2 Serious adverse events - bias	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
2.1 High risk of bias	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Serious adverse events - mode of delivery	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
3.1 General nutrition support	6	1420	Risk Ratio (M-H, Random, 95% CI)	1.19 [0.79, 1.78]
3.2 Fortified	2	290	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.61, 2.54]
3.3 Oral	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
3.4 Enteral	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
3.5 Parenteral	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
3.6 Mixed	5	354	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.33, 1.76]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4 Serious adverse events - by medical specialty	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
4.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Medical gastroenterology and hepatology	10	518	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.60, 1.36]
4.3 High risk	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.4 Geriatrics	13	2554	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.66, 1.08]
4.5 Pulmonary disease	3	118	Risk Ratio (M-H, Random, 95% CI)	0.44 [0.15, 1.28]
4.6 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.7 Infectious diseases	1	56	Risk Ratio (M-H, Random, 95% CI)	1.23 [0.52, 2.93]
4.8 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.9 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.10 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.11 Gastroenterologic surgery	57	4320	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.72, 1.02]
4.12 Trauma surgery	5	225	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.55, 1.57]
4.13 Ortopaedics	12	1210	Risk Ratio (M-H, Random, 95% CI)	1.39 [0.90, 2.14]
4.14 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.15 Vascular surgery	3	48	Risk Ratio (M-H, Random, 95% CI)	0.5 [0.05, 4.67]
4.16 Transplant surgery	3	84	Risk Ratio (M-H, Random, 95% CI)	0.58 [0.23, 1.50]
4.17 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.18 Thoracic surgery	3	592	Risk Ratio (M-H, Random, 95% CI)	0.47 [0.06, 3.62]
4.19 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.20 Oro-maxillo-facial surgery	1	32	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.44, 1.78]
4.21 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.22 Emergency medicine	7	5198	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.80, 1.22]
4.23 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.24 Neurology	7	5168	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.58, 1.06]
4.25 Oncology	5	309	Risk Ratio (M-H, Random, 95% CI)	1.12 [0.51, 2.44]
4.26 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.27 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.28 Mixed	7	1655	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.92, 1.67]
5 Serious adverse events - based on adequacy of the amount of calories	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
5.1 Clearly adequate in intervention and clearly inadequate in control	28	7405	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.80, 1.11]
5.2 Inadequate in the experimental or adequate in the control	28	7335	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.84, 1.13]
5.3 Experimental group is overfed	6	224	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.44, 1.67]
5.4 Unclear intake in control or experimental	75	7123	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.70, 0.98]
6 Serious adverse events - different screening tools	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
6.1 NRS 2002	4	5064	Risk Ratio (M-H, Random, 95% CI)	1.06 [0.87, 1.31]

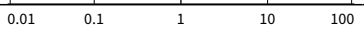
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
6.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.3 MNA	2	117	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.12, 3.18]
6.4 SGA	3	1175	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.35, 1.92]
6.5 Other means	128	15731	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.82, 0.98]
7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
7.1 Major surgery	65	5180	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.71, 0.99]
7.2 Stroke	6	5139	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.58, 1.06]
7.3 ICU participants including trauma	12	5423	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.81, 1.19]
7.4 Frail elderly participants with less severe conditions known to increase protein requirements	19	2406	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.75, 1.26]
7.5 Participants do not fall into one of the categories above	35	3939	Risk Ratio (M-H, Random, 95% CI)	1.01 [0.85, 1.21]
8 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
8.1 BMI less than 20.5 kg/m2	2	247	Risk Ratio (M-H, Random, 95% CI)	1.19 [0.58, 2.45]
8.2 Weight loss of at least 5% during the last three months	1	32	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.3 Weight loss of at least 10% during the last six months	1	32	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.44, 1.78]
8.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.5 Participants characterised as 'at nutritional risk' by other means	133	21776	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]

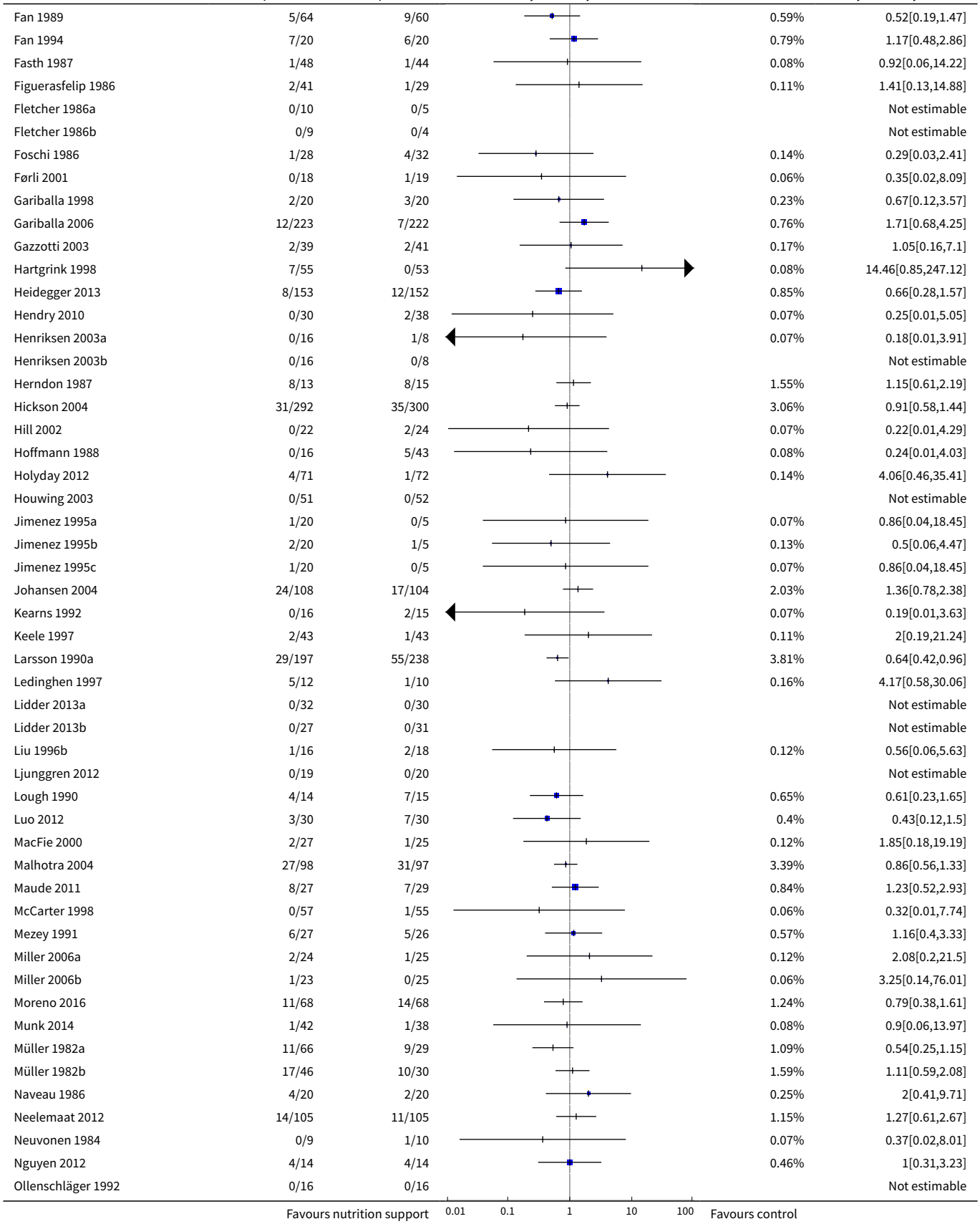
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
9 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
9.1 Biomarkers	8	703	Risk Ratio (M-H, Random, 95% CI)	0.39 [0.16, 0.95]
9.2 Anthropometric measures	15	1677	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.68, 1.20]
9.3 Mixed	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.4 Characterised by other means	114	19707	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.02]
10 Serious adverse events - randomisation year	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
10.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
10.2 1960 to 1979	5	184	Risk Ratio (M-H, Random, 95% CI)	1.40 [0.70, 2.78]
10.3 1980 to 1999	86	11472	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.82, 1.00]
10.4 After 1999	46	10431	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.75, 1.06]
11 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	137	22087	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.86, 1.01]
11.1 Three days or more	125	21408	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.86, 1.02]
11.2 Less than three days	10	602	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.39, 1.16]
11.3 Unknown	2	77	Risk Ratio (M-H, Random, 95% CI)	0.25 [0.01, 5.00]
12 Serious adverse events - 'best-worst case' scenario	137	22557	Risk Ratio (M-H, Random, 95% CI)	0.74 [0.65, 0.83]
13 Serious adverse events - 'worst-best case' scenario	137	22557	Risk Ratio (M-H, Random, 95% CI)	1.06 [0.92, 1.21]
14 Serious adverse events co-interventions	137	22087	Risk Ratio (M-H, Fixed, 95% CI)	0.91 [0.84, 0.99]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
14.1 received nutrition support as co-intervention	11	5337	Risk Ratio (M-H, Fixed, 95% CI)	0.95 [0.79, 1.15]
14.2 did not receive nutrition support as co-intervention	119	16327	Risk Ratio (M-H, Fixed, 95% CI)	0.90 [0.83, 0.99]
14.3 delayed versus early nutrition support	7	423	Risk Ratio (M-H, Fixed, 95% CI)	0.89 [0.51, 1.57]

Analysis 3.1. Comparison 3 Serious adverse event end of intervention, Outcome 1 Serious adverse events - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.07%	0.25[0.01,5]
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.47%	0.76[0.24,2.43]
Bastow 1983a	5/39	4/35		0.42%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.27%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.3%	1.43[0.33,6.16]
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.3%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Duncan 2006	18/150	11/159		1.24%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.3%	1.35[0.31,5.85]





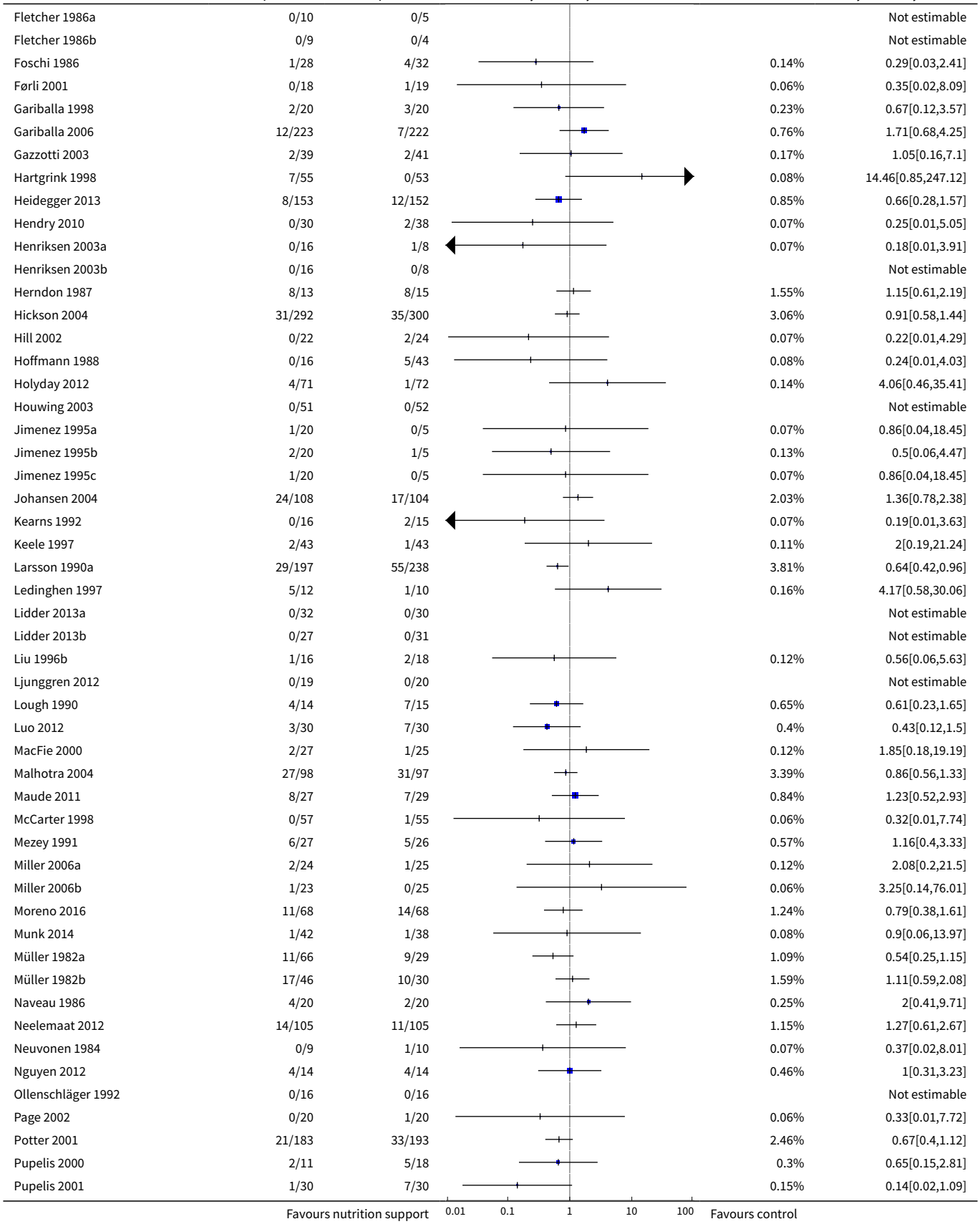
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.13%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.08%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.21%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.13%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.32%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.09%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Simon 1988	3/15	2/17		0.23%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.07%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.07%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.09%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Starke 2011	2/66	5/66		0.25%	0.4[0.08,1.99]
Stein 2002	2/40	3/40		0.21%	0.67[0.12,3.78]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.32%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.13%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.07%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.07%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.64%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.12%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.11%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.14%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.14%	0.38[0.05,3.26]
Williams 1985	4/21	3/22		0.34%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.76%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.6%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.72%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.23%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.15%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.25%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	4/60	12/60		0.55%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.41%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.95%	0.57[0.25,1.29]
Total (95% CI)	**11260**	**10827**		**100%**	**0.93[0.86,1.01]**
Total events: 996 (Experimental), 1067 (Control)					

Favours nutrition support — Favours control

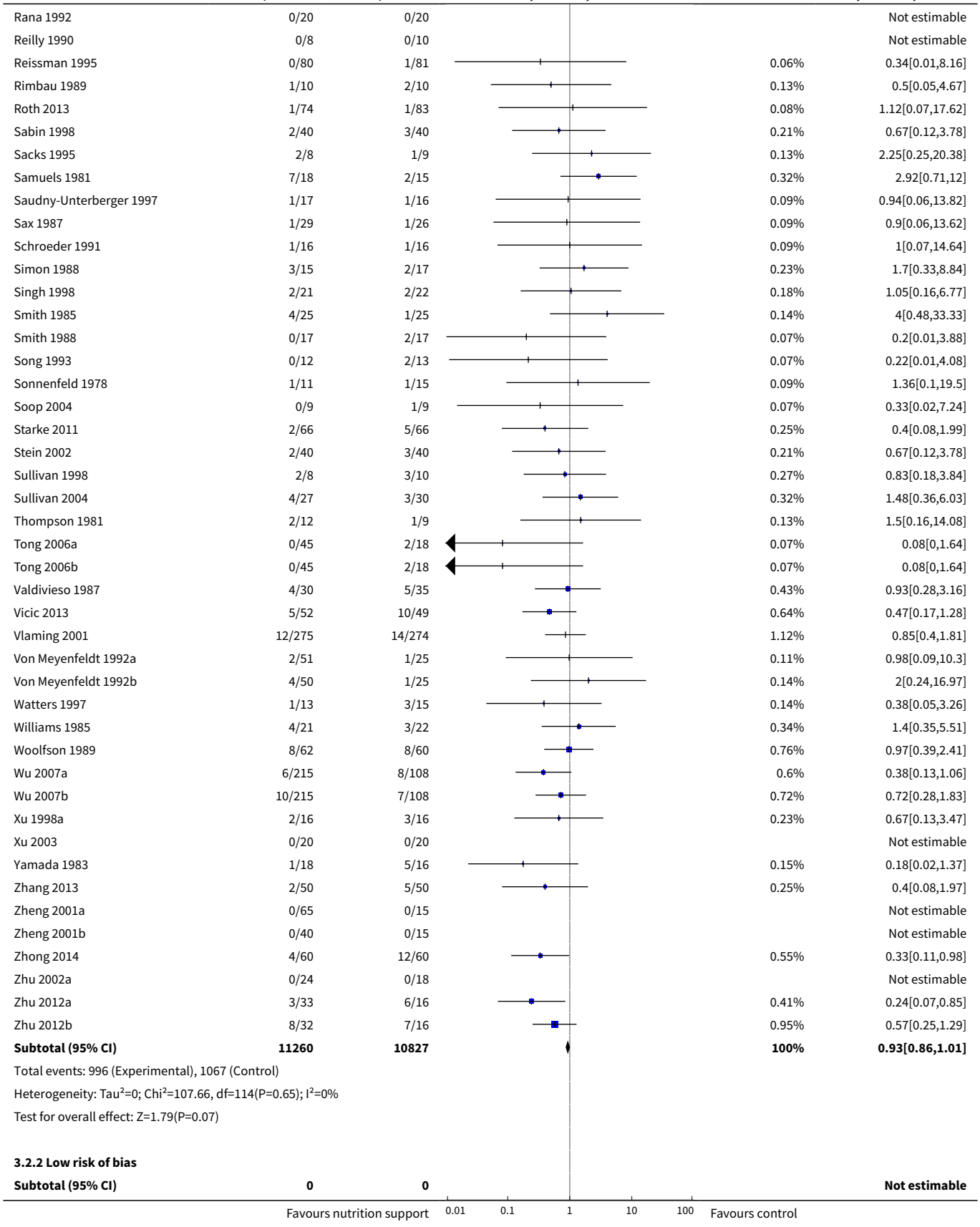
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Tau²=0; Chi²=107.66, df=114(P=0.65); I²=0%					
Test for overall effect: Z=1.79(P=0.07)					

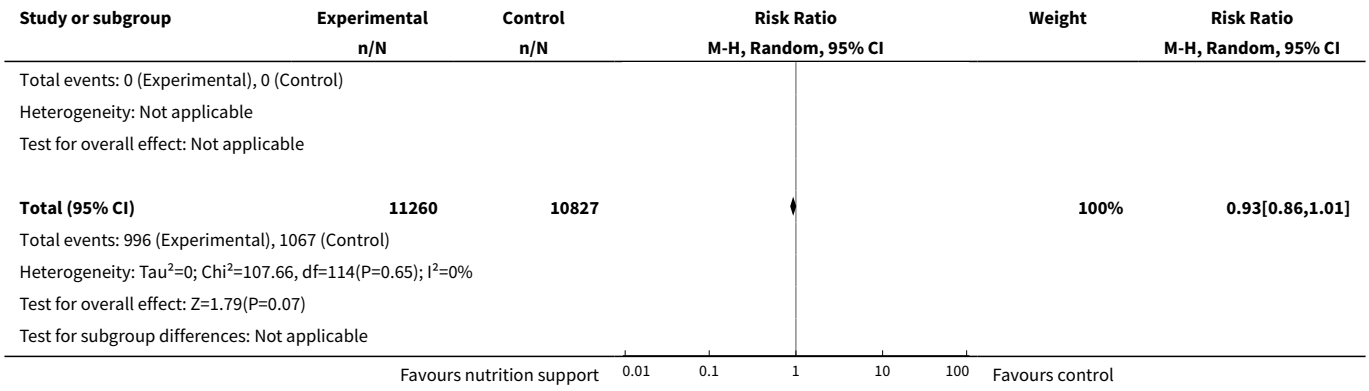
Analysis 3.2. Comparison 3 Serious adverse event end of intervention, Outcome 2 Serious adverse events - bias.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
3.2.1 High risk of bias					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.07%	0.25[0.01,5]
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.47%	0.76[0.24,2.43]
Bastow 1983a	5/39	4/35		0.42%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.27%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.3%	1.43[0.33,6.16]
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.3%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Duncan 2006	18/150	11/159		1.24%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.3%	1.35[0.31,5.85]
Fan 1989	7/20	6/20		0.79%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.59%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]

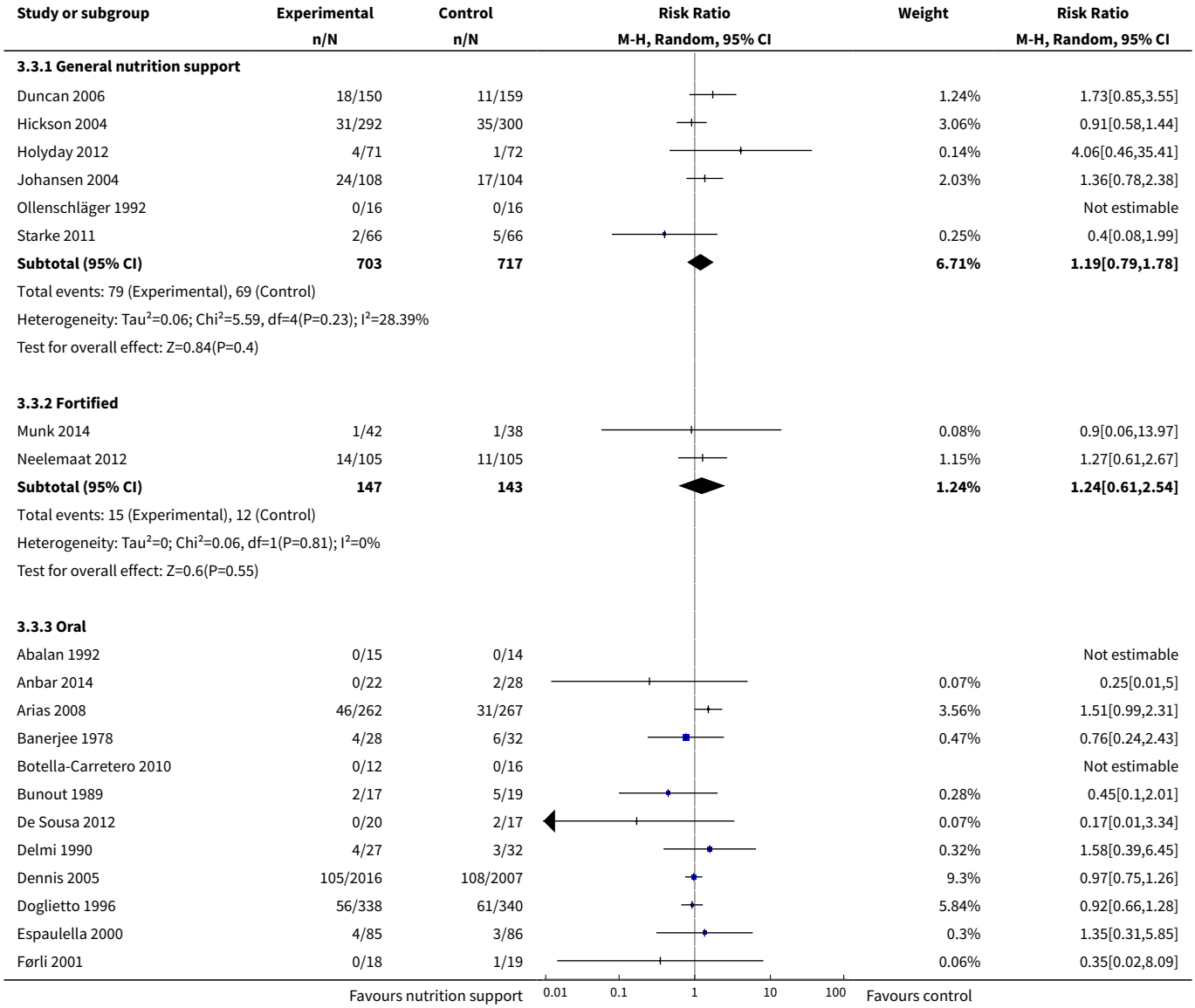


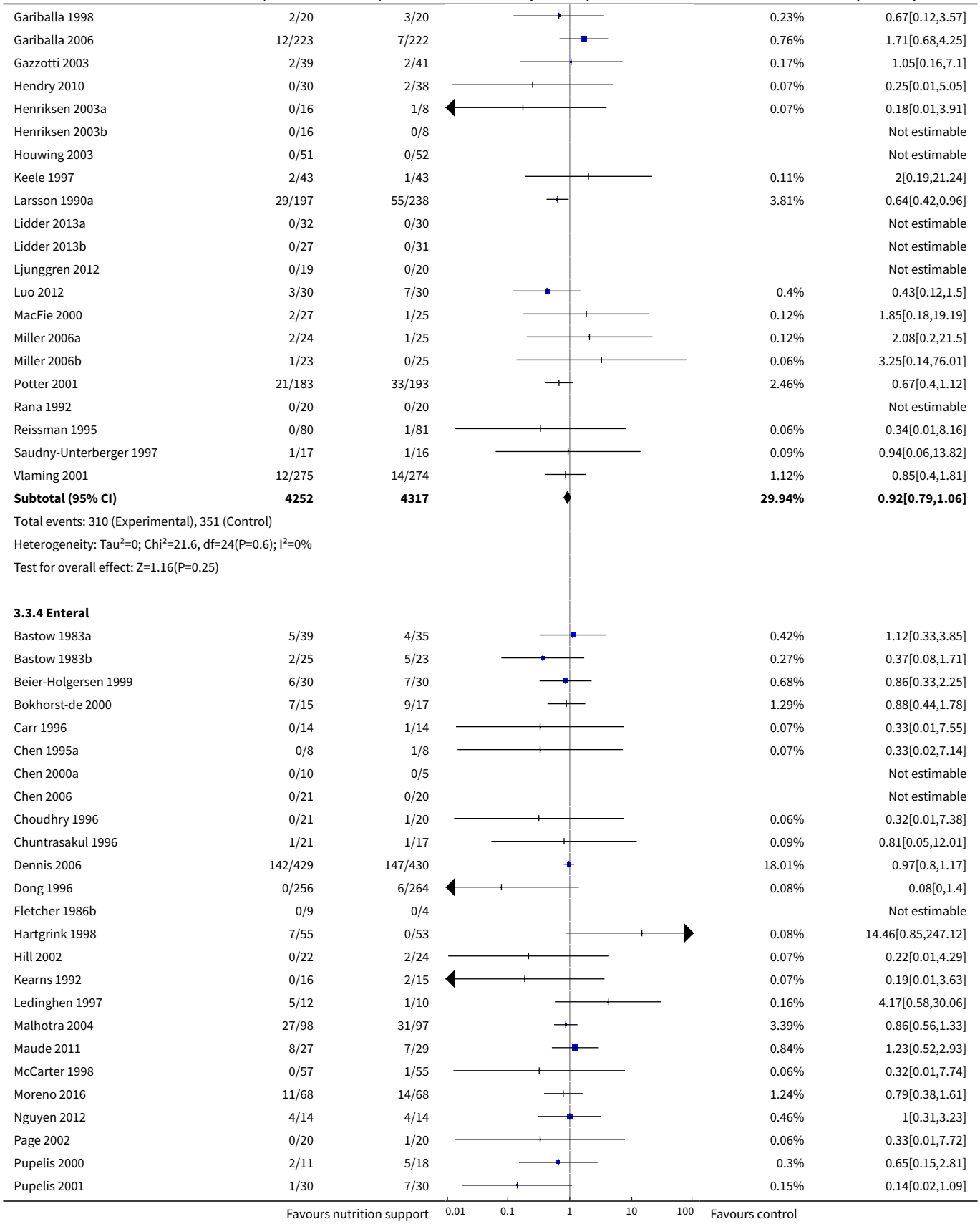
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.14%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.06%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.23%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.76%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.08%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		0.85%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.07%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.07%	0.22[0.01,4.29]
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Johansen 2004	24/108	17/104		2.03%	1.36[0.78,2.38]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		3.81%	0.64[0.42,0.96]
Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.65%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.84%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.06%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Miller 2006a	2/24	1/25		0.12%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.06%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.24%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.08%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		1.09%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.59%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Neelemaat 2012	14/105	11/105		1.15%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.07%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.46%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]





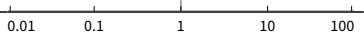
Analysis 3.3. Comparison 3 Serious adverse event end of intervention, Outcome 3 Serious adverse events - mode of delivery.





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Gariballa 1998	2/20	3/20		0.23%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.76%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.07%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		3.81%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.12%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.06%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		1.12%	0.85[0.4,1.81]
Subtotal (95% CI)	**4252**	**4317**		**29.94%**	**0.92[0.79,1.06]**
Total events: 310 (Experimental), 351 (Control)					
Heterogeneity: Tau^2=0; Chi^2=21.6, df=24(P=0.6); I^2=0%					
Test for overall effect: Z=1.16(P=0.25)					
3.3.4 Enteral					
Bastow 1983a	5/39	4/35		0.42%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.27%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.08%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.07%	0.22[0.01,4.29]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.84%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.06%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		1.24%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		0.46%	1[0.31,3.23]
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sabin 1998	2/40	3/40		0.21%	0.67[0.12,3.78]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.09%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Tong 2006a	0/45	2/18		0.07%	0.08[0,1.64]
Vicic 2013	5/52	10/49		0.64%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.14%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.14%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		0.6%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.25%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	4/60	12/60		0.55%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		0.95%	0.57[0.25,1.29]
Subtotal (95% CI)	**2084**	**1851**		**32.32%**	**0.85[0.74,0.98]**
Total events: 270 (Experimental), 317 (Control)					
Heterogeneity: Tau²=0; Chi²=34.37, df=36(P=0.55); I²=0%					
Test for overall effect: Z=2.21(P=0.03)					
3.3.5 Parenteral					
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		0.59%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		0.85%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.65%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Müller 1982a	11/66	9/29		1.09%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.59%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]



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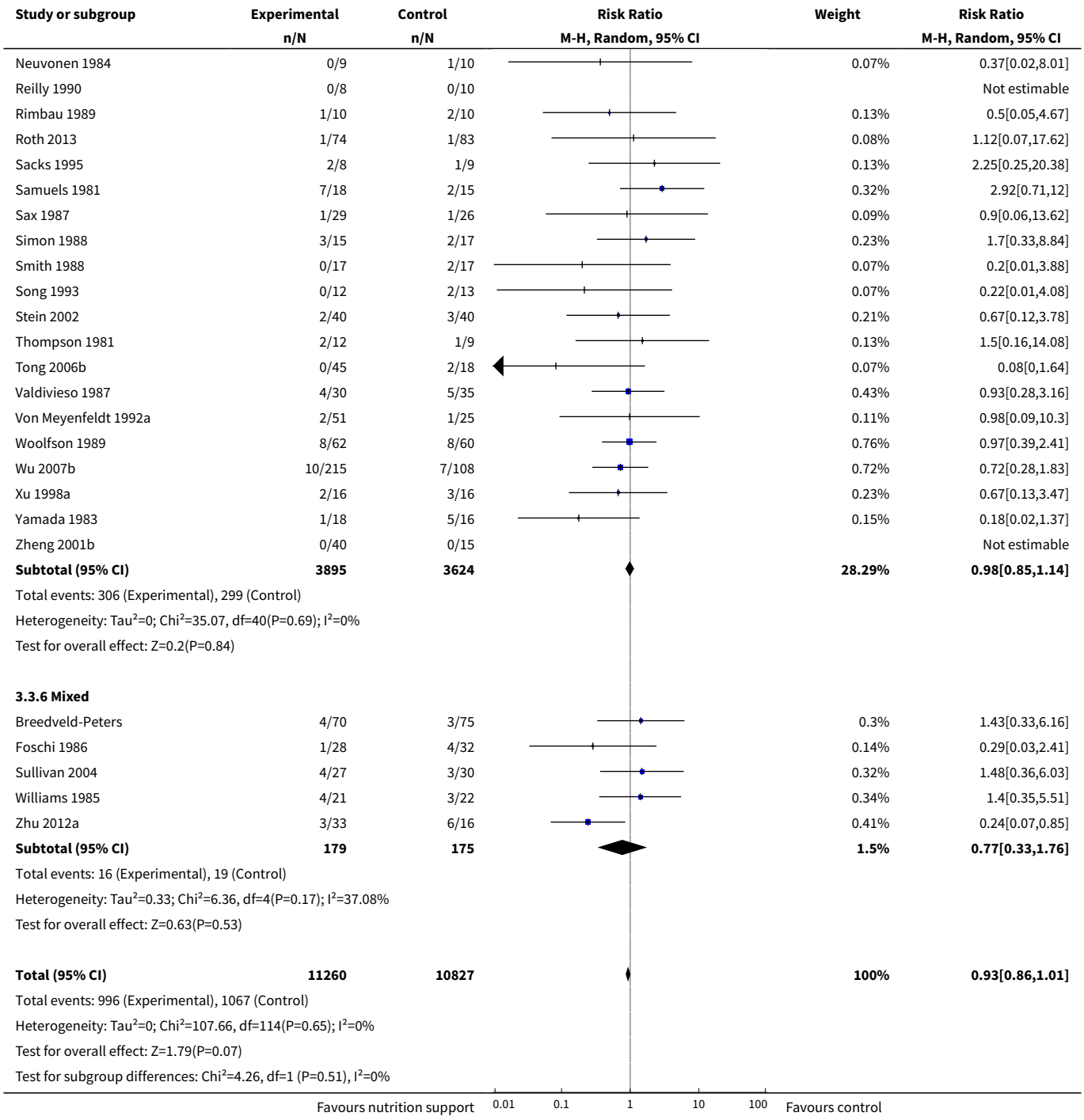
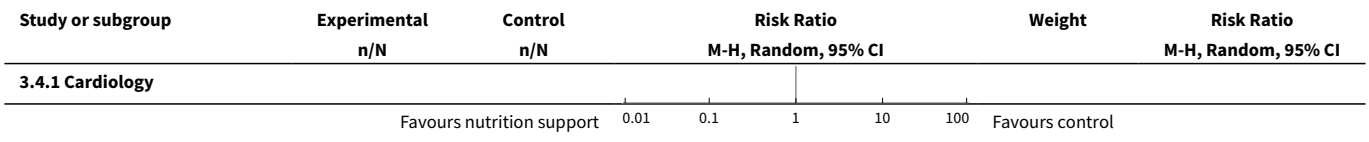
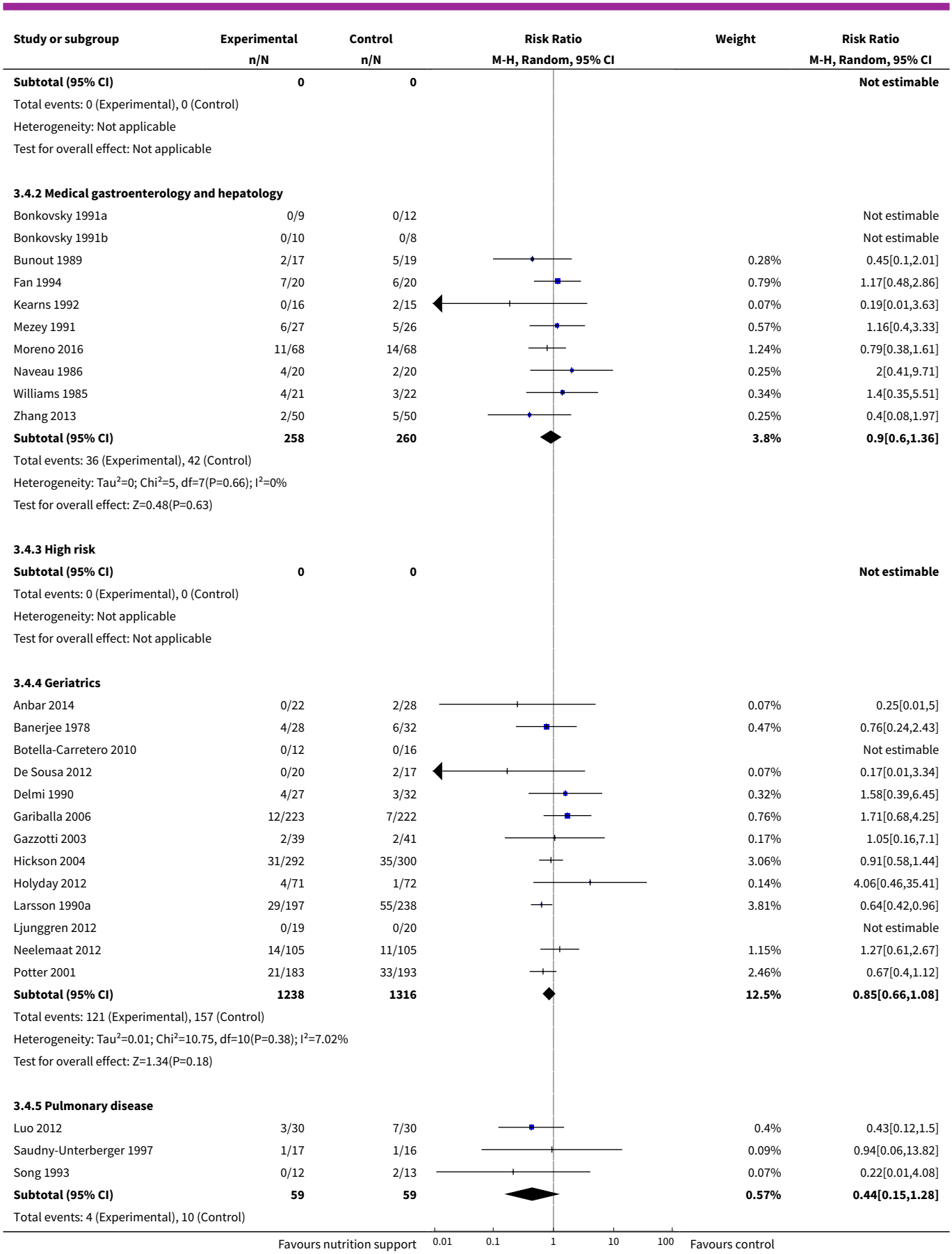


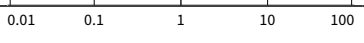
Analysis 3.4. Comparison 3 Serious adverse event end of intervention, Outcome 4 Serious adverse events - by medical specialty.





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.2 Medical gastroenterology and hepatology					
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Fan 1994	7/20	6/20		0.79%	1.17[0.48,2.86]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Moreno 2016	11/68	14/68		1.24%	0.79[0.38,1.61]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Williams 1985	4/21	3/22		0.34%	1.4[0.35,5.51]
Zhang 2013	2/50	5/50		0.25%	0.4[0.08,1.97]
Subtotal (95% CI)	**258**	**260**		**3.8%**	**0.9[0.6,1.36]**
Total events: 36 (Experimental), 42 (Control)					
Heterogeneity: Tau^2=0; Chi^2=5, df=7(P=0.66); I^2=0%					
Test for overall effect: Z=0.48(P=0.63)					
3.4.3 High risk					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.4 Geriatrics					
Anbar 2014	0/22	2/28		0.07%	0.25[0.01,5]
Banerjee 1978	4/28	6/32		0.47%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Gariballa 2006	12/223	7/222		0.76%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Larsson 1990a	29/197	55/238		3.81%	0.64[0.42,0.96]
Ljunggren 2012	0/19	0/20			Not estimable
Neelemaat 2012	14/105	11/105		1.15%	1.27[0.61,2.67]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Subtotal (95% CI)	**1238**	**1316**		**12.5%**	**0.85[0.66,1.08]**
Total events: 121 (Experimental), 157 (Control)					
Heterogeneity: Tau^2=0.01; Chi^2=10.75, df=10(P=0.38); I^2=7.02%					
Test for overall effect: Z=1.34(P=0.18)					
3.4.5 Pulmonary disease					
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Song 1993	0/12	2/13		0.07%	0.22[0.01,4.08]
Subtotal (95% CI)	**59**	**59**		**0.57%**	**0.44[0.15,1.28]**
Total events: 4 (Experimental), 10 (Control)					

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Tau²=0; Chi²=0.54, df=2(P=0.76); I²=0%					
Test for overall effect: Z=1.51(P=0.13)					
3.4.6 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.7 Infectious diseases					
Maude 2011	8/27	7/29		0.84%	1.23[0.52,2.93]
Subtotal (95% CI)	**27**	**29**		**0.84%**	**1.23[0.52,2.93]**
Total events: 8 (Experimental), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.46(P=0.64)					
3.4.8 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.9 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.10 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.11 Gastroenterologic surgery					
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Fan 1989	5/64	9/60		0.59%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Foschi 1986	1/28	4/32		0.14%	0.29[0.03,2.41]
Hendry 2010	0/30	2/38		0.07%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]



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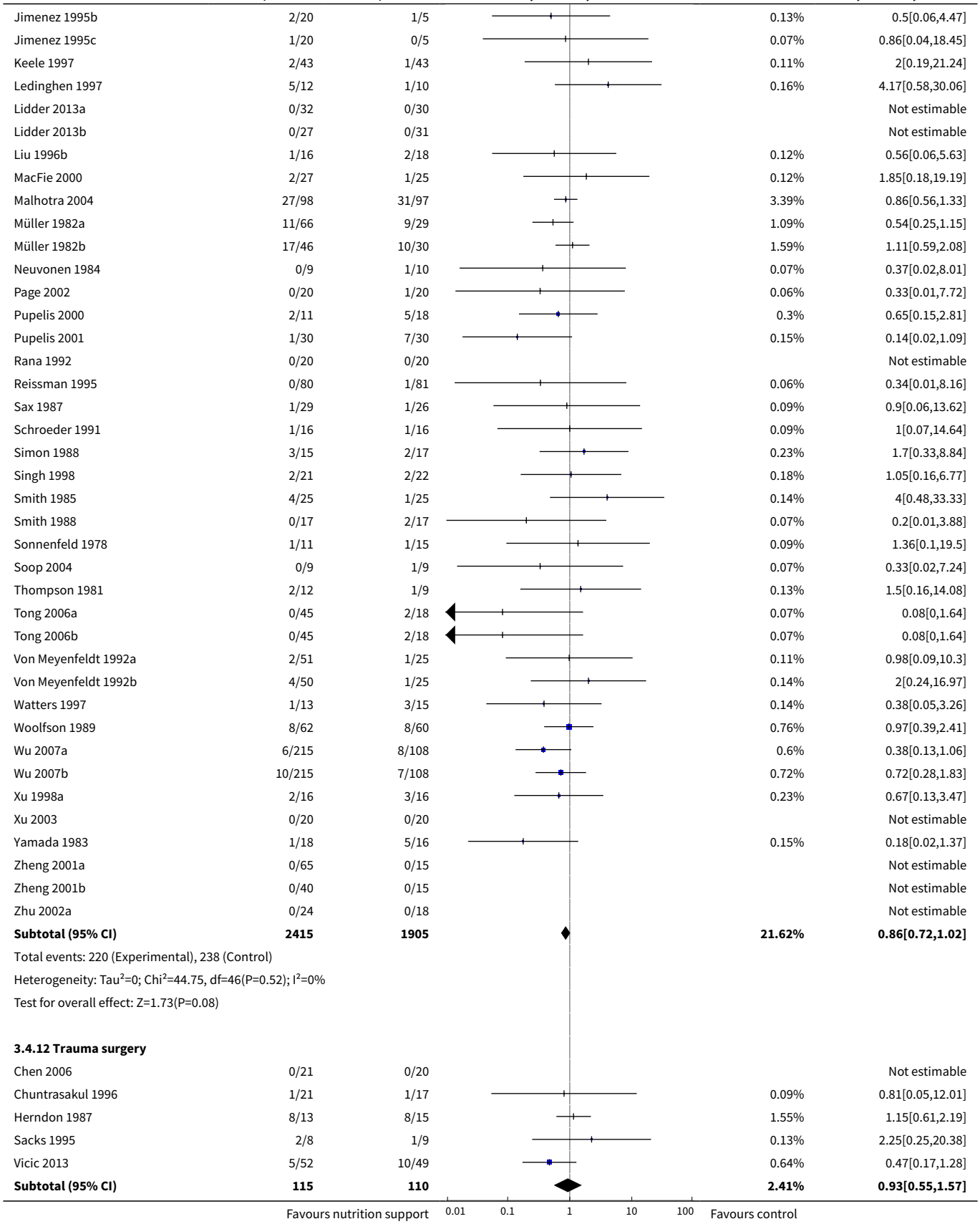
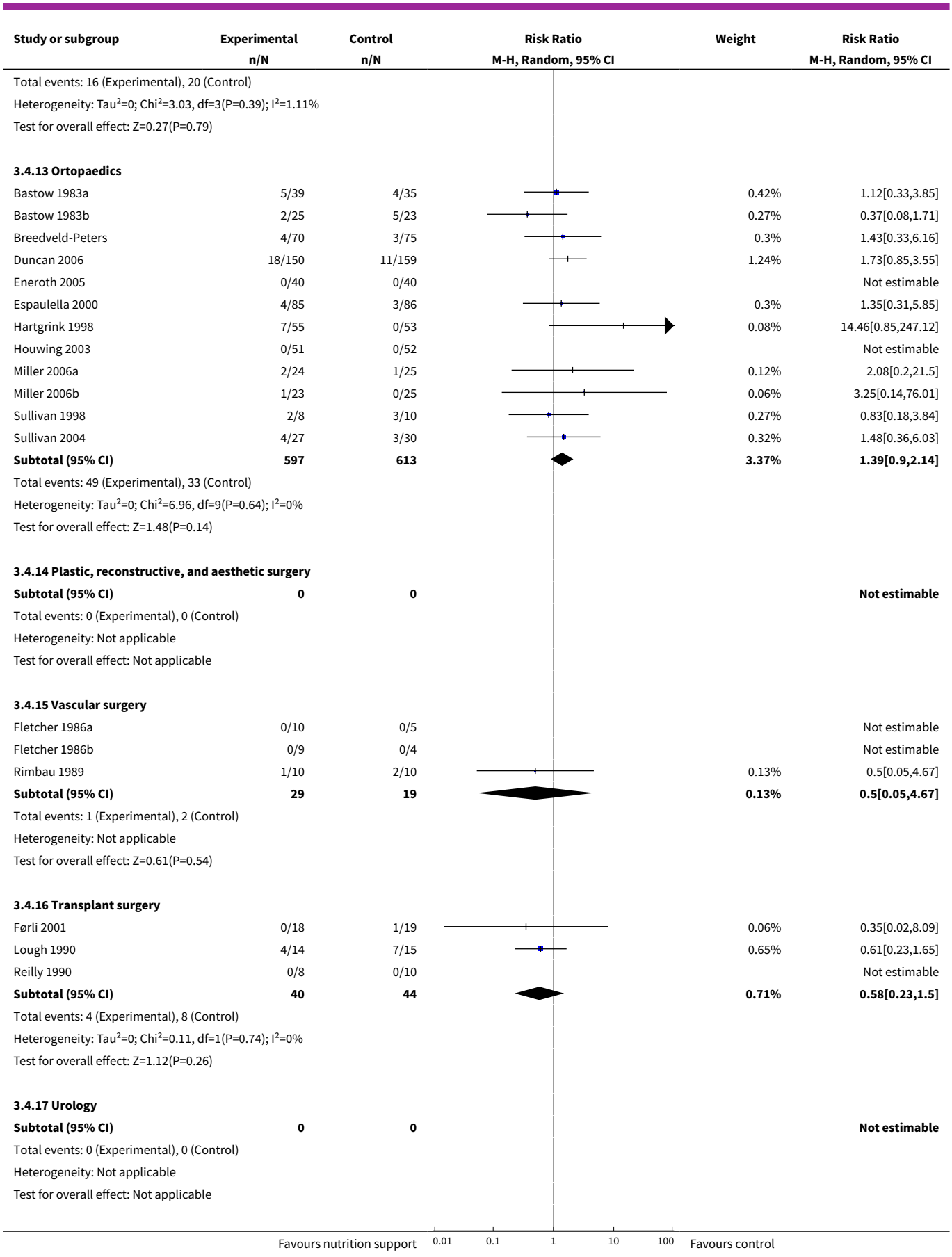
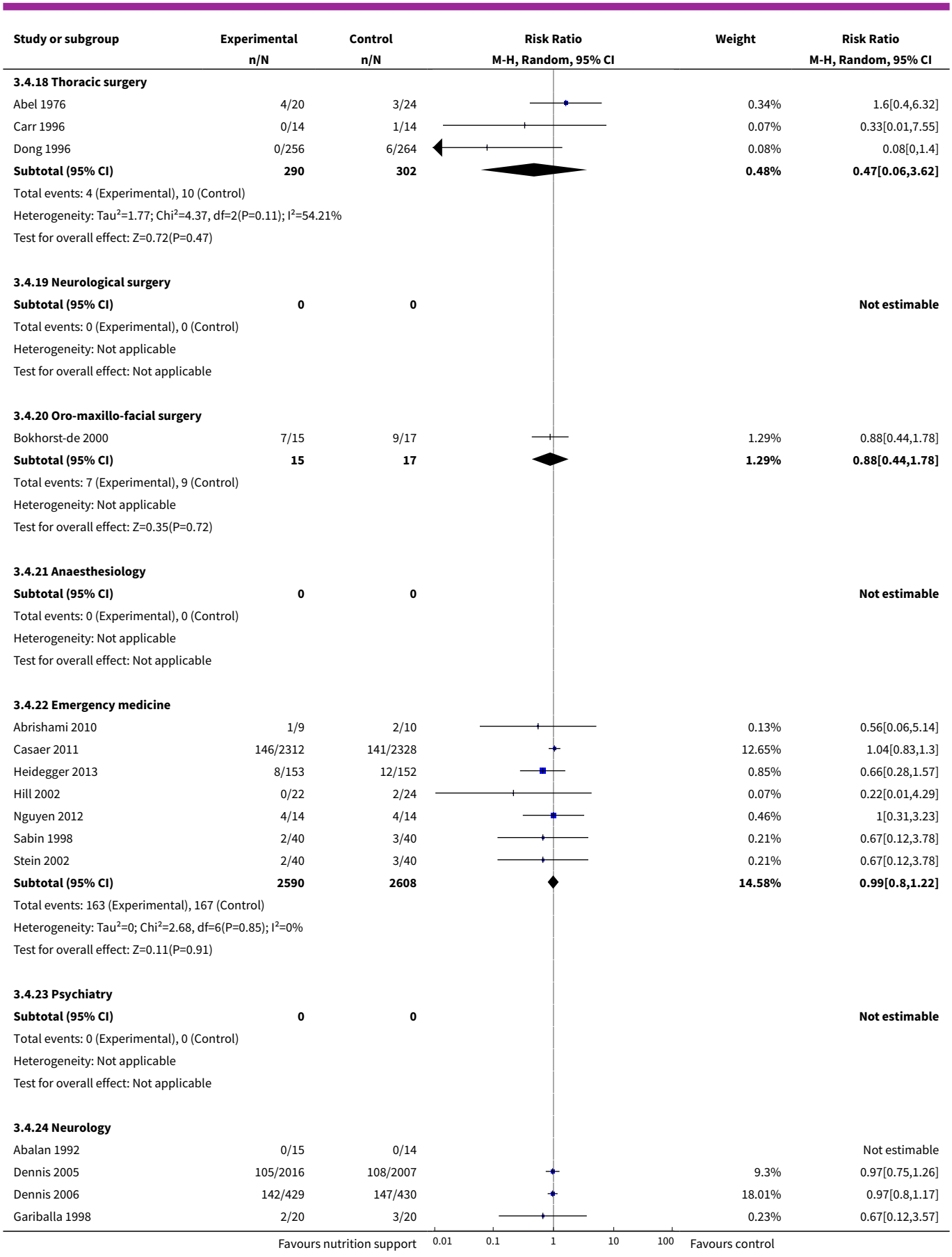
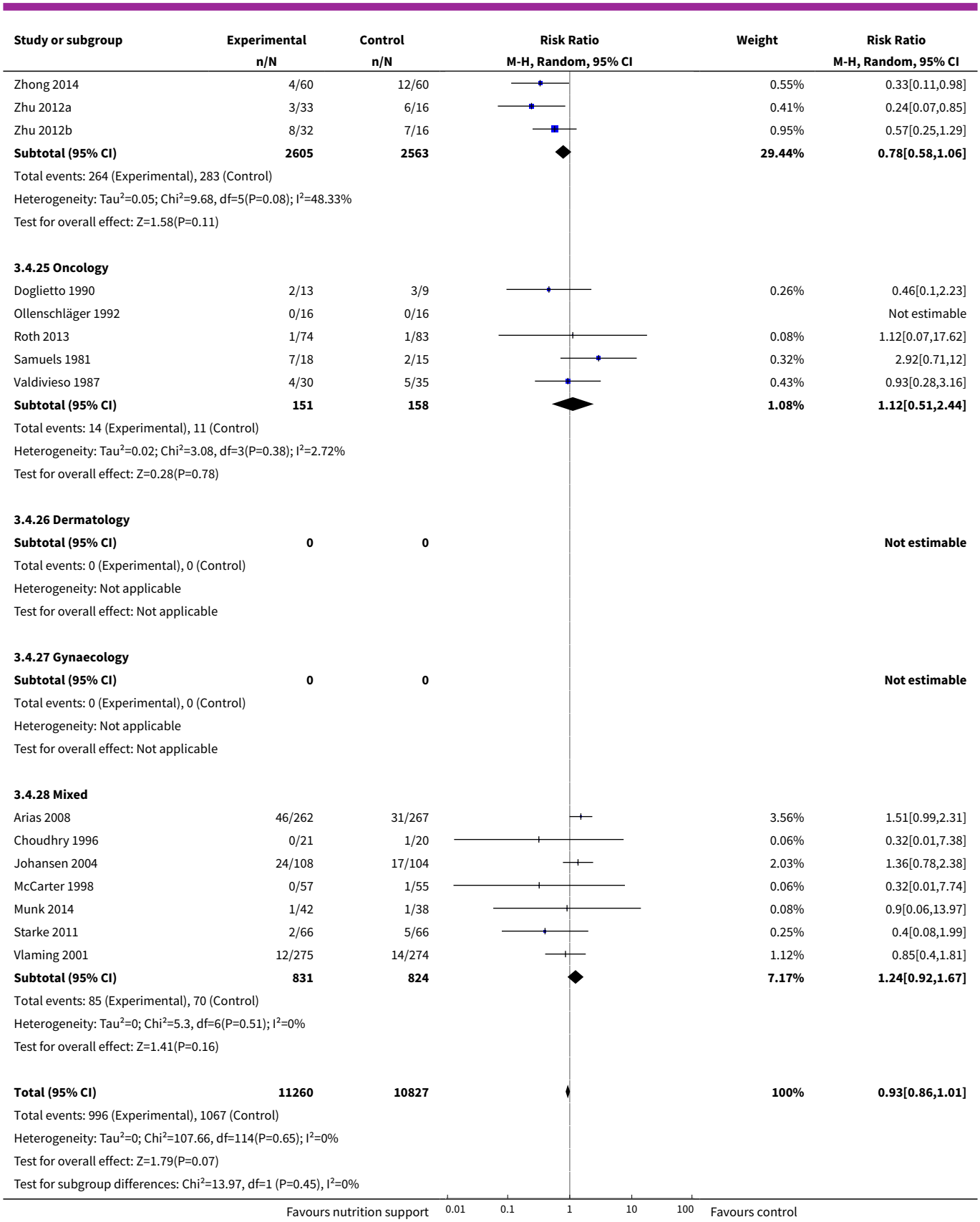


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]
Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]
Müller 1982a	11/66	9/29		1.09%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.59%	1.11[0.59,2.08]
Neuvonen 1984	0/9	1/10		0.07%	0.37[0.02,8.01]
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Sax 1987	1/29	1/26		0.09%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Simon 1988	3/15	2/17		0.23%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.07%	0.2[0.01,3.88]
Sonnenfeld 1978	1/11	1/15		0.09%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Thompson 1981	2/12	1/9		0.13%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.07%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.07%	0.08[0,1.64]
Von Meyenfeldt 1992a	2/51	1/25		0.11%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.14%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.14%	0.38[0.05,3.26]
Woolfson 1989	8/62	8/60		0.76%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.6%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.72%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.23%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.15%	0.18[0.02,1.37]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**2415**	**1905**		**21.62%**	**0.86[0.72,1.02]**
Total events: 220 (Experimental), 238 (Control)					
Heterogeneity: Tau^2=0; Chi^2=44.75, df=46(P=0.52); I^2=0%					
Test for overall effect: Z=1.73(P=0.08)					
3.4.12 Trauma surgery					
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Sacks 1995	2/8	1/9		0.13%	2.25[0.25,20.38]
Vicic 2013	5/52	10/49		0.64%	0.47[0.17,1.28]
Subtotal (95% CI)	**115**	**110**		**2.41%**	**0.93[0.55,1.57]**





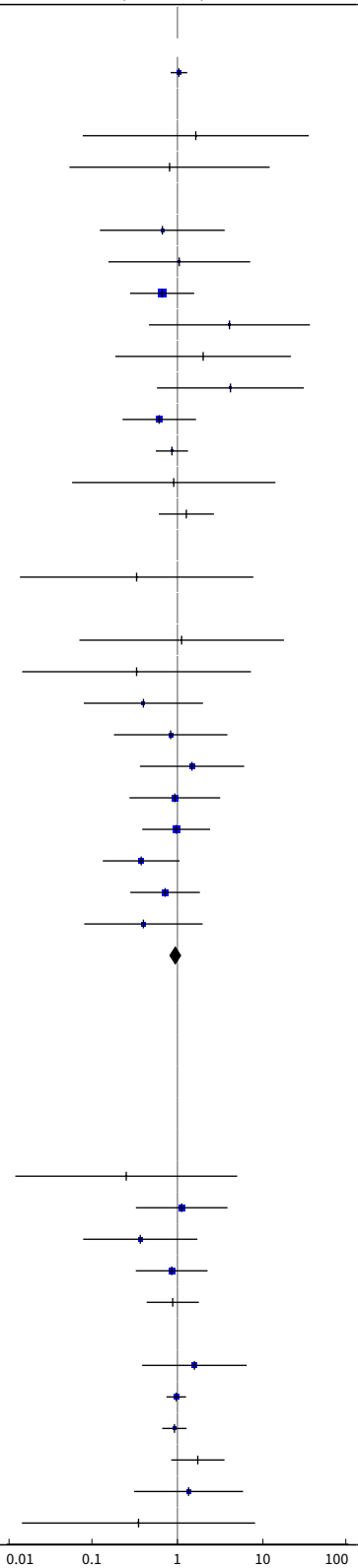
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
3.4.18 Thoracic surgery					
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Subtotal (95% CI)	**290**	**302**		**0.48%**	**0.47[0.06,3.62]**
Total events: 4 (Experimental), 10 (Control)					
Heterogeneity: Tau²=1.77; Chi²=4.37, df=2(P=0.11); I²=54.21%					
Test for overall effect: Z=0.72(P=0.47)					
3.4.19 Neurological surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.20 Oro-maxillo-facial surgery					
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Subtotal (95% CI)	**15**	**17**		**1.29%**	**0.88[0.44,1.78]**
Total events: 7 (Experimental), 9 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.35(P=0.72)					
3.4.21 Anaesthesiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.22 Emergency medicine					
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Heidegger 2013	8/153	12/152		0.85%	0.66[0.28,1.57]
Hill 2002	0/22	2/24		0.07%	0.22[0.01,4.29]
Nguyen 2012	4/14	4/14		0.46%	1[0.31,3.23]
Sabin 1998	2/40	3/40		0.21%	0.67[0.12,3.78]
Stein 2002	2/40	3/40		0.21%	0.67[0.12,3.78]
Subtotal (95% CI)	**2590**	**2608**		**14.58%**	**0.99[0.8,1.22]**
Total events: 163 (Experimental), 167 (Control)					
Heterogeneity: Tau²=0; Chi²=2.68, df=6(P=0.85); I²=0%					
Test for overall effect: Z=0.11(P=0.91)					
3.4.23 Psychiatry					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.24 Neurology					
Abalan 1992	0/15	0/14			Not estimable
Dennis 2005	105/2016	108/2007		9.3%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Gariballa 1998	2/20	3/20		0.23%	0.67[0.12,3.57]

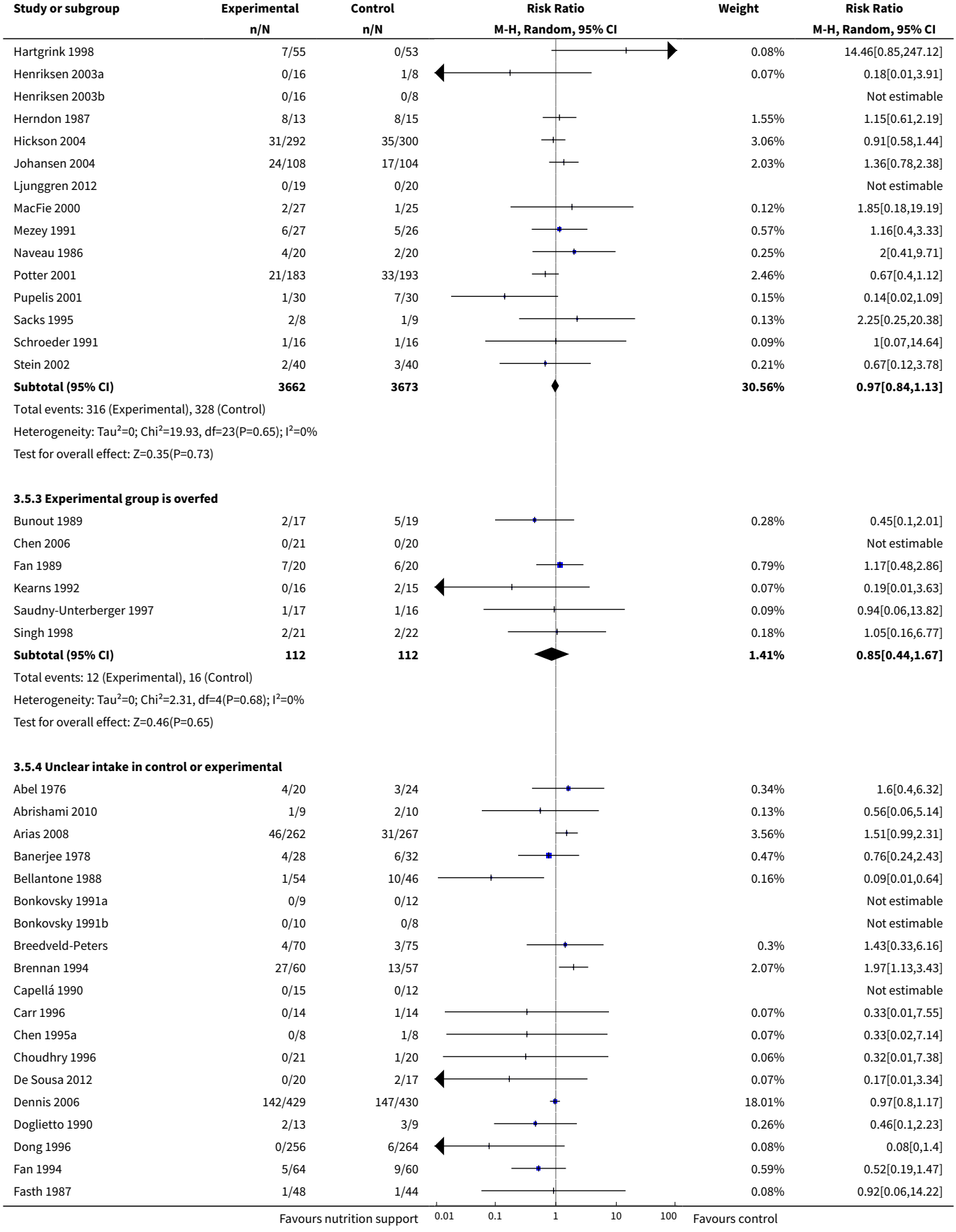


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Zhong 2014	4/60	12/60		0.55%	0.33[0.11,0.98]
Zhu 2012a	3/33	6/16		0.41%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.95%	0.57[0.25,1.29]
Subtotal (95% CI)	**2605**	**2563**		**29.44%**	**0.78[0.58,1.06]**
Total events: 264 (Experimental), 283 (Control)					
Heterogeneity: Tau^2=0.05; Chi^2=9.68, df=5(P=0.08); I^2=48.33%					
Test for overall effect: Z=1.58(P=0.11)					
3.4.25 Oncology					
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Roth 2013	1/74	1/83		0.08%	1.12[0.07,17.62]
Samuels 1981	7/18	2/15		0.32%	2.92[0.71,12]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Subtotal (95% CI)	**151**	**158**		**1.08%**	**1.12[0.51,2.44]**
Total events: 14 (Experimental), 11 (Control)					
Heterogeneity: Tau^2=0.02; Chi^2=3.08, df=3(P=0.38); I^2=2.72%					
Test for overall effect: Z=0.28(P=0.78)					
3.4.26 Dermatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.27 Gynaecology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.4.28 Mixed					
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
Johansen 2004	24/108	17/104		2.03%	1.36[0.78,2.38]
McCarter 1998	0/57	1/55		0.06%	0.32[0.01,7.74]
Munk 2014	1/42	1/38		0.08%	0.9[0.06,13.97]
Starke 2011	2/66	5/66		0.25%	0.4[0.08,1.99]
Vlaming 2001	12/275	14/274		1.12%	0.85[0.4,1.81]
Subtotal (95% CI)	**831**	**824**		**7.17%**	**1.24[0.92,1.67]**
Total events: 85 (Experimental), 70 (Control)					
Heterogeneity: Tau^2=0; Chi^2=5.3, df=6(P=0.51); I^2=0%					
Test for overall effect: Z=1.41(P=0.16)					
Total (95% CI)	**11260**	**10827**		**100%**	**0.93[0.86,1.01]**
Total events: 996 (Experimental), 1067 (Control)					
Heterogeneity: Tau^2=0; Chi^2=107.66, df=114(P=0.65); I^2=0%					
Test for overall effect: Z=1.79(P=0.07)					
Test for subgroup differences: Chi^2=13.97, df=1 (P=0.45), I^2=0%					

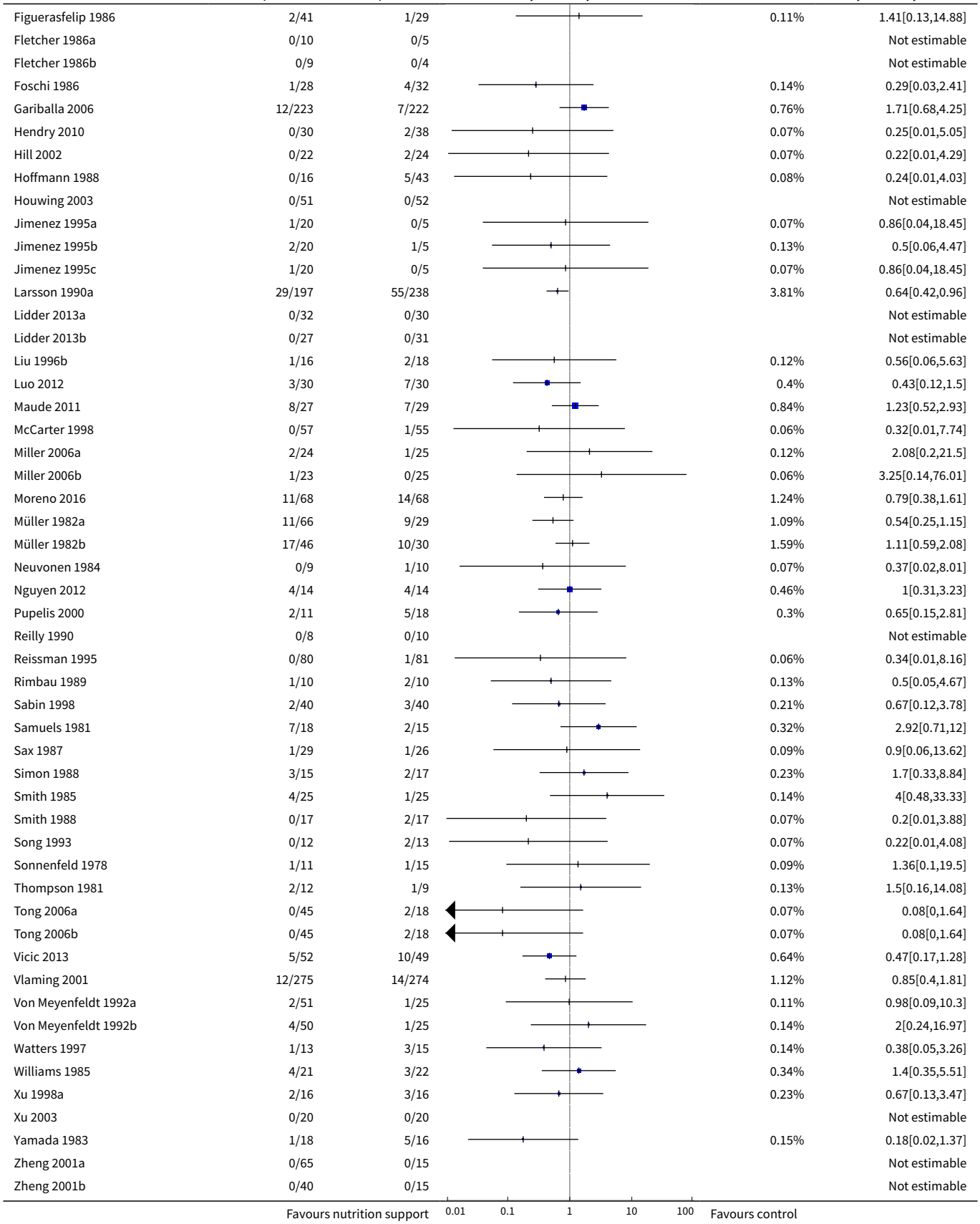
Analysis 3.5. Comparison 3 Serious adverse event end of intervention, Outcome 5 Serious adverse events - based on adequacy of the amount of calories.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
3.5.1 Clearly adequate in intervention and clearly inadequate in control					
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
Eneroth 2005	0/40	0/40			Not estimable
Gariballa 1998	2/20	3/20		0.23%	0.67[0.12,3.57]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Heidegger 2013	8/153	12/152		0.85%	0.66[0.28,1.57]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]
Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Lough 1990	4/14	7/15		0.65%	0.61[0.23,1.65]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]
Munk 2014	1/42	1/38		0.08%	0.9[0.06,13.97]
Neelemaat 2012	14/105	11/105		1.15%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Rana 1992	0/20	0/20			Not estimable
Roth 2013	1/74	1/83		0.08%	1.12[0.07,17.62]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Starke 2011	2/66	5/66		0.25%	0.4[0.08,1.99]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.32%	1.48[0.36,6.03]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Woolfson 1989	8/62	8/60		0.76%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.6%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.72%	0.72[0.28,1.83]
Zhang 2013	2/50	5/50		0.25%	0.4[0.08,1.97]
Subtotal (95% CI)	**3802**	**3603**		**23.56%**	**0.95[0.8,1.11]**
Total events: 256 (Experimental), 259 (Control)					
Heterogeneity: Tau^2=0; Chi^2=14.44, df=23(P=0.91); I^2=0%					
Test for overall effect: Z=0.67(P=0.5)					
3.5.2 Inadequate in the experimental or adequate in the control					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.07%	0.25[0.01,5]
Bastow 1983a	5/39	4/35		0.42%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.27%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.3%	0.97[0.75,1.26]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Duncan 2006	18/150	11/159		1.24%	1.73[0.85,3.55]
Espaulella 2000	4/85	3/86		0.3%	1.35[0.31,5.85]
Førli 2001	0/18	1/19		0.06%	0.35[0.02,8.09]

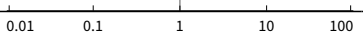




Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hartgrink 1998	7/55	0/53		0.08%	14.46[0.85,247.12]
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Johansen 2004	24/108	17/104		2.03%	1.36[0.78,2.38]
Ljunggren 2012	0/19	0/20			Not estimable
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Sacks 1995	2/8	1/9		0.13%	2.25[0.25,20.38]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Stein 2002	2/40	3/40		0.21%	0.67[0.12,3.78]
Subtotal (95% CI)	**3662**	**3673**		**30.56%**	**0.97[0.84,1.13]**
Total events: 316 (Experimental), 328 (Control)					
Heterogeneity: Tau^2=0; Chi^2=19.93, df=23(P=0.65); I^2=0%					
Test for overall effect: Z=0.35(P=0.73)					
3.5.3 Experimental group is overfed					
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Chen 2006	0/21	0/20			Not estimable
Fan 1989	7/20	6/20		0.79%	1.17[0.48,2.86]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Subtotal (95% CI)	**112**	**112**		**1.41%**	**0.85[0.44,1.67]**
Total events: 12 (Experimental), 16 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.31, df=4(P=0.68); I^2=0%					
Test for overall effect: Z=0.46(P=0.65)					
3.5.4 Unclear intake in control or experimental					
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.47%	0.76[0.24,2.43]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Breedveld-Peters	4/70	3/75		0.3%	1.43[0.33,6.16]
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Fan 1994	5/64	9/60		0.59%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]



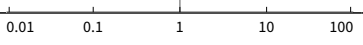
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Zhong 2014	4/60	12/60		0.55%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.41%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.95%	0.57[0.25,1.29]
Subtotal (95% CI)	**3684**	**3439**		**44.47%**	**0.83[0.7,0.98]**
Total events: 412 (Experimental), 464 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=70.62, df=61(P=0.19); I^2=13.62%					
Test for overall effect: Z=2.19(P=0.03)					
Total (95% CI)	**11260**	**10827**		**100%**	**0.93[0.86,1.01]**
Total events: 996 (Experimental), 1067 (Control)					
Heterogeneity: Tau^2=0; Chi^2=107.66, df=114(P=0.65); I^2=0%					
Test for overall effect: Z=1.79(P=0.07)					
Test for subgroup differences: Chi^2=2.25, df=1 (P=0.52), I^2=0%					



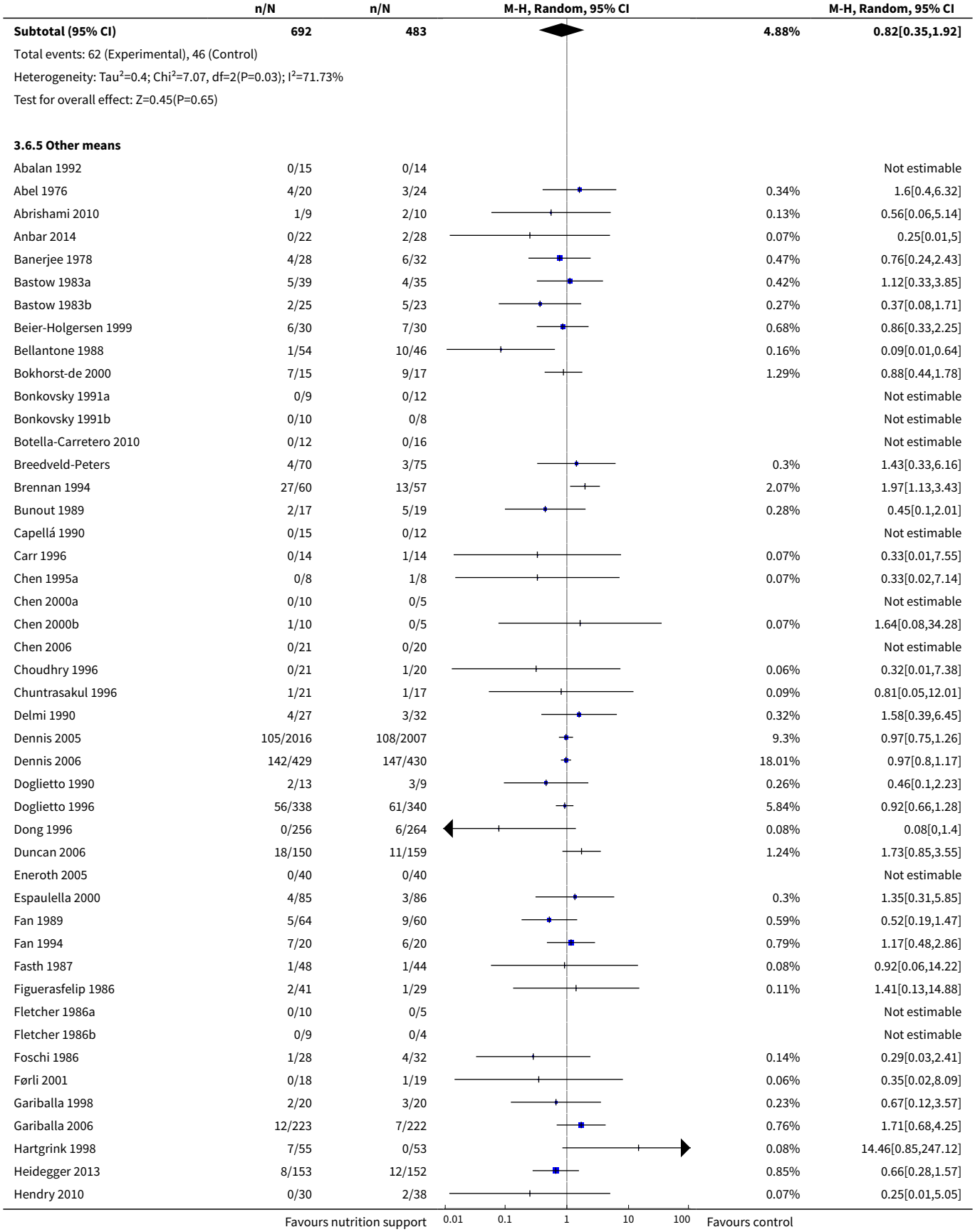
Favours nutrition support — Favours control

Analysis 3.6. Comparison 3 Serious adverse event end of intervention, Outcome 6 Serious adverse events - different screening tools.

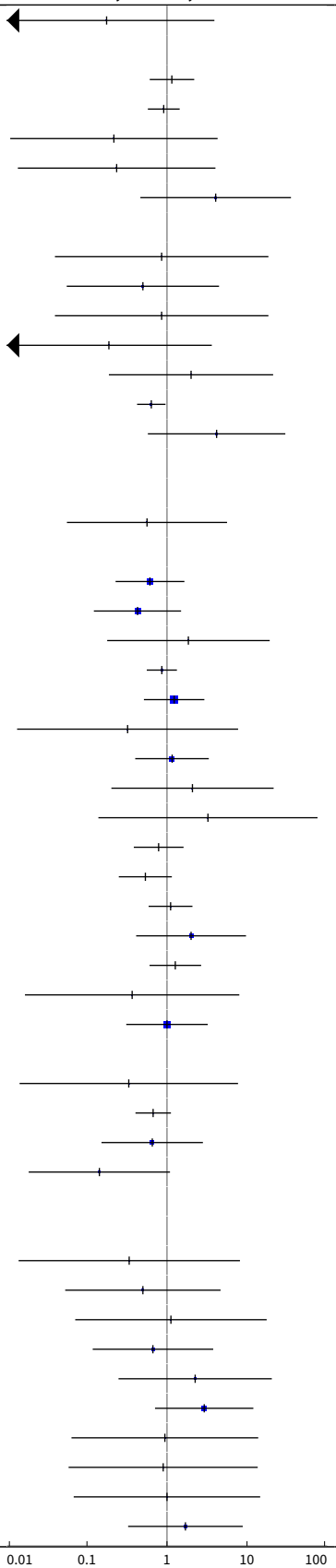
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
3.6.1 NRS 2002					
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Johansen 2004	24/108	17/104		2.03%	1.36[0.78,2.38]
Munk 2014	1/42	1/38		0.08%	0.9[0.06,13.97]
Starke 2011	2/66	5/66		0.25%	0.4[0.08,1.99]
Subtotal (95% CI)	**2528**	**2536**		**15.01%**	**1.06[0.87,1.31]**
Total events: 173 (Experimental), 164 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.21, df=3(P=0.53); I^2=0%					
Test for overall effect: Z=0.58(P=0.56)					
3.6.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.6.3 MNA					
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Subtotal (95% CI)	**59**	**58**		**0.25%**	**0.61[0.12,3.18]**
Total events: 2 (Experimental), 4 (Control)					
Heterogeneity: Tau^2=0.06; Chi^2=1.04, df=1(P=0.31); I^2=3.81%					
Test for overall effect: Z=0.59(P=0.56)					
3.6.4 SGA					
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Wu 2007a	6/215	8/108		0.6%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.72%	0.72[0.28,1.83]



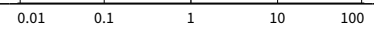
Favours nutrition support — Favours control



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.07%	0.22[0.01,4.29]
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		3.81%	0.64[0.42,0.96]
Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.65%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.84%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.06%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Miller 2006a	2/24	1/25		0.12%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.06%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.24%	0.79[0.38,1.61]
Müller 1982a	11/66	9/29		1.09%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.59%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Neelemaat 2012	14/105	11/105		1.15%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.07%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.46%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.13%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.08%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.21%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.13%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.32%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.09%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Simon 1988	3/15	2/17		0.23%	1.7[0.33,8.84]



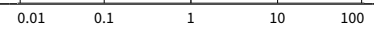
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.07%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.07%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.09%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Stein 2002	2/40	3/40		0.21%	0.67[0.12,3.78]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.32%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.13%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.07%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.07%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.64%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.12%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.11%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.14%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.14%	0.38[0.05,3.26]
Williams 1985	4/21	3/22		0.34%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.76%	0.97[0.39,2.41]
Xu 1998a	2/16	3/16		0.23%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.15%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.25%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	4/60	12/60		0.55%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.41%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.95%	0.57[0.25,1.29]
Subtotal (95% CI)	**7981**	**7750**		**79.86%**	**0.9[0.82,0.98]**
Total events: 759 (Experimental), 853 (Control)					
Heterogeneity: Tau^2=0; Chi^2=93.67, df=105(P=0.78); I^2=0%					
Test for overall effect: Z=2.4(P=0.02)					
Total (95% CI)	**11260**	**10827**		**100%**	**0.93[0.86,1.01]**
Total events: 996 (Experimental), 1067 (Control)					
Heterogeneity: Tau^2=0; Chi^2=107.66, df=114(P=0.65); I^2=0%					
Test for overall effect: Z=1.79(P=0.07)					
Test for subgroup differences: Chi^2=2.52, df=1 (P=0.47), I^2=0%					



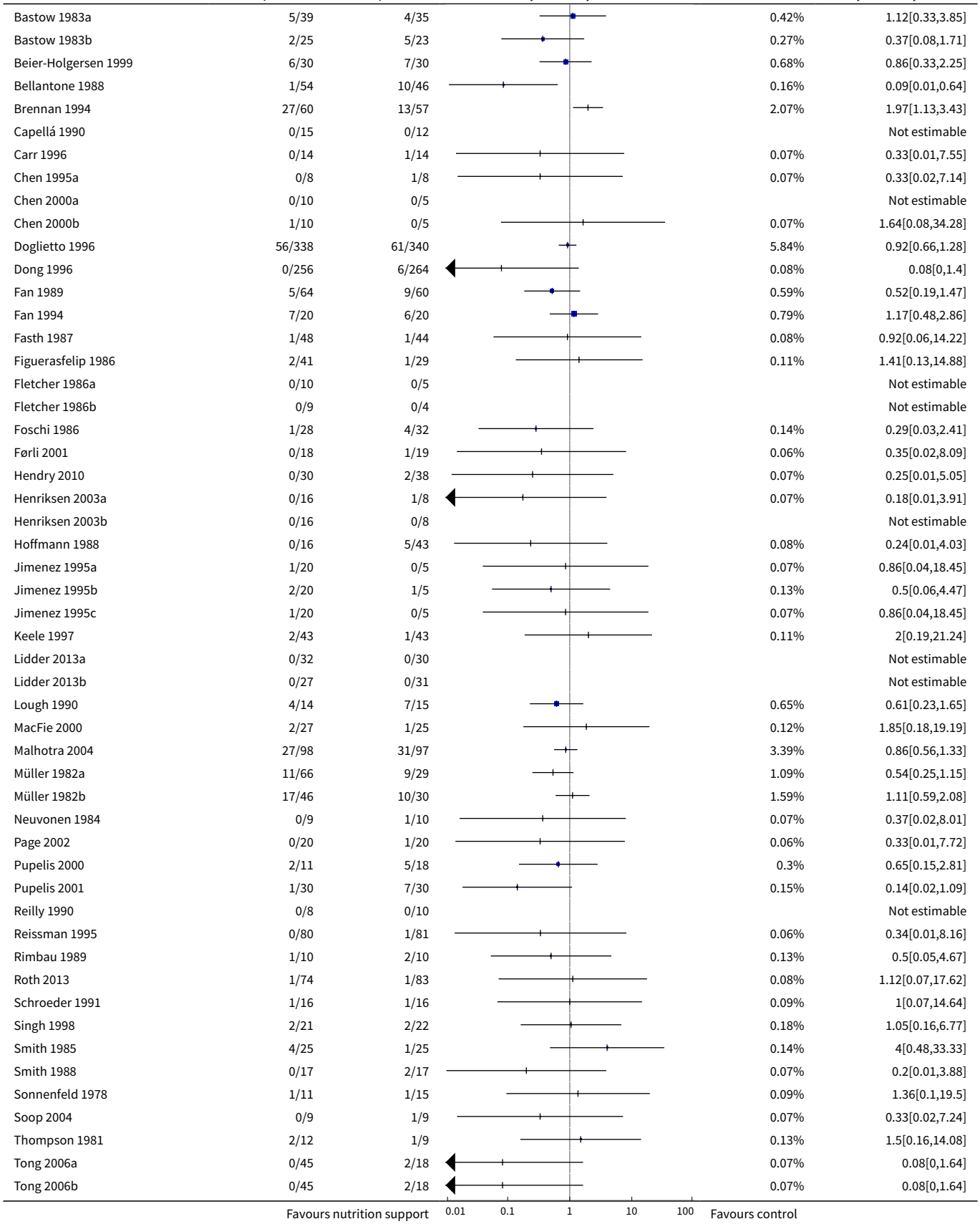
Favours nutrition support — Favours control

Analysis 3.7. Comparison 3 Serious adverse event end of intervention, Outcome 7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions.

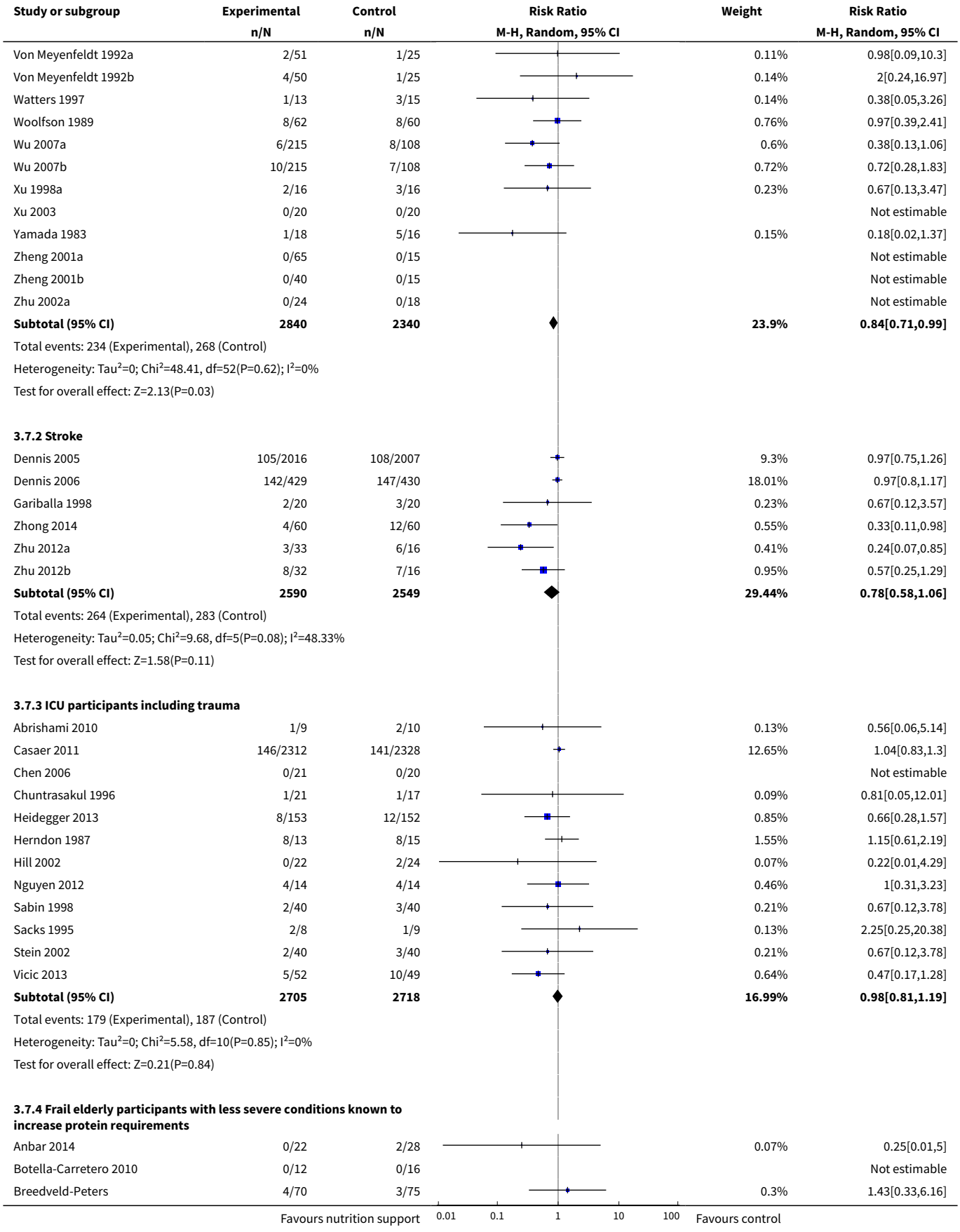
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
3.7.1 Major surgery					
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]

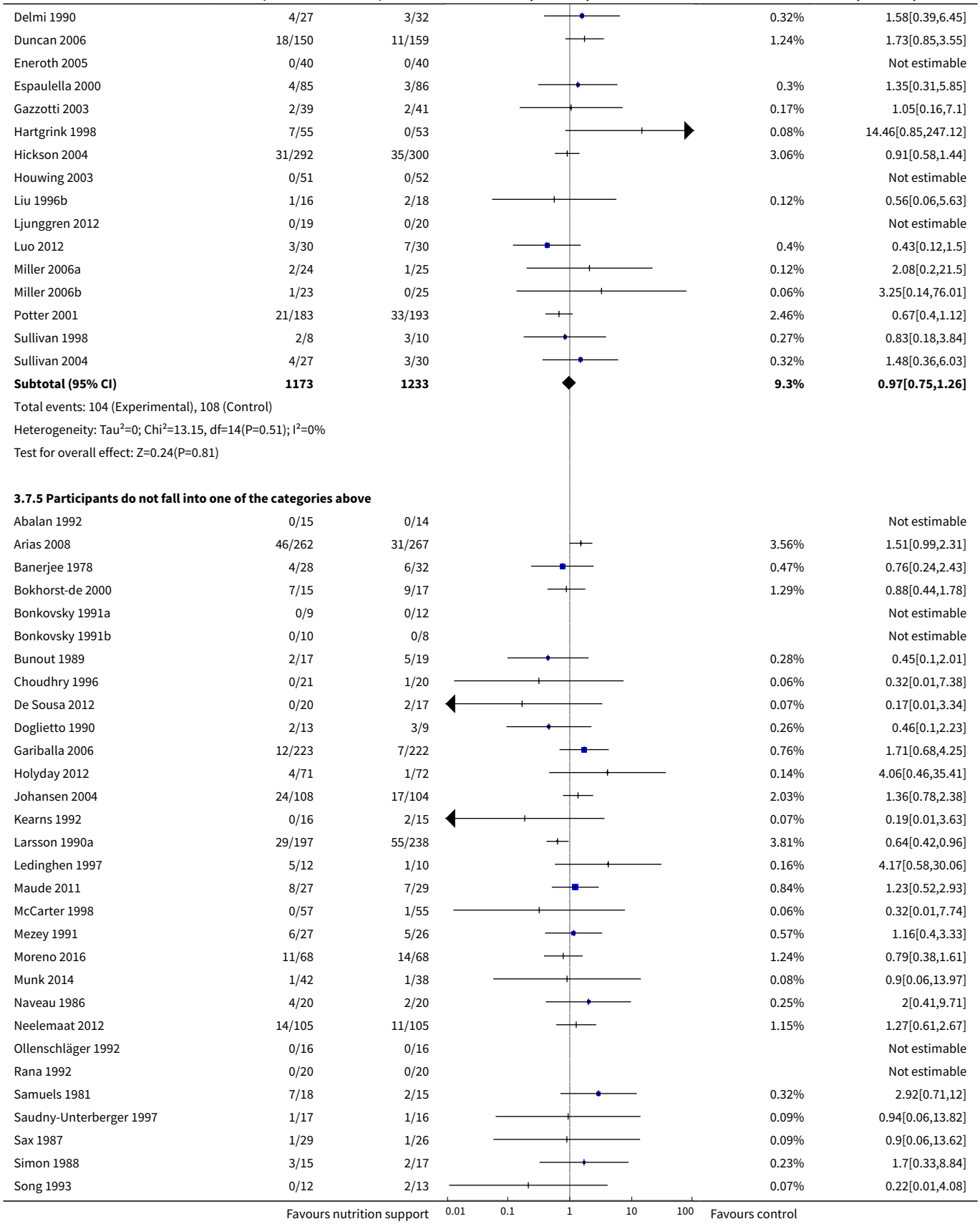


Favours nutrition support — Favours control

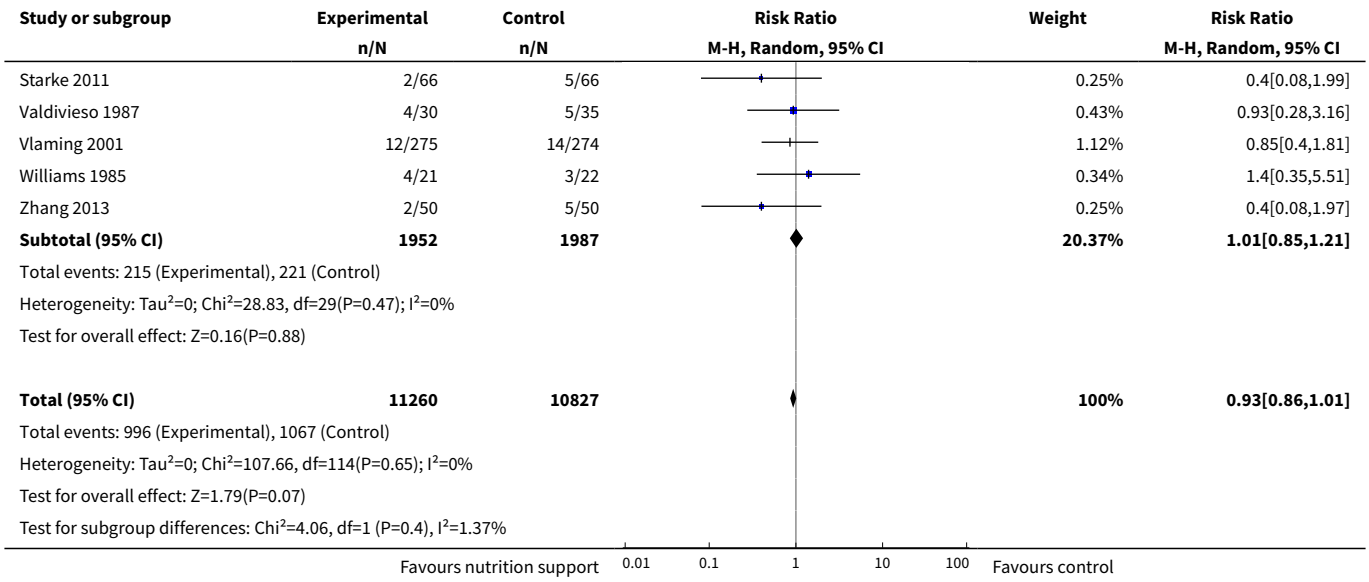


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983a	5/39	4/35		0.42%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.27%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Fan 1989	5/64	9/60		0.59%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.14%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.06%	0.35[0.02,8.09]
Hendry 2010	0/30	2/38		0.07%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Lough 1990	4/14	7/15		0.65%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]
Müller 1982a	11/66	9/29		1.09%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.59%	1.11[0.59,2.08]
Neuvonen 1984	0/9	1/10		0.07%	0.37[0.02,8.01]
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.13%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.08%	1.12[0.07,17.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.07%	0.2[0.01,3.88]
Sonnenfeld 1978	1/11	1/15		0.09%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Thompson 1981	2/12	1/9		0.13%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.07%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.07%	0.08[0,1.64]

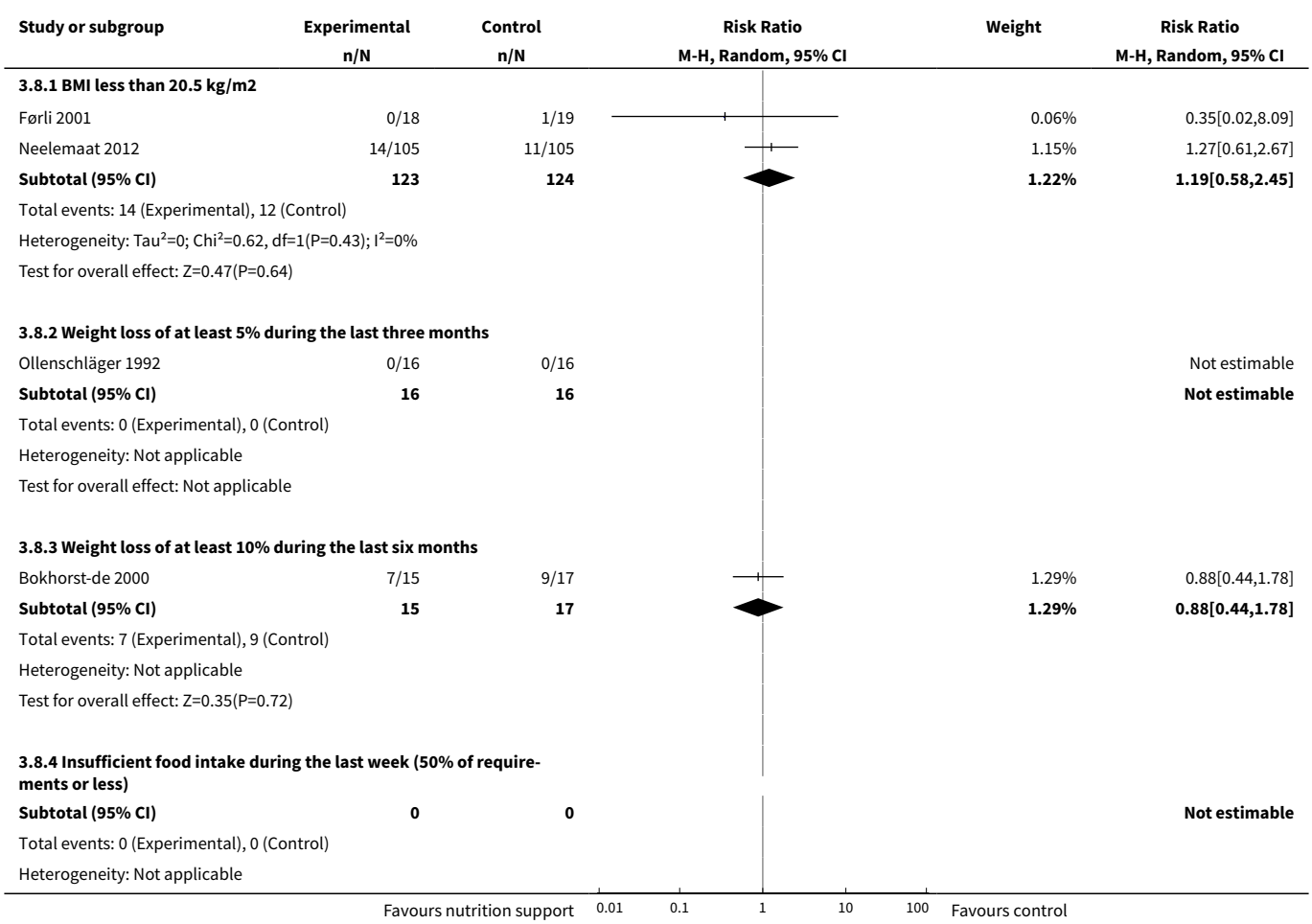




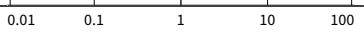
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Duncan 2006	18/150	11/159		1.24%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.3%	1.35[0.31,5.85]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.08%	14.46[0.85,247.12]
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Houwing 2003	0/51	0/52			Not estimable
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
Miller 2006a	2/24	1/25		0.12%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.06%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.32%	1.48[0.36,6.03]
Subtotal (95% CI)	**1173**	**1233**		**9.3%**	**0.97[0.75,1.26]**
Total events: 104 (Experimental), 108 (Control)					
Heterogeneity: Tau^2=0; Chi^2=13.15, df=14(P=0.51); I^2=0%					
Test for overall effect: Z=0.24(P=0.81)					
3.7.5 Participants do not fall into one of the categories above					
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.47%	0.76[0.24,2.43]
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Gariballa 2006	12/223	7/222		0.76%	1.71[0.68,4.25]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Johansen 2004	24/108	17/104		2.03%	1.36[0.78,2.38]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Larsson 1990a	29/197	55/238		3.81%	0.64[0.42,0.96]
Lediنghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Maude 2011	8/27	7/29		0.84%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.06%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Moreno 2016	11/68	14/68		1.24%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.08%	0.9[0.06,13.97]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Neelemaat 2012	14/105	11/105		1.15%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Rana 1992	0/20	0/20			Not estimable
Samuels 1981	7/18	2/15		0.32%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.09%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.23%	1.7[0.33,8.84]
Song 1993	0/12	2/13		0.07%	0.22[0.01,4.08]



Analysis 3.8. Comparison 3 Serious adverse event end of intervention, Outcome 8 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria.

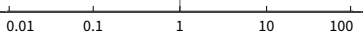


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Not applicable					
3.8.5 Participants characterised as 'at nutritional risk' by other means					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.07%	0.25[0.01,5]
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.47%	0.76[0.24,2.43]
Bastow 1983a	5/39	4/35		0.42%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.27%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.3%	1.43[0.33,6.16]
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.3%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Duncan 2006	18/150	11/159		1.24%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.3%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.59%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.14%	0.29[0.03,2.41]
Gariballa 1998	2/20	3/20		0.23%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.76%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.08%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		0.85%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.07%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]



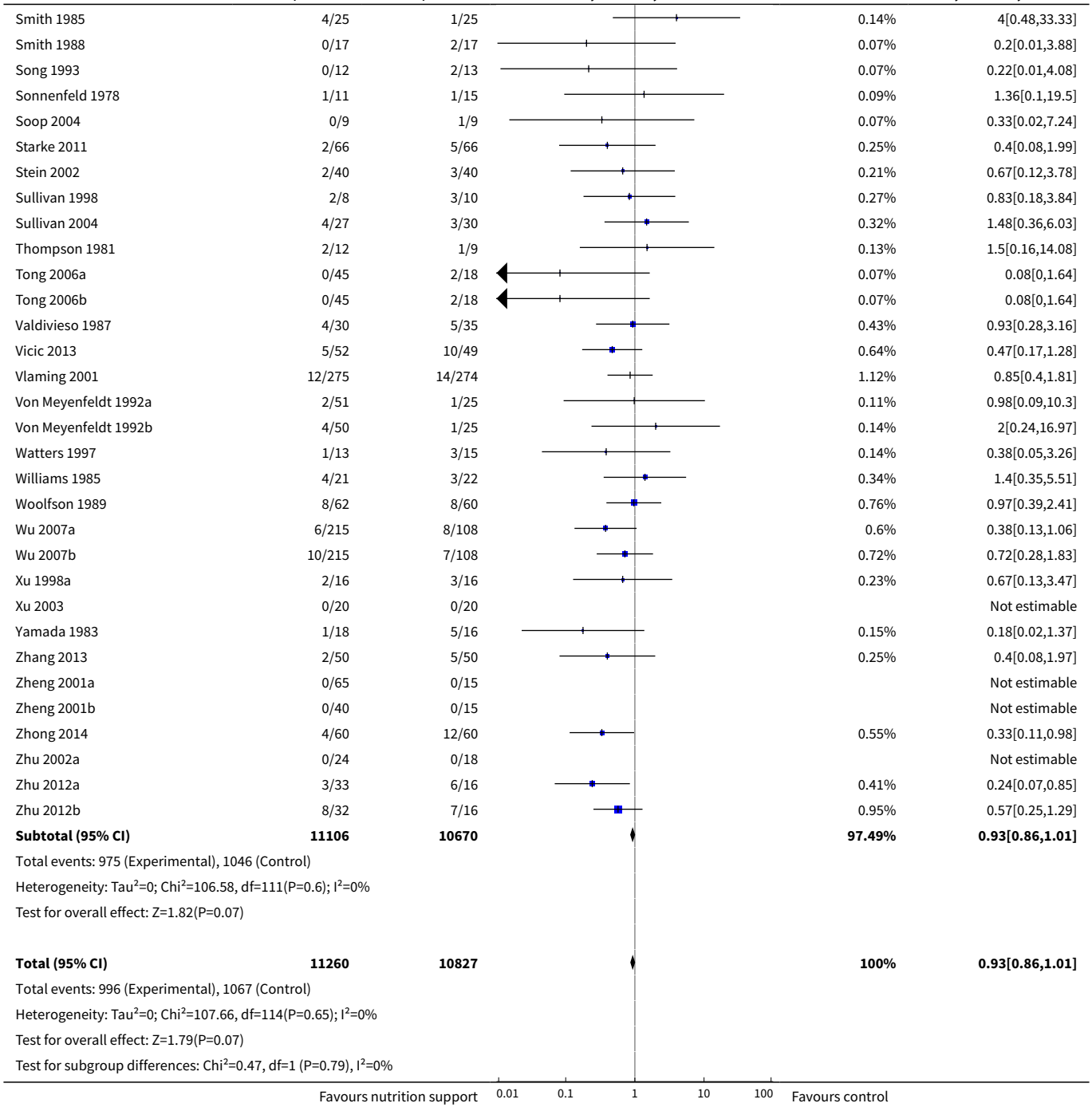
Favours nutrition support | Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.07%	0.22[0.01,4.29]
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Johansen 2004	24/108	17/104		2.03%	1.36[0.78,2.38]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		3.81%	0.64[0.42,0.96]
Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.65%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.84%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.06%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Miller 2006a	2/24	1/25		0.12%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.06%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.24%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.08%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		1.09%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.59%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.07%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.46%	1[0.31,3.23]
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.13%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.08%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.21%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.13%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.32%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.09%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Simon 1988	3/15	2/17		0.23%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]



Favours nutrition support

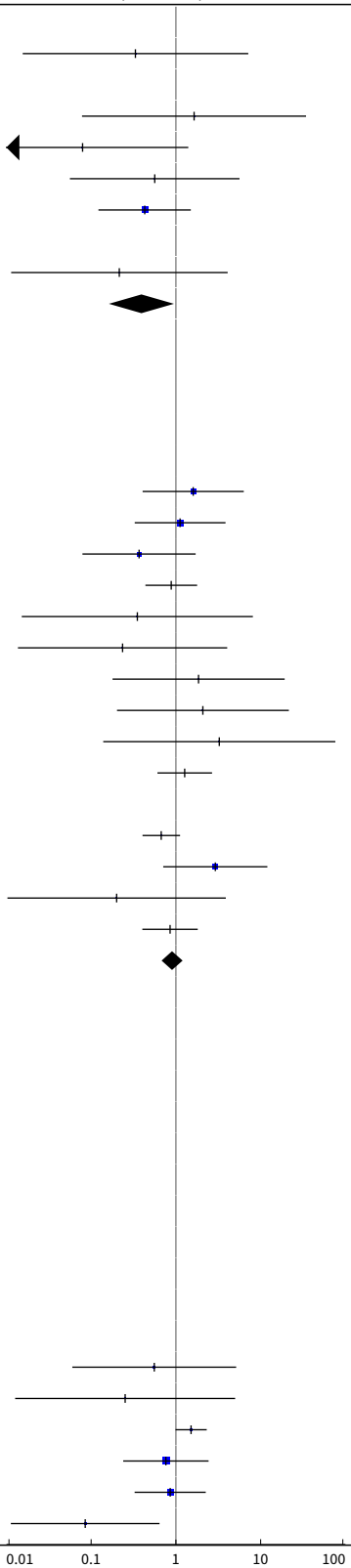
Favours control

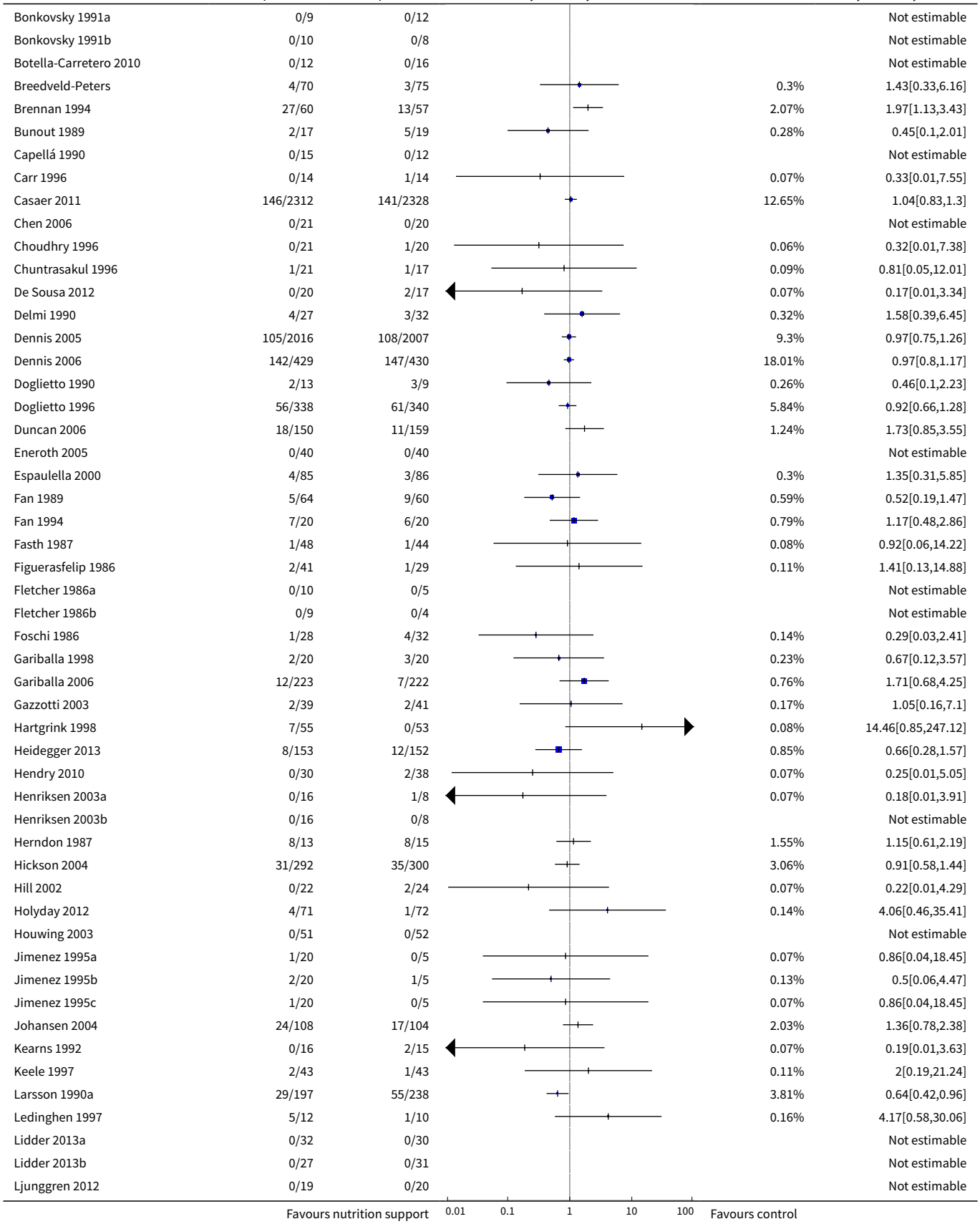


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.07%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.07%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.09%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Starke 2011	2/66	5/66		0.25%	0.4[0.08,1.99]
Stein 2002	2/40	3/40		0.21%	0.67[0.12,3.78]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.32%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.13%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.07%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.07%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.64%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.12%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.11%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.14%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.14%	0.38[0.05,3.26]
Williams 1985	4/21	3/22		0.34%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.76%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.6%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.72%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.23%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.15%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.25%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	4/60	12/60		0.55%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.41%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.95%	0.57[0.25,1.29]
Subtotal (95% CI)	**11106**	**10670**		**97.49%**	**0.93[0.86,1.01]**
Total events: 975 (Experimental), 1046 (Control)					
Heterogeneity: Tau^2=0; Chi^2=106.58, df=111(P=0.6); I^2=0%					
Test for overall effect: Z=1.82(P=0.07)					
Total (95% CI)	**11260**	**10827**		**100%**	**0.93[0.86,1.01]**
Total events: 996 (Experimental), 1067 (Control)					
Heterogeneity: Tau^2=0; Chi^2=107.66, df=114(P=0.65); I^2=0%					
Test for overall effect: Z=1.79(P=0.07)					
Test for subgroup differences: Chi^2=0.47, df=1 (P=0.79), I^2=0%					

Analysis 3.9. Comparison 3 Serious adverse event end of intervention, Outcome 9 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
3.9.1 Biomarkers					
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
Reilly 1990	0/8	0/10			Not estimable
Song 1993	0/12	2/13		0.07%	0.22[0.01,4.08]
Subtotal (95% CI)	**350**	**353**		**0.81%**	**0.39[0.16,0.95]**
Total events: 5 (Experimental), 18 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.44, df=5(P=0.79); I^2=0%					
Test for overall effect: Z=2.07(P=0.04)					
3.9.2 Anthropometric measures					
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]
Bastow 1983a	5/39	4/35		0.42%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.27%	0.37[0.08,1.71]
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Førli 2001	0/18	1/19		0.06%	0.35[0.02,8.09]
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.12%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.06%	3.25[0.14,76.01]
Neelemaat 2012	14/105	11/105		1.15%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Samuels 1981	7/18	2/15		0.32%	2.92[0.71,12]
Smith 1988	0/17	2/17		0.07%	0.2[0.01,3.88]
Vlaming 2001	12/275	14/274		1.12%	0.85[0.4,1.81]
Subtotal (95% CI)	**821**	**856**		**7.88%**	**0.9[0.68,1.2]**
Total events: 77 (Experimental), 91 (Control)					
Heterogeneity: Tau^2=0; Chi^2=10.59, df=13(P=0.65); I^2=0%					
Test for overall effect: Z=0.73(P=0.47)					
3.9.3 Mixed					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.9.4 Characterised by other means					
Abalan 1992	0/15	0/14			Not estimable
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.07%	0.25[0.01,5]
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.47%	0.76[0.24,2.43]
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.3%	1.43[0.33,6.16]
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.3%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Duncan 2006	18/150	11/159		1.24%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.3%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.59%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.14%	0.29[0.03,2.41]
Gariballa 1998	2/20	3/20		0.23%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.76%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.08%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		0.85%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.07%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.07%	0.22[0.01,4.29]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
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Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
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Maude 2011	8/27	7/29		0.84%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.06%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Moreno 2016	11/68	14/68		1.24%	0.79[0.38,1.61]
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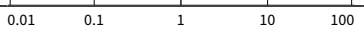
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.07%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.46%	1[0.31,3.23]
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.13%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.08%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.21%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.13%	2.25[0.25,20.38]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.09%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Simon 1988	3/15	2/17		0.23%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.09%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Starke 2011	2/66	5/66		0.25%	0.4[0.08,1.99]
Stein 2002	2/40	3/40		0.21%	0.67[0.12,3.78]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.32%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.13%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.07%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.07%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.64%	0.47[0.17,1.28]
Von Meyenfeldt 1992a	2/51	1/25		0.11%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.14%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.14%	0.38[0.05,3.26]
Williams 1985	4/21	3/22		0.34%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.76%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.6%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.72%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.23%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.15%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.25%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	4/60	12/60		0.55%	0.33[0.11,0.98]



Favours nutrition support

Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.41%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.95%	0.57[0.25,1.29]
Subtotal (95% CI)	**10089**	**9618**		**91.31%**	**0.94[0.86,1.02]**
Total events: 914 (Experimental), 958 (Control)					
Heterogeneity: Tau^2=0; Chi^2=90.88, df=94(P=0.57); I^2=0%					
Test for overall effect: Z=1.46(P=0.14)					
Total (95% CI)	**11260**	**10827**		**100%**	**0.93[0.86,1.01]**
Total events: 996 (Experimental), 1067 (Control)					
Heterogeneity: Tau^2=0; Chi^2=107.66, df=114(P=0.65); I^2=0%					
Test for overall effect: Z=1.79(P=0.07)					
Test for subgroup differences: Chi^2=3.77, df=1 (P=0.15), I^2=47.01%					

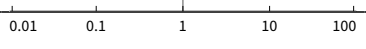
Favours nutrition support — Favours control

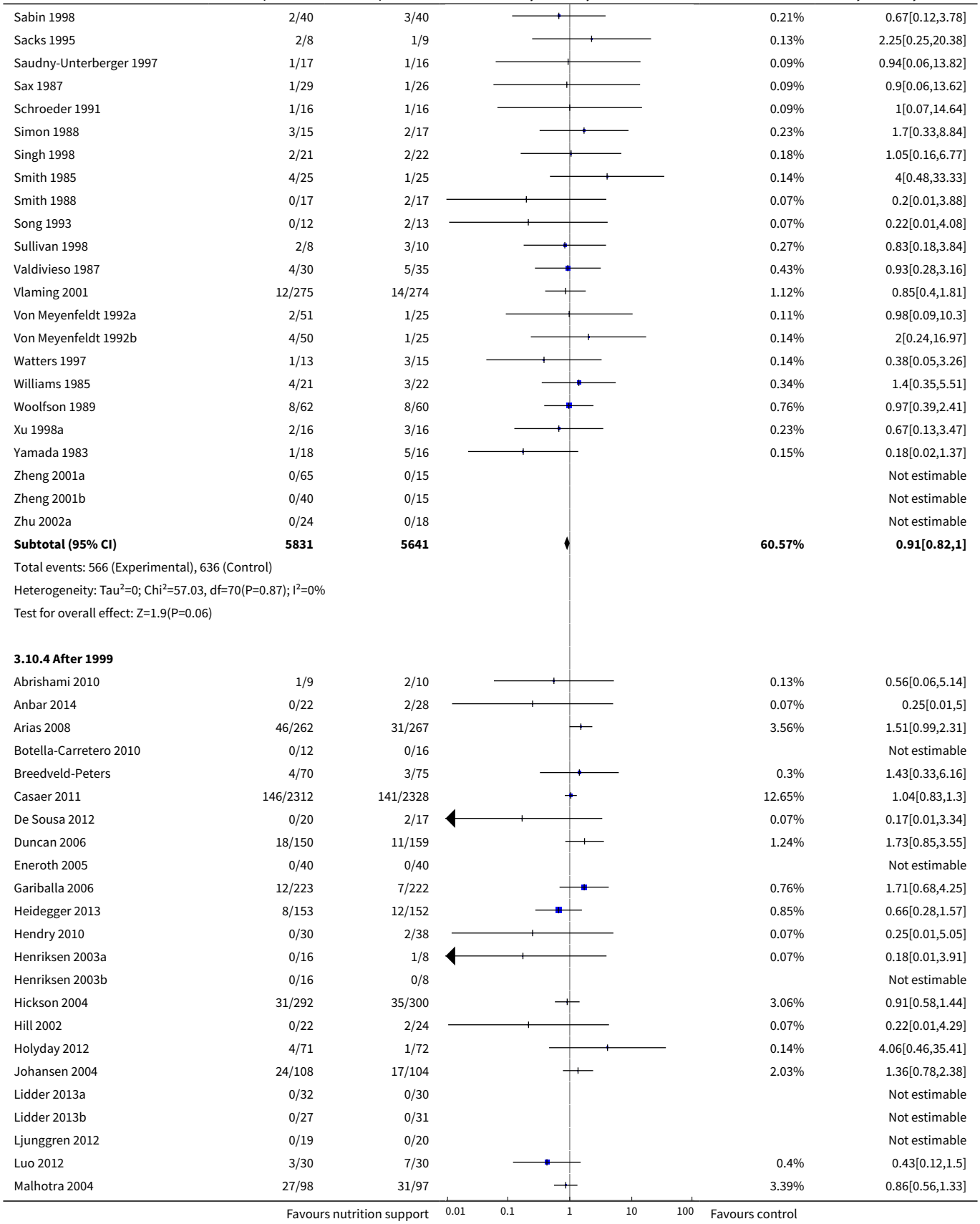
Analysis 3.10. Comparison 3 Serious adverse event end of intervention, Outcome 10 Serious adverse events - randomisation year.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
3.10.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
3.10.2 1960 to 1979					
Abel 1976	4/20	3/24		0.34%	1.6[0.4,6.32]
Banerjee 1978	4/28	6/32		0.47%	0.76[0.24,2.43]
Samuels 1981	7/18	2/15		0.32%	2.92[0.71,12]
Sonnenfeld 1978	1/11	1/15		0.09%	1.36[0.1,19.5]
Thompson 1981	2/12	1/9		0.13%	1.5[0.16,14.08]
Subtotal (95% CI)	**89**	**95**		**1.34%**	**1.4[0.7,2.78]**
Total events: 18 (Experimental), 13 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.14, df=4(P=0.71); I^2=0%					
Test for overall effect: Z=0.95(P=0.34)					
3.10.3 1980 to 1999					
Abalan 1992	0/15	0/14			Not estimable
Bastow 1983a	5/39	4/35		0.42%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.27%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable

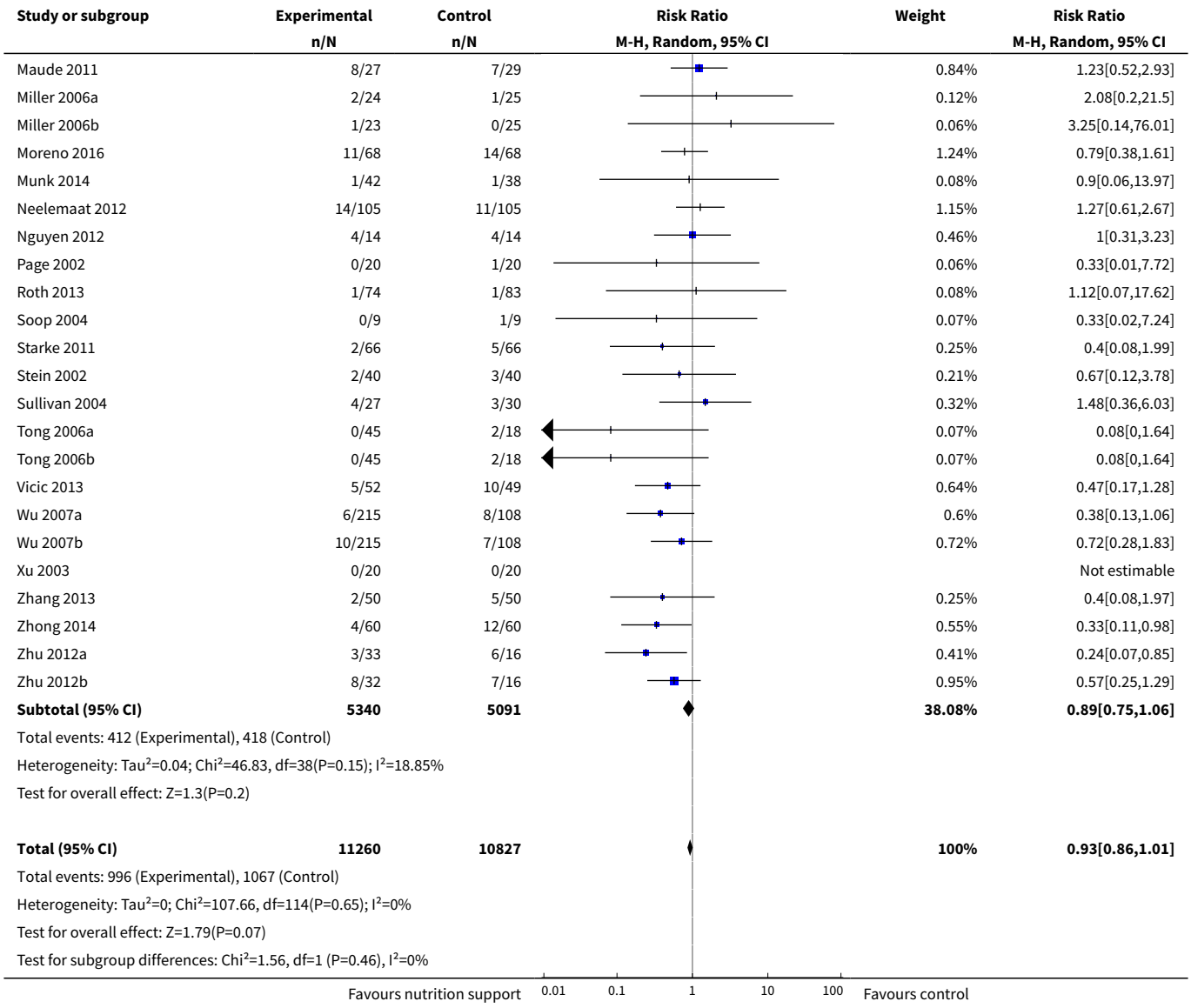
Favours nutrition support — Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.06%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.3%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Espaulella 2000	4/85	3/86		0.3%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.59%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.14%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.06%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.23%	0.67[0.12,3.57]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.08%	14.46[0.85,247.12]
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		3.81%	0.64[0.42,0.96]
Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.65%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
McCarter 1998	0/57	1/55		0.06%	0.32[0.01,7.74]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Müller 1982a	11/66	9/29		1.09%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.59%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.07%	0.37[0.02,8.01]
Ollenschläger 1992	0/16	0/16			Not estimable
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.13%	0.5[0.05,4.67]

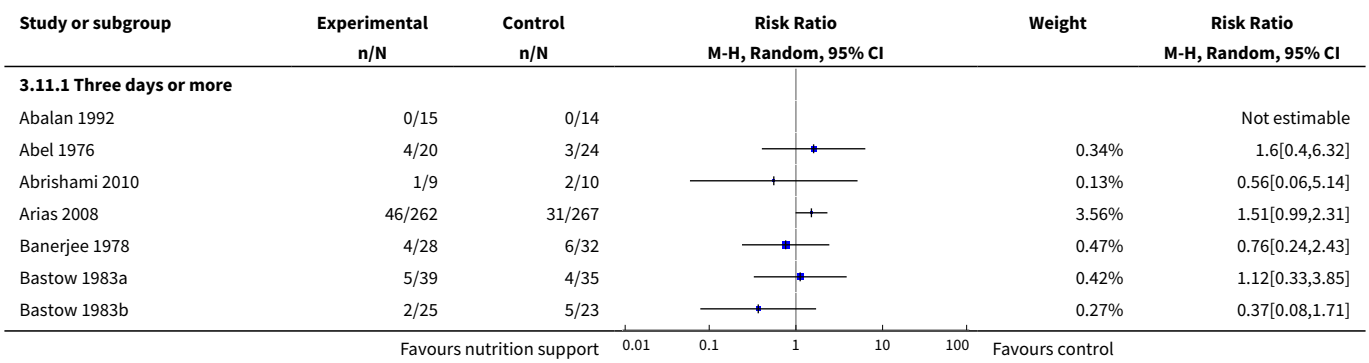


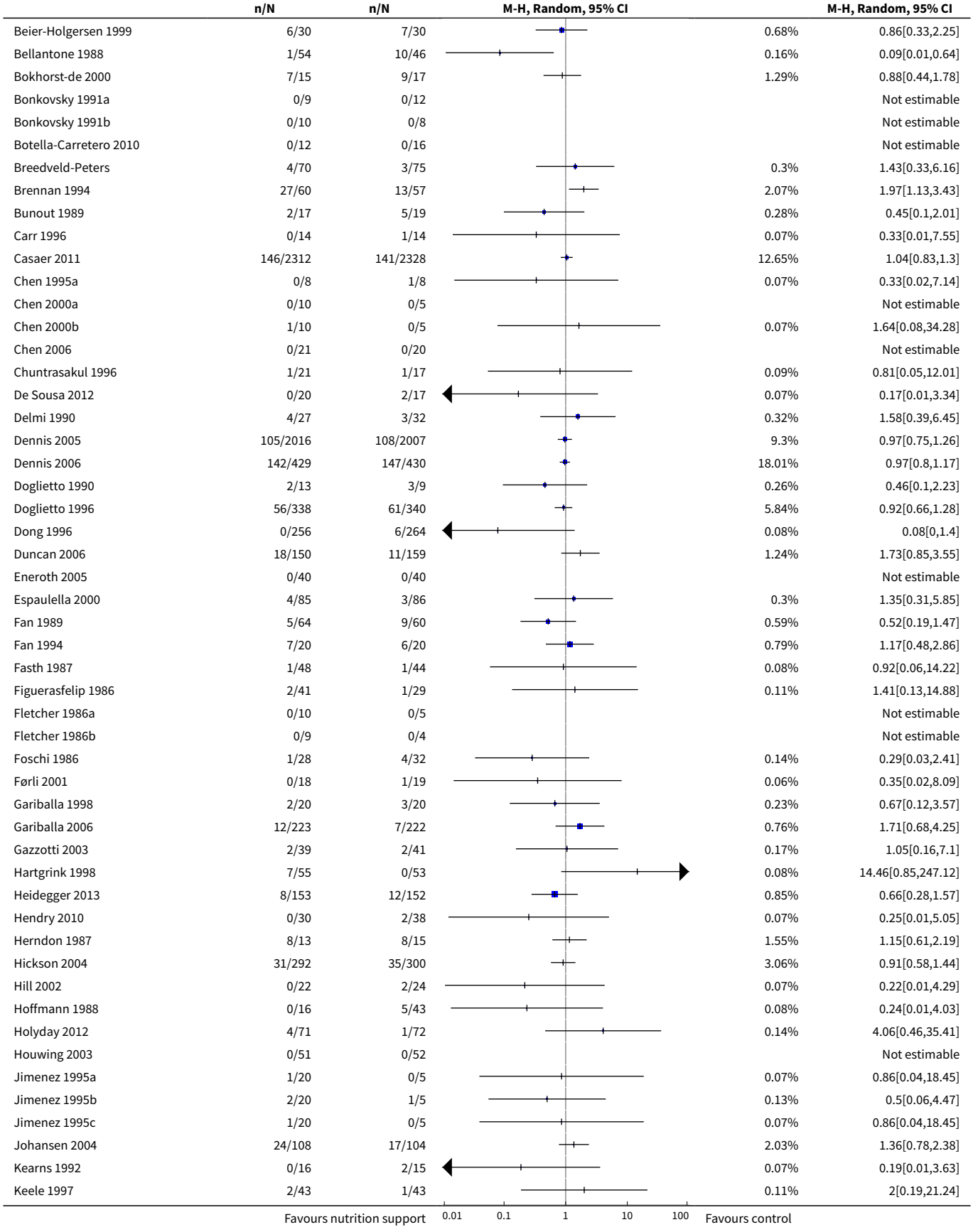


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sabin 1998	2/40	3/40		0.21%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.13%	2.25[0.25,20.38]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.09%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Simon 1988	3/15	2/17		0.23%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.07%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.07%	0.22[0.01,4.08]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Vlaming 2001	12/275	14/274		1.12%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.11%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.14%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.14%	0.38[0.05,3.26]
Williams 1985	4/21	3/22		0.34%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.76%	0.97[0.39,2.41]
Xu 1998a	2/16	3/16		0.23%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.15%	0.18[0.02,1.37]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**5831**	**5641**		**60.57%**	**0.91[0.82,1]**
Total events: 566 (Experimental), 636 (Control)					
Heterogeneity: Tau²=0; Chi²=57.03, df=70(P=0.87); I²=0%					
Test for overall effect: Z=1.9(P=0.06)					
3.10.4 After 1999					
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.07%	0.25[0.01,5]
Arias 2008	46/262	31/267		3.56%	1.51[0.99,2.31]
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.3%	1.43[0.33,6.16]
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Duncan 2006	18/150	11/159		1.24%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Gariballa 2006	12/223	7/222		0.76%	1.71[0.68,4.25]
Heidegger 2013	8/153	12/152		0.85%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.07%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.07%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.07%	0.22[0.01,4.29]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Johansen 2004	24/108	17/104		2.03%	1.36[0.78,2.38]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]



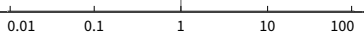
Analysis 3.11. Comparison 3 Serious adverse event end of intervention, Outcome 11 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.





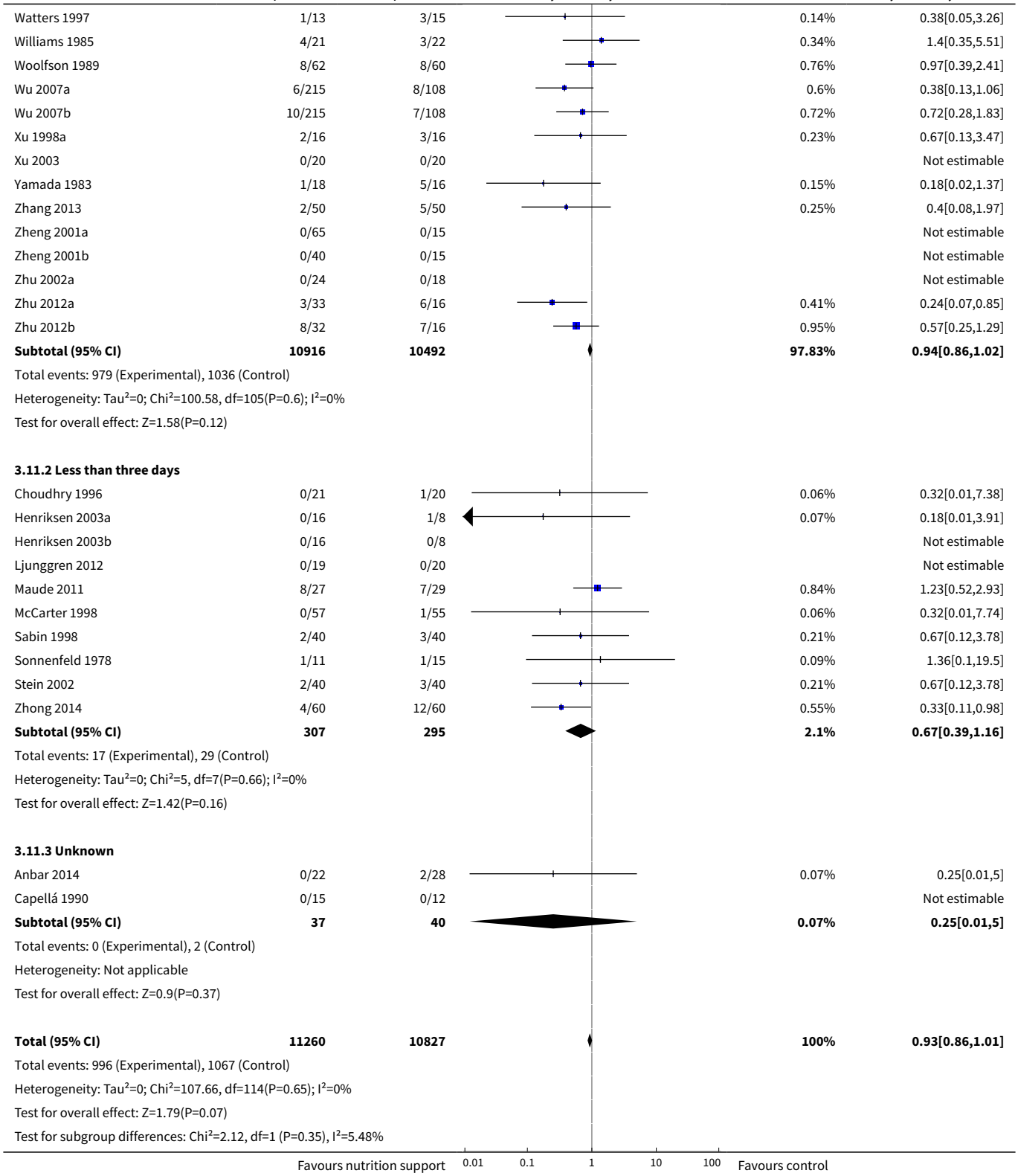
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Beier-Holgersen 1999	6/30	7/30		0.68%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.16%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		1.29%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.3%	1.43[0.33,6.16]
Brennan 1994	27/60	13/57		2.07%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.28%	0.45[0.1,2.01]
Carr 1996	0/14	1/14		0.07%	0.33[0.01,7.55]
Casaer 2011	146/2312	141/2328		12.65%	1.04[0.83,1.3]
Chen 1995a	0/8	1/8		0.07%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.07%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	1/17		0.09%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.07%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.32%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.3%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		18.01%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.26%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		5.84%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.08%	0.08[0,1.4]
Duncan 2006	18/150	11/159		1.24%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.3%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.59%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.08%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.14%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.06%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.23%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.76%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.17%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.08%	14.46[0.85,247.12]
Heidegger 2013	8/153	12/152		0.85%	0.66[0.28,1.57]
Hendry 2010	0/30	2/38		0.07%	0.25[0.01,5.05]
Herndon 1987	8/13	8/15		1.55%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.06%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.07%	0.22[0.01,4.29]
Hoffmann 1988	0/16	5/43		0.08%	0.24[0.01,4.03]
Holyday 2012	4/71	1/72		0.14%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.13%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Johansen 2004	24/108	17/104		2.03%	1.36[0.78,2.38]
Kearns 1992	0/16	2/15		0.07%	0.19[0.01,3.63]
Keele 1997	2/43	1/43		0.11%	2[0.19,21.24]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Larsson 1990a	29/197	55/238		3.81%	0.64[0.42,0.96]
Ledinghen 1997	5/12	1/10		0.16%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.12%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.65%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.12%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		3.39%	0.86[0.56,1.33]
Mezey 1991	6/27	5/26		0.57%	1.16[0.4,3.33]
Miller 2006a	2/24	1/25		0.12%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.06%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.24%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.08%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		1.09%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.59%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.25%	2[0.41,9.71]
Neelemaat 2012	14/105	11/105		1.15%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.07%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.46%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.06%	0.33[0.01,7.72]
Potter 2001	21/183	33/193		2.46%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.3%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.15%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.06%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.13%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.08%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.13%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.32%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.09%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Simon 1988	3/15	2/17		0.23%	1.7[0.33,8.84]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.14%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.07%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.07%	0.22[0.01,4.08]
Soop 2004	0/9	1/9		0.07%	0.33[0.02,7.24]
Starke 2011	2/66	5/66		0.25%	0.4[0.08,1.99]
Sullivan 1998	2/8	3/10		0.27%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.32%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.13%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.07%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.07%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.64%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.12%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.11%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.14%	2[0.24,16.97]



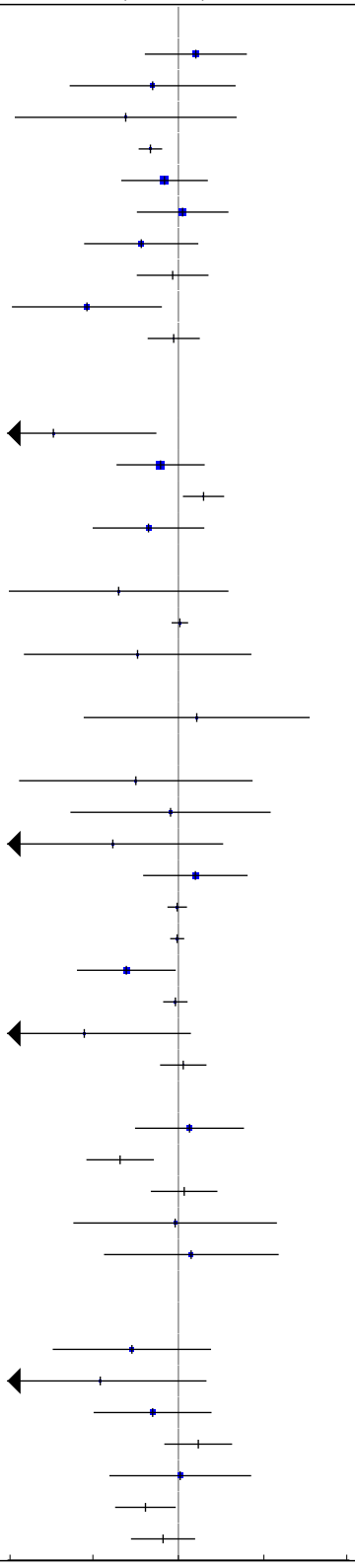
Favours nutrition support

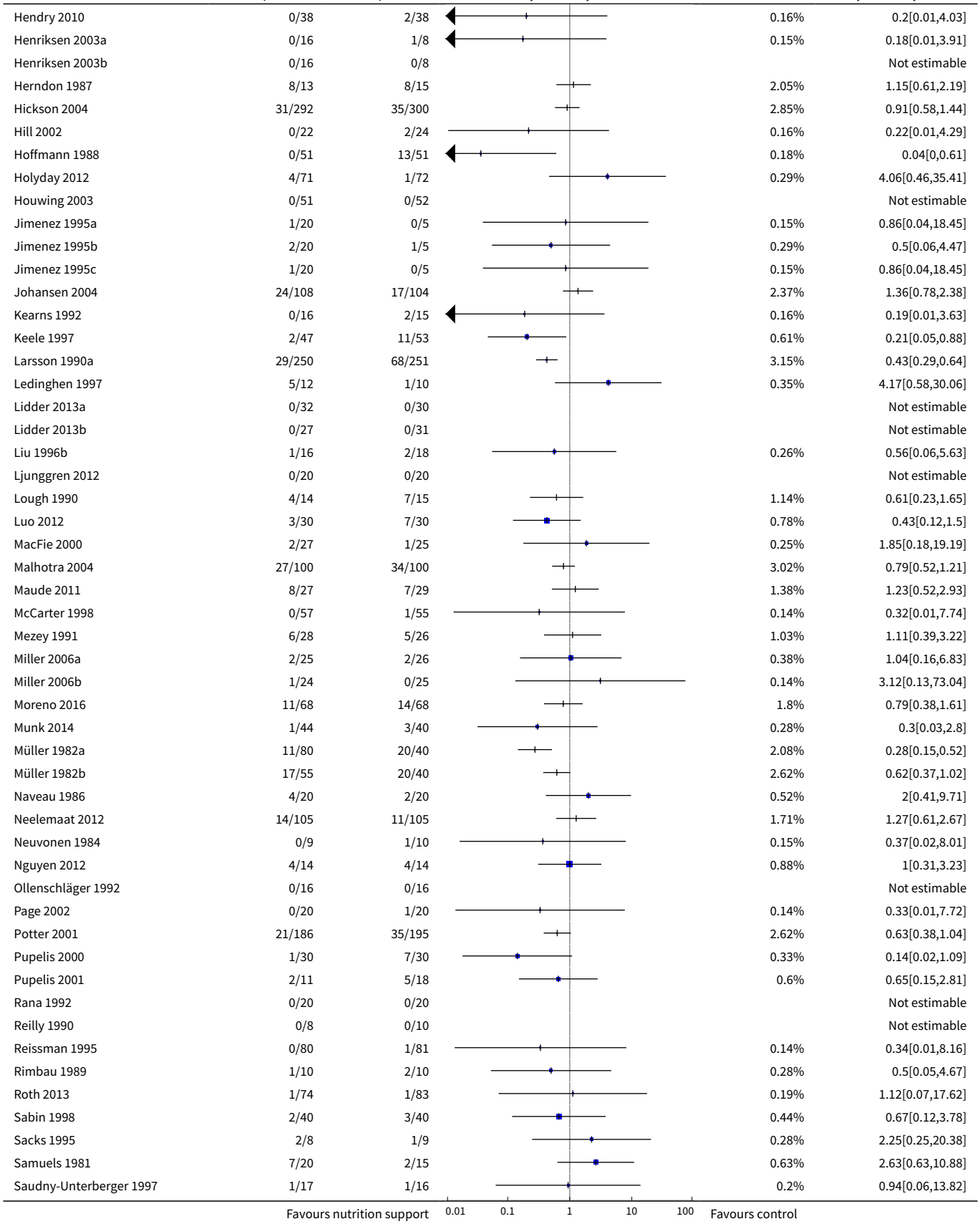
Favours control



Analysis 3.12. Comparison 3 Serious adverse event end of intervention, Outcome 12 Serious adverse events - 'best-worst case' scenario.

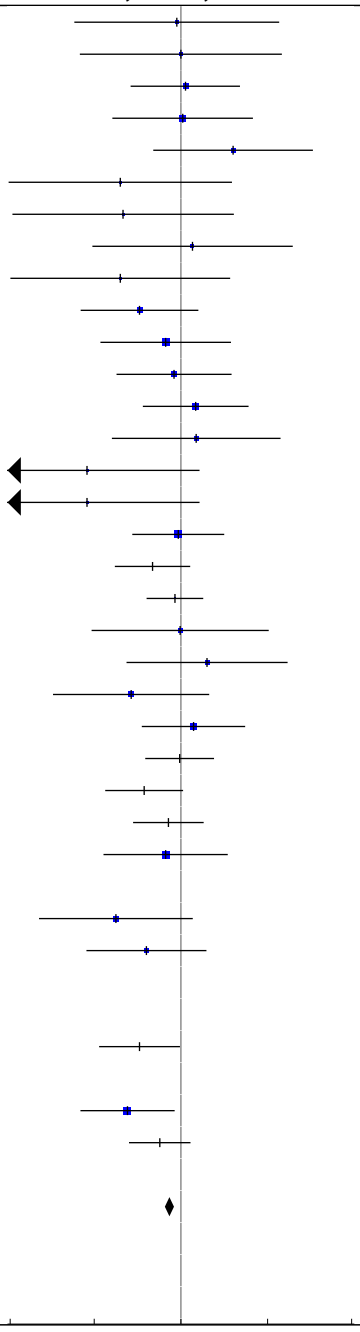
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.67%	1.6[0.4,6.32]
Abrishami 2010	1/10	2/10		0.28%	0.5[0.05,4.67]
Anbar 2014	0/23	2/28		0.16%	0.24[0.01,4.8]
Arias 2008	46/333	98/334		3.61%	0.47[0.34,0.65]
Banerjee 1978	4/31	6/32		0.88%	0.69[0.21,2.21]
Bastow 1983a	5/39	4/35		0.8%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.55%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		1.18%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.34%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		1.83%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/30	14/30		0.18%	0.03[0,0.55]
Breedveld-Peters	4/73	7/79		0.86%	0.62[0.19,2.03]
Brennan 1994	27/60	13/57		2.39%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.57%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/15	2/15		0.16%	0.2[0.01,3.85]
Casaer 2011	146/2312	141/2328		4.11%	1.04[0.83,1.3]
Chen 1995a	0/8	1/8		0.15%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.15%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.14%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.19%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.16%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.64%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		3.91%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		4.28%	0.97[0.8,1.17]
Doglietto 1990	2/13	10/16		0.71%	0.25[0.07,0.93]
Doglietto 1996	56/338	61/340		3.53%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.17%	0.08[0,1.4]
Duncan 2006	18/153	17/165		2.1%	1.14[0.61,2.13]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.6%	1.35[0.31,5.85]
Fan 1989	5/75	24/75		1.3%	0.21[0.08,0.52]
Fan 1994	7/20	6/20		1.32%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.19%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.25%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.3%	0.29[0.03,2.41]
Førli 2001	0/20	4/22		0.17%	0.12[0.01,2.13]
Gariballa 1998	2/21	4/21		0.52%	0.5[0.1,2.44]
Gariballa 2006	12/223	7/222		1.29%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.37%	1.05[0.16,7.1]
Hartgrink 1998	7/70	17/70		1.51%	0.41[0.18,0.93]
Heidegger 2013	8/153	12/152		1.39%	0.66[0.28,1.57]





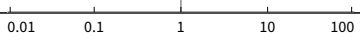
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hendry 2010	0/38	2/38		0.16%	0.2[0.01,4.03]
Henriksen 2003a	0/16	1/8		0.15%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		2.05%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		2.85%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Hoffmann 1988	0/51	13/51		0.18%	0.04[0,0.61]
Holyday 2012	4/71	1/72		0.29%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.15%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.29%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.15%	0.86[0.04,18.45]
Johansen 2004	24/108	17/104		2.37%	1.36[0.78,2.38]
Kearns 1992	0/16	2/15		0.16%	0.19[0.01,3.63]
Keele 1997	2/47	11/53		0.61%	0.21[0.05,0.88]
Larsson 1990a	29/250	68/251		3.15%	0.43[0.29,0.64]
Ledinghen 1997	5/12	1/10		0.35%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.26%	0.56[0.06,5.63]
Ljunggren 2012	0/20	0/20			Not estimable
Lough 1990	4/14	7/15		1.14%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.78%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.25%	1.85[0.18,19.19]
Malhotra 2004	27/100	34/100		3.02%	0.79[0.52,1.21]
Maude 2011	8/27	7/29		1.38%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.14%	0.32[0.01,7.74]
Mezey 1991	6/28	5/26		1.03%	1.11[0.39,3.22]
Miller 2006a	2/25	2/26		0.38%	1.04[0.16,6.83]
Miller 2006b	1/24	0/25		0.14%	3.12[0.13,73.04]
Moreno 2016	11/68	14/68		1.8%	0.79[0.38,1.61]
Munk 2014	1/44	3/40		0.28%	0.3[0.03,2.8]
Müller 1982a	11/80	20/40		2.08%	0.28[0.15,0.52]
Müller 1982b	17/55	20/40		2.62%	0.62[0.37,1.02]
Naveau 1986	4/20	2/20		0.52%	2[0.41,9.71]
Neelemaat 2012	14/105	11/105		1.71%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.15%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.88%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.14%	0.33[0.01,7.72]
Potter 2001	21/186	35/195		2.62%	0.63[0.38,1.04]
Pupelis 2000	1/30	7/30		0.33%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.6%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.14%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.28%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.19%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.44%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.28%	2.25[0.25,20.38]
Samuels 1981	7/20	2/15		0.63%	2.63[0.63,10.88]
Saudny-Unterberger 1997	1/17	1/16		0.2%	0.94[0.06,13.82]

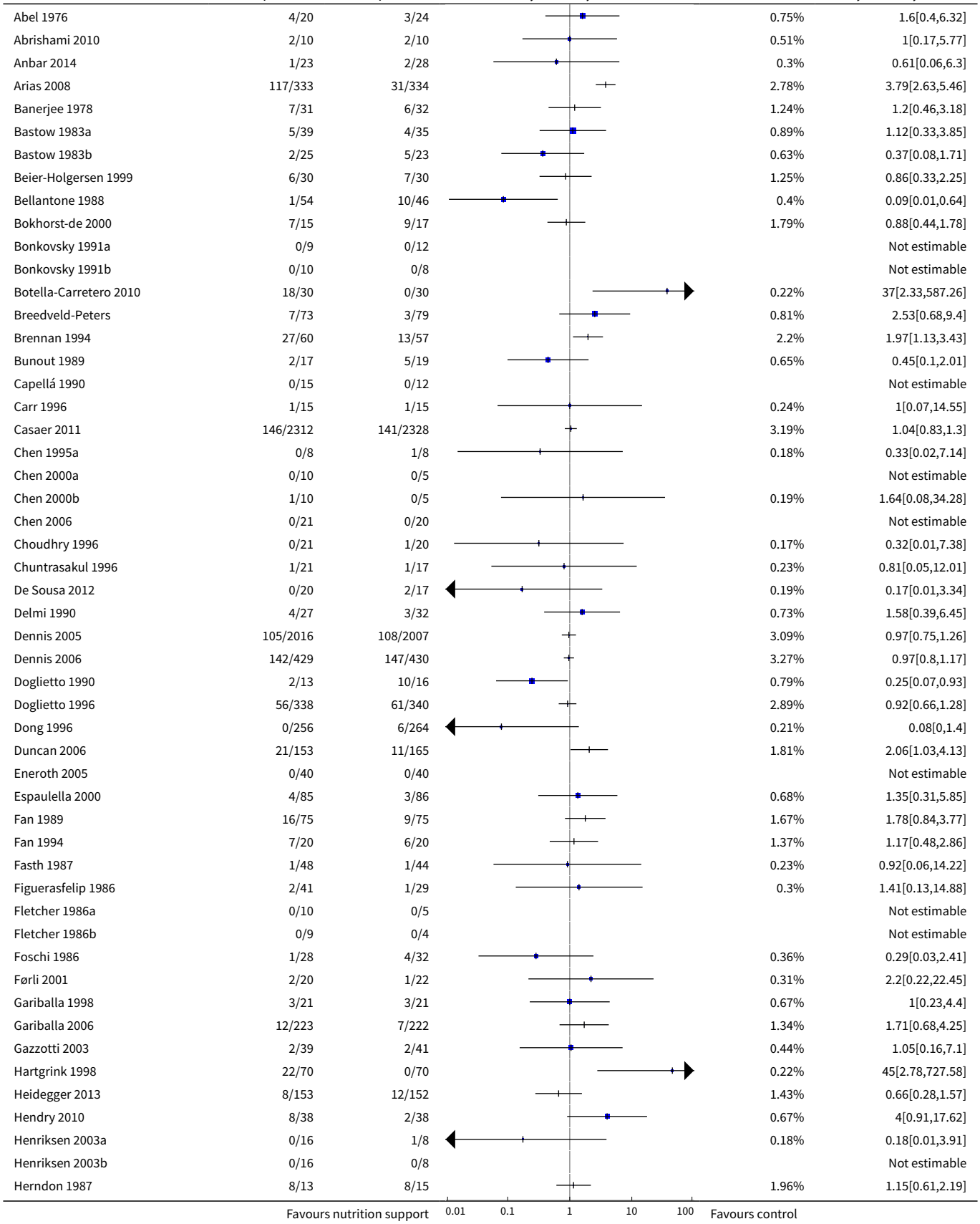
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sax 1987	1/29	1/26		0.19%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.2%	1[0.07,14.64]
Simon 1988	3/16	3/18		0.61%	1.13[0.26,4.8]
Singh 1998	2/21	2/22		0.39%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.16%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.16%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.2%	1.36[0.1,19.5]
Soop 2004	0/10	2/10		0.17%	0.2[0.01,3.7]
Starke 2011	2/67	6/67		0.53%	0.33[0.07,1.59]
Stein 2002	2/40	3/40		0.44%	0.67[0.12,3.78]
Sullivan 1998	2/8	3/10		0.56%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.65%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.28%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.16%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.16%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.82%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		1.12%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.68%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.25%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]
Watters 1997	1/15	4/16		0.32%	0.27[0.03,2.12]
Williams 1985	4/21	3/22		0.67%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		1.29%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		1.07%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		1.24%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.49%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.33%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.52%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	4/60	12/60		1.01%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.79%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.51%	0.57[0.25,1.29]
Total (95% CI)	**11531**	**11026**		**100%**	**0.74[0.65,0.83]**
Total events: 996 (Experimental), 1266 (Control)					
Heterogeneity: Tau²=0.08; Chi²=163.47, df=115(P=0); I²=29.65%					
Test for overall effect: Z=4.94(P<0.0001)					



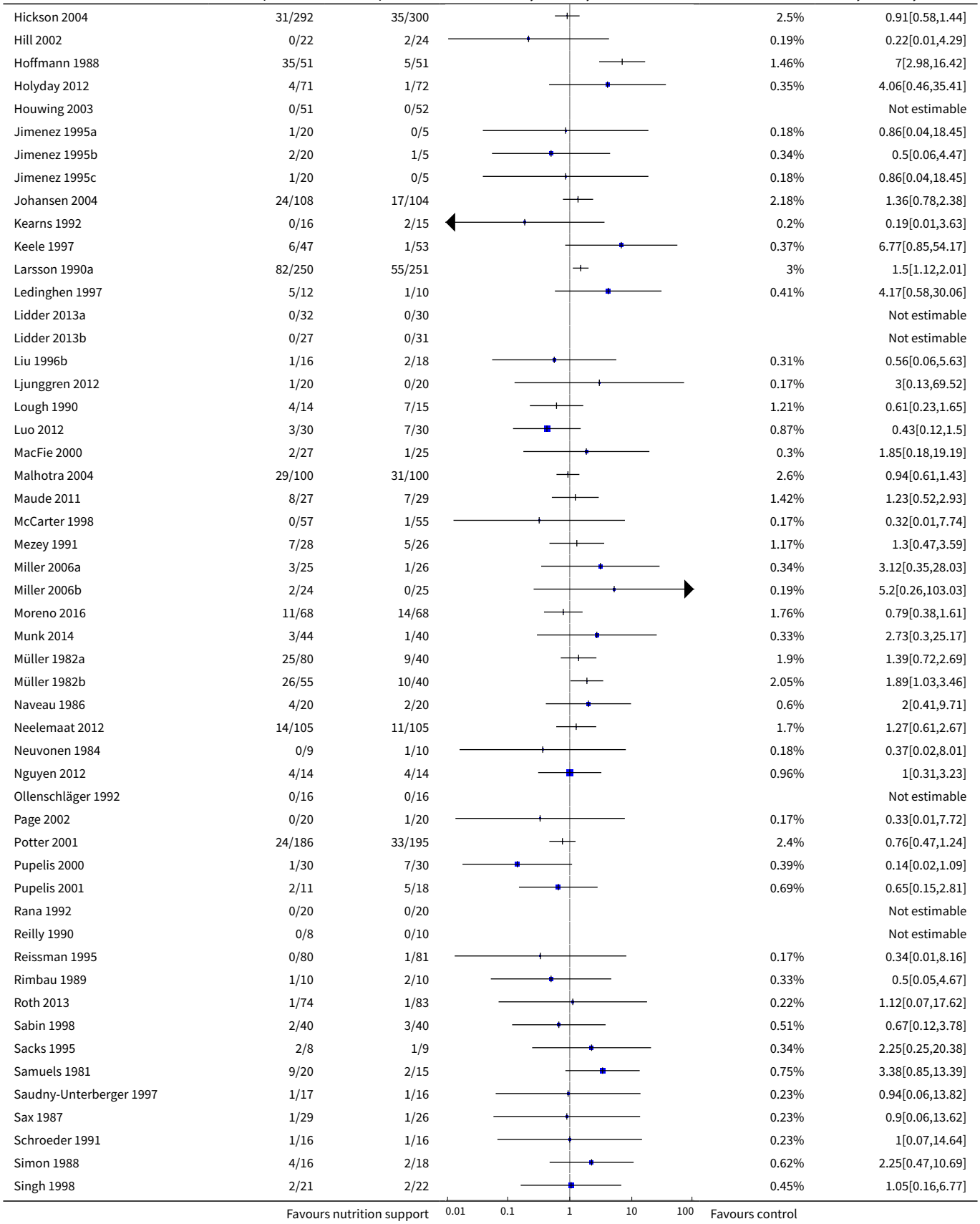
Analysis 3.13. Comparison 3 Serious adverse event end of intervention, Outcome 13 Serious adverse events - 'worst-best case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable



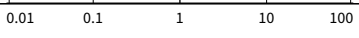


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		0.75%	1.6[0.4,6.32]
Abrishami 2010	2/10	2/10		0.51%	1[0.17,5.77]
Anbar 2014	1/23	2/28		0.3%	0.61[0.06,6.3]
Arias 2008	117/333	31/334		2.78%	3.79[2.63,5.46]
Banerjee 1978	7/31	6/32		1.24%	1.2[0.46,3.18]
Bastow 1983a	5/39	4/35		0.89%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.63%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		1.25%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.4%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		1.79%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	18/30	0/30		0.22%	37[2.33,587.26]
Breedveld-Peters	7/73	3/79		0.81%	2.53[0.68,9.4]
Brennan 1994	27/60	13/57		2.2%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.65%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	1/15	1/15		0.24%	1[0.07,14.55]
Casaer 2011	146/2312	141/2328		3.19%	1.04[0.83,1.3]
Chen 1995a	0/8	1/8		0.18%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.19%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.17%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.23%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.19%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.73%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		3.09%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		3.27%	0.97[0.8,1.17]
Doglietto 1990	2/13	10/16		0.79%	0.25[0.07,0.93]
Doglietto 1996	56/338	61/340		2.89%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.21%	0.08[0,1.4]
Duncan 2006	21/153	11/165		1.81%	2.06[1.03,4.13]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.68%	1.35[0.31,5.85]
Fan 1989	16/75	9/75		1.67%	1.78[0.84,3.77]
Fan 1994	7/20	6/20		1.37%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.23%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.3%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.36%	0.29[0.03,2.41]
Førli 2001	2/20	1/22		0.31%	2.2[0.22,22.45]
Gariballa 1998	3/21	3/21		0.67%	1[0.23,4.4]
Gariballa 2006	12/223	7/222		1.34%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.44%	1.05[0.16,7.1]
Hartgrink 1998	22/70	0/70		0.22%	45[2.78,727.58]
Heidegger 2013	8/153	12/152		1.43%	0.66[0.28,1.57]
Hendry 2010	8/38	2/38		0.67%	4[0.91,17.62]
Henriksen 2003a	0/16	1/8		0.18%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.96%	1.15[0.61,2.19]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hickson 2004	31/292	35/300		2.5%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.19%	0.22[0.01,4.29]
Hoffmann 1988	35/51	5/51		1.46%	7[2.98,16.42]
Holyday 2012	4/71	1/72		0.35%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.18%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.34%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.18%	0.86[0.04,18.45]
Johansen 2004	24/108	17/104		2.18%	1.36[0.78,2.38]
Kearns 1992	0/16	2/15		0.2%	0.19[0.01,3.63]
Keele 1997	6/47	1/53		0.37%	6.77[0.85,54.17]
Larsson 1990a	82/250	55/251		3%	1.5[1.12,2.01]
Ledinghen 1997	5/12	1/10		0.41%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.31%	0.56[0.06,5.63]
Ljunggren 2012	1/20	0/20		0.17%	3[0.13,69.52]
Lough 1990	4/14	7/15		1.21%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.87%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.3%	1.85[0.18,19.19]
Malhotra 2004	29/100	31/100		2.6%	0.94[0.61,1.43]
Maude 2011	8/27	7/29		1.42%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.17%	0.32[0.01,7.74]
Mezey 1991	7/28	5/26		1.17%	1.3[0.47,3.59]
Miller 2006a	3/25	1/26		0.34%	3.12[0.35,28.03]
Miller 2006b	2/24	0/25		0.19%	5.2[0.26,103.03]
Moreno 2016	11/68	14/68		1.76%	0.79[0.38,1.61]
Munk 2014	3/44	1/40		0.33%	2.73[0.3,25.17]
Müller 1982a	25/80	9/40		1.9%	1.39[0.72,2.69]
Müller 1982b	26/55	10/40		2.05%	1.89[1.03,3.46]
Naveau 1986	4/20	2/20		0.6%	2[0.41,9.71]
Neelemaat 2012	14/105	11/105		1.7%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.18%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.96%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.17%	0.33[0.01,7.72]
Potter 2001	24/186	33/195		2.4%	0.76[0.47,1.24]
Pupelis 2000	1/30	7/30		0.39%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.69%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.17%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.33%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.22%	1.12[0.07,17.62]
Sabin 1998	2/40	3/40		0.51%	0.67[0.12,3.78]
Sacks 1995	2/8	1/9		0.34%	2.25[0.25,20.38]
Samuels 1981	9/20	2/15		0.75%	3.38[0.85,13.39]
Saudny-Unterberger 1997	1/17	1/16		0.23%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.23%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.23%	1[0.07,14.64]
Simon 1988	4/16	2/18		0.62%	2.25[0.47,10.69]
Singh 1998	2/21	2/22		0.45%	1.05[0.16,6.77]

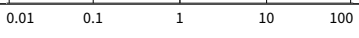
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Smith 1985	4/25	1/25		0.36%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.19%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.2%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.24%	1.36[0.1,19.5]
Soop 2004	1/10	1/10		0.24%	1[0.07,13.87]
Starke 2011	3/67	5/67		0.74%	0.6[0.15,2.41]
Stein 2002	2/40	3/40		0.51%	0.67[0.12,3.78]
Sullivan 1998	2/8	3/10		0.64%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.73%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.33%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.19%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.19%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.9%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		1.19%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.67%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.3%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.36%	2[0.24,16.97]
Watters 1997	3/15	3/16		0.7%	1.07[0.25,4.49]
Williams 1985	4/21	3/22		0.76%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		1.34%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		1.14%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		1.3%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.56%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.39%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.59%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	4/60	12/60		1.09%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.87%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		1.53%	0.57[0.25,1.29]
Total (95% CI)	**11531**	**11026**		**100%**	**1.06[0.92,1.21]**
Total events: 1267 (Experimental), 1074 (Control)					
Heterogeneity: Tau^2=0.14; Chi^2=199.02, df=116(P<0.0001); I^2=41.71%					
Test for overall effect: Z=0.79(P=0.43)					



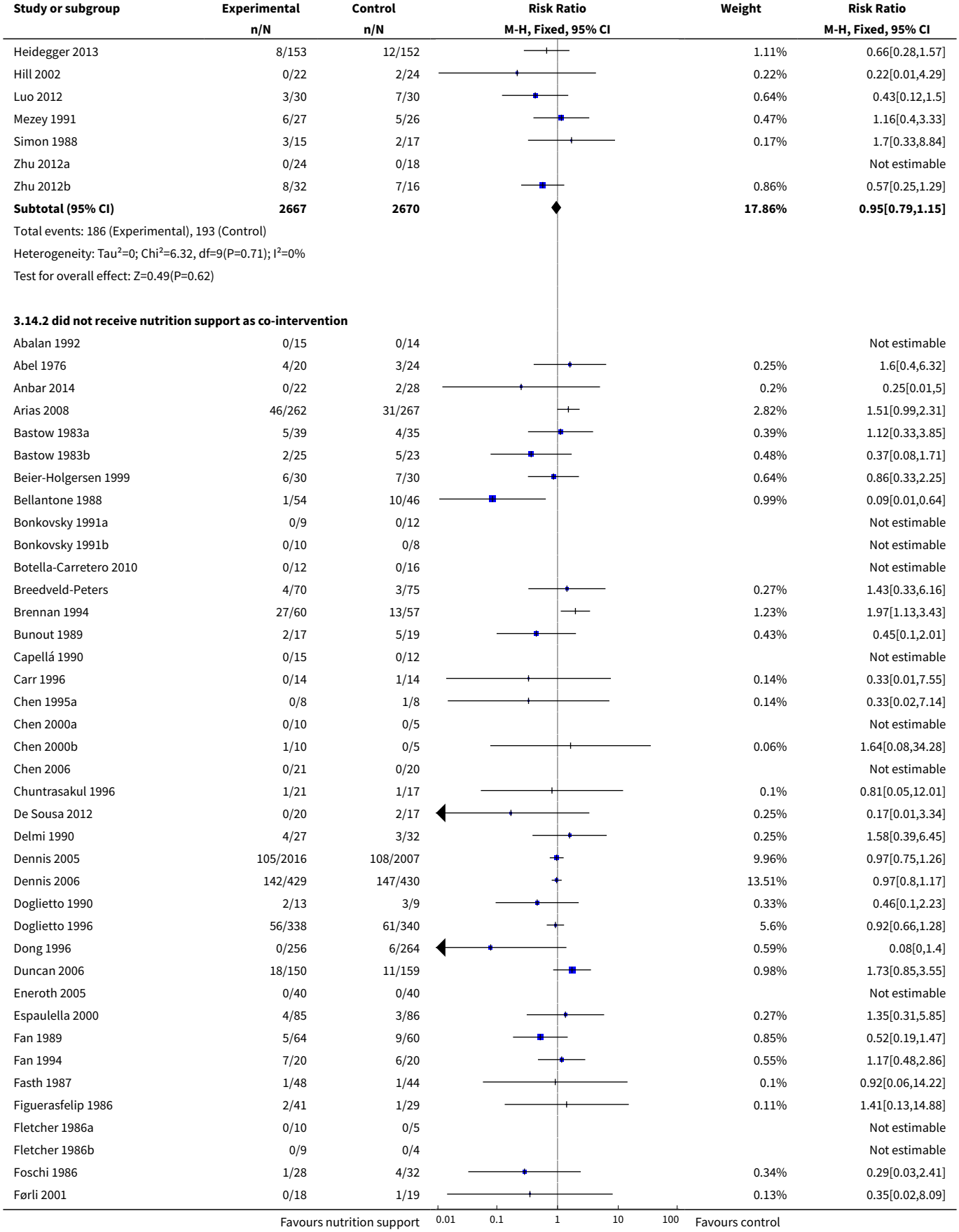
Favours nutrition support — Favours control

Analysis 3.14. Comparison 3 Serious adverse event end of intervention, Outcome 14 Serious adverse events co-interventions.

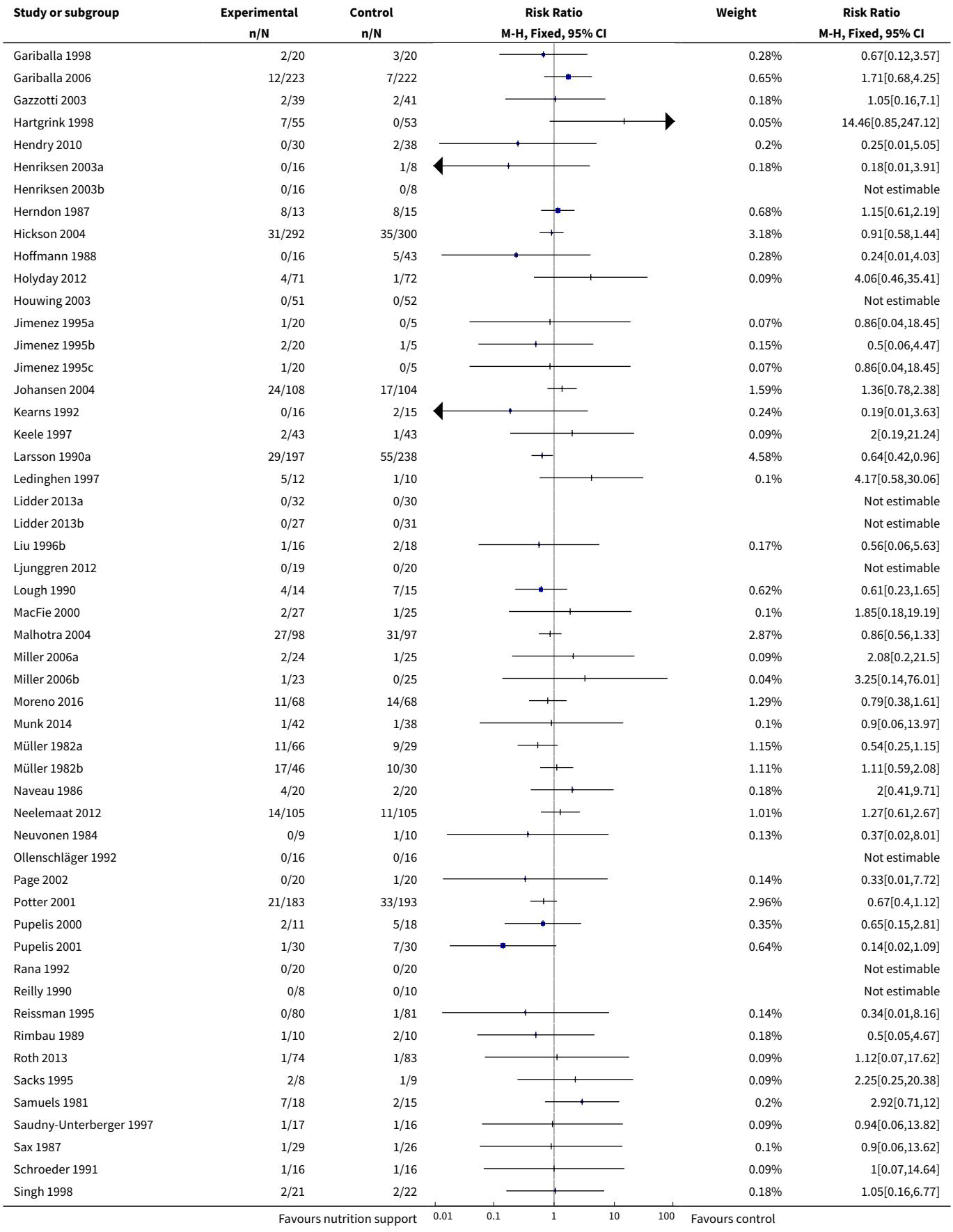
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
3.14.1 received nutrition support as co-intervention					
Abrishami 2010	1/9	2/10		0.17%	0.56[0.06,5.14]
Banerjee 1978	4/28	6/32		0.52%	0.76[0.24,2.43]
Bokhorst-de 2000	7/15	9/17		0.78%	0.88[0.44,1.78]
Casaer 2011	146/2312	141/2328		12.93%	1.04[0.83,1.3]



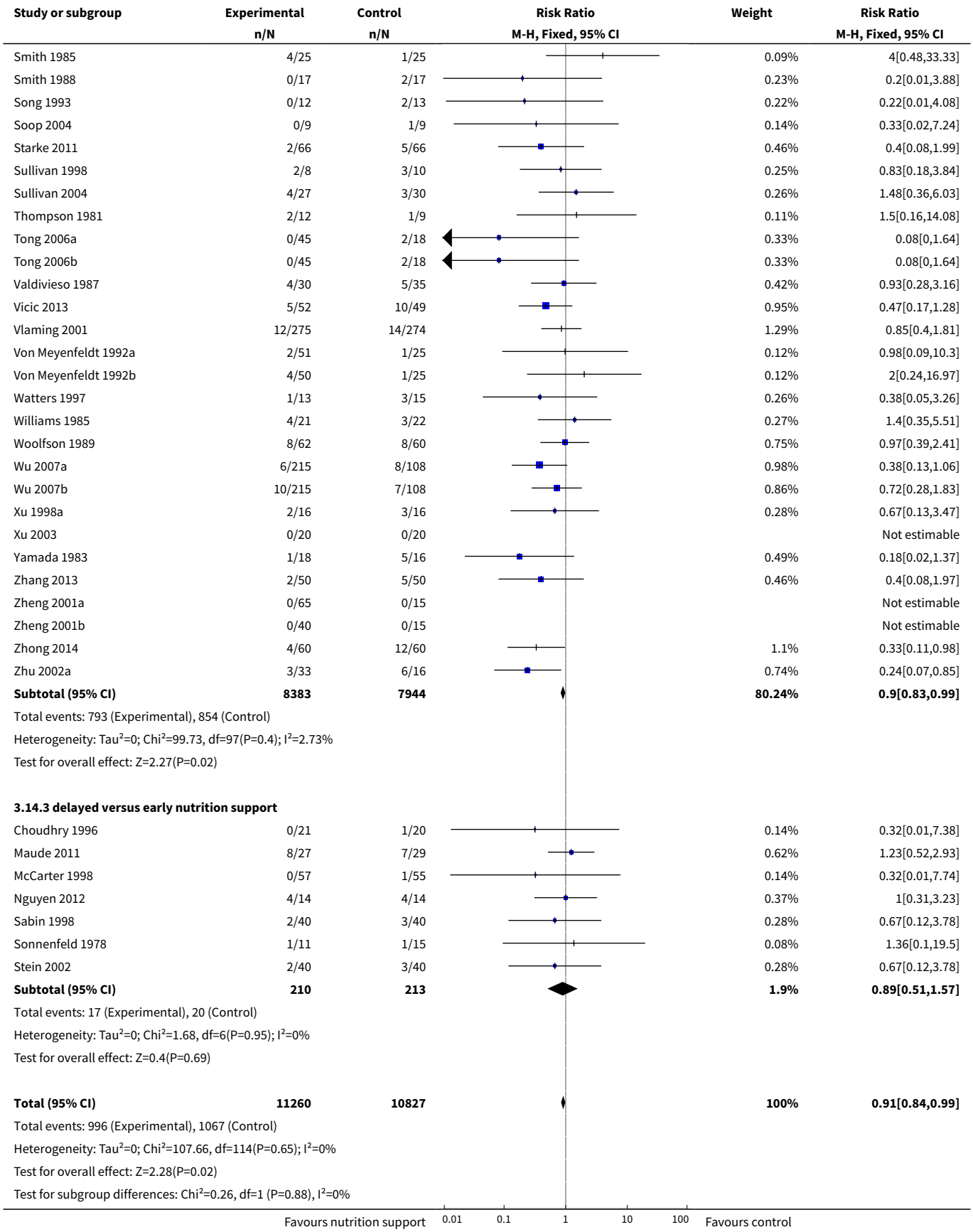
Favours nutrition support — Favours control



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Heidegger 2013	8/153	12/152		1.11%	0.66[0.28,1.57]
Hill 2002	0/22	2/24		0.22%	0.22[0.01,4.29]
Luo 2012	3/30	7/30		0.64%	0.43[0.12,1.5]
Mezey 1991	6/27	5/26		0.47%	1.16[0.4,3.33]
Simon 1988	3/15	2/17		0.17%	1.7[0.33,8.84]
Zhu 2012a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		0.86%	0.57[0.25,1.29]
Subtotal (95% CI)	**2667**	**2670**		**17.86%**	**0.95[0.79,1.15]**
Total events: 186 (Experimental), 193 (Control)					
Heterogeneity: Tau^2=0; Chi^2=6.32, df=9(P=0.71); I^2=0%					
Test for overall effect: Z=0.49(P=0.62)					
3.14.2 did not receive nutrition support as co-intervention					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.25%	1.6[0.4,6.32]
Anbar 2014	0/22	2/28		0.2%	0.25[0.01,5]
Arias 2008	46/262	31/267		2.82%	1.51[0.99,2.31]
Bastow 1983a	5/39	4/35		0.39%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.48%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.64%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.99%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	4/70	3/75		0.27%	1.43[0.33,6.16]
Brennan 1994	27/60	13/57		1.23%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.43%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.14%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.14%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.06%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	1/17		0.1%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.25%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.25%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.96%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		13.51%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.33%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		5.6%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.59%	0.08[0,1.4]
Duncan 2006	18/150	11/159		0.98%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.27%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.55%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.34%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.13%	0.35[0.02,8.09]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.65%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.18%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Hendry 2010	0/30	2/38		0.2%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.18%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.68%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.18%	0.91[0.58,1.44]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.15%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Johansen 2004	24/108	17/104		1.59%	1.36[0.78,2.38]
Kearns 1992	0/16	2/15		0.24%	0.19[0.01,3.63]
Keele 1997	2/43	1/43		0.09%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		4.58%	0.64[0.42,0.96]
Ledinghen 1997	5/12	1/10		0.1%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.17%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.62%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.1%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		2.87%	0.86[0.56,1.33]
Miller 2006a	2/24	1/25		0.09%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.29%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.1%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		1.15%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.11%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.18%	2[0.41,9.71]
Neelemaat 2012	14/105	11/105		1.01%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.13%	0.37[0.02,8.01]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.14%	0.33[0.01,7.72]
Potter 2001	21/183	33/193		2.96%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.35%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.64%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.14%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.18%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.09%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.2%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.09%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.23%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.22%	0.22[0.01,4.08]
Soop 2004	0/9	1/9		0.14%	0.33[0.02,7.24]
Starke 2011	2/66	5/66		0.46%	0.4[0.08,1.99]
Sullivan 1998	2/8	3/10		0.25%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.26%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.11%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.33%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.33%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.42%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.95%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.29%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.12%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.12%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Williams 1985	4/21	3/22		0.27%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.75%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.98%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.86%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.28%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.49%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zheng 2001b	0/40	0/15			Not estimable
Zhong 2014	4/60	12/60		1.1%	0.33[0.11,0.98]
Zhu 2002a	3/33	6/16		0.74%	0.24[0.07,0.85]
Subtotal (95% CI)	**8383**	**7944**		**80.24%**	**0.9[0.83,0.99]**
Total events: 793 (Experimental), 854 (Control)					
Heterogeneity: Tau^2=0; Chi^2=99.73, df=97(P=0.4); I^2=2.73%					
Test for overall effect: Z=2.27(P=0.02)					
3.14.3 delayed versus early nutrition support					
Choudhry 1996	0/21	1/20		0.14%	0.32[0.01,7.38]
Maude 2011	8/27	7/29		0.62%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.14%	0.32[0.01,7.74]
Nguyen 2012	4/14	4/14		0.37%	1[0.31,3.23]
Sabin 1998	2/40	3/40		0.28%	0.67[0.12,3.78]
Sonnenfeld 1978	1/11	1/15		0.08%	1.36[0.1,19.5]
Stein 2002	2/40	3/40		0.28%	0.67[0.12,3.78]
Subtotal (95% CI)	**210**	**213**		**1.9%**	**0.89[0.51,1.57]**
Total events: 17 (Experimental), 20 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.68, df=6(P=0.95); I^2=0%					
Test for overall effect: Z=0.4(P=0.69)					
Total (95% CI)	**11260**	**10827**		**100%**	**0.91[0.84,0.99]**
Total events: 996 (Experimental), 1067 (Control)					
Heterogeneity: Tau^2=0; Chi^2=107.66, df=114(P=0.65); I^2=0%					
Test for overall effect: Z=2.28(P=0.02)					
Test for subgroup differences: Chi^2=0.26, df=1 (P=0.88), I^2=0%					

Comparison 4. Serious adverse event maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Serious adverse events - overall	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
2 Serious adverse events - bias	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
2.1 High risk of bias	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Serious adverse events - mode of delivery	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
3.1 General nutrition support	7	1544	Risk Ratio (M-H, Random, 95% CI)	1.04 [0.76, 1.44]
3.2 Fortified nutrition	2	290	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.61, 2.54]
3.3 Oral nutrition support	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
3.4 Enteral nutrition	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
3.5 Parenteral nutrition	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
3.6 Mixed	5	350	Risk Ratio (M-H, Random, 95% CI)	0.74 [0.37, 1.48]
4 Serious adverse events - by medical specialty	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
4.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Medical gastroenterology and hepatology	13	706	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.75, 1.17]
4.3 Geriatrics	13	2547	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.67, 1.17]
4.4 Pulmonary disease	3	118	Risk Ratio (M-H, Random, 95% CI)	0.44 [0.15, 1.28]
4.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.6 Infectious diseases	1	56	Risk Ratio (M-H, Random, 95% CI)	1.23 [0.52, 2.93]
4.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.10 Gastroenterologic surgery	59	4835	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.71, 0.97]
4.11 Trauma surgery	7	290	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.55, 1.34]
4.12 Ortopaedics	12	1196	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.63, 1.51]
4.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.14 Vascular surgery	3	48	Risk Ratio (M-H, Random, 95% CI)	0.5 [0.05, 4.67]
4.15 Transplant surgery	3	84	Risk Ratio (M-H, Random, 95% CI)	0.54 [0.22, 1.31]
4.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.17 Thoracic surgery	3	592	Risk Ratio (M-H, Random, 95% CI)	0.47 [0.06, 3.62]
4.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.19 Oro-maxillo-facial surgery	1	32	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.44, 1.78]
4.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.21 Emergency medicine	11	5421	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.84, 1.10]
4.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.23 Neurology	9	5426	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.58, 0.98]

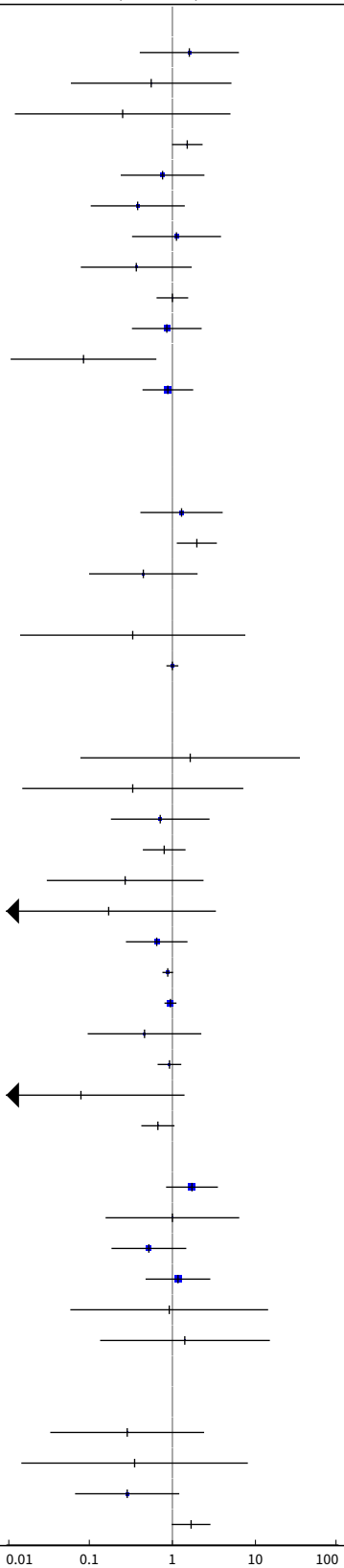
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.24 Oncology	7	407	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.87, 1.20]
4.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.27 Mixed	7	1655	Risk Ratio (M-H, Random, 95% CI)	1.29 [0.97, 1.71]
5 Serious adverse events - based on adequacy of the amount of calories	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
5.1 Clearly adequate in intervention and clearly inadequate in control	31	7623	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.86, 1.05]
5.2 Inadequate in the experimental or adequate in the control	29	7395	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.85, 1.05]
5.3 Experimental group is overfed	11	867	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.72, 1.19]
5.4 Unclear intake in control or experimental	81	7528	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.70, 0.94]
6 Serious adverse events - different screening tools	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
6.1 NRS 2002	4	5064	Risk Ratio (M-H, Random, 95% CI)	1.03 [0.89, 1.21]
6.2 MUST	1	124	Risk Ratio (M-H, Random, 95% CI)	1.37 [0.64, 2.92]
6.3 MNA	2	117	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.12, 3.18]
6.4 SGA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.5 Other means	145	18108	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.82, 0.95]
7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
7.1 Major surgery	72	5936	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.71, 0.94]
7.2 Stroke	8	5397	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.58, 0.98]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
7.3 ICU participants including trauma	16	5667	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.84, 1.10]
7.4 Frail elderly participants with less severe conditions known to increase protein requirements	19	2385	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.65, 1.03]
7.5 Participants do not fall into one of the categories above	37	4028	Risk Ratio (M-H, Random, 95% CI)	1.03 [0.92, 1.15]
8 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
8.1 BMI less than 20.5 kg/m2	2	247	Risk Ratio (M-H, Random, 95% CI)	1.19 [0.58, 2.45]
8.2 Weight loss of at least 5% during the last three months	1	32	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.3 Weight loss of at least 10% during the last six months	3	124	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.42, 1.67]
8.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.5 Participants characterised as 'at nutritional risk' by other means	146	23010	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.84, 0.97]
9 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
9.1 Biomarkers	10	795	Risk Ratio (M-H, Random, 95% CI)	0.37 [0.16, 0.85]
9.2 Anthropometric measures	12	1402	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.54, 1.08]
9.3 Both	3	75	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.14, 3.07]
9.4 Characterised by other means	127	21141	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.98]
10 Serious adverse events - randomisation year	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
10.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
10.2 1960 to 1979	6	240	Risk Ratio (M-H, Random, 95% CI)	1.18 [0.65, 2.14]
10.3 1980 to 1999	93	12128	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.86, 0.99]
10.4 After 1999	53	11045	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.72, 0.97]
11 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	152	23413	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.85, 0.97]
11.1 Three days or more	138	22637	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.84, 0.97]
11.2 Less than three days	12	699	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.66, 1.23]
11.3 Unknown	2	77	Risk Ratio (M-H, Random, 95% CI)	0.25 [0.01, 5.00]
12 Serious adverse events - 'best-worst case' scenario	152	24315	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.65, 0.79]
13 Serious adverse events - 'worst-best case' scenario	152	24082	Risk Ratio (M-H, Random, 95% CI)	1.05 [0.94, 1.17]
14 Serious adverse events co-interventions	152	23413	Risk Ratio (M-H, Fixed, 95% CI)	0.89 [0.84, 0.95]
14.1 Received nutrition support as co-intervention	12	5459	Risk Ratio (M-H, Fixed, 95% CI)	0.93 [0.81, 1.06]
14.2 did not receive nutrition support as co-intervention	132	17493	Risk Ratio (M-H, Fixed, 95% CI)	0.88 [0.82, 0.94]
14.3 delayed versus early nutrition support	8	461	Risk Ratio (M-H, Fixed, 95% CI)	1.09 [0.75, 1.59]
15 Serious adverse events - 'best-worse case' scenario (enteral nutrition)	46	4415	Risk Ratio (M-H, Random, 95% CI)	0.62 [0.51, 0.75]
16 Serious adverse events - 'worst-best case' scenario (enteral nutrition)	46	4415	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.69, 0.96]

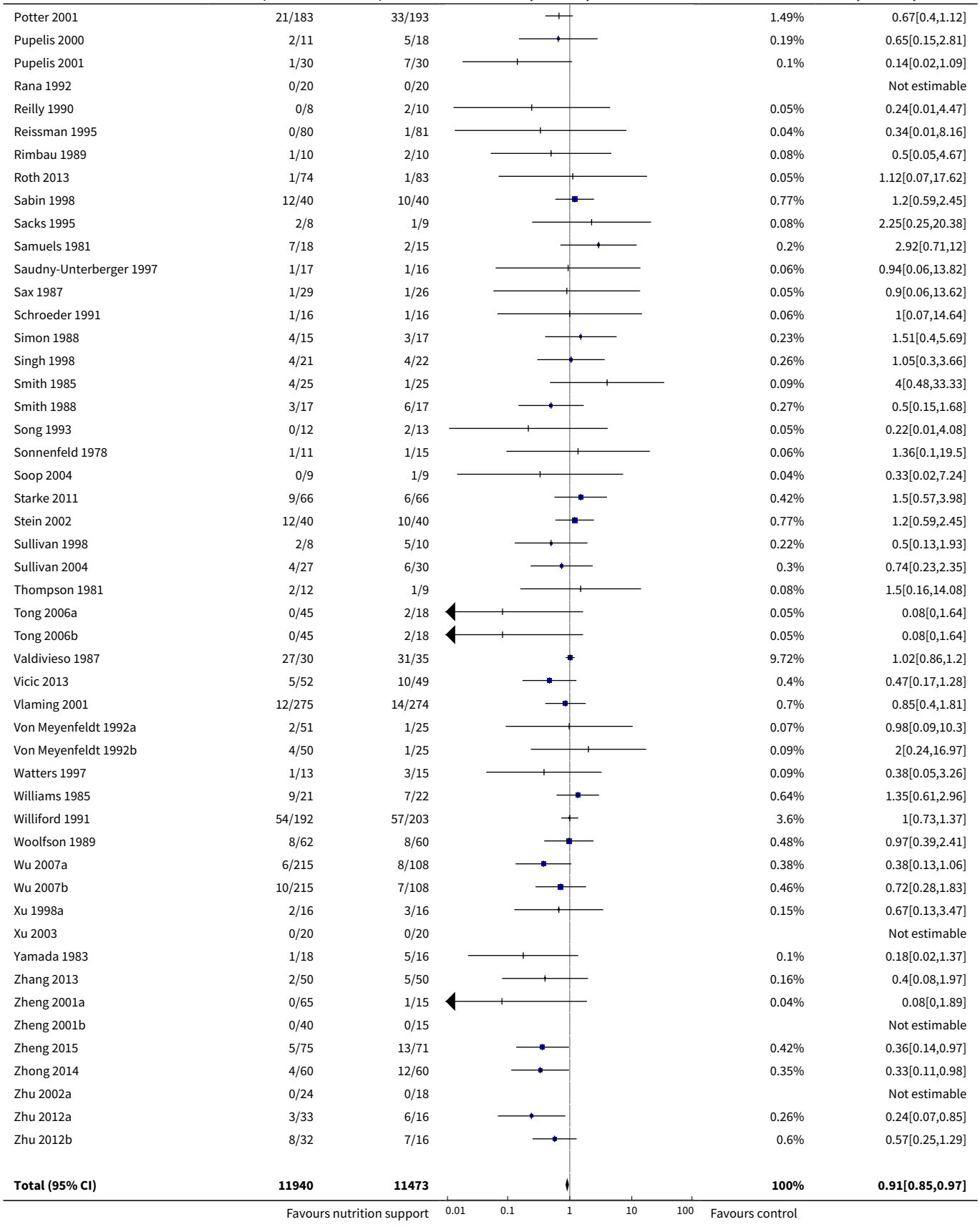
Analysis 4.1. Comparison 4 Serious adverse event maximum follow-up, Outcome 1 Serious adverse events - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.21%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Arias 2008	46/262	31/267		2.12%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.3%	0.76[0.24,2.43]
Barlow 2011	3/64	7/57		0.24%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.26%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.17%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.98%	1[0.65,1.55]
Beier-Holgersen 1999	6/30	7/30		0.43%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		0.8%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.31%	1.29[0.41,4.03]
Brennan 1994	27/60	13/57		1.27%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.18%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		10.13%	1[0.85,1.18]
Chen 1995a	0/21	0/20			Not estimable
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.04%	1.64[0.08,34.28]
Chen 2006	0/8	1/8		0.04%	0.33[0.02,7.14]
Choudhry 1996	3/21	4/20		0.22%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		1.12%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.55%	0.65[0.28,1.52]
Dennis 2005	182/429	207/429		11.55%	0.88[0.76,1.02]
Dennis 2006	241/2012	253/2000		9.98%	0.95[0.8,1.12]
Doglietto 1990	2/13	3/9		0.16%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		3.32%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Duncan 2006	24/150	38/159		1.81%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.77%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Fan 1989	5/64	9/60		0.37%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.5%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.07%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.09%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.19%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.35%	1.68[0.98,2.87]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Gazzotti 2003	2/39	2/41		0.11%	1.05[0.16,7.1]
Ha 2010	12/58	10/66		0.68%	1.37[0.64,2.92]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.39%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.96%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.84%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Hoffmann 1988	0/16	5/43		0.05%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.28%	0.69[0.21,2.31]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.14%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Johansen 2004	24/108	17/104		1.24%	1.36[0.78,2.38]
Kaur 2005	6/50	12/50		0.5%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.33%	1.17[0.39,3.56]
Keele 1997	2/43	1/43		0.07%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		2.26%	0.64[0.42,0.96]
Ledinghen 1997	5/12	2/10		0.2%	2.08[0.51,8.52]
Lidder 2013a	2/32	6/30		0.17%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.19%	0.29[0.07,1.24]
Liu 1996b	1/16	2/18		0.08%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.41%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.26%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		2.02%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.53%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		1.96%	0.95[0.61,1.48]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.94%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.05%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		0.68%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		0.99%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		0.92%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.72%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.04%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.29%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		0.35%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.49%	1.17[0.47,2.89]

Favours nutrition support | Favours control

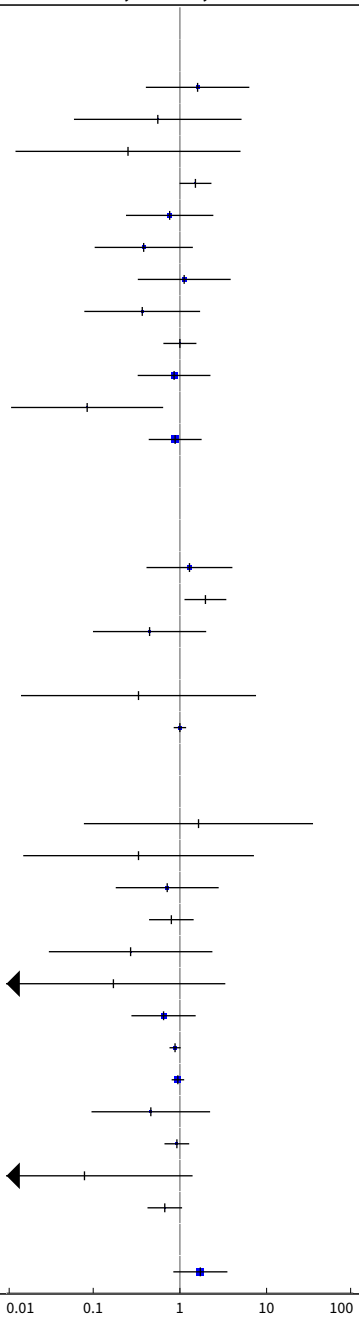


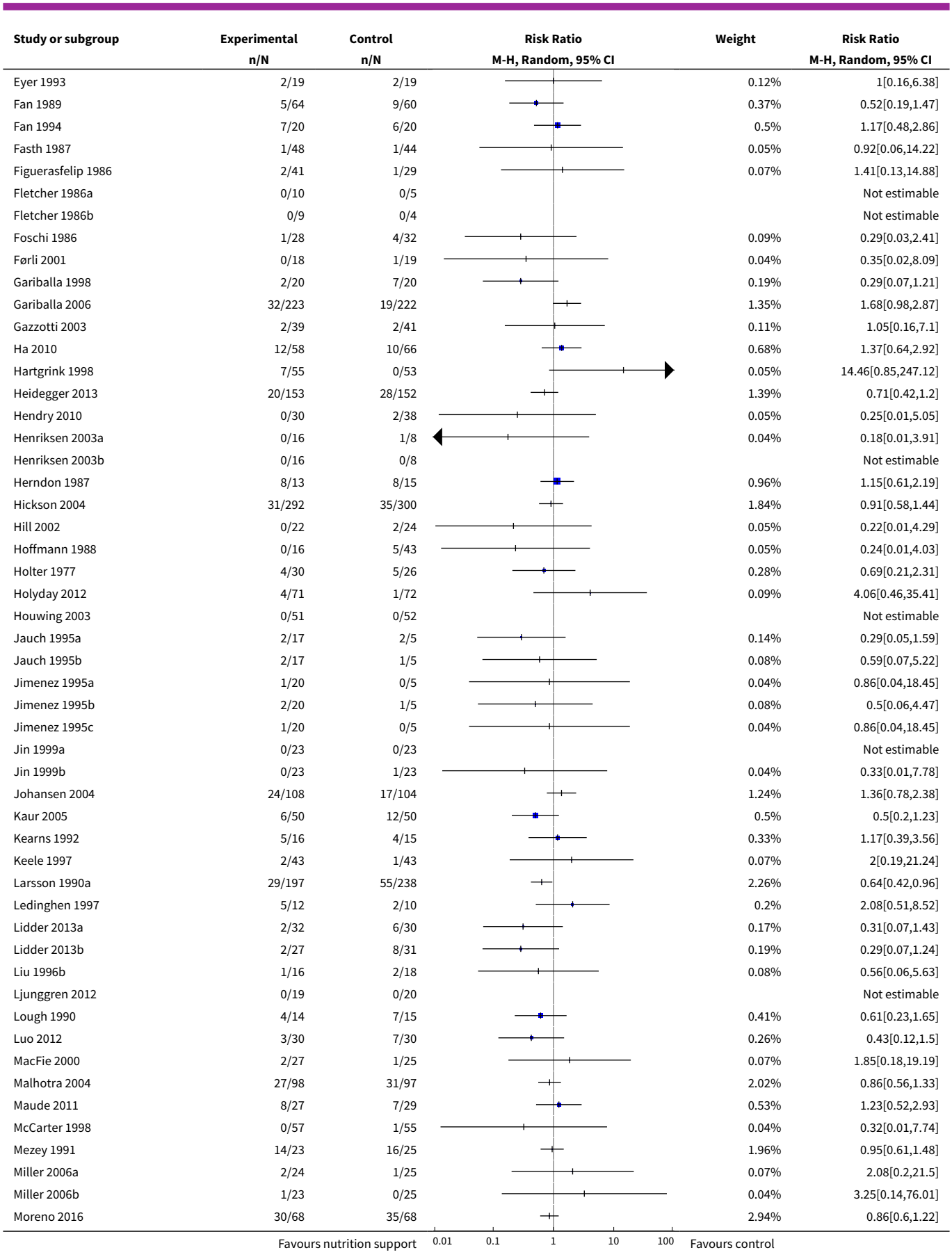
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Potter 2001	21/183	33/193		1.49%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.19%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.1%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.08%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		0.77%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.2%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.05%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Simon 1988	4/15	3/17		0.23%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.26%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.27%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.05%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.06%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.04%	0.33[0.02,7.24]
Starke 2011	9/66	6/66		0.42%	1.5[0.57,3.98]
Stein 2002	12/40	10/40		0.77%	1.2[0.59,2.45]
Sullivan 1998	2/8	5/10		0.22%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.3%	0.74[0.23,2.35]
Thompson 1981	2/12	1/9		0.08%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		9.72%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.4%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.7%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Williams 1985	9/21	7/22		0.64%	1.35[0.61,2.96]
Williford 1991	54/192	57/203		3.6%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.48%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.38%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.46%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.15%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.16%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.42%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		0.35%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.26%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.6%	0.57[0.25,1.29]
Total (95% CI)	**11940**	**11473**		**100%**	**0.91[0.85,0.97]**

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 1580 (Experimental), 1741 (Control)					
Heterogeneity: Tau²=0; Chi²=135.82, df=132(P=0.39); I²=2.81%					
Test for overall effect: Z=2.87(P=0)					

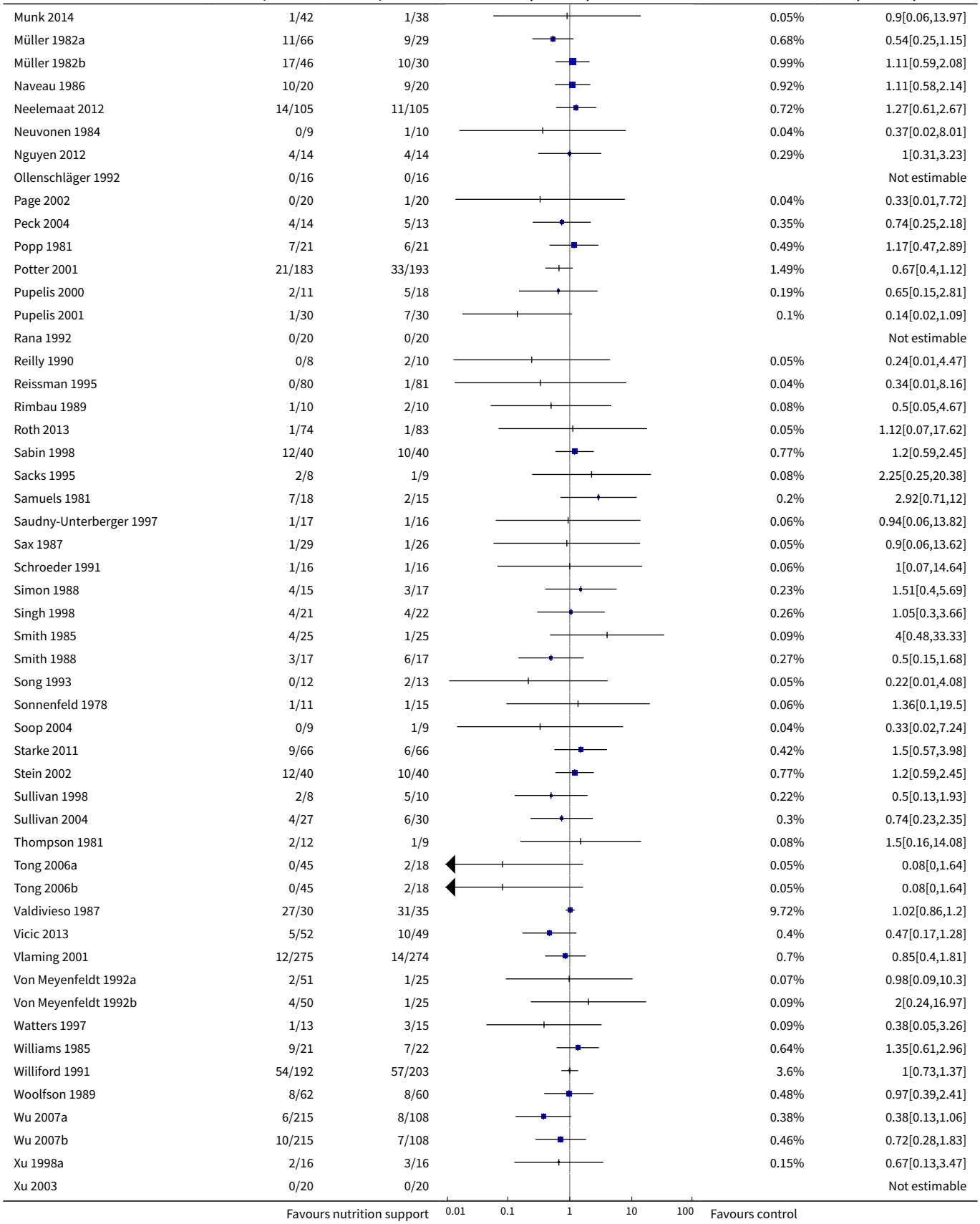
Analysis 4.2. Comparison 4 Serious adverse event maximum follow-up, Outcome 2 Serious adverse events - bias.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
4.2.1 High risk of bias					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.21%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Arias 2008	46/262	31/267		2.12%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.3%	0.76[0.24,2.43]
Barlow 2011	3/64	7/57		0.24%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.26%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.17%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.98%	1[0.65,1.55]
Beier-Holgersen 1999	6/30	7/30		0.43%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		0.8%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.31%	1.29[0.41,4.03]
Brennan 1994	27/60	13/57		1.27%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.18%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		10.13%	1[0.85,1.18]
Chen 1995a	0/21	0/20			Not estimable
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.04%	1.64[0.08,34.28]
Chen 2006	0/8	1/8		0.04%	0.33[0.02,7.14]
Choudhry 1996	3/21	4/20		0.22%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		1.12%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.55%	0.65[0.28,1.52]
Dennis 2005	182/429	207/429		11.55%	0.88[0.76,1.02]
Dennis 2006	241/2012	253/2000		9.98%	0.95[0.8,1.12]
Doglietto 1990	2/13	3/9		0.16%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		3.32%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Duncan 2006	24/150	38/159		1.81%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.77%	1.72[0.84,3.53]

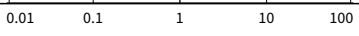




Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Fan 1989	5/64	9/60		0.37%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.5%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.07%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.09%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.19%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.35%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.11%	1.05[0.16,7.1]
Ha 2010	12/58	10/66		0.68%	1.37[0.64,2.92]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.39%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.96%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.84%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Hoffmann 1988	0/16	5/43		0.05%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.28%	0.69[0.21,2.31]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.14%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Johansen 2004	24/108	17/104		1.24%	1.36[0.78,2.38]
Kaur 2005	6/50	12/50		0.5%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.33%	1.17[0.39,3.56]
Keele 1997	2/43	1/43		0.07%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		2.26%	0.64[0.42,0.96]
Ledinghen 1997	5/12	2/10		0.2%	2.08[0.51,8.52]
Lidder 2013a	2/32	6/30		0.17%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.19%	0.29[0.07,1.24]
Liu 1996b	1/16	2/18		0.08%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.41%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.26%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		2.02%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.53%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		1.96%	0.95[0.61,1.48]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.94%	0.86[0.6,1.22]

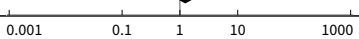


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.16%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.42%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		0.35%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.26%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.6%	0.57[0.25,1.29]
Subtotal (95% CI)	**11940**	**11473**		**100%**	**0.91[0.85,0.97]**
Total events: 1580 (Experimental), 1741 (Control)					
Heterogeneity: Tau^2=0; Chi^2=135.82, df=132(P=0.39); I^2=2.81%					
Test for overall effect: Z=2.87(P=0)					
4.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**11940**	**11473**		**100%**	**0.91[0.85,0.97]**
Total events: 1580 (Experimental), 1741 (Control)					
Heterogeneity: Tau^2=0; Chi^2=135.82, df=132(P=0.39); I^2=2.81%					
Test for overall effect: Z=2.87(P=0)					
Test for subgroup differences: Not applicable					

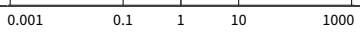


Analysis 4.3. Comparison 4 Serious adverse event maximum follow-up, Outcome 3 Serious adverse events - mode of delivery.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
4.3.1 General nutrition support					
Duncan 2006	24/150	38/159		1.87%	0.67[0.42,1.06]
Ha 2010	12/58	10/66		0.72%	1.37[0.64,2.92]
Hickson 2004	31/292	35/300		1.9%	0.91[0.58,1.44]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Johansen 2004	24/108	17/104		1.29%	1.36[0.78,2.38]
Ollenschläger 1992	0/16	0/16			Not estimable
Starke 2011	9/66	6/66		0.44%	1.5[0.57,3.98]
Subtotal (95% CI)	**761**	**783**		**6.31%**	**1.04[0.76,1.44]**
Total events: 104 (Experimental), 107 (Control)					
Heterogeneity: Tau^2=0.05; Chi^2=7.16, df=5(P=0.21); I^2=30.19%					
Test for overall effect: Z=0.26(P=0.79)					
4.3.2 Fortified nutrition					
Munk 2014	1/42	1/38		0.06%	0.9[0.06,13.97]
Neelemaat 2012	14/105	11/105		0.75%	1.27[0.61,2.67]
Subtotal (95% CI)	**147**	**143**		**0.81%**	**1.24[0.61,2.54]**

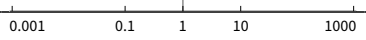


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 15 (Experimental), 12 (Control)					
Heterogeneity: Tau²=0; Chi²=0.06, df=1(P=0.81); I²=0%					
Test for overall effect: Z=0.6(P=0.55)					
4.3.3 Oral nutrition support					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Arias 2008	46/262	31/267		2.18%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.31%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		0.19%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.57%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		9.48%	0.95[0.8,1.12]
Doglietto 1996	56/338	61/340		3.38%	0.92[0.66,1.28]
Espaulella 2000	17/80	10/81		0.8%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.2%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.4%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.12%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.08%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		2.32%	0.64[0.42,0.96]
Lidder 2013a	2/32	6/30		0.18%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.2%	0.29[0.07,1.24]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		0.27%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.08%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.08%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		1.55%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		0.73%	0.85[0.4,1.81]
Subtotal (95% CI)	**4241**	**4300**		**24.51%**	**0.89[0.74,1.07]**
Total events: 485 (Experimental), 540 (Control)					
Heterogeneity: Tau²=0.04; Chi²=34.14, df=26(P=0.13); I²=23.83%					
Test for overall effect: Z=1.26(P=0.21)					
4.3.4 Enteral nutrition					
Barlow 2011	3/64	7/57		0.25%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.28%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.18%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.45%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		0.84%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.05%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable

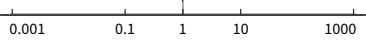


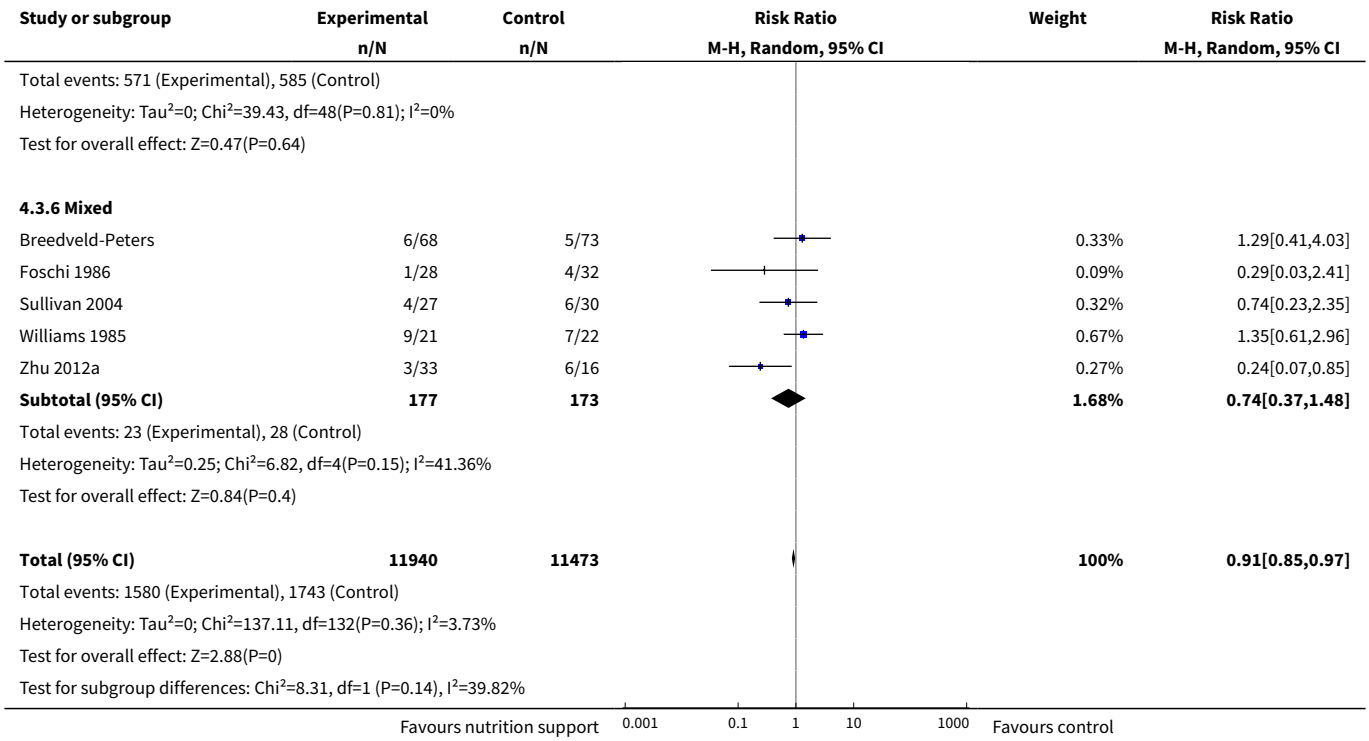
Favours nutrition support | Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.23%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		1.17%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		10.8%	0.88[0.76,1.02]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Kaur 2005	6/50	12/50		0.52%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.34%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		0.21%	2.08[0.51,8.52]
Malhotra 2004	27/98	31/97		2.09%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		3%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		0.31%	1[0.31,3.23]
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		0.36%	0.74[0.25,2.18]
Pupelis 2000	1/30	7/30		0.1%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.2%	0.65[0.15,2.81]
Sabin 1998	12/40	10/40		0.81%	1.2[0.59,2.45]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.06%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.05%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.23%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Vicic 2013	5/52	10/49		0.42%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		0.4%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.17%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2015	5/75	13/71		0.44%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		0.37%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		0.62%	0.57[0.25,1.29]
Subtotal (95% CI)	**2340**	**2085**		**26.7%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau²=0; Chi²=42.26, df=43(P=0.5); I²=0%					
Test for overall effect: Z=3.69(P=0)					
4.3.5 Parenteral nutrition					
Abel 1976	4/20	3/24		0.22%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.09%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		2.04%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable

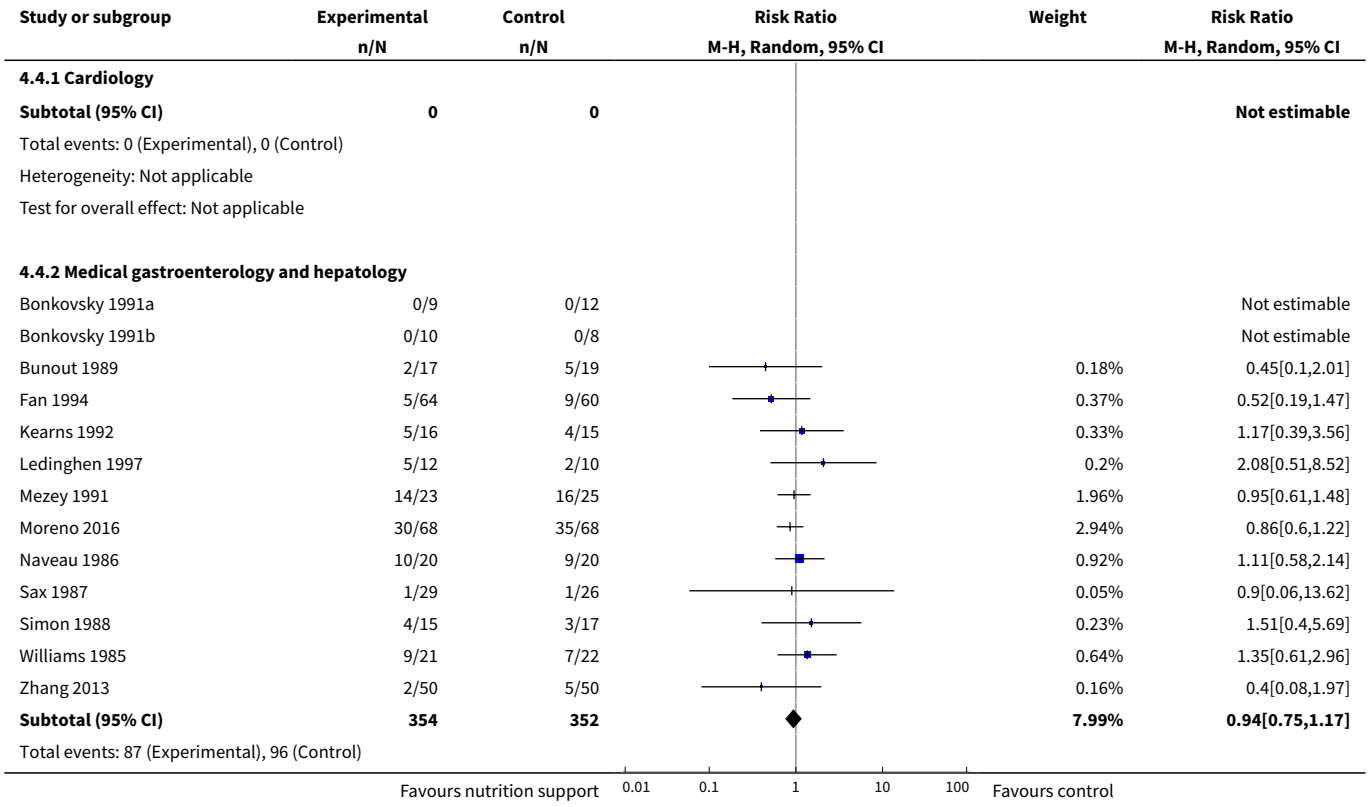


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		1.32%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		9.6%	1[0.85,1.18]
Chen 2000b	1/10	0/5		0.05%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.17%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	7/20	6/20		0.52%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.39%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.06%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.08%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		1.44%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		1%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.05%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.29%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.15%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.09%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.05%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.09%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.05%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.08%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.43%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		2.02%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		0.71%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.03%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		0.96%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.04%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.51%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.09%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.21%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.06%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.24%	1.51[0.4,5.69]
Smith 1988	3/17	6/17		0.29%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.05%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		0.81%	1.2[0.59,2.45]
Thompson 1981	2/12	1/9		0.09%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		9.25%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.08%	0.98[0.09,10.3]
Williford 1991	54/192	57/203		3.65%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.5%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		0.48%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.16%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**4274**	**3989**		**39.98%**	**0.98[0.9,1.07]**

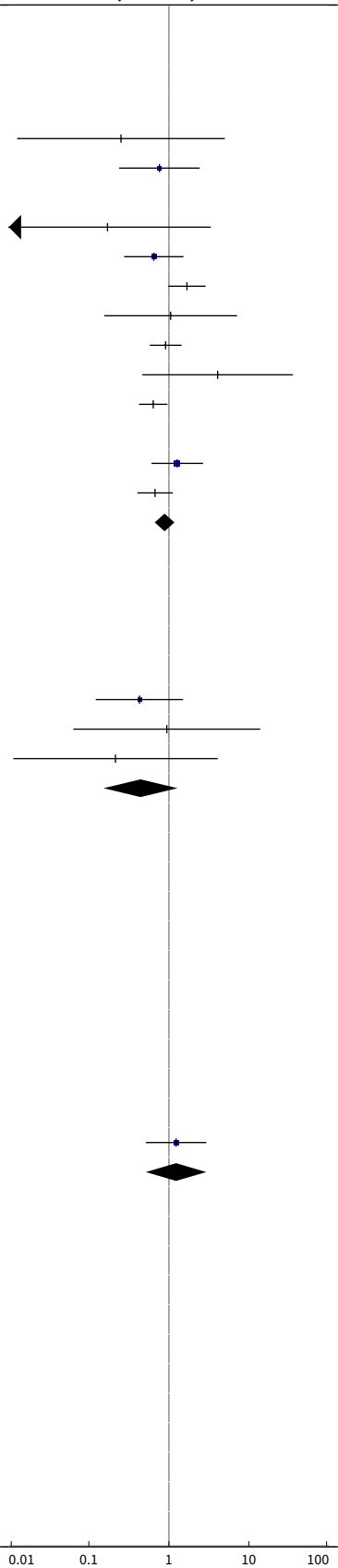




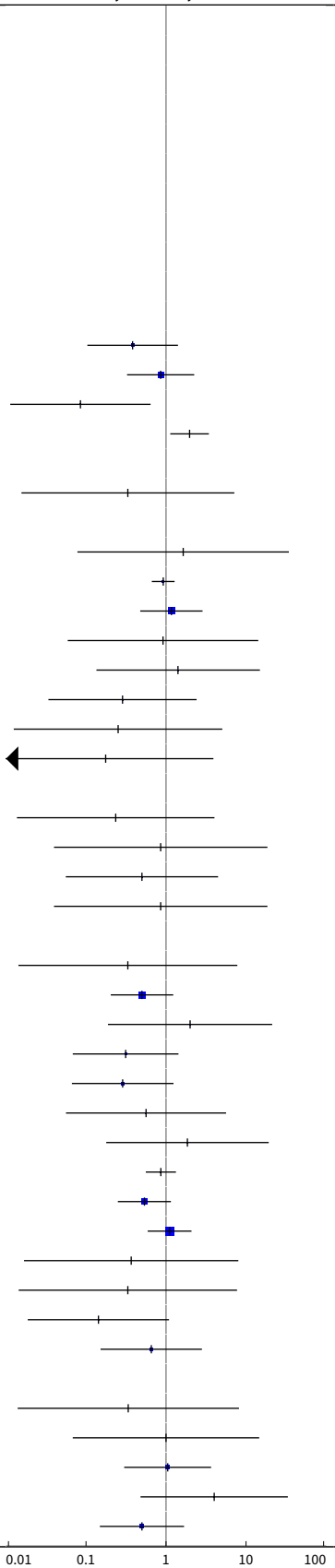
Analysis 4.4. Comparison 4 Serious adverse event maximum follow-up, Outcome 4 Serious adverse events - by medical specialty.

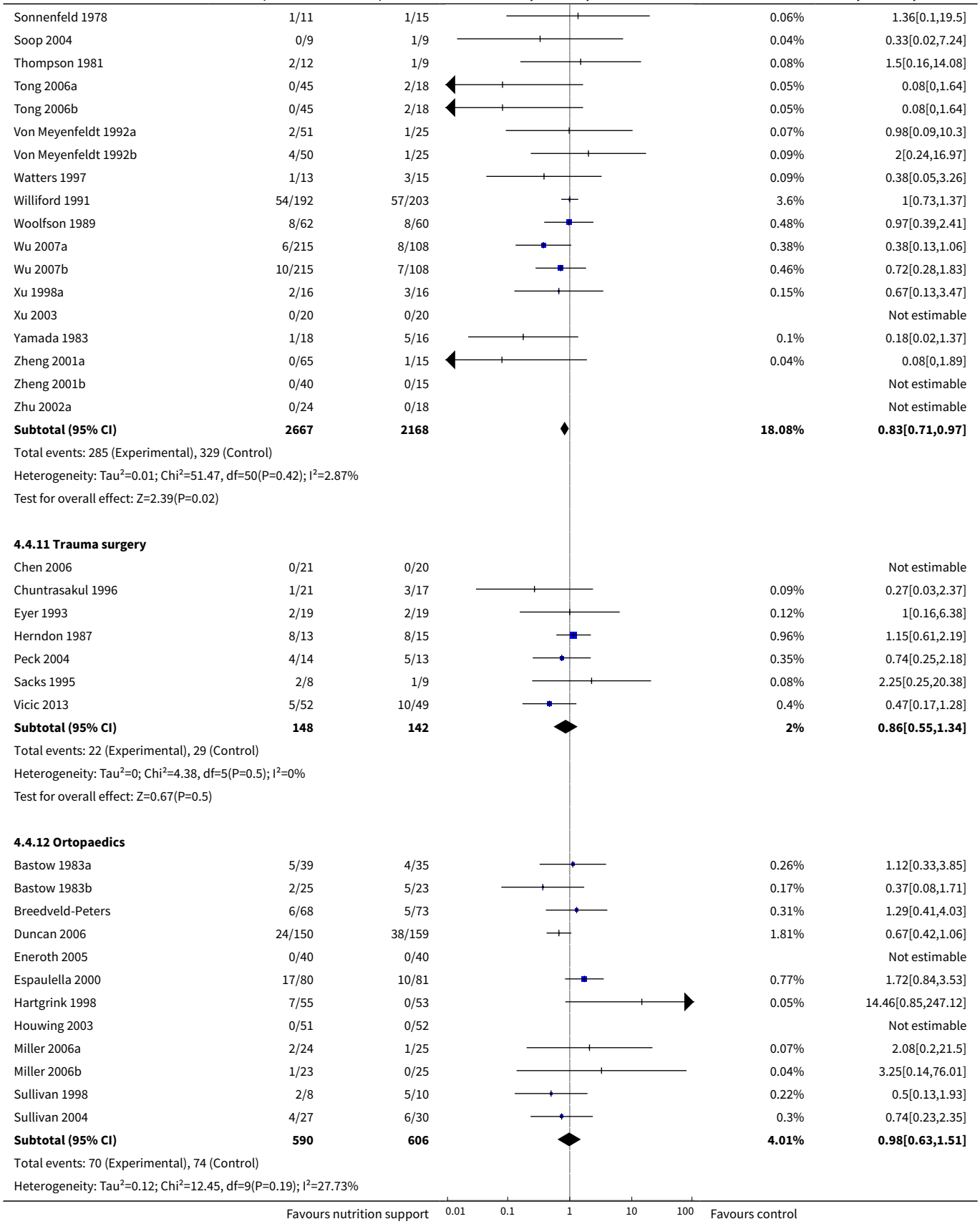


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Tau²=0; Chi²=6.53, df=10(P=0.77); I²=0%					
Test for overall effect: Z=0.59(P=0.56)					
4.4.3 Geriatrics					
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Banerjee 1978	4/28	6/32		0.3%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.55%	0.65[0.28,1.52]
Gariballa 2006	32/223	19/222		1.35%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.11%	1.05[0.16,7.1]
Hickson 2004	31/292	35/300		1.84%	0.91[0.58,1.44]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Larsson 1990a	29/197	55/238		2.26%	0.64[0.42,0.96]
Ljunggren 2012	0/19	0/20			Not estimable
Neelemaat 2012	14/105	11/105		0.72%	1.27[0.61,2.67]
Potter 2001	21/183	33/193		1.49%	0.67[0.4,1.12]
Subtotal (95% CI)	**1236**	**1311**		**8.79%**	**0.88[0.67,1.17]**
Total events: 143 (Experimental), 176 (Control)					
Heterogeneity: Tau²=0.06; Chi²=14.34, df=10(P=0.16); I²=30.25%					
Test for overall effect: Z=0.85(P=0.39)					
4.4.4 Pulmonary disease					
Luo 2012	3/30	7/30		0.26%	0.43[0.12,1.5]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Song 1993	0/12	2/13		0.05%	0.22[0.01,4.08]
Subtotal (95% CI)	**59**	**59**		**0.36%**	**0.44[0.15,1.28]**
Total events: 4 (Experimental), 10 (Control)					
Heterogeneity: Tau²=0; Chi²=0.54, df=2(P=0.76); I²=0%					
Test for overall effect: Z=1.51(P=0.13)					
4.4.5 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.6 Infectious diseases					
Maude 2011	8/27	7/29		0.53%	1.23[0.52,2.93]
Subtotal (95% CI)	**27**	**29**		**0.53%**	**1.23[0.52,2.93]**
Total events: 8 (Experimental), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.46(P=0.64)					
4.4.7 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.8 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**



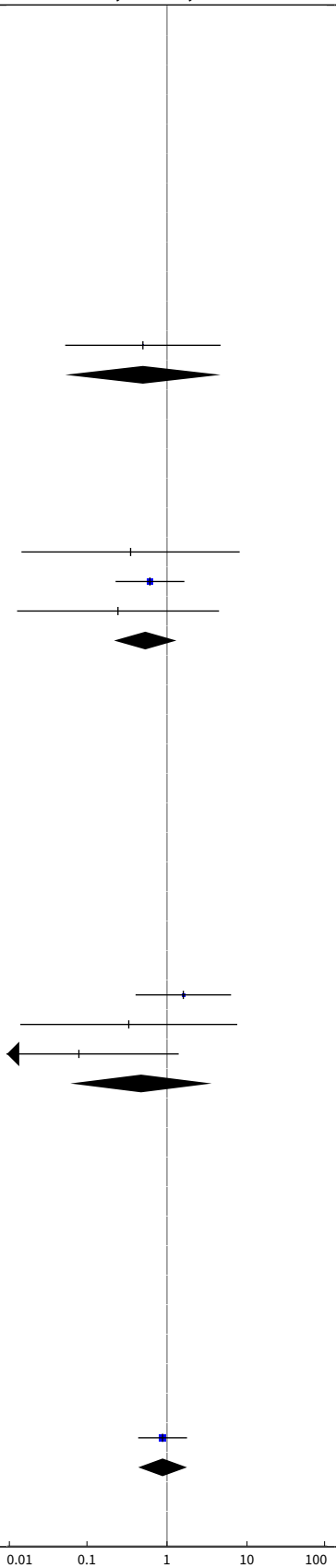
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.9 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.10 Gastroenterologic surgery					
Barlow 2011	3/64	7/57		0.24%	0.38[0.1,1.41]
Beier-Holgersen 1999	6/30	7/30		0.43%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Brennan 1994	27/60	13/57		1.27%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 1995a	0/8	1/8		0.04%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.04%	1.64[0.08,34.28]
Doglietto 1996	56/338	61/340		3.32%	0.92[0.66,1.28]
Fan 1989	7/20	6/20		0.5%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.05%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.07%	1.41[0.13,14.88]
Foschi 1986	1/28	4/32		0.09%	0.29[0.03,2.41]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hoffmann 1988	0/16	5/43		0.05%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.08%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Kaur 2005	6/50	12/50		0.5%	0.5[0.2,1.23]
Keele 1997	2/43	1/43		0.07%	2[0.19,21.24]
Lidder 2013a	2/32	6/30		0.17%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.19%	0.29[0.07,1.24]
Liu 1996b	1/16	2/18		0.08%	0.56[0.06,5.63]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		2.02%	0.86[0.56,1.33]
Müller 1982a	11/66	9/29		0.68%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		0.99%	1.11[0.59,2.08]
Neuvonen 1984	0/9	1/10		0.04%	0.37[0.02,8.01]
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Pupelis 2000	1/30	7/30		0.1%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.19%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.26%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.27%	0.5[0.15,1.68]



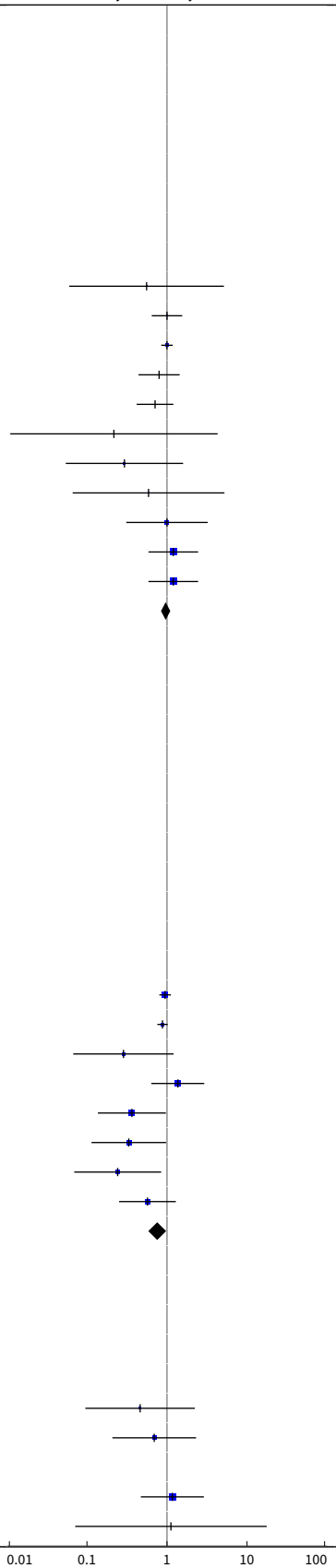


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sonnenfeld 1978	1/11	1/15		0.06%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.04%	0.33[0.02,7.24]
Thompson 1981	2/12	1/9		0.08%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Von Meyenfeldt 1992a	2/51	1/25		0.07%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Williford 1991	54/192	57/203		3.6%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.48%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.38%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.46%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.15%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**2667**	**2168**		**18.08%**	**0.83[0.71,0.97]**
Total events: 285 (Experimental), 329 (Control)					
Heterogeneity: Tau^2=0.01; Chi^2=51.47, df=50(P=0.42); I^2=2.87%					
Test for overall effect: Z=2.39(P=0.02)					
4.4.11 Trauma surgery					
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Herndon 1987	8/13	8/15		0.96%	1.15[0.61,2.19]
Peck 2004	4/14	5/13		0.35%	0.74[0.25,2.18]
Sacks 1995	2/8	1/9		0.08%	2.25[0.25,20.38]
Vicic 2013	5/52	10/49		0.4%	0.47[0.17,1.28]
Subtotal (95% CI)	**148**	**142**		**2%**	**0.86[0.55,1.34]**
Total events: 22 (Experimental), 29 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.38, df=5(P=0.5); I^2=0%					
Test for overall effect: Z=0.67(P=0.5)					
4.4.12 Ortopaedics					
Bastow 1983a	5/39	4/35		0.26%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.17%	0.37[0.08,1.71]
Breedveld-Peters	6/68	5/73		0.31%	1.29[0.41,4.03]
Duncan 2006	24/150	38/159		1.81%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.77%	1.72[0.84,3.53]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Houwing 2003	0/51	0/52			Not estimable
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Sullivan 1998	2/8	5/10		0.22%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.3%	0.74[0.23,2.35]
Subtotal (95% CI)	**590**	**606**		**4.01%**	**0.98[0.63,1.51]**
Total events: 70 (Experimental), 74 (Control)					
Heterogeneity: Tau^2=0.12; Chi^2=12.45, df=9(P=0.19); I^2=27.73%					

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.09(P=0.93)					
4.4.13 Plastic, reconstructive, and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.14 Vascular surgery					
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Rimbau 1989	1/10	2/10		0.08%	0.5[0.05,4.67]
Subtotal (95% CI)	**29**	**19**		**0.08%**	**0.5[0.05,4.67]**
Total events: 1 (Experimental), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.61(P=0.54)					
4.4.15 Transplant surgery					
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Lough 1990	4/14	7/15		0.41%	0.61[0.23,1.65]
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Subtotal (95% CI)	**40**	**44**		**0.5%**	**0.54[0.22,1.31]**
Total events: 4 (Experimental), 10 (Control)					
Heterogeneity: $Tau^2=0$; $Chi^2=0.45$, df=2(P=0.8); $I^2=0\%$					
Test for overall effect: Z=1.36(P=0.17)					
4.4.16 Urology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.17 Thoracic surgery					
Abel 1976	4/20	3/24		0.21%	1.6[0.4,6.32]
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Subtotal (95% CI)	**290**	**302**		**0.3%**	**0.47[0.06,3.62]**
Total events: 4 (Experimental), 10 (Control)					
Heterogeneity: $Tau^2=1.77$; $Chi^2=4.37$, df=2(P=0.11); $I^2=54.21\%$					
Test for overall effect: Z=0.72(P=0.47)					
4.4.18 Neurological surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.19 Oro-maxillo-facial surgery					
Bokhorst-de 2000	7/15	9/17		0.8%	0.88[0.44,1.78]
Subtotal (95% CI)	**15**	**17**		**0.8%**	**0.88[0.44,1.78]**
Total events: 7 (Experimental), 9 (Control)					
Heterogeneity: Not applicable					



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.35(P=0.72)					
4.4.20 Anaesthesiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.21 Emergency medicine					
Abrishami 2010	1/9	2/10		0.08%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		1.98%	1[0.65,1.55]
Casaer 2011	255/2312	257/2328		10.13%	1[0.85,1.18]
Chourdakis 2012	13/34	12/25		1.12%	0.8[0.44,1.44]
Heidegger 2013	20/153	28/152		1.39%	0.71[0.42,1.2]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Jauch 1995a	2/17	2/5		0.14%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.08%	0.59[0.07,5.22]
Nguyen 2012	4/14	4/14		0.29%	1[0.31,3.23]
Sabin 1998	12/40	10/40		0.77%	1.2[0.59,2.45]
Stein 2002	12/40	10/40		0.77%	1.2[0.59,2.45]
Subtotal (95% CI)	**2718**	**2703**		**16.81%**	**0.96[0.84,1.1]**
Total events: 345 (Experimental), 352 (Control)					
Heterogeneity: Tau^2=0; Chi^2=5.92, df=10(P=0.82); I^2=0%					
Test for overall effect: Z=0.54(P=0.59)					
4.4.22 Psychiatry					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.23 Neurology					
Abalan 1992	0/15	0/14			Not estimable
Dennis 2005	241/2012	253/2000		9.98%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		11.55%	0.88[0.76,1.02]
Gariballa 1998	2/20	7/20		0.19%	0.29[0.07,1.21]
Ha 2010	12/58	10/66		0.68%	1.37[0.64,2.92]
Zheng 2015	5/75	13/71		0.42%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		0.35%	0.33[0.11,0.98]
Zhu 2012a	3/33	6/16		0.26%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.6%	0.57[0.25,1.29]
Subtotal (95% CI)	**2734**	**2692**		**24.04%**	**0.75[0.58,0.98]**
Total events: 457 (Experimental), 515 (Control)					
Heterogeneity: Tau^2=0.05; Chi^2=15.78, df=7(P=0.03); I^2=55.65%					
Test for overall effect: Z=2.14(P=0.03)					
4.4.24 Oncology					
Doglietto 1990	2/13	3/9		0.16%	0.46[0.1,2.23]
Holter 1977	4/30	5/26		0.28%	0.69[0.21,2.31]
Ollenschläger 1992	0/16	0/16			Not estimable
Popp 1981	7/21	6/21		0.49%	1.17[0.47,2.89]
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]

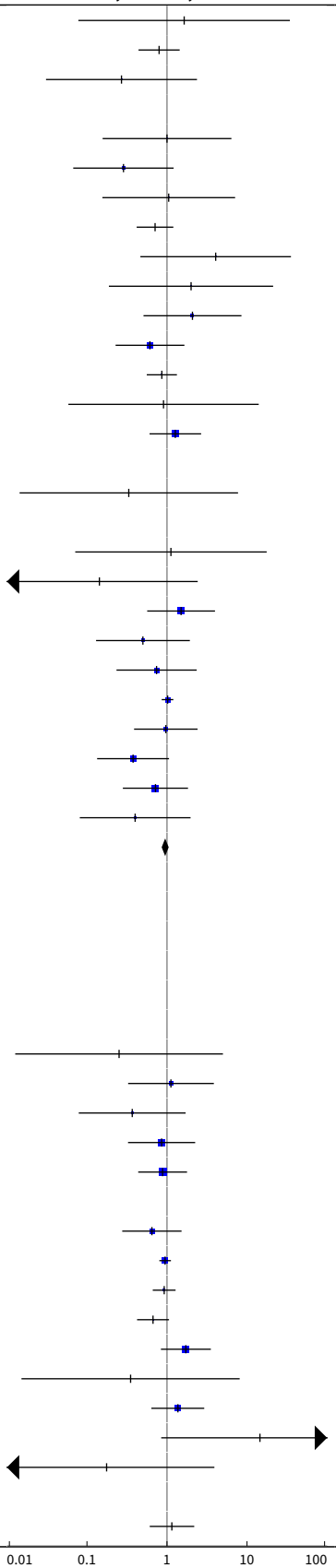


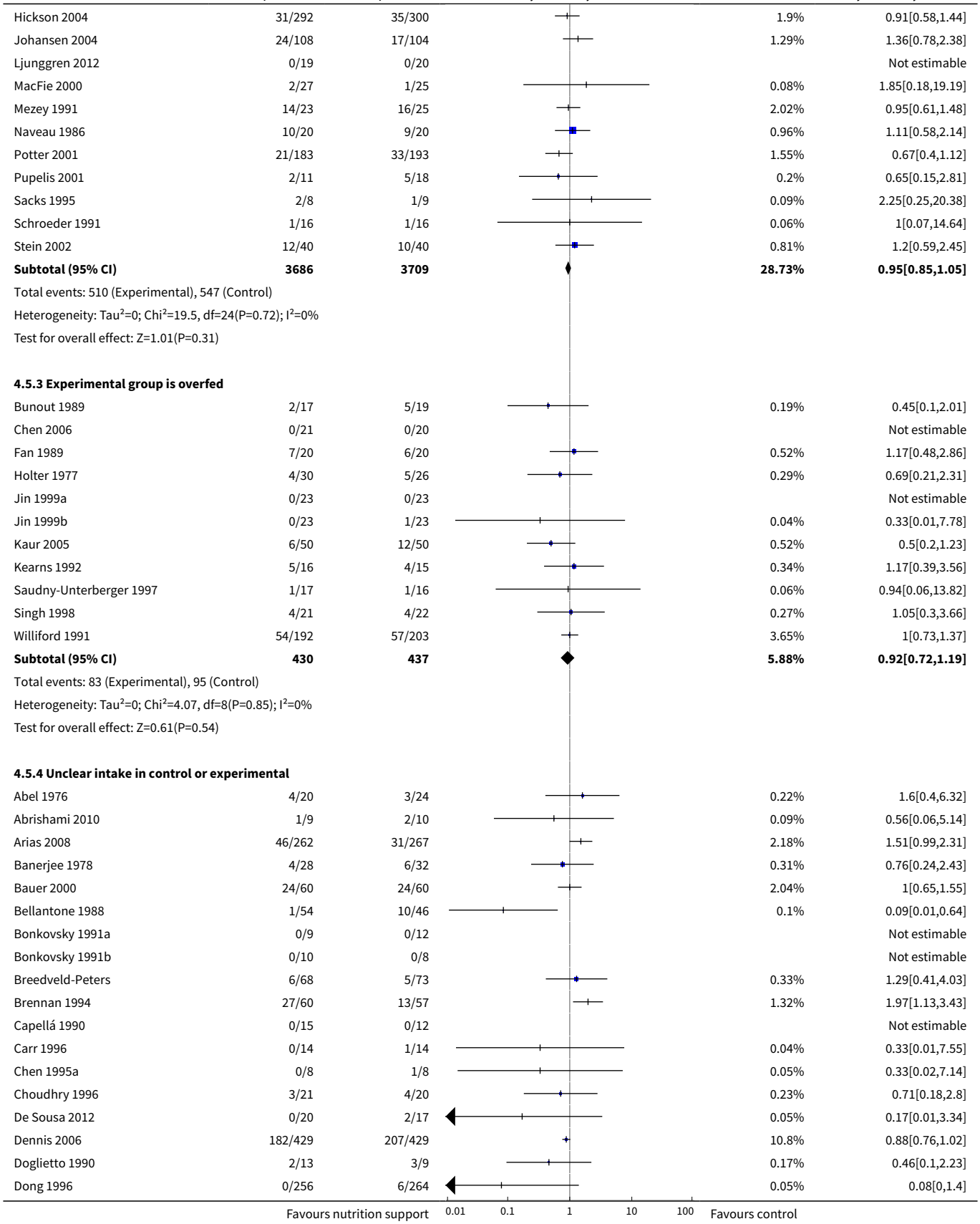
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Samuels 1981	7/18	2/15		0.2%	2.92[0.71,12]
Valdivieso 1987	27/30	31/35		9.72%	1.02[0.86,1.2]
Subtotal (95% CI)	**202**	**205**		**10.9%**	**1.02[0.87,1.2]**
Total events: 48 (Experimental), 48 (Control)					
Heterogeneity: Tau^2=0; Chi^2=3.69, df=5(P=0.6); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
4.4.25 Dermatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.26 Gynaecology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.4.27 Mixed					
Arias 2008	46/262	31/267		2.12%	1.51[0.99,2.31]
Choudhry 1996	3/21	4/20		0.22%	0.71[0.18,2.8]
Johansen 2004	24/108	17/104		1.24%	1.36[0.78,2.38]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Munk 2014	1/42	1/38		0.05%	0.9[0.06,13.97]
Starke 2011	9/66	6/66		0.42%	1.5[0.57,3.98]
Vlaming 2001	12/275	14/274		0.7%	0.85[0.4,1.81]
Subtotal (95% CI)	**831**	**824**		**4.79%**	**1.29[0.97,1.71]**
Total events: 95 (Experimental), 74 (Control)					
Heterogeneity: Tau^2=0; Chi^2=3.34, df=6(P=0.76); I^2=0%					
Test for overall effect: Z=1.75(P=0.08)					
Total (95% CI)	**11940**	**11473**		**100%**	**0.91[0.85,0.97]**
Total events: 1580 (Experimental), 1741 (Control)					
Heterogeneity: Tau^2=0; Chi^2=135.82, df=132(P=0.39); I^2=2.81%					
Test for overall effect: Z=2.87(P=0)					
Test for subgroup differences: Chi^2=16.04, df=1 (P=0.31), I^2=12.74%					

Analysis 4.5. Comparison 4 Serious adverse event maximum follow-up, Outcome 5 Serious adverse events - based on adequacy of the amount of calories.

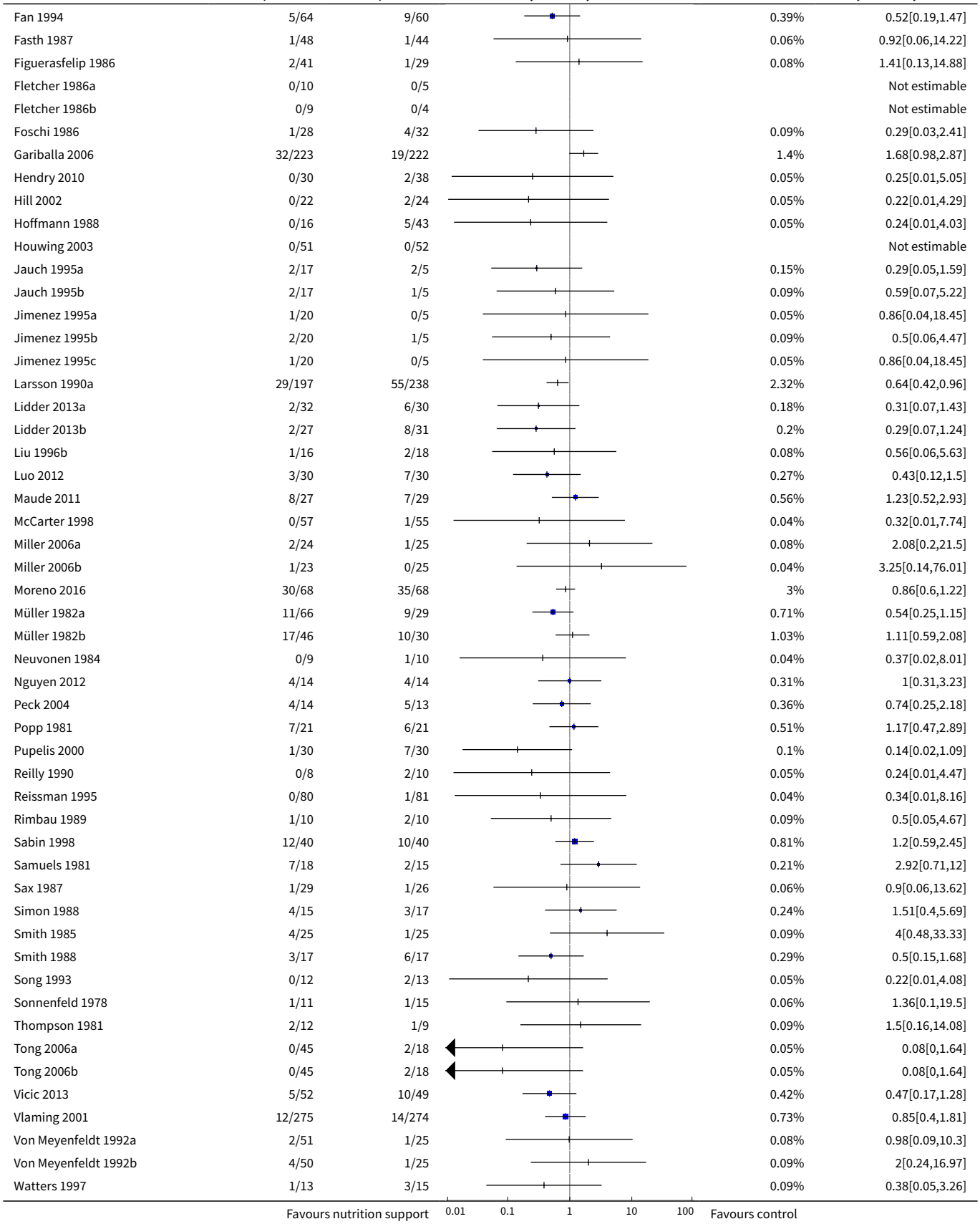
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
4.5.1 Clearly adequate in intervention and clearly inadequate in control					
Barlow 2011	3/64	7/57		0.25%	0.38[0.1,1.41]
Casaer 2011	255/2312	257/2328		9.6%	1[0.85,1.18]
Chen 2000a	0/10	0/5			Not estimable

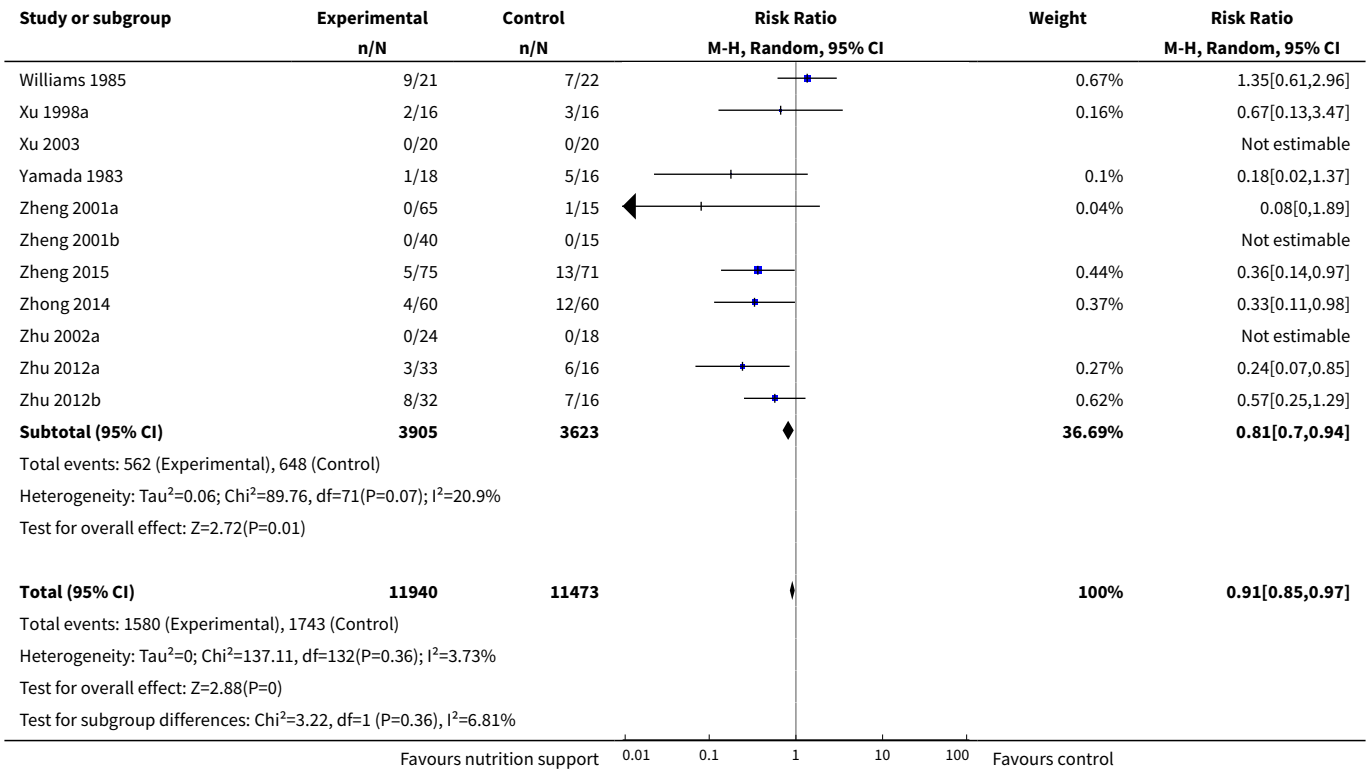
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chen 2000b	1/10	0/5		0.05%	1.64[0.08,34.28]
Chourdakis 2012	13/34	12/25		1.17%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
Eneroth 2005	0/40	0/40			Not estimable
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Gariballa 1998	2/20	7/20		0.2%	0.29[0.07,1.21]
Gazzotti 2003	2/39	2/41		0.12%	1.05[0.16,7.1]
Heidegger 2013	20/153	28/152		1.44%	0.71[0.42,1.2]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Keele 1997	2/43	1/43		0.08%	2[0.19,21.24]
Ledinghen 1997	5/12	2/10		0.21%	2.08[0.51,8.52]
Lough 1990	4/14	7/15		0.43%	0.61[0.23,1.65]
Malhotra 2004	27/98	31/97		2.09%	0.86[0.56,1.33]
Munk 2014	1/42	1/38		0.06%	0.9[0.06,13.97]
Neelemaat 2012	14/105	11/105		0.75%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Rana 1992	0/20	0/20			Not estimable
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Soop 2004	0/9	3/9		0.05%	0.14[0.01,2.42]
Starke 2011	9/66	6/66		0.44%	1.5[0.57,3.98]
Sullivan 1998	2/8	5/10		0.23%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.32%	0.74[0.23,2.35]
Valdivieso 1987	27/30	31/35		9.25%	1.02[0.86,1.2]
Woolfson 1989	8/62	8/60		0.5%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.4%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.48%	0.72[0.28,1.83]
Zhang 2013	2/50	5/50		0.17%	0.4[0.08,1.97]
Subtotal (95% CI)	**3919**	**3704**		**28.7%**	**0.95[0.86,1.05]**
Total events: 425 (Experimental), 453 (Control)					
Heterogeneity: Tau^2=0; Chi^2=22.3, df=26(P=0.67); I^2=0%					
Test for overall effect: Z=1(P=0.32)					
4.5.2 Inadequate in the experimental or adequate in the control					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Bastow 1983a	5/39	4/35		0.28%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.18%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.45%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		0.84%	0.88[0.44,1.78]
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	6/25	10/27		0.57%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		9.48%	0.95[0.8,1.12]
Doglietto 1996	56/338	61/340		3.38%	0.92[0.66,1.28]
Duncan 2006	24/150	38/159		1.87%	0.67[0.42,1.06]
Espaulella 2000	17/80	10/81		0.8%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Ha 2010	12/58	10/66		0.72%	1.37[0.64,2.92]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1%	1.15[0.61,2.19]



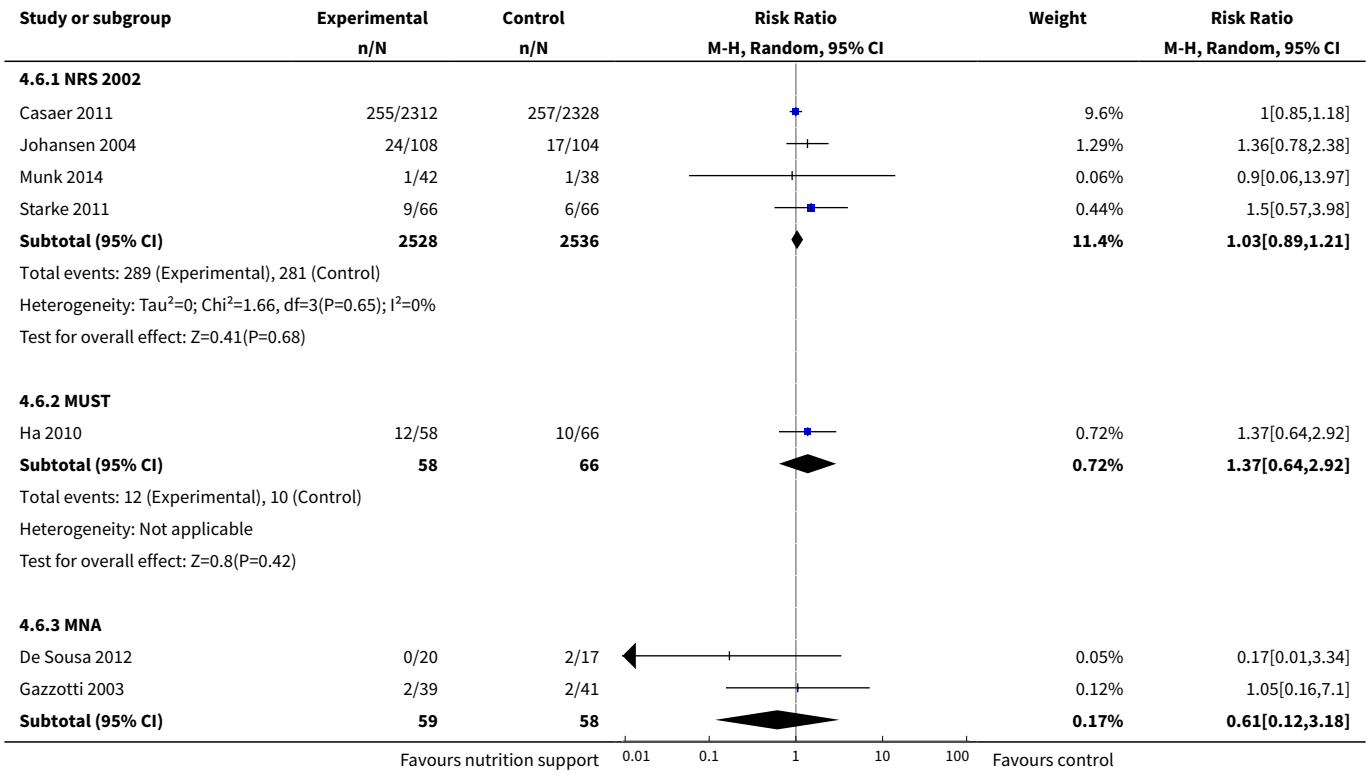


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hickson 2004	31/292	35/300		1.9%	0.91[0.58,1.44]
Johansen 2004	24/108	17/104		1.29%	1.36[0.78,2.38]
Ljunggren 2012	0/19	0/20			Not estimable
MacFie 2000	2/27	1/25		0.08%	1.85[0.18,19.19]
Mezey 1991	14/23	16/25		2.02%	0.95[0.61,1.48]
Naveau 1986	10/20	9/20		0.96%	1.11[0.58,2.14]
Potter 2001	21/183	33/193		1.55%	0.67[0.4,1.12]
Pupelis 2001	2/11	5/18		0.2%	0.65[0.15,2.81]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Stein 2002	12/40	10/40		0.81%	1.2[0.59,2.45]
Subtotal (95% CI)	**3686**	**3709**		**28.73%**	**0.95[0.85,1.05]**
Total events: 510 (Experimental), 547 (Control)					
Heterogeneity: Tau^2=0; Chi^2=19.5, df=24(P=0.72); I^2=0%					
Test for overall effect: Z=1.01(P=0.31)					
4.5.3 Experimental group is overfed					
Bunout 1989	2/17	5/19		0.19%	0.45[0.1,2.01]
Chen 2006	0/21	0/20			Not estimable
Fan 1989	7/20	6/20		0.52%	1.17[0.48,2.86]
Holter 1977	4/30	5/26		0.29%	0.69[0.21,2.31]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Kaur 2005	6/50	12/50		0.52%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.34%	1.17[0.39,3.56]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Williford 1991	54/192	57/203		3.65%	1[0.73,1.37]
Subtotal (95% CI)	**430**	**437**		**5.88%**	**0.92[0.72,1.19]**
Total events: 83 (Experimental), 95 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.07, df=8(P=0.85); I^2=0%					
Test for overall effect: Z=0.61(P=0.54)					
4.5.4 Unclear intake in control or experimental					
Abel 1976	4/20	3/24		0.22%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.09%	0.56[0.06,5.14]
Arias 2008	46/262	31/267		2.18%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.31%	0.76[0.24,2.43]
Bauer 2000	24/60	24/60		2.04%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Breedveld-Peters	6/68	5/73		0.33%	1.29[0.41,4.03]
Brennan 1994	27/60	13/57		1.32%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.05%	0.33[0.02,7.14]
Choudhry 1996	3/21	4/20		0.23%	0.71[0.18,2.8]
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Dennis 2006	182/429	207/429		10.8%	0.88[0.76,1.02]
Doglietto 1990	2/13	3/9		0.17%	0.46[0.1,2.23]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]

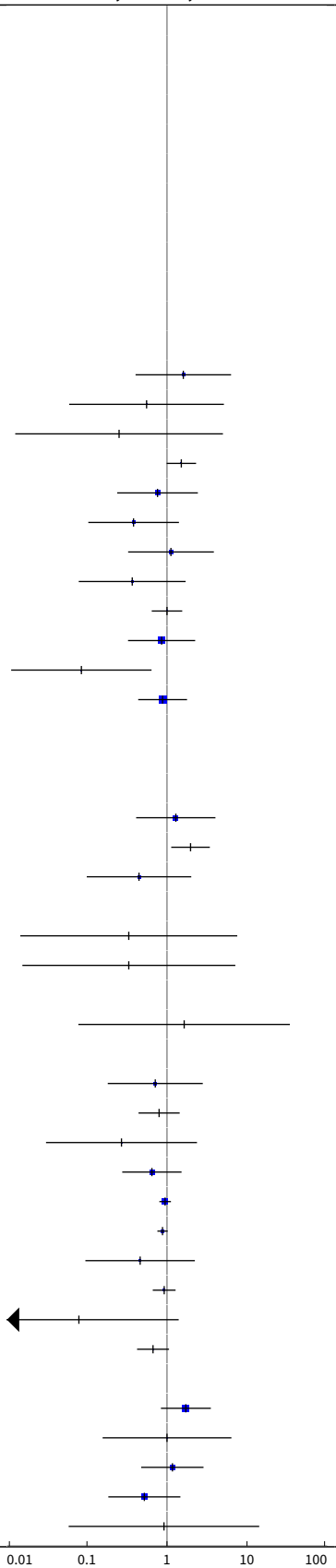


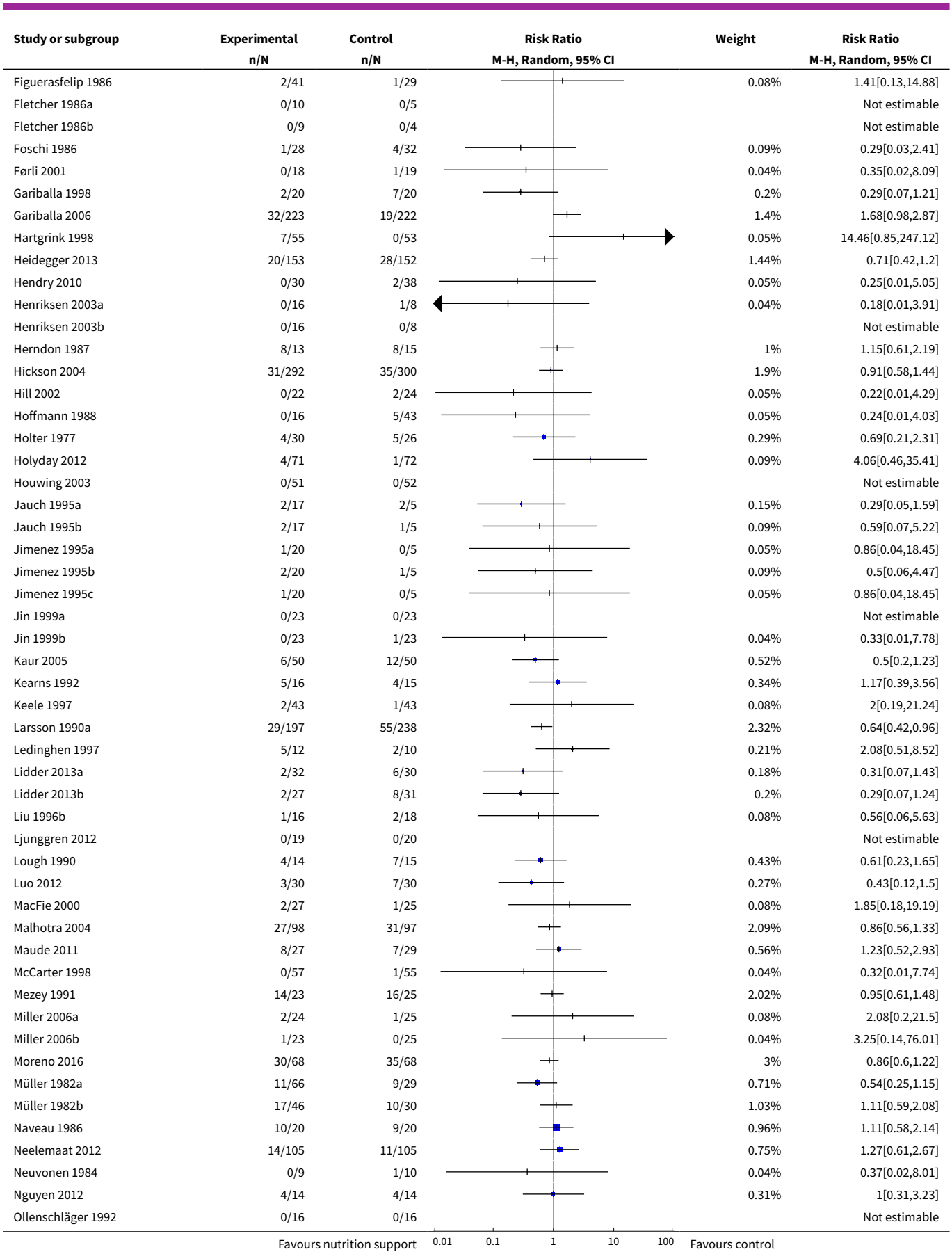


Analysis 4.6. Comparison 4 Serious adverse event maximum follow-up, Outcome 6 Serious adverse events - different screening tools.



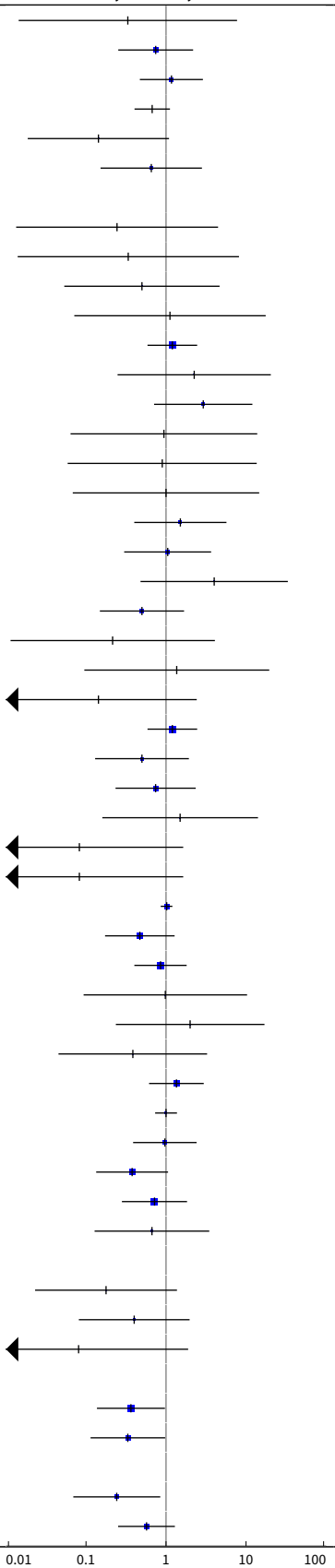
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 2 (Experimental), 4 (Control)					
Heterogeneity: Tau²=0.06; Chi²=1.04, df=1(P=0.31); I²=3.81%					
Test for overall effect: Z=0.59(P=0.56)					
4.6.4 SGA					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.6.5 Other means					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.22%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.09%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Arias 2008	46/262	31/267		2.18%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.31%	0.76[0.24,2.43]
Barlow 2011	3/64	7/57		0.25%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.28%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.18%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		2.04%	1[0.65,1.55]
Beier-Holgersen 1999	6/30	7/30		0.45%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		0.84%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.33%	1.29[0.41,4.03]
Brennan 1994	27/60	13/57		1.32%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.19%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.05%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.05%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.23%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		1.17%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
Delmi 1990	6/25	10/27		0.57%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		9.48%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		10.8%	0.88[0.76,1.02]
Doglietto 1990	2/13	3/9		0.17%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		3.38%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Duncan 2006	24/150	38/159		1.87%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.8%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Fan 1989	7/20	6/20		0.52%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.39%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.06%	0.92[0.06,14.22]



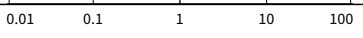


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Figuerasfelip 1986	2/41	1/29		0.08%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.09%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.2%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.4%	1.68[0.98,2.87]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.44%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.9%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Hoffmann 1988	0/16	5/43		0.05%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.29%	0.69[0.21,2.31]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.15%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.09%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.05%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.09%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.05%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Kaur 2005	6/50	12/50		0.52%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.34%	1.17[0.39,3.56]
Keele 1997	2/43	1/43		0.08%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		2.32%	0.64[0.42,0.96]
Ledinghen 1997	5/12	2/10		0.21%	2.08[0.51,8.52]
Lidder 2013a	2/32	6/30		0.18%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.2%	0.29[0.07,1.24]
Liu 1996b	1/16	2/18		0.08%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.43%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.27%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.08%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		2.09%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		2.02%	0.95[0.61,1.48]
Miller 2006a	2/24	1/25		0.08%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		3%	0.86[0.6,1.22]
Müller 1982a	11/66	9/29		0.71%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.03%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		0.96%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.75%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.04%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.31%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		0.36%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.51%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.55%	0.67[0.4,1.12]
Pupelis 2000	1/30	7/30		0.1%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.2%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.09%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		0.81%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.21%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.06%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Simon 1988	4/15	3/17		0.24%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.29%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.05%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.06%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.05%	0.14[0.01,2.42]
Stein 2002	12/40	10/40		0.81%	1.2[0.59,2.45]
Sullivan 1998	2/8	5/10		0.23%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.32%	0.74[0.23,2.35]
Thompson 1981	2/12	1/9		0.09%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		9.25%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.42%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.73%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.08%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Williams 1985	9/21	7/22		0.67%	1.35[0.61,2.96]
Williford 1991	54/192	57/203		3.65%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.5%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.4%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.48%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.16%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.17%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.44%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		0.37%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.27%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.62%	0.57[0.25,1.29]

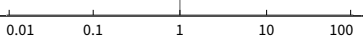


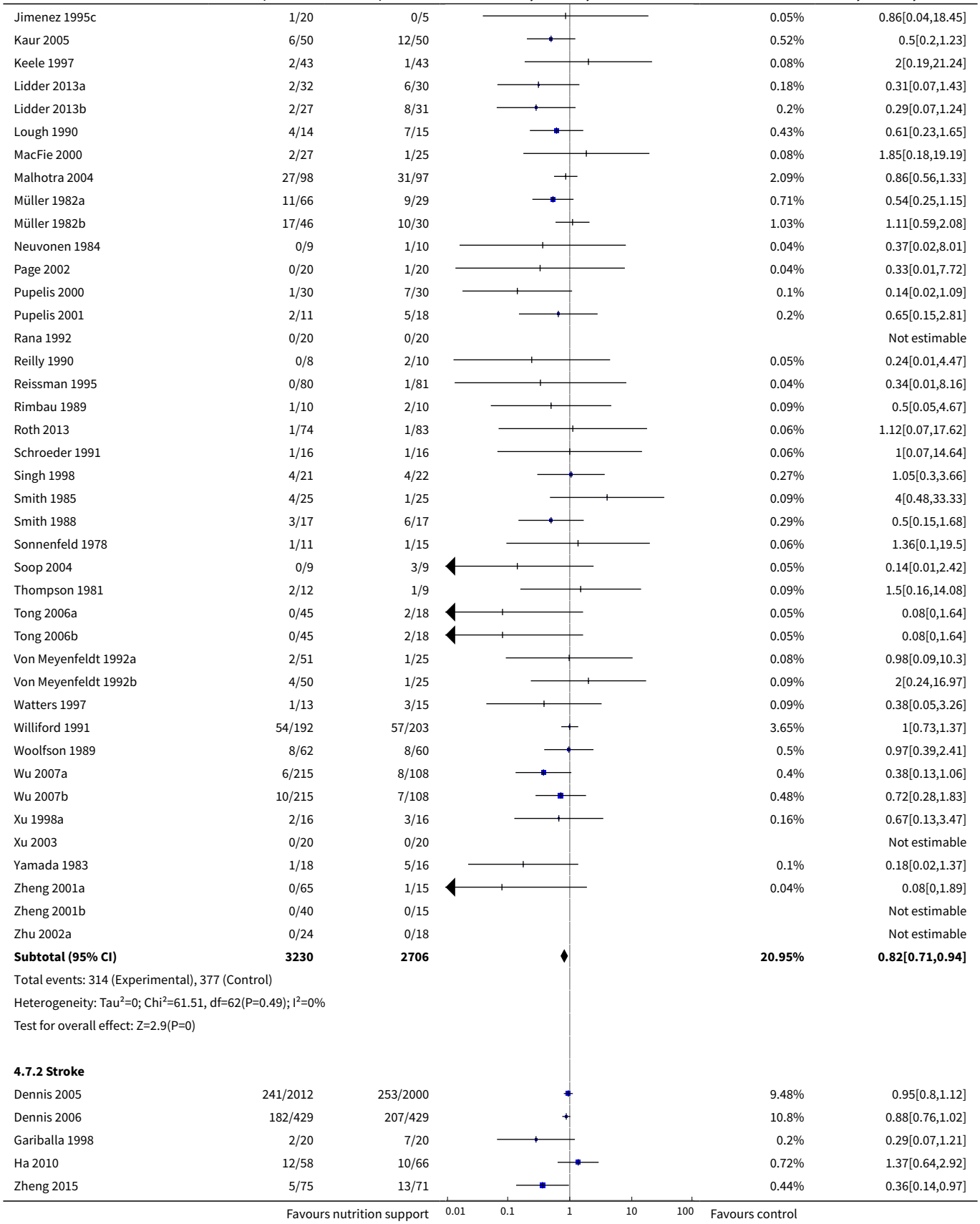
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Subtotal (95% CI)	**9295**	**8813**		**87.72%**	**0.89[0.82,0.95]**
Total events: 1277 (Experimental), 1448 (Control)					
Heterogeneity: Tau^2=0.01; Chi^2=131.09, df=125(P=0.34); I^2=4.65%					
Test for overall effect: Z=3.29(P=0)					
Total (95% CI)	**11940**	**11473**		**100%**	**0.91[0.85,0.97]**
Total events: 1580 (Experimental), 1743 (Control)					
Heterogeneity: Tau^2=0; Chi^2=137.11, df=132(P=0.36); I^2=3.73%					
Test for overall effect: Z=2.88(P=0)					
Test for subgroup differences: Chi^2=4.42, df=1 (P=0.22), I^2=32.16%					



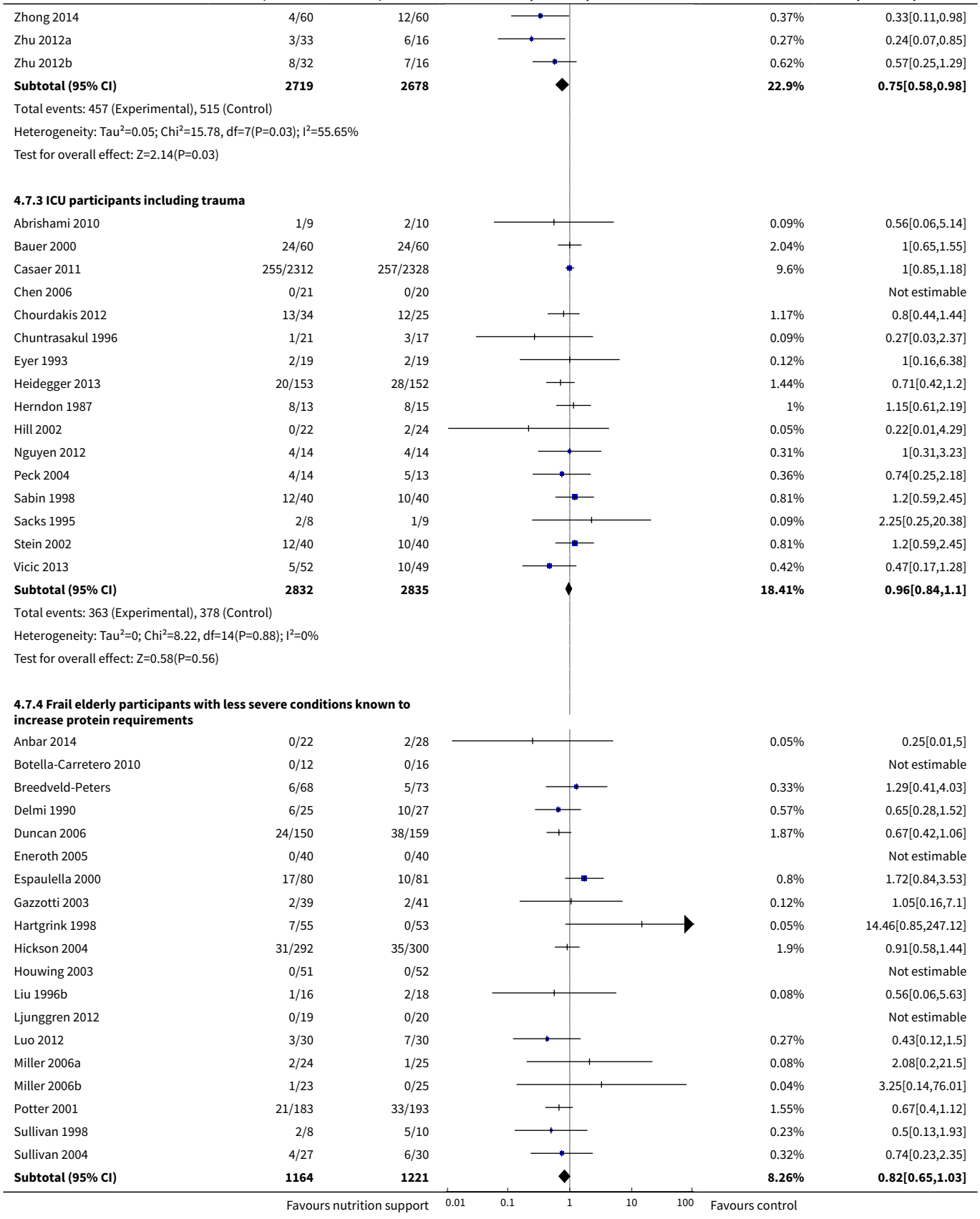
Analysis 4.7. Comparison 4 Serious adverse event maximum follow-up, Outcome 7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
4.7.1 Major surgery					
Abel 1976	4/20	3/24		0.22%	1.6[0.4,6.32]
Barlow 2011	3/64	7/57		0.25%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.28%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.18%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.45%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Brennan 1994	27/60	13/57		1.32%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.05%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.05%	1.64[0.08,34.28]
Doglietto 1996	56/338	61/340		3.38%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Fan 1989	7/20	6/20		0.52%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.39%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.06%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.08%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.09%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hoffmann 1988	0/16	5/43		0.05%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.29%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.15%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.09%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.05%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.09%	0.5[0.06,4.47]

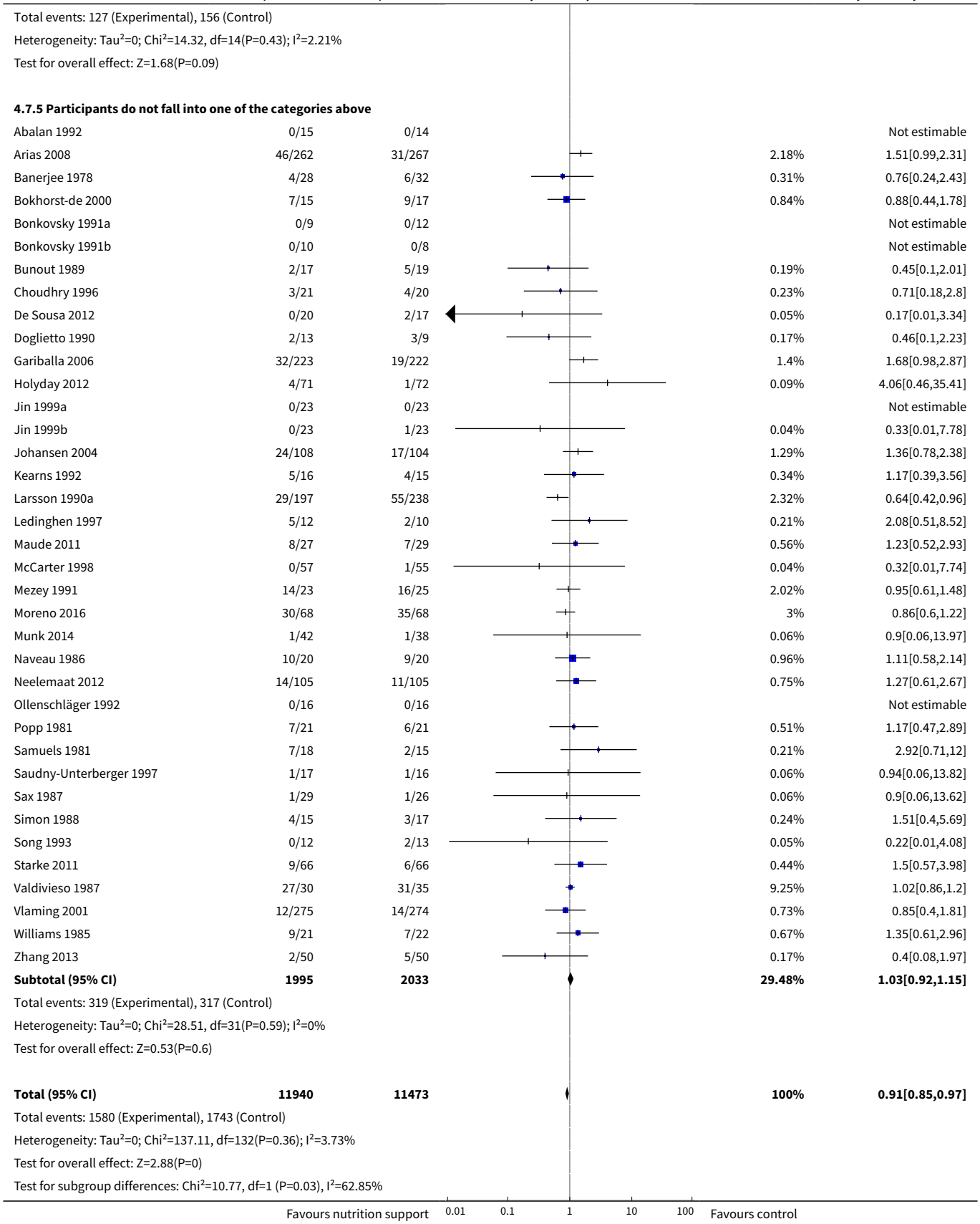




Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Jimenez 1995c	1/20	0/5		0.05%	0.86[0.04,18.45]
Kaur 2005	6/50	12/50		0.52%	0.5[0.2,1.23]
Keele 1997	2/43	1/43		0.08%	2[0.19,21.24]
Lidder 2013a	2/32	6/30		0.18%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.2%	0.29[0.07,1.24]
Lough 1990	4/14	7/15		0.43%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.08%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		2.09%	0.86[0.56,1.33]
Müller 1982a	11/66	9/29		0.71%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.03%	1.11[0.59,2.08]
Neuvonen 1984	0/9	1/10		0.04%	0.37[0.02,8.01]
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Pupelis 2000	1/30	7/30		0.1%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.2%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.09%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.29%	0.5[0.15,1.68]
Sonnenfeld 1978	1/11	1/15		0.06%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.05%	0.14[0.01,2.42]
Thompson 1981	2/12	1/9		0.09%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Von Meyenfeldt 1992a	2/51	1/25		0.08%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Williford 1991	54/192	57/203		3.65%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.5%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.4%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.48%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.16%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**3230**	**2706**		**20.95%**	**0.82[0.71,0.94]**
Total events: 314 (Experimental), 377 (Control)					
Heterogeneity: Tau²=0; Chi²=61.51, df=62(P=0.49); I²=0%					
Test for overall effect: Z=2.9(P=0)					
4.7.2 Stroke					
Dennis 2005	241/2012	253/2000		9.48%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		10.8%	0.88[0.76,1.02]
Gariballa 1998	2/20	7/20		0.2%	0.29[0.07,1.21]
Ha 2010	12/58	10/66		0.72%	1.37[0.64,2.92]
Zheng 2015	5/75	13/71		0.44%	0.36[0.14,0.97]

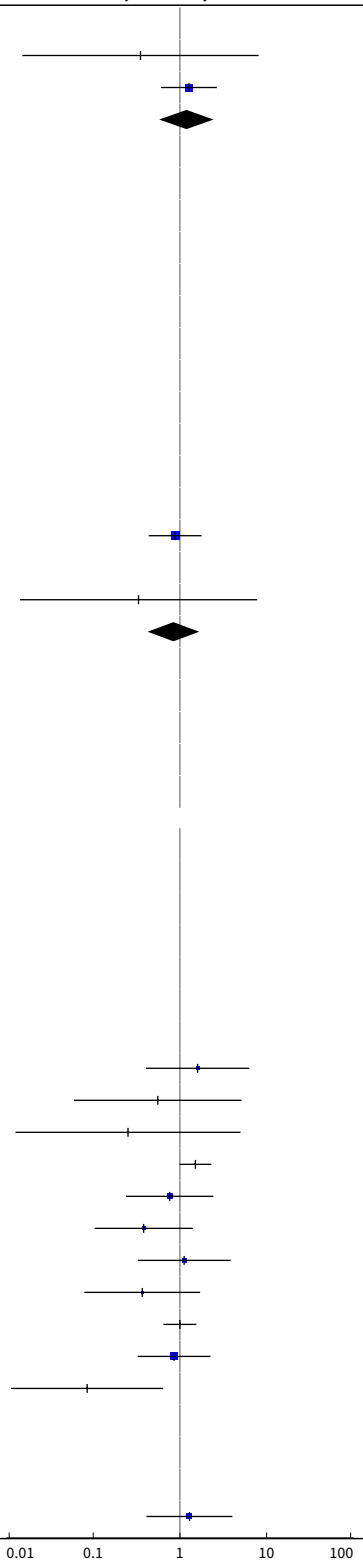


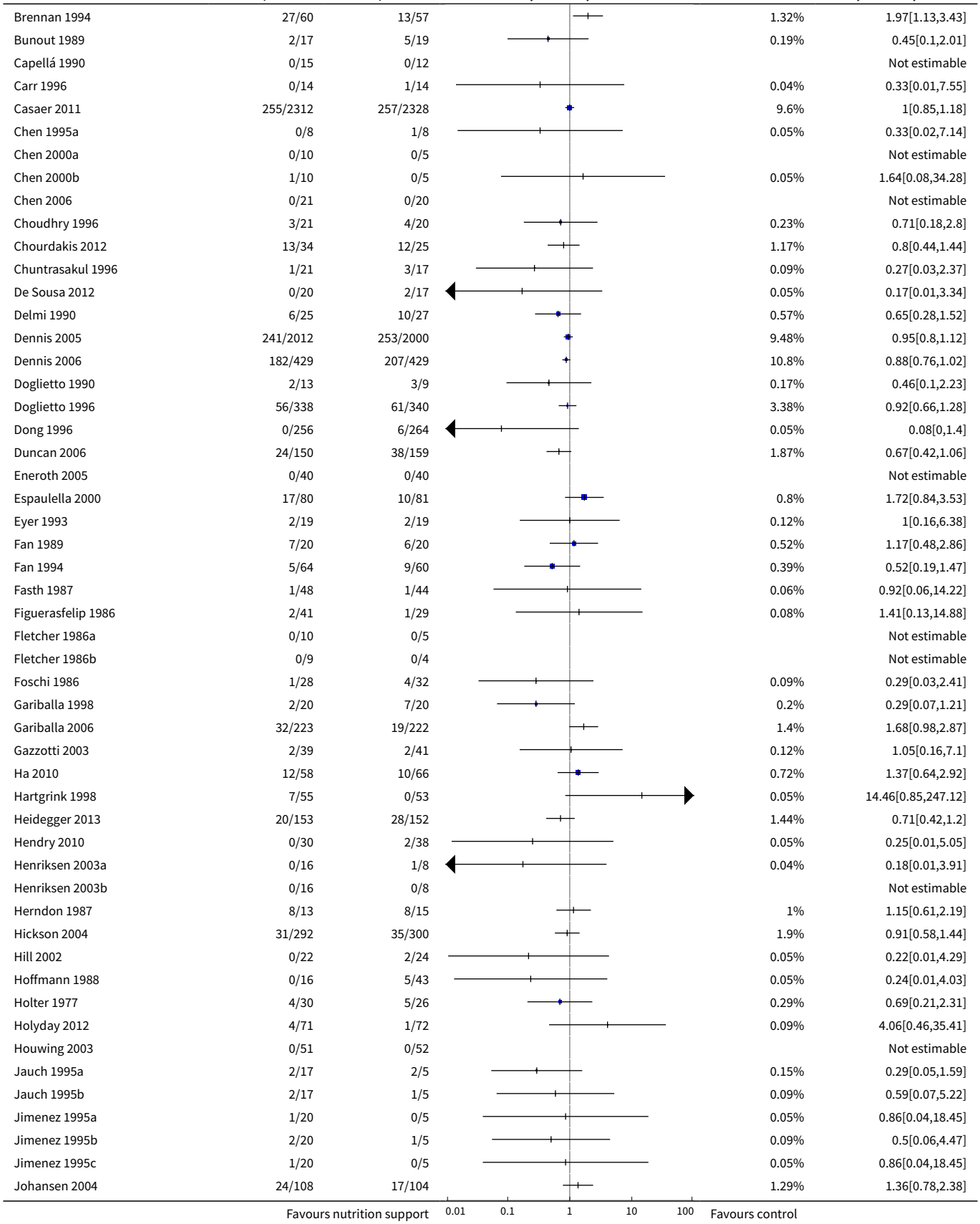
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Zhong 2014	4/60	12/60		0.37%	0.33[0.11,0.98]
Zhu 2012a	3/33	6/16		0.27%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.62%	0.57[0.25,1.29]
Subtotal (95% CI)	**2719**	**2678**		**22.9%**	**0.75[0.58,0.98]**
Total events: 457 (Experimental), 515 (Control)					
Heterogeneity: Tau^2=0.05; Chi^2=15.78, df=7(P=0.03); I^2=55.65%					
Test for overall effect: Z=2.14(P=0.03)					
4.7.3 ICU participants including trauma					
Abrishami 2010	1/9	2/10		0.09%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		2.04%	1[0.65,1.55]
Casaer 2011	255/2312	257/2328		9.6%	1[0.85,1.18]
Chen 2006	0/21	0/20			Not estimable
Chourdakis 2012	13/34	12/25		1.17%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Heidegger 2013	20/153	28/152		1.44%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		1%	1.15[0.61,2.19]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Nguyen 2012	4/14	4/14		0.31%	1[0.31,3.23]
Peck 2004	4/14	5/13		0.36%	0.74[0.25,2.18]
Sabin 1998	12/40	10/40		0.81%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Stein 2002	12/40	10/40		0.81%	1.2[0.59,2.45]
Vicic 2013	5/52	10/49		0.42%	0.47[0.17,1.28]
Subtotal (95% CI)	**2832**	**2835**		**18.41%**	**0.96[0.84,1.1]**
Total events: 363 (Experimental), 378 (Control)					
Heterogeneity: Tau^2=0; Chi^2=8.22, df=14(P=0.88); I^2=0%					
Test for overall effect: Z=0.58(P=0.56)					
4.7.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.33%	1.29[0.41,4.03]
Delmi 1990	6/25	10/27		0.57%	0.65[0.28,1.52]
Duncan 2006	24/150	38/159		1.87%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.8%	1.72[0.84,3.53]
Gazzotti 2003	2/39	2/41		0.12%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Hickson 2004	31/292	35/300		1.9%	0.91[0.58,1.44]
Houwing 2003	0/51	0/52			Not estimable
Liu 1996b	1/16	2/18		0.08%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		0.27%	0.43[0.12,1.5]
Miller 2006a	2/24	1/25		0.08%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		1.55%	0.67[0.4,1.12]
Sullivan 1998	2/8	5/10		0.23%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.32%	0.74[0.23,2.35]
Subtotal (95% CI)	**1164**	**1221**		**8.26%**	**0.82[0.65,1.03]**



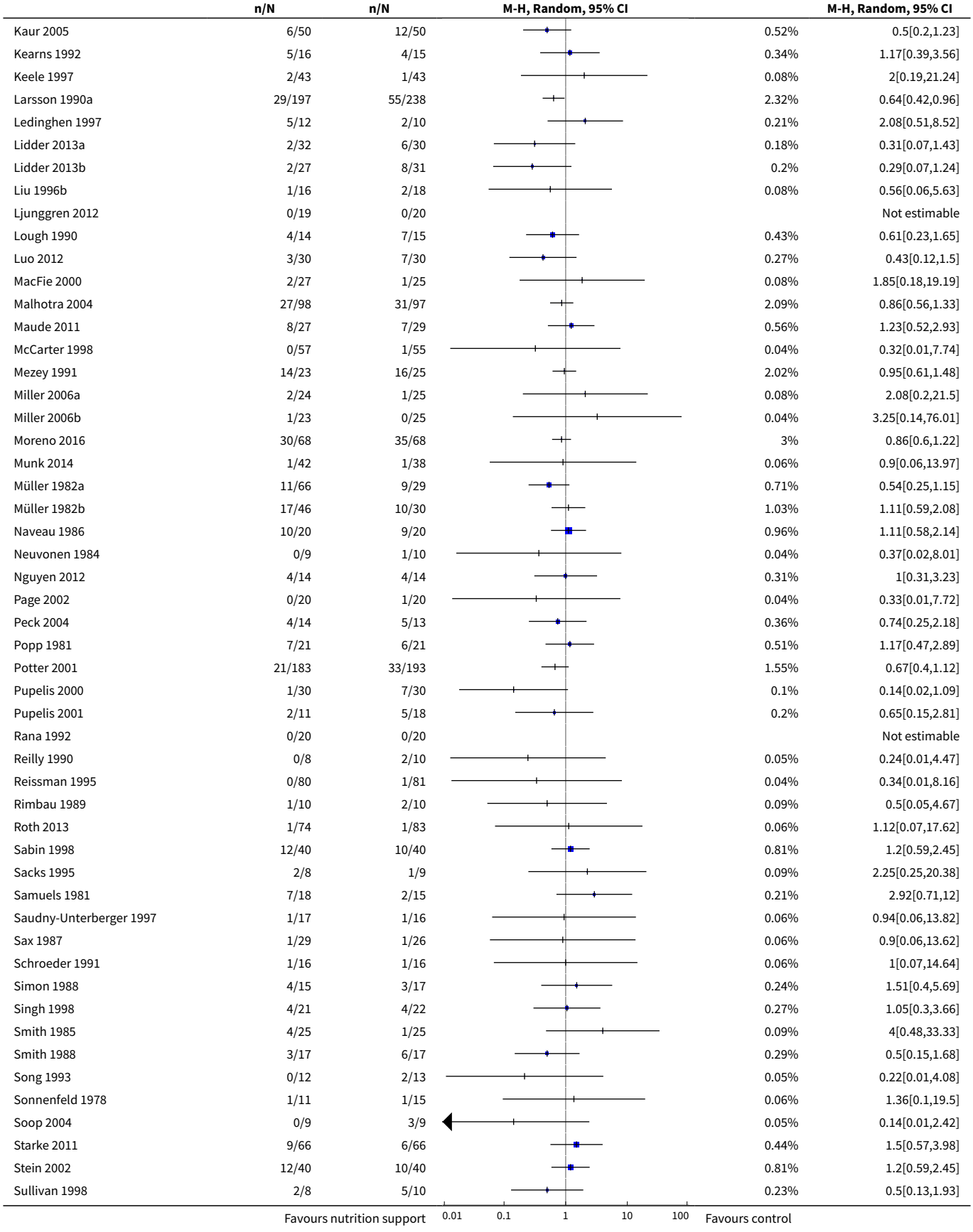
Analysis 4.8. Comparison 4 Serious adverse event maximum follow-up, Outcome 8 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
4.8.1 BMI less than 20.5 kg/m2					
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Neelemaat 2012	14/105	11/105		0.75%	1.27[0.61,2.67]
Subtotal (95% CI)	**123**	**124**		**0.8%**	**1.19[0.58,2.45]**
Total events: 14 (Experimental), 12 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.62, df=1(P=0.43); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					
4.8.2 Weight loss of at least 5% during the last three months					
Ollenschläger 1992	0/16	0/16			Not estimable
Subtotal (95% CI)	**16**	**16**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.8.3 Weight loss of at least 10% during the last six months					
Bokhorst-de 2000	7/15	9/17		0.84%	0.88[0.44,1.78]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Subtotal (95% CI)	**61**	**63**		**0.88%**	**0.84[0.42,1.67]**
Total events: 7 (Experimental), 10 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.37, df=1(P=0.54); I^2=0%					
Test for overall effect: Z=0.49(P=0.62)					
4.8.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
4.8.5 Participants characterised as 'at nutritional risk' by other means					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.22%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.09%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Arias 2008	46/262	31/267		2.18%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.31%	0.76[0.24,2.43]
Barlow 2011	3/64	7/57		0.25%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.28%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.18%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		2.04%	1[0.65,1.55]
Beier-Holgersen 1999	6/30	7/30		0.45%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.33%	1.29[0.41,4.03]



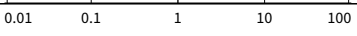


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Brennan 1994	27/60	13/57		1.32%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.19%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		9.6%	1[0.85,1.18]
Chen 1995a	0/8	1/8		0.05%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.05%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.23%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		1.17%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.57%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		9.48%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		10.8%	0.88[0.76,1.02]
Doglietto 1990	2/13	3/9		0.17%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		3.38%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Duncan 2006	24/150	38/159		1.87%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.8%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Fan 1989	7/20	6/20		0.52%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.39%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.06%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.08%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.09%	0.29[0.03,2.41]
Gariballa 1998	2/20	7/20		0.2%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.4%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.12%	1.05[0.16,7.1]
Ha 2010	12/58	10/66		0.72%	1.37[0.64,2.92]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.44%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.9%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Hoffmann 1988	0/16	5/43		0.05%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.29%	0.69[0.21,2.31]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.15%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.09%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.05%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.09%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.05%	0.86[0.04,18.45]
Johansen 2004	24/108	17/104		1.29%	1.36[0.78,2.38]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Kaur 2005	6/50	12/50		0.52%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.34%	1.17[0.39,3.56]
Keele 1997	2/43	1/43		0.08%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		2.32%	0.64[0.42,0.96]
Ledinghen 1997	5/12	2/10		0.21%	2.08[0.51,8.52]
Lidder 2013a	2/32	6/30		0.18%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.2%	0.29[0.07,1.24]
Liu 1996b	1/16	2/18		0.08%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.43%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.27%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.08%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		2.09%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		2.02%	0.95[0.61,1.48]
Miller 2006a	2/24	1/25		0.08%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		3%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.06%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		0.71%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.03%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		0.96%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.04%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.31%	1[0.31,3.23]
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		0.36%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.51%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.55%	0.67[0.4,1.12]
Pupelis 2000	1/30	7/30		0.1%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.2%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.09%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		0.81%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.21%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.06%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Simon 1988	4/15	3/17		0.24%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.29%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.05%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.06%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.05%	0.14[0.01,2.42]
Starke 2011	9/66	6/66		0.44%	1.5[0.57,3.98]
Stein 2002	12/40	10/40		0.81%	1.2[0.59,2.45]
Sullivan 1998	2/8	5/10		0.23%	0.5[0.13,1.93]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sullivan 2004	4/27	6/30		0.32%	0.74[0.23,2.35]
Thompson 1981	2/12	1/9		0.09%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		9.25%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.42%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.73%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.08%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Williams 1985	9/21	7/22		0.67%	1.35[0.61,2.96]
Williford 1991	54/192	57/203		3.65%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.5%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.4%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.48%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.16%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.17%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.44%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		0.37%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.27%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.62%	0.57[0.25,1.29]
Subtotal (95% CI)	**11740**	**11270**		**98.32%**	**0.9[0.84,0.97]**
Total events: 1559 (Experimental), 1721 (Control)					
Heterogeneity: Tau^2=0.01; Chi^2=135.62, df=128(P=0.31); I^2=5.62%					
Test for overall effect: Z=2.89(P=0)					
Total (95% CI)	**11940**	**11473**		**100%**	**0.91[0.85,0.97]**
Total events: 1580 (Experimental), 1743 (Control)					
Heterogeneity: Tau^2=0; Chi^2=137.11, df=132(P=0.36); I^2=3.73%					
Test for overall effect: Z=2.88(P=0)					
Test for subgroup differences: Chi^2=0.59, df=1 (P=0.74), I^2=0%					

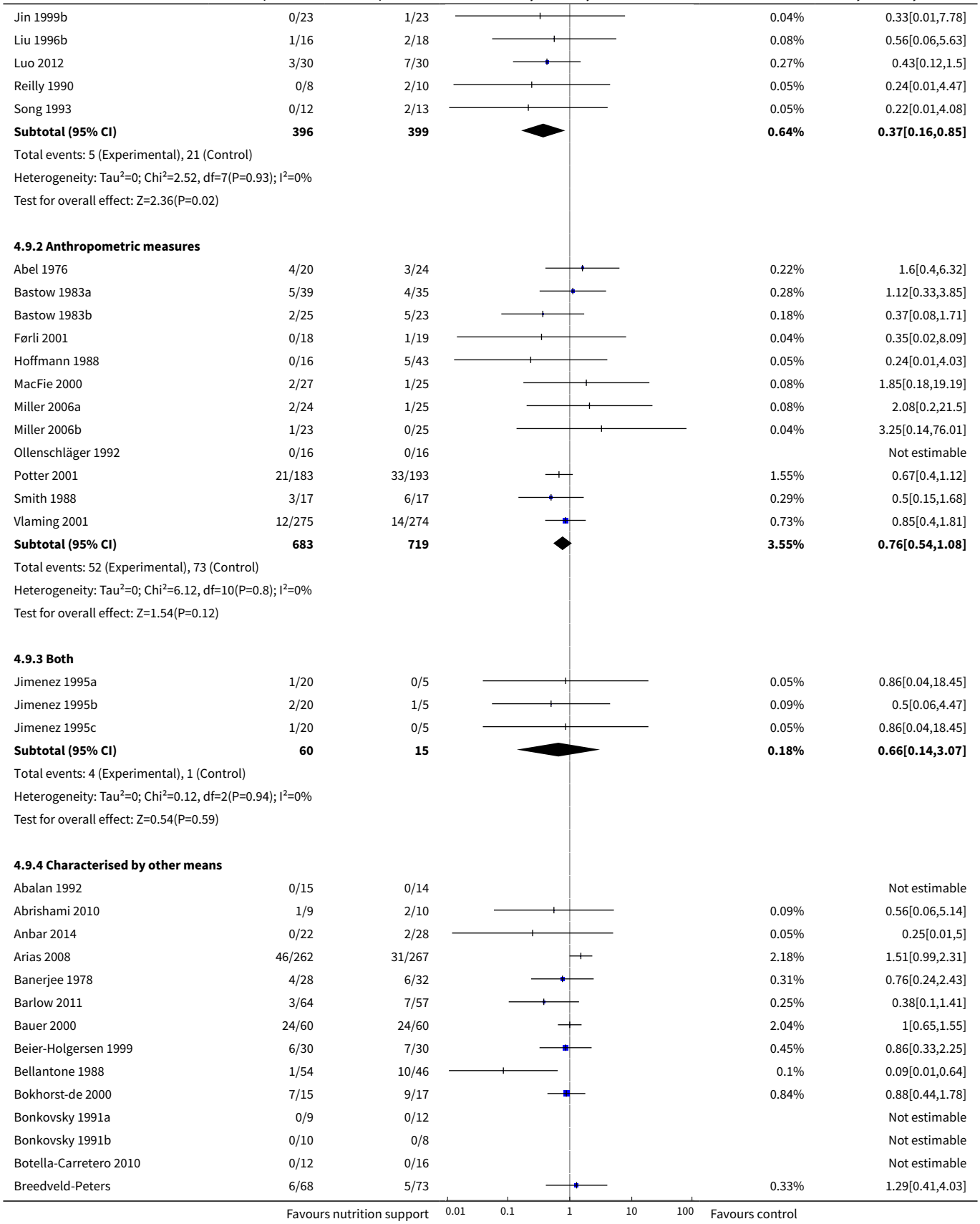


Favours nutrition support — Favours control

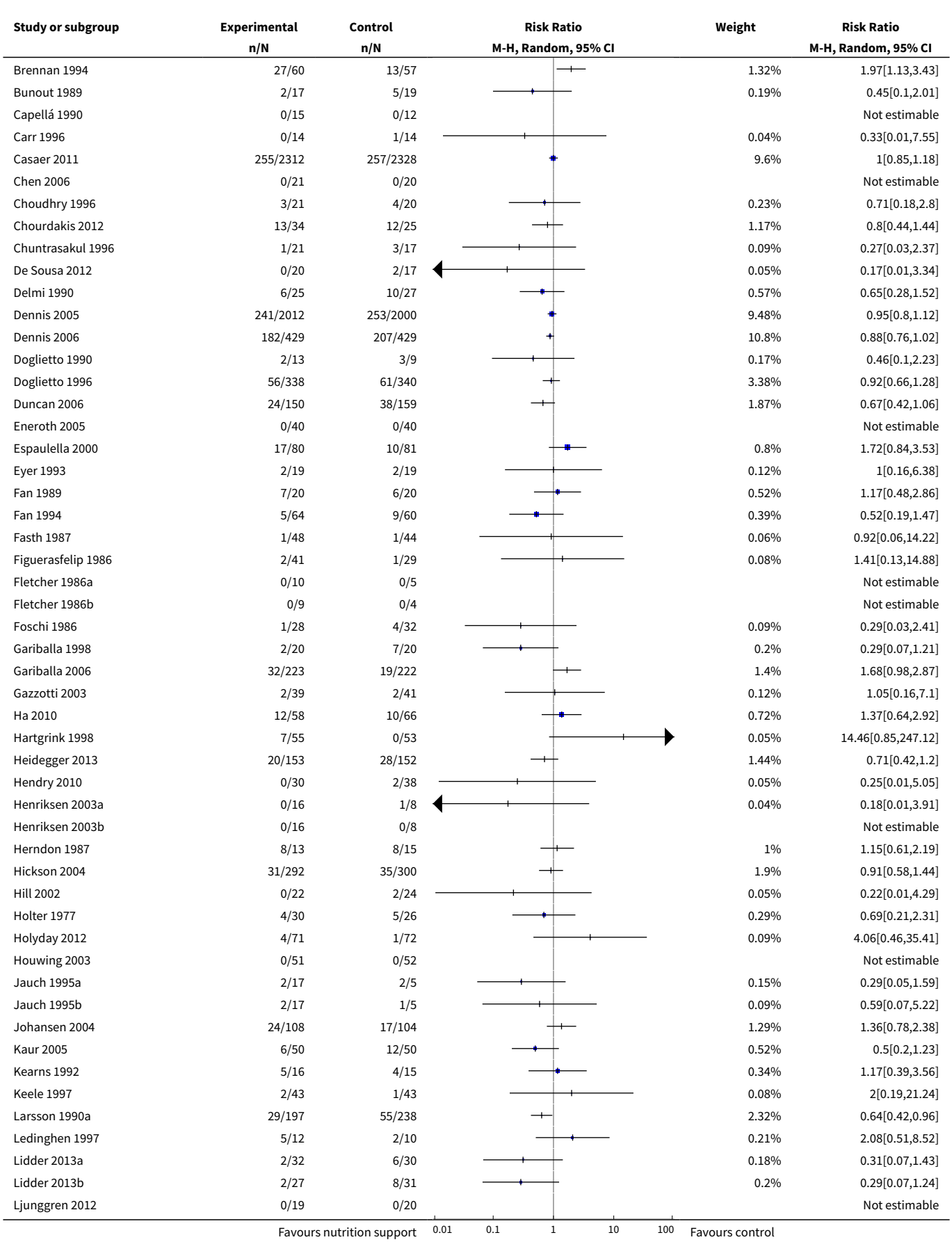
Analysis 4.9. Comparison 4 Serious adverse event maximum follow-up, Outcome 9 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
4.9.1 Biomarkers					
Chen 1995a	0/8	1/8		0.05%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.05%	1.64[0.08,34.28]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Jin 1999a	0/23	0/23			Not estimable

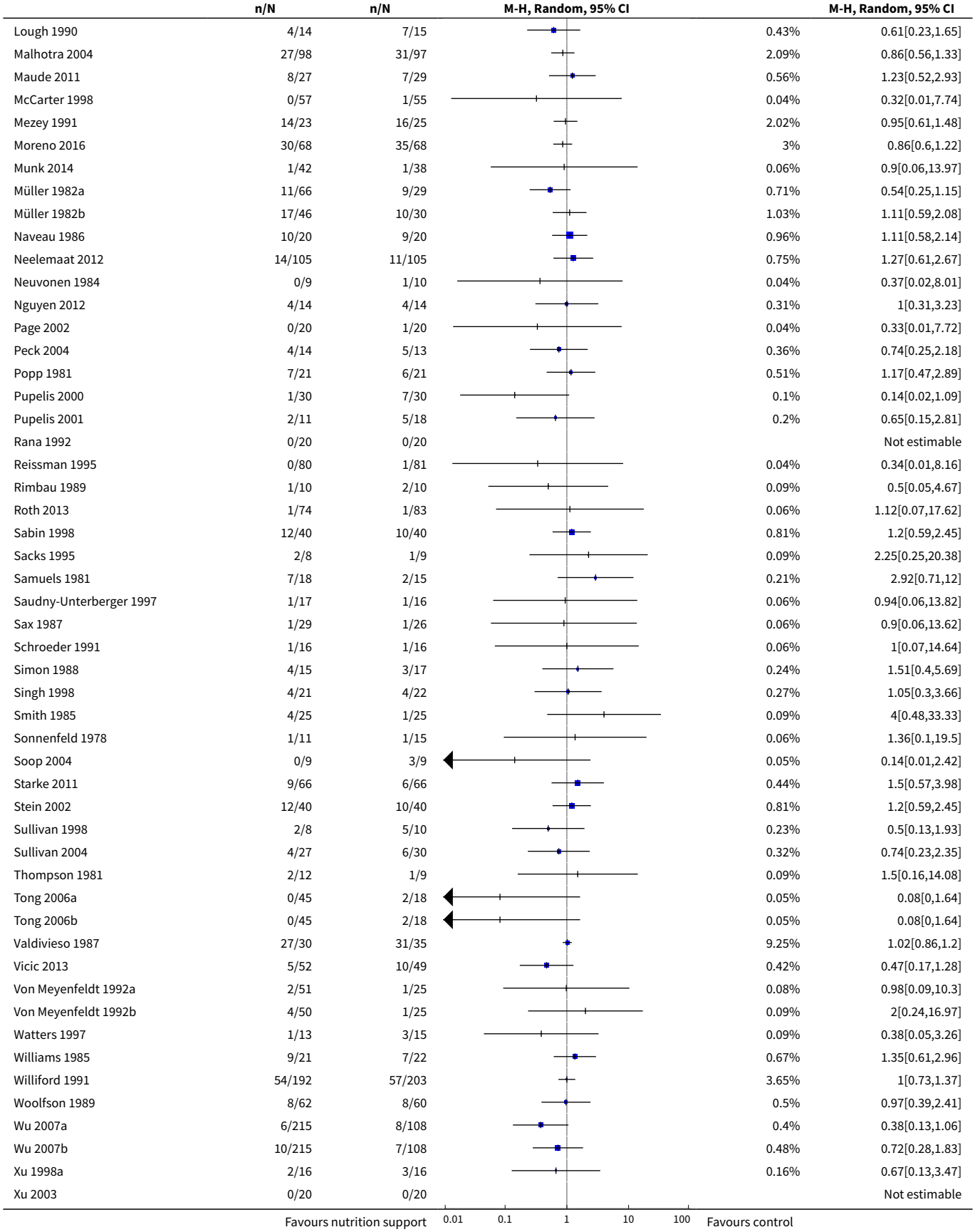
Favours nutrition support — Favours control



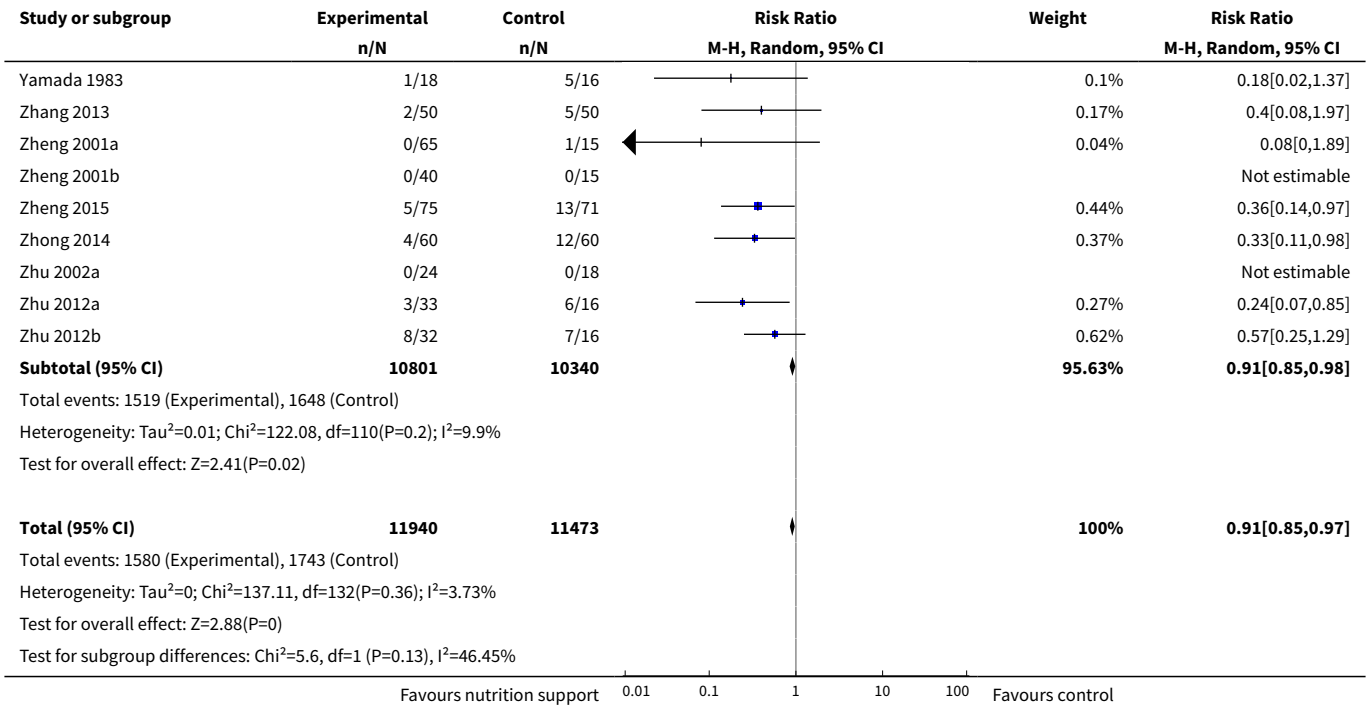
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Jin 1999b	0/23	1/23		0.04%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.08%	0.56[0.06,5.63]
Luo 2012	3/30	7/30		0.27%	0.43[0.12,1.5]
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Song 1993	0/12	2/13		0.05%	0.22[0.01,4.08]
Subtotal (95% CI)	**396**	**399**		**0.64%**	**0.37[0.16,0.85]**
Total events: 5 (Experimental), 21 (Control)					
Heterogeneity: Tau²=0; Chi²=2.52, df=7(P=0.93); I²=0%					
Test for overall effect: Z=2.36(P=0.02)					
4.9.2 Anthropometric measures					
Abel 1976	4/20	3/24		0.22%	1.6[0.4,6.32]
Bastow 1983a	5/39	4/35		0.28%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.18%	0.37[0.08,1.71]
Førli 2001	0/18	1/19		0.04%	0.35[0.02,8.09]
Hoffmann 1988	0/16	5/43		0.05%	0.24[0.01,4.03]
MacFie 2000	2/27	1/25		0.08%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.08%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Ollenschläger 1992	0/16	0/16			Not estimable
Potter 2001	21/183	33/193		1.55%	0.67[0.4,1.12]
Smith 1988	3/17	6/17		0.29%	0.5[0.15,1.68]
Vlaming 2001	12/275	14/274		0.73%	0.85[0.4,1.81]
Subtotal (95% CI)	**683**	**719**		**3.55%**	**0.76[0.54,1.08]**
Total events: 52 (Experimental), 73 (Control)					
Heterogeneity: Tau²=0; Chi²=6.12, df=10(P=0.8); I²=0%					
Test for overall effect: Z=1.54(P=0.12)					
4.9.3 Both					
Jimenez 1995a	1/20	0/5		0.05%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.09%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.05%	0.86[0.04,18.45]
Subtotal (95% CI)	**60**	**15**		**0.18%**	**0.66[0.14,3.07]**
Total events: 4 (Experimental), 1 (Control)					
Heterogeneity: Tau²=0; Chi²=0.12, df=2(P=0.94); I²=0%					
Test for overall effect: Z=0.54(P=0.59)					
4.9.4 Characterised by other means					
Abalan 1992	0/15	0/14			Not estimable
Abrishami 2010	1/9	2/10		0.09%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Arias 2008	46/262	31/267		2.18%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.31%	0.76[0.24,2.43]
Barlow 2011	3/64	7/57		0.25%	0.38[0.1,1.41]
Bauer 2000	24/60	24/60		2.04%	1[0.65,1.55]
Beier-Holgersen 1999	6/30	7/30		0.45%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		0.84%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.33%	1.29[0.41,4.03]



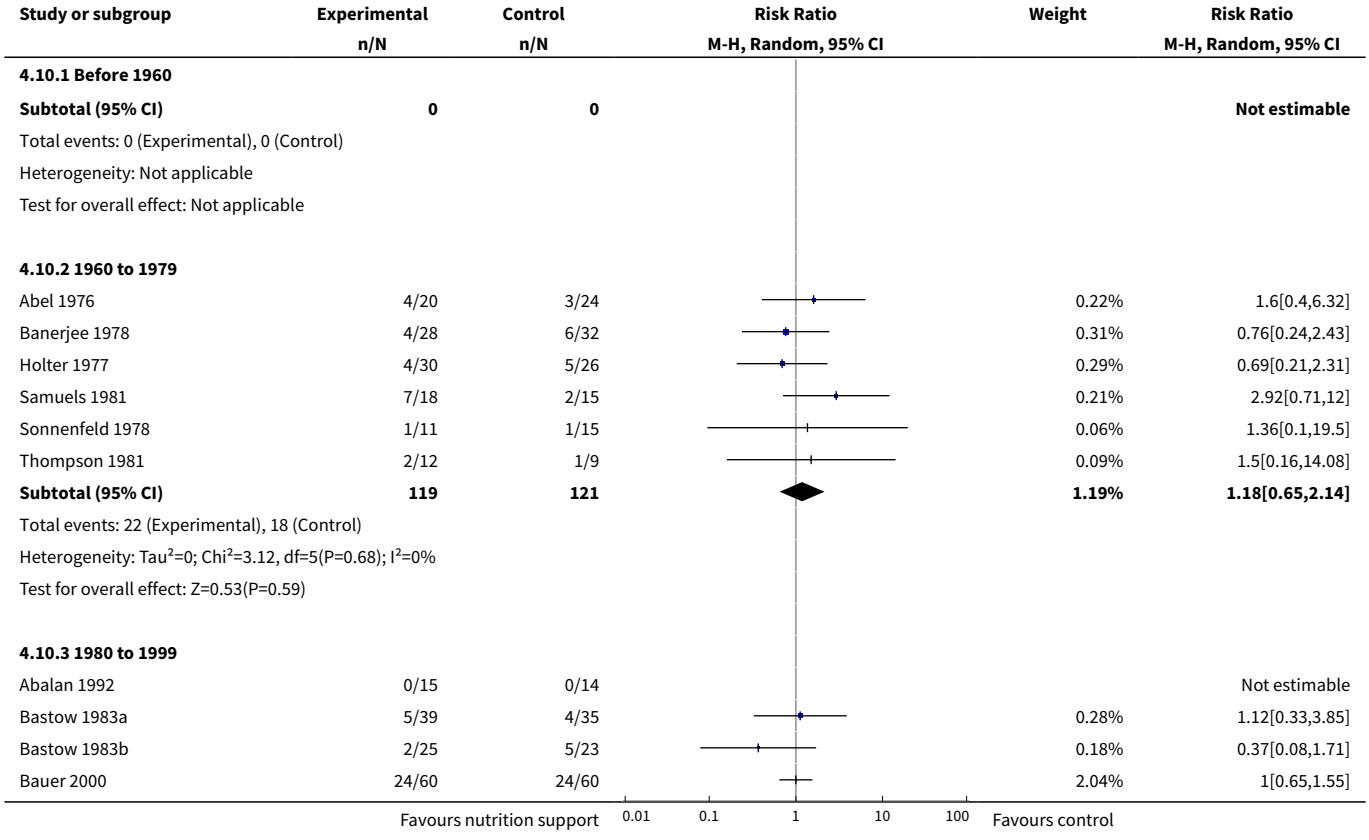
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Brennan 1994	27/60	13/57		1.32%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.19%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		9.6%	1[0.85,1.18]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.23%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		1.17%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.57%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		9.48%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		10.8%	0.88[0.76,1.02]
Doglietto 1990	2/13	3/9		0.17%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		3.38%	0.92[0.66,1.28]
Duncan 2006	24/150	38/159		1.87%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.8%	1.72[0.84,3.53]
Eyer 1993	2/19	2/19		0.12%	1[0.16,6.38]
Fan 1989	7/20	6/20		0.52%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.39%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.06%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.08%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.09%	0.29[0.03,2.41]
Gariballa 1998	2/20	7/20		0.2%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.4%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.12%	1.05[0.16,7.1]
Ha 2010	12/58	10/66		0.72%	1.37[0.64,2.92]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Heidegger 2013	20/153	28/152		1.44%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.9%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Holter 1977	4/30	5/26		0.29%	0.69[0.21,2.31]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.15%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.09%	0.59[0.07,5.22]
Johansen 2004	24/108	17/104		1.29%	1.36[0.78,2.38]
Kaur 2005	6/50	12/50		0.52%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.34%	1.17[0.39,3.56]
Keele 1997	2/43	1/43		0.08%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		2.32%	0.64[0.42,0.96]
Ledinghen 1997	5/12	2/10		0.21%	2.08[0.51,8.52]
Lidder 2013a	2/32	6/30		0.18%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.2%	0.29[0.07,1.24]
Ljunggren 2012	0/19	0/20			Not estimable

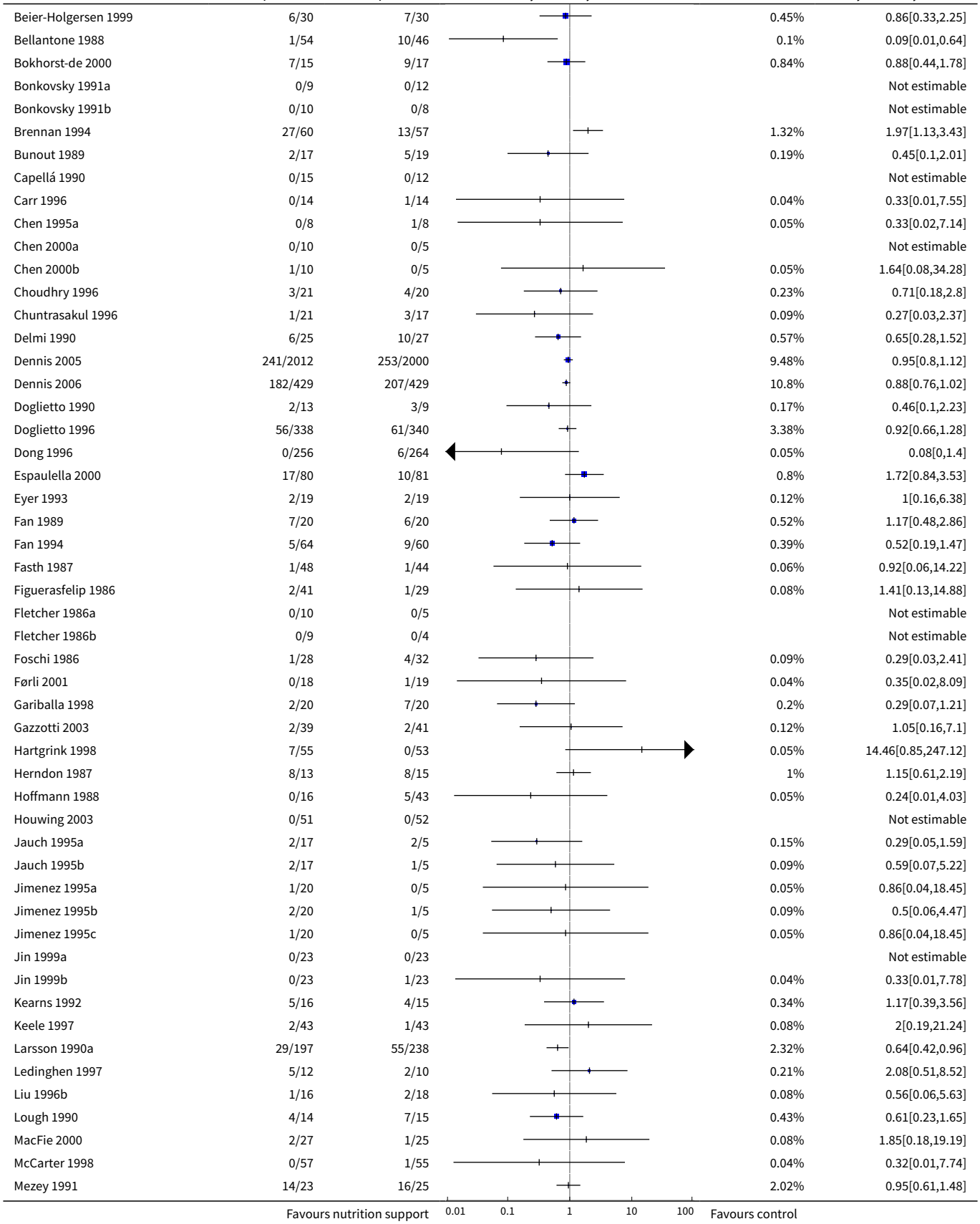


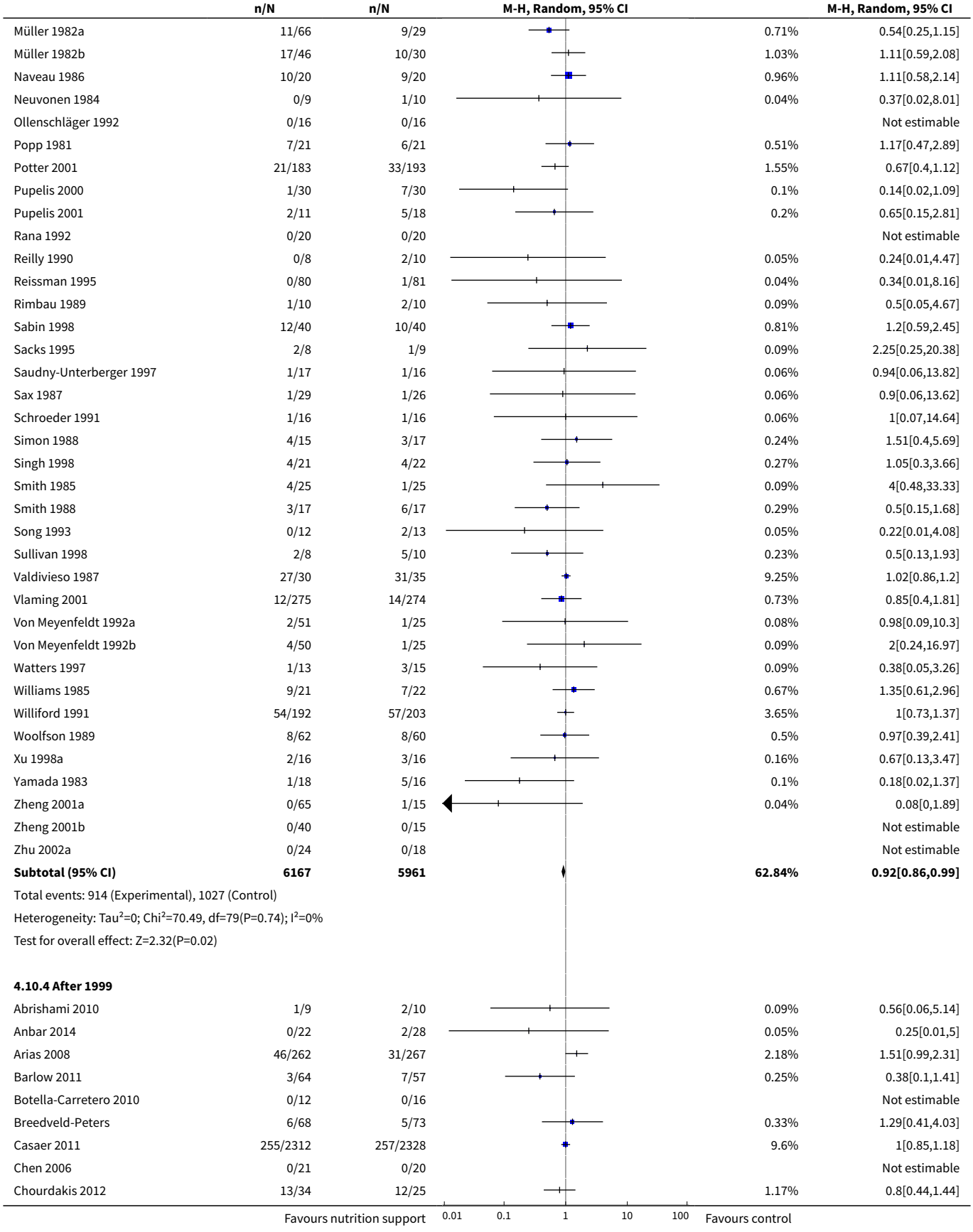
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Lough 1990	4/14	7/15		0.43%	0.61[0.23,1.65]
Malhotra 2004	27/98	31/97		2.09%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.04%	0.32[0.01,7.74]
Mezey 1991	14/23	16/25		2.02%	0.95[0.61,1.48]
Moreno 2016	30/68	35/68		3%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.06%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		0.71%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.03%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		0.96%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.75%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.04%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.31%	1[0.31,3.23]
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		0.36%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.51%	1.17[0.47,2.89]
Pupelis 2000	1/30	7/30		0.1%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.2%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.09%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		0.81%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.21%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.06%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Simon 1988	4/15	3/17		0.24%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.06%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.05%	0.14[0.01,2.42]
Starke 2011	9/66	6/66		0.44%	1.5[0.57,3.98]
Stein 2002	12/40	10/40		0.81%	1.2[0.59,2.45]
Sullivan 1998	2/8	5/10		0.23%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.32%	0.74[0.23,2.35]
Thompson 1981	2/12	1/9		0.09%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		9.25%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.42%	0.47[0.17,1.28]
Von Meyenfeldt 1992a	2/51	1/25		0.08%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Williams 1985	9/21	7/22		0.67%	1.35[0.61,2.96]
Williford 1991	54/192	57/203		3.65%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.5%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.4%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.48%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.16%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable



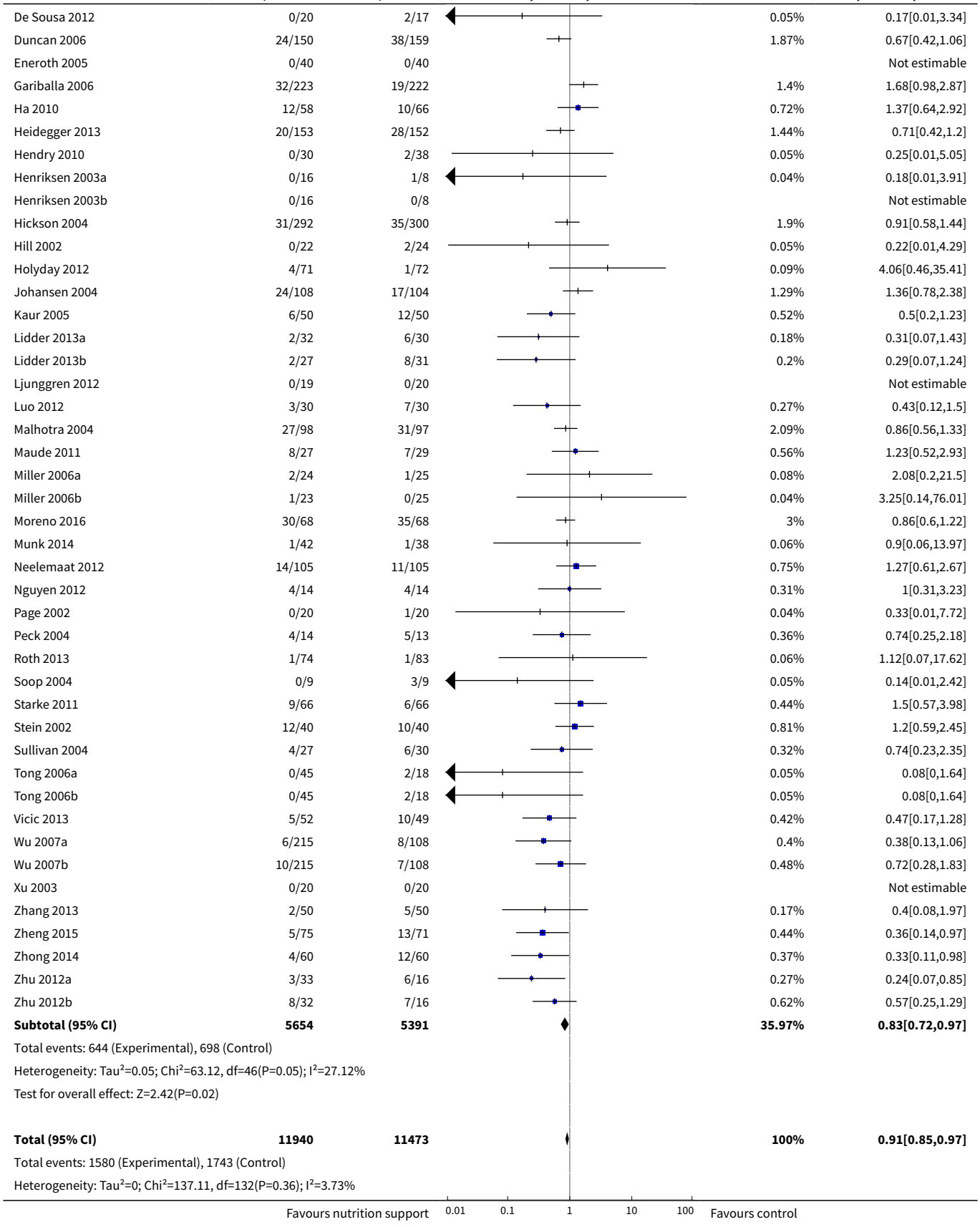
Analysis 4.10. Comparison 4 Serious adverse event maximum follow-up, Outcome 10 Serious adverse events - randomisation year.







Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Müller 1982a	11/66	9/29		0.71%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.03%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		0.96%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.04%	0.37[0.02,8.01]
Ollenschläger 1992	0/16	0/16			Not estimable
Popp 1981	7/21	6/21		0.51%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.55%	0.67[0.4,1.12]
Pupelis 2000	1/30	7/30		0.1%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.2%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.09%	0.5[0.05,4.67]
Sabin 1998	12/40	10/40		0.81%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.06%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Simon 1988	4/15	3/17		0.24%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.29%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.05%	0.22[0.01,4.08]
Sullivan 1998	2/8	5/10		0.23%	0.5[0.13,1.93]
Valdivieso 1987	27/30	31/35		9.25%	1.02[0.86,1.2]
Vlaming 2001	12/275	14/274		0.73%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.08%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Williams 1985	9/21	7/22		0.67%	1.35[0.61,2.96]
Williford 1991	54/192	57/203		3.65%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.5%	0.97[0.39,2.41]
Xu 1998a	2/16	3/16		0.16%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**6167**	**5961**		**62.84%**	**0.92[0.86,0.99]**
Total events: 914 (Experimental), 1027 (Control)					
Heterogeneity: Tau^2=0; Chi^2=70.49, df=79(P=0.74); I^2=0%					
Test for overall effect: Z=2.32(P=0.02)					
4.10.4 After 1999					
Abrishami 2010	1/9	2/10		0.09%	0.56[0.06,5.14]
Anbar 2014	0/22	2/28		0.05%	0.25[0.01,5]
Arias 2008	46/262	31/267		2.18%	1.51[0.99,2.31]
Barlow 2011	3/64	7/57		0.25%	0.38[0.1,1.41]
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.33%	1.29[0.41,4.03]
Casaer 2011	255/2312	257/2328		9.6%	1[0.85,1.18]
Chen 2006	0/21	0/20			Not estimable
Chourdakis 2012	13/34	12/25		1.17%	0.8[0.44,1.44]



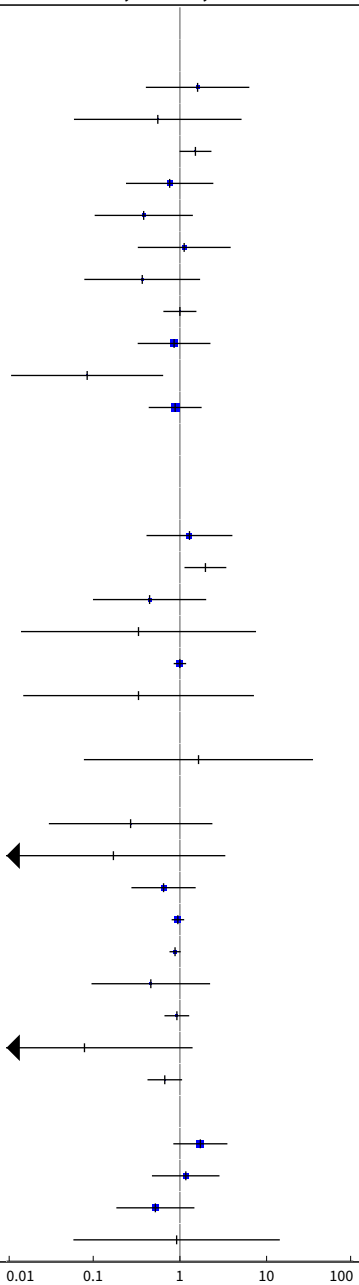
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Duncan 2006	24/150	38/159		1.87%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Gariballa 2006	32/223	19/222		1.4%	1.68[0.98,2.87]
Ha 2010	12/58	10/66		0.72%	1.37[0.64,2.92]
Heidegger 2013	20/153	28/152		1.44%	0.71[0.42,1.2]
Hendry 2010	0/30	2/38		0.05%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.04%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Hickson 2004	31/292	35/300		1.9%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.05%	0.22[0.01,4.29]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Johansen 2004	24/108	17/104		1.29%	1.36[0.78,2.38]
Kaur 2005	6/50	12/50		0.52%	0.5[0.2,1.23]
Lidder 2013a	2/32	6/30		0.18%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.2%	0.29[0.07,1.24]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		0.27%	0.43[0.12,1.5]
Malhotra 2004	27/98	31/97		2.09%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		0.56%	1.23[0.52,2.93]
Miller 2006a	2/24	1/25		0.08%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		3%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.06%	0.9[0.06,13.97]
Neelemaat 2012	14/105	11/105		0.75%	1.27[0.61,2.67]
Nguyen 2012	4/14	4/14		0.31%	1[0.31,3.23]
Page 2002	0/20	1/20		0.04%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		0.36%	0.74[0.25,2.18]
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Soop 2004	0/9	3/9		0.05%	0.14[0.01,2.42]
Starke 2011	9/66	6/66		0.44%	1.5[0.57,3.98]
Stein 2002	12/40	10/40		0.81%	1.2[0.59,2.45]
Sullivan 2004	4/27	6/30		0.32%	0.74[0.23,2.35]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Vicic 2013	5/52	10/49		0.42%	0.47[0.17,1.28]
Wu 2007a	6/215	8/108		0.4%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.48%	0.72[0.28,1.83]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.17%	0.4[0.08,1.97]
Zheng 2015	5/75	13/71		0.44%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		0.37%	0.33[0.11,0.98]
Zhu 2012a	3/33	6/16		0.27%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.62%	0.57[0.25,1.29]
Subtotal (95% CI)	**5654**	**5391**		**35.97%**	**0.83[0.72,0.97]**
Total events: 644 (Experimental), 698 (Control)					
Heterogeneity: Tau^2=0.05; Chi^2=63.12, df=46(P=0.05); I^2=27.12%					
Test for overall effect: Z=2.42(P=0.02)					
Total (95% CI)	**11940**	**11473**		**100%**	**0.91[0.85,0.97]**
Total events: 1580 (Experimental), 1743 (Control)					
Heterogeneity: Tau^2=0; Chi^2=137.11, df=132(P=0.36); I^2=3.73%					

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=2.88(P=0)					
Test for subgroup differences: Chi²=2.16, df=1 (P=0.34), I²=7.37%					

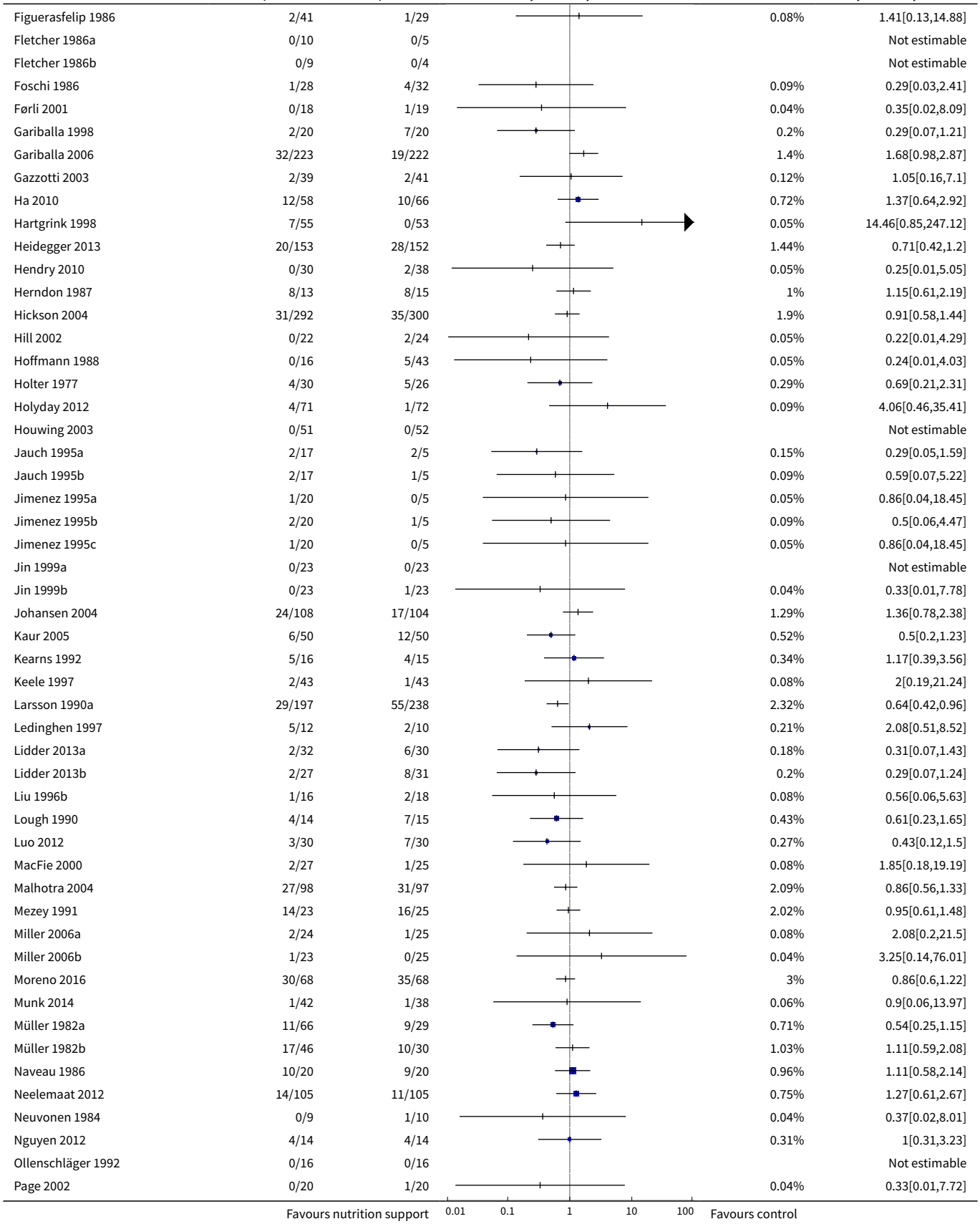
Favours nutrition support — Favours control

Analysis 4.11. Comparison 4 Serious adverse event maximum follow-up, Outcome 11 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

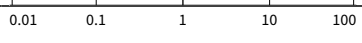
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
4.11.1 Three days or more					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.22%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.09%	0.56[0.06,5.14]
Arias 2008	46/262	31/267		2.18%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.31%	0.76[0.24,2.43]
Barlow 2011	3/64	7/57		0.25%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.28%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.18%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		2.04%	1[0.65,1.55]
Beier-Holgersen 1999	6/30	7/30		0.45%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.1%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		0.84%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.33%	1.29[0.41,4.03]
Brennan 1994	27/60	13/57		1.32%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.19%	0.45[0.1,2.01]
Carr 1996	0/14	1/14		0.04%	0.33[0.01,7.55]
Casaer 2011	255/2312	257/2328		9.6%	1[0.85,1.18]
Chen 1995a	0/8	1/8		0.05%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.05%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	3/17		0.09%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.05%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.57%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		9.48%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		10.8%	0.88[0.76,1.02]
Doglietto 1990	2/13	3/9		0.17%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		3.38%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.05%	0.08[0,1.4]
Duncan 2006	24/150	38/159		1.87%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.8%	1.72[0.84,3.53]
Fan 1989	7/20	6/20		0.52%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.39%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.06%	0.92[0.06,14.22]



Favours nutrition support — Favours control

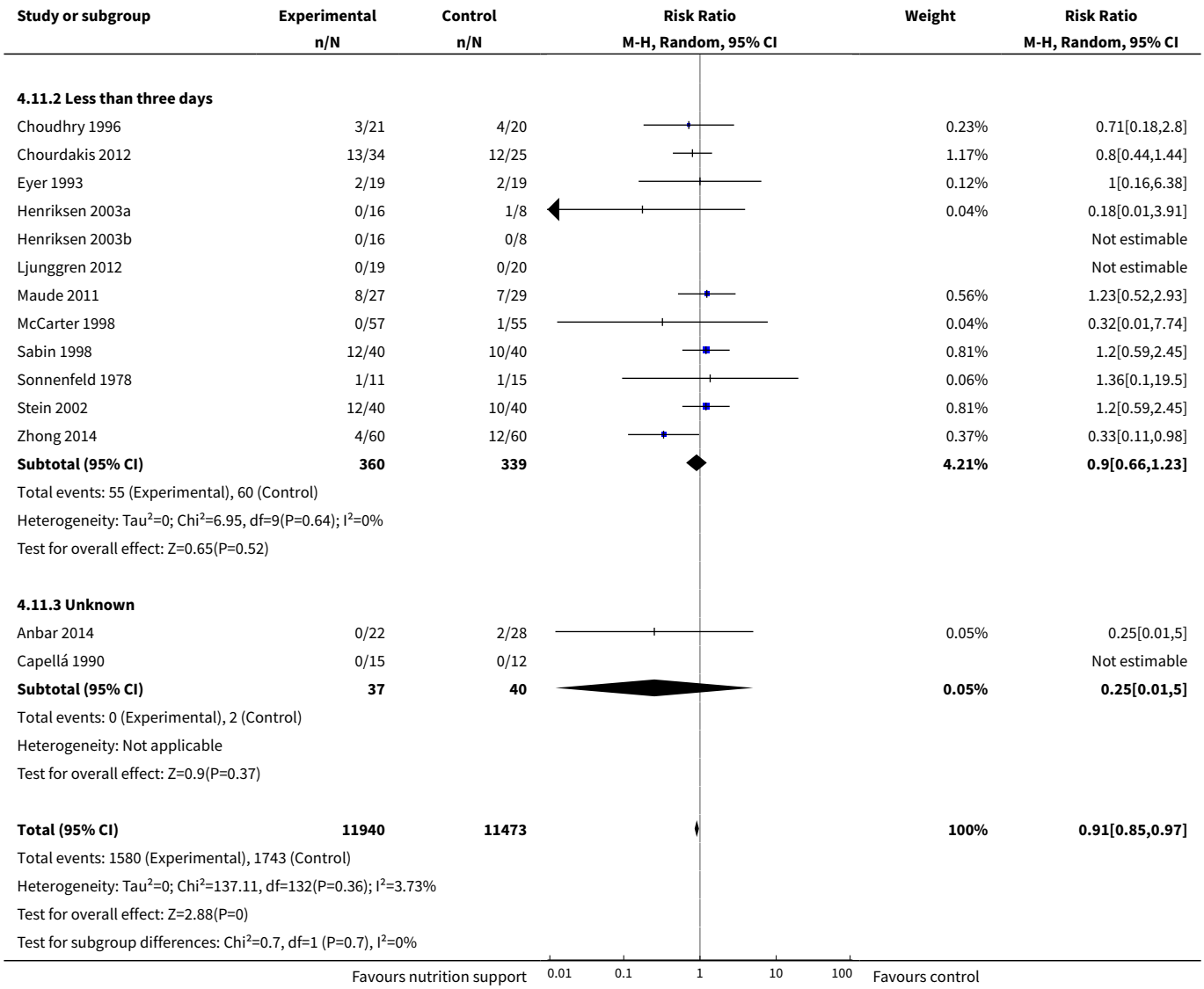


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Peck 2004	4/14	5/13		0.36%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.51%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.55%	0.67[0.4,1.12]
Pupelis 2000	1/30	7/30		0.1%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.2%	0.65[0.15,2.81]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.05%	0.24[0.01,4.47]
Reissman 1995	0/80	1/81		0.04%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.09%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.21%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.06%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Simon 1988	4/15	3/17		0.24%	1.51[0.4,5.69]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.29%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.05%	0.22[0.01,4.08]
Soop 2004	0/9	3/9		0.05%	0.14[0.01,2.42]
Starke 2011	9/66	6/66		0.44%	1.5[0.57,3.98]
Sullivan 1998	2/8	5/10		0.23%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.32%	0.74[0.23,2.35]
Thompson 1981	2/12	1/9		0.09%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.05%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.05%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		9.25%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.42%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.73%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.08%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.09%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.09%	0.38[0.05,3.26]
Williams 1985	9/21	7/22		0.67%	1.35[0.61,2.96]
Williford 1991	54/192	57/203		3.65%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.5%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.4%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.48%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.16%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.1%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.17%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.04%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.44%	0.36[0.14,0.97]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	6/16		0.27%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.62%	0.57[0.25,1.29]
Subtotal (95% CI)	**11543**	**11094**		**95.75%**	**0.9[0.84,0.97]**
Total events: 1525 (Experimental), 1681 (Control)					
Heterogeneity: Tau²=0.01; Chi²=129.41, df=121(P=0.28); I²=6.5%					
Test for overall effect: Z=2.78(P=0.01)					

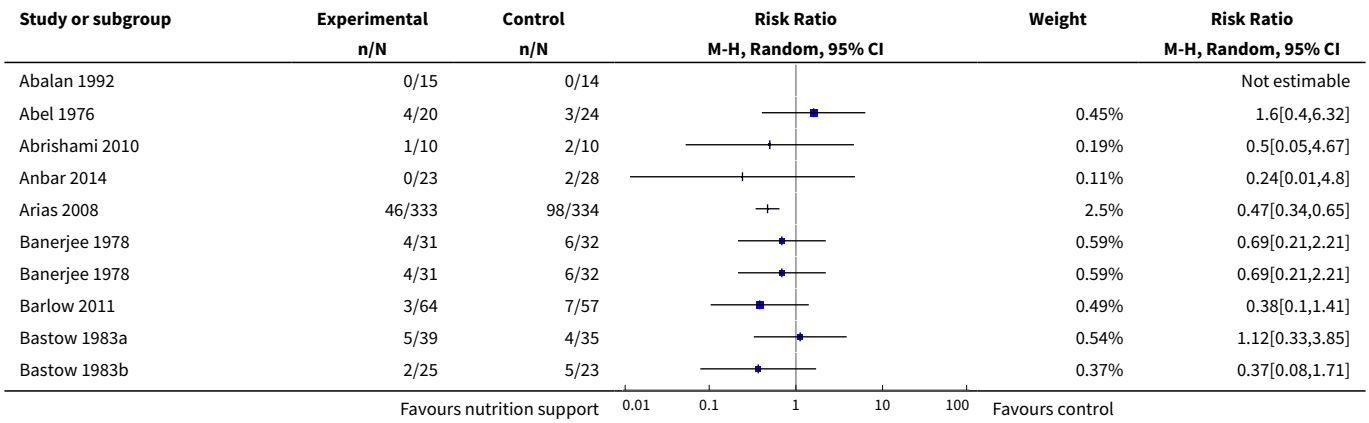


Favours nutrition support

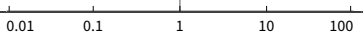
Favours control



Analysis 4.12. Comparison 4 Serious adverse event maximum follow-up, Outcome 12 Serious adverse events - 'best-worst case' scenario.

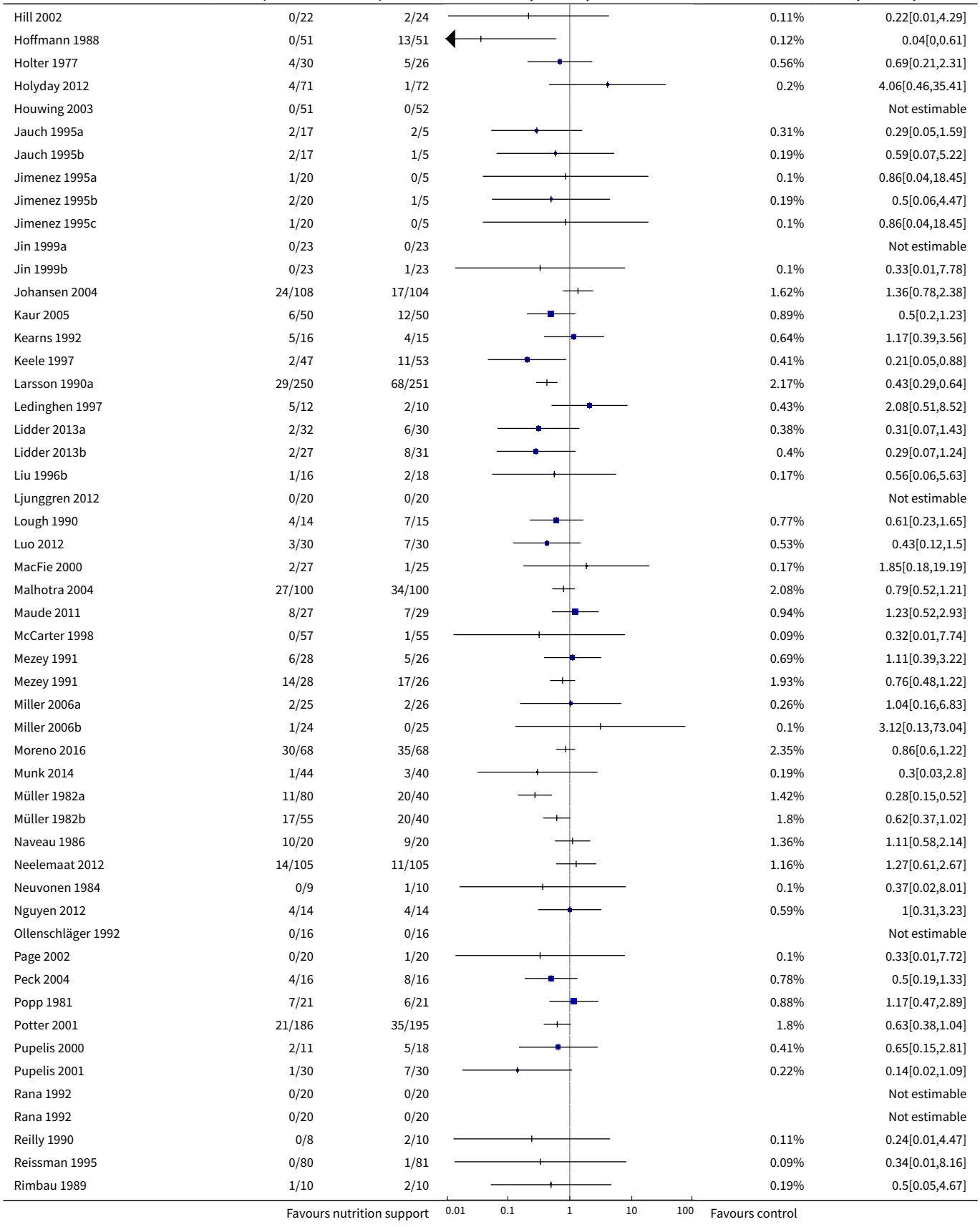


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bauer 2000	24/60	24/60		2.02%	1[0.65,1.55]
Beier-Holgersen 1999	6/30	7/30		0.8%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.22%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		1.25%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/30	14/30		0.12%	0.03[0,0.55]
Breedveld-Peters	6/73	11/79		0.83%	0.59[0.23,1.51]
Brennan 1994	27/60	13/57		1.64%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.38%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/15	2/15		0.11%	0.2[0.01,3.85]
Carr 1996	0/15	2/15		0.11%	0.2[0.01,3.85]
Casaer 2011	255/2312	257/2328		3.07%	1[0.85,1.18]
Chen 1995a	0/8	1/8		0.1%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.1%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.45%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		1.53%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.2%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.11%	0.17[0.01,3.34]
Delmi 1990	6/27	15/32		1.06%	0.47[0.21,1.05]
Dennis 2005	241/2016	260/2007		3.06%	0.92[0.78,1.09]
Dennis 2006	182/429	207/430		3.11%	0.88[0.76,1.02]
Doglietto 1990	2/13	10/16		0.48%	0.25[0.07,0.93]
Doglietto 1996	56/338	61/340		2.44%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.11%	0.08[0,1.4]
Duncan 2006	24/153	44/165		1.99%	0.59[0.38,0.92]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/85	15/86		1.43%	1.15[0.61,2.14]
Eyer 1993	2/26	9/26		0.42%	0.22[0.05,0.93]
Fan 1989	5/75	24/75		0.88%	0.21[0.08,0.52]
Fan 1994	7/20	6/20		0.89%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.13%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.17%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.2%	0.29[0.03,2.41]
Førli 2001	0/20	4/22		0.12%	0.12[0.01,2.13]
Gariballa 1998	2/21	8/21		0.42%	0.25[0.06,1.04]
Gariballa 2006	32/223	19/222		1.69%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.25%	1.05[0.16,7.1]
Ha 2010	12/84	30/86		1.51%	0.41[0.23,0.74]
Hartgrink 1998	7/70	17/70		1.02%	0.41[0.18,0.93]
Heidegger 2013	20/153	28/152		1.71%	0.71[0.42,1.2]
Hendry 2010	0/38	2/38		0.11%	0.2[0.01,4.03]
Henriksen 2003a	0/16	1/8		0.1%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.4%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.96%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.11%	0.22[0.01,4.29]



Favours nutrition support

Favours control



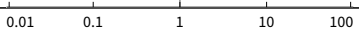
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hill 2002	0/22	2/24		0.11%	0.22[0.01,4.29]
Hoffmann 1988	0/51	13/51		0.12%	0.04[0,0.61]
Holter 1977	4/30	5/26		0.56%	0.69[0.21,2.31]
Holyday 2012	4/71	1/72		0.2%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.31%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.19%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.1%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.19%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.1%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.1%	0.33[0.01,7.78]
Johansen 2004	24/108	17/104		1.62%	1.36[0.78,2.38]
Kaur 2005	6/50	12/50		0.89%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.64%	1.17[0.39,3.56]
Keele 1997	2/47	11/53		0.41%	0.21[0.05,0.88]
Larsson 1990a	29/250	68/251		2.17%	0.43[0.29,0.64]
Ledinghen 1997	5/12	2/10		0.43%	2.08[0.51,8.52]
Lidder 2013a	2/32	6/30		0.38%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.4%	0.29[0.07,1.24]
Liu 1996b	1/16	2/18		0.17%	0.56[0.06,5.63]
Ljunggren 2012	0/20	0/20			Not estimable
Lough 1990	4/14	7/15		0.77%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.53%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.17%	1.85[0.18,19.19]
Malhotra 2004	27/100	34/100		2.08%	0.79[0.52,1.21]
Maude 2011	8/27	7/29		0.94%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.09%	0.32[0.01,7.74]
Mezey 1991	6/28	5/26		0.69%	1.11[0.39,3.22]
Mezey 1991	14/28	17/26		1.93%	0.76[0.48,1.22]
Miller 2006a	2/25	2/26		0.26%	1.04[0.16,6.83]
Miller 2006b	1/24	0/25		0.1%	3.12[0.13,73.04]
Moreno 2016	30/68	35/68		2.35%	0.86[0.6,1.22]
Munk 2014	1/44	3/40		0.19%	0.3[0.03,2.8]
Müller 1982a	11/80	20/40		1.42%	0.28[0.15,0.52]
Müller 1982b	17/55	20/40		1.8%	0.62[0.37,1.02]
Naveau 1986	10/20	9/20		1.36%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		1.16%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.1%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.59%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.1%	0.33[0.01,7.72]
Peck 2004	4/16	8/16		0.78%	0.5[0.19,1.33]
Popp 1981	7/21	6/21		0.88%	1.17[0.47,2.89]
Potter 2001	21/186	35/195		1.8%	0.63[0.38,1.04]
Pupelis 2000	2/11	5/18		0.41%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.22%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]
Reissman 1995	0/80	1/81		0.09%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.19%	0.5[0.05,4.67]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Sabin 1998	12/40	10/40		1.22%	1.2[0.59,2.45]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]
Samuels 1981	7/20	2/15		0.42%	2.63[0.63,10.88]
Saudny-Unterberger 1997	1/17	1/16		0.13%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.13%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.13%	1[0.07,14.64]
Simon 1988	4/16	4/18		0.56%	1.13[0.34,3.78]
Singh 1998	4/21	4/22		0.53%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.2%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.56%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Sonnenfeld 1978	1/11	1/15		0.13%	1.36[0.1,19.5]
Soop 2004	0/10	2/10		0.11%	0.2[0.01,3.7]
Starke 2011	9/67	7/67		0.85%	1.29[0.51,3.25]
Stein 2002	12/40	10/40		1.22%	1.2[0.59,2.45]
Sullivan 1998	2/8	5/10		0.46%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.6%	0.74[0.23,2.35]
Thompson 1981	2/12	1/9		0.18%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.11%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.11%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		3.05%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.76%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.14%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.17%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.2%	2[0.24,16.97]
Watters 1997	1/15	4/16		0.21%	0.27[0.03,2.12]
Williams 1985	9/21	7/22		1.08%	1.35[0.61,2.96]
Williford 1991	54/231	82/228		2.6%	0.65[0.49,0.87]
Woolfson 1989	8/62	8/60		0.87%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.72%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.84%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.33%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.22%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.35%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.1%	0.08[0,1.89]
Zheng 2001b	0/40	0/15			Not estimable
Zheng 2015	5/75	13/71		0.78%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		0.68%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012a	3/33	22/32		0.65%	0.13[0.04,0.4]
Zhu 2012b	8/32	23/32		1.4%	0.35[0.18,0.66]
Total (95% CI)	**12418**	**11897**		**100%**	**0.72[0.65,0.79]**

Total events: 1590 (Experimental), 2062 (Control)

Heterogeneity: Tau^2=0.08; Chi^2=225.88, df=137(P<0.0001); I^2=39.35%

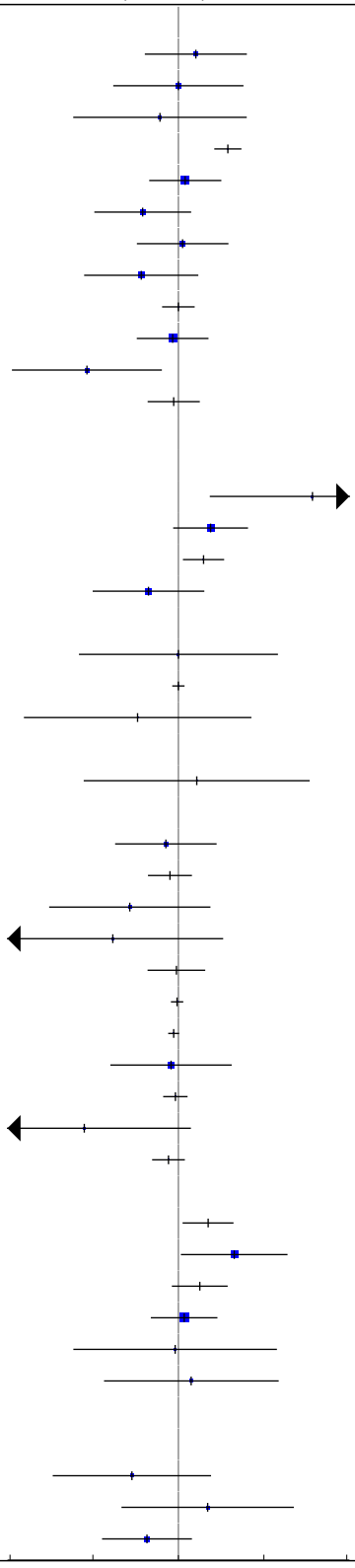
Test for overall effect: Z=6.64(P<0.0001)

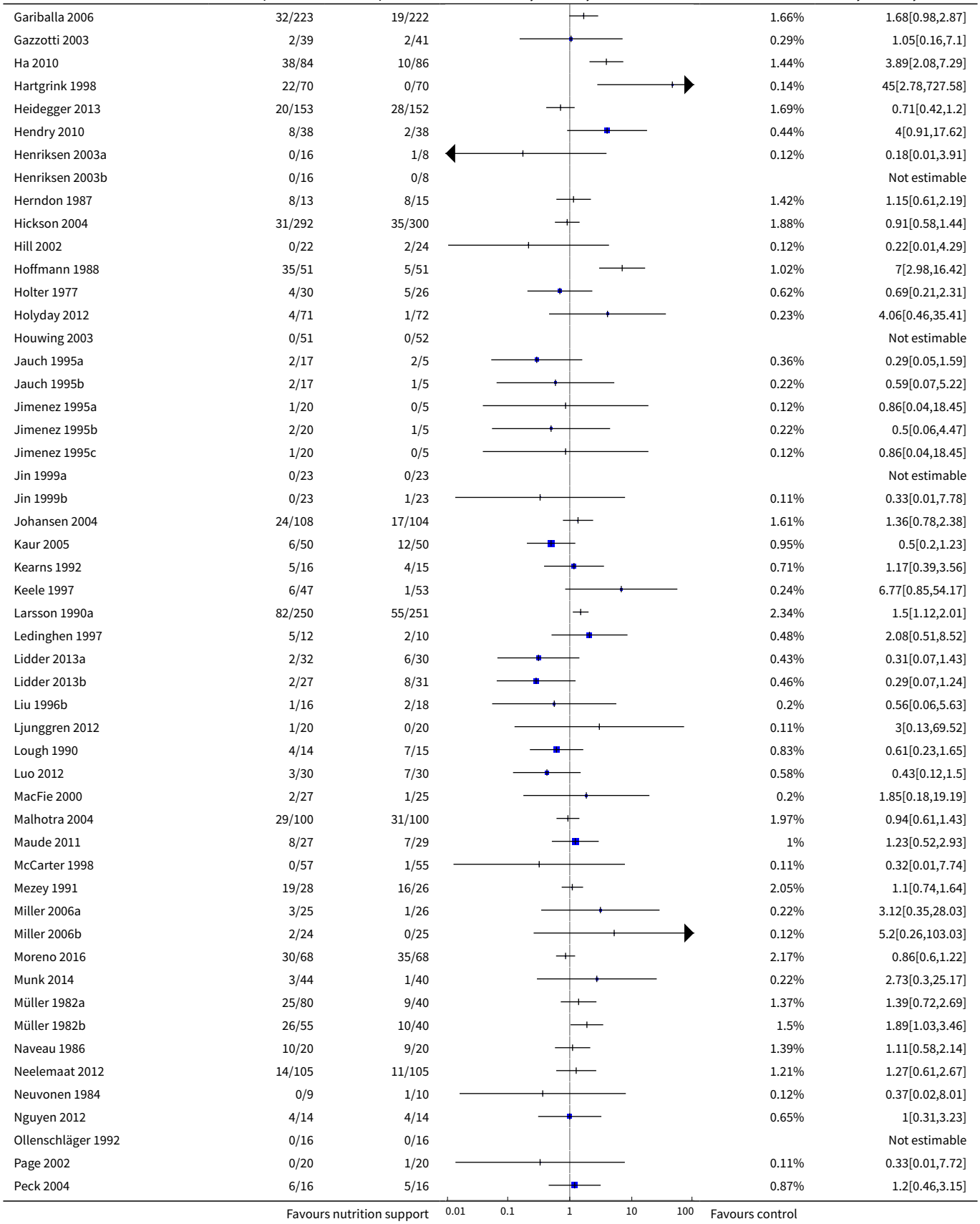


Favours nutrition support — Favours control

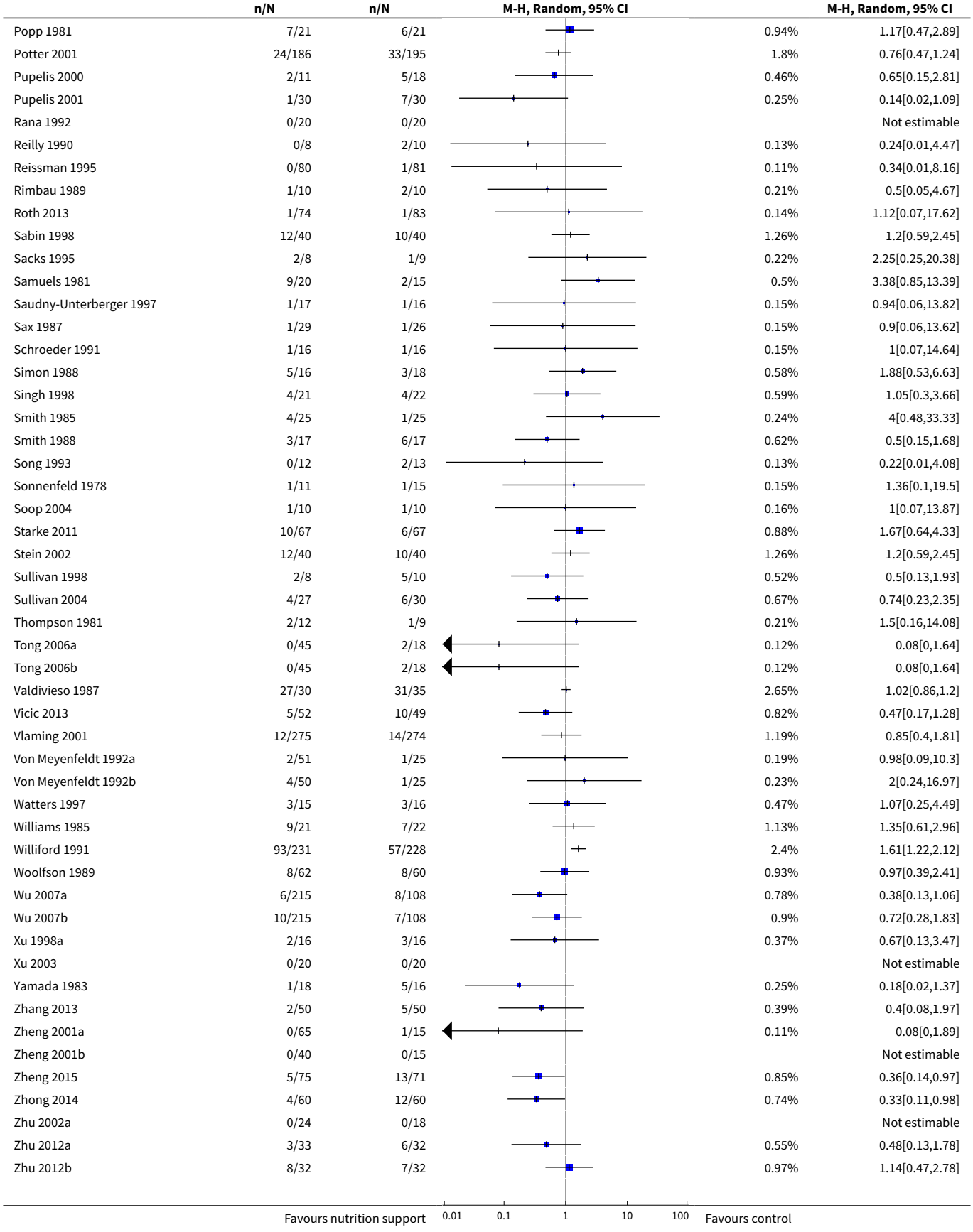
Analysis 4.13. Comparison 4 Serious adverse event maximum follow-up, Outcome 13 Serious adverse events - 'worst-best case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.5%	1.6[0.4,6.32]
Abrishami 2010	2/10	2/10		0.33%	1[0.17,5.77]
Anbar 2014	1/23	2/28		0.2%	0.61[0.06,6.3]
Arias 2008	117/333	31/334		2.14%	3.79[2.63,5.46]
Banerjee 1978	7/31	6/32		0.86%	1.2[0.46,3.18]
Barlow 2011	3/64	7/57		0.55%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.6%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.42%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.93%	1[0.65,1.55]
Beier-Holgersen 1999	6/30	7/30		0.86%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.26%	0.09[0.01,0.64]
Bokhorst-de 2000	7/15	9/17		1.28%	0.88[0.44,1.78]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	18/30	0/30		0.14%	37[2.33,587.26]
Breedveld-Peters	11/73	5/79		0.81%	2.38[0.87,6.52]
Brennan 1994	27/60	13/57		1.62%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.43%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	1/15	1/15		0.15%	1[0.07,14.55]
Casaer 2011	255/2312	257/2328		2.67%	1[0.85,1.18]
Chen 1995a	0/8	1/8		0.12%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.12%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.51%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		1.53%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.23%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.13%	0.17[0.01,3.34]
Delmi 1990	8/27	10/32		1.15%	0.95[0.44,2.06]
Dennis 2005	245/2016	253/2007		2.66%	0.96[0.82,1.14]
Dennis 2006	182/429	207/430		2.7%	0.88[0.76,1.02]
Doglietto 1990	2/13	3/16		0.38%	0.82[0.16,4.2]
Doglietto 1996	56/338	61/340		2.24%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.13%	0.08[0,1.4]
Duncan 2006	27/153	38/165		1.92%	0.77[0.49,1.19]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	22/85	10/86		1.32%	2.23[1.12,4.41]
Eyer 1993	9/26	2/26		0.47%	4.5[1.07,18.85]
Fan 1989	16/75	9/75		1.19%	1.78[0.84,3.77]
Fan 1994	7/20	6/20		0.95%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.15%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.19%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.23%	0.29[0.03,2.41]
Førli 2001	2/20	1/22		0.2%	2.2[0.22,22.45]
Gariballa 1998	3/21	7/21		0.62%	0.43[0.13,1.44]





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Gariballa 2006	32/223	19/222		1.66%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.29%	1.05[0.16,7.1]
Ha 2010	38/84	10/86		1.44%	3.89[2.08,7.29]
Hartgrink 1998	22/70	0/70		0.14%	45[2.78,727.58]
Heidegger 2013	20/153	28/152		1.69%	0.71[0.42,1.2]
Hendry 2010	8/38	2/38		0.44%	4[0.91,17.62]
Henriksen 2003a	0/16	1/8		0.12%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		1.42%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.88%	0.91[0.58,1.44]
Hill 2002	0/22	2/24		0.12%	0.22[0.01,4.29]
Hoffmann 1988	35/51	5/51		1.02%	7[2.98,16.42]
Holter 1977	4/30	5/26		0.62%	0.69[0.21,2.31]
Holyday 2012	4/71	1/72		0.23%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.36%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.22%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.12%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.22%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.12%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.11%	0.33[0.01,7.78]
Johansen 2004	24/108	17/104		1.61%	1.36[0.78,2.38]
Kaur 2005	6/50	12/50		0.95%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.71%	1.17[0.39,3.56]
Keele 1997	6/47	1/53		0.24%	6.77[0.85,54.17]
Larsson 1990a	82/250	55/251		2.34%	1.5[1.12,2.01]
Ledinghen 1997	5/12	2/10		0.48%	2.08[0.51,8.52]
Lidder 2013a	2/32	6/30		0.43%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.46%	0.29[0.07,1.24]
Liu 1996b	1/16	2/18		0.2%	0.56[0.06,5.63]
Ljunggren 2012	1/20	0/20		0.11%	3[0.13,69.52]
Lough 1990	4/14	7/15		0.83%	0.61[0.23,1.65]
Luo 2012	3/30	7/30		0.58%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.2%	1.85[0.18,19.19]
Malhotra 2004	29/100	31/100		1.97%	0.94[0.61,1.43]
Maude 2011	8/27	7/29		1%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.11%	0.32[0.01,7.74]
Mezey 1991	19/28	16/26		2.05%	1.1[0.74,1.64]
Miller 2006a	3/25	1/26		0.22%	3.12[0.35,28.03]
Miller 2006b	2/24	0/25		0.12%	5.2[0.26,103.03]
Moreno 2016	30/68	35/68		2.17%	0.86[0.6,1.22]
Munk 2014	3/44	1/40		0.22%	2.73[0.3,25.17]
Müller 1982a	25/80	9/40		1.37%	1.39[0.72,2.69]
Müller 1982b	26/55	10/40		1.5%	1.89[1.03,3.46]
Naveau 1986	10/20	9/20		1.39%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		1.21%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.12%	0.37[0.02,8.01]
Nguyen 2012	4/14	4/14		0.65%	1[0.31,3.23]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.11%	0.33[0.01,7.72]
Peck 2004	6/16	5/16		0.87%	1.2[0.46,3.15]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total (95% CI)	**12302**	**11780**		**100%**	**1.05[0.94,1.17]**
Total events: 1942 (Experimental), 1741 (Control)					
Heterogeneity: Tau^2=0.11; Chi^2=258.45, df=134(P<0.0001); I^2=48.15%					
Test for overall effect: Z=0.88(P=0.38)					

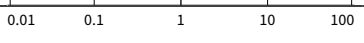
Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 4.14. Comparison 4 Serious adverse event maximum follow-up, Outcome 14 Serious adverse events co-interventions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
4.14.1 Received nutrition support as co-intervention					
Abrishami 2010	1/9	2/10		0.11%	0.56[0.06,5.14]
Banerjee 1978	4/28	6/32		0.32%	0.76[0.24,2.43]
Bauer 2000	24/60	24/60		1.36%	1[0.65,1.55]
Bokhorst-de 2000	7/15	9/17		0.48%	0.88[0.44,1.78]
Casaer 2011	255/2312	257/2328		14.55%	1[0.85,1.18]
Heidegger 2013	20/153	28/152		1.6%	0.71[0.42,1.2]
Hill 2002	0/22	2/24		0.14%	0.22[0.01,4.29]
Luo 2012	3/30	7/30		0.4%	0.43[0.12,1.5]
Mezey 1991	14/23	16/25		0.87%	0.95[0.61,1.48]
Simon 1988	4/15	3/17		0.16%	1.51[0.4,5.69]
Zhu 2012a	3/33	6/16		0.46%	0.24[0.07,0.85]
Zhu 2012b	8/32	7/16		0.53%	0.57[0.25,1.29]
Subtotal (95% CI)	**2732**	**2727**		**20.97%**	**0.93[0.81,1.06]**
Total events: 343 (Experimental), 367 (Control)					
Heterogeneity: Tau^2=0; Chi^2=10.9, df=11(P=0.45); I^2=0%					
Test for overall effect: Z=1.11(P=0.27)					
4.14.2 did not receive nutrition support as co-intervention					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.15%	1.6[0.4,6.32]
Anbar 2014	0/22	2/28		0.13%	0.25[0.01,5]
Arias 2008	46/262	31/267		1.74%	1.51[0.99,2.31]
Barlow 2011	3/64	7/57		0.42%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.24%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.3%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		0.4%	0.86[0.33,2.25]
Bellantone 1988	1/54	10/46		0.61%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.27%	1.29[0.41,4.03]
Brennan 1994	27/60	13/57		0.76%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.27%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Carr 1996	0/14	1/14		0.09%	0.33[0.01,7.55]
Chen 1995a	0/21	0/20			Not estimable
Chen 2000a	0/10	0/5			Not estimable

Favours nutrition support 0.01 0.1 1 10 100 Favours control

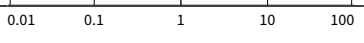
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Chen 2000b	1/10	0/5		0.04%	1.64[0.08,34.28]
Chen 2006	0/8	1/8		0.09%	0.33[0.02,7.14]
Chourdakis 2012	13/34	12/25		0.79%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.19%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.15%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.55%	0.65[0.28,1.52]
Dennis 2005	182/429	207/429		11.76%	0.88[0.76,1.02]
Dennis 2006	241/2012	253/2000		14.42%	0.95[0.8,1.12]
Doglietto 1990	2/13	3/9		0.2%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		3.46%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.36%	0.08[0,1.4]
Duncan 2006	24/150	38/159		2.1%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.56%	1.72[0.84,3.53]
Fan 1989	5/64	9/60		0.53%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.34%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.06%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.07%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.21%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.08%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.4%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.08%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.11%	1.05[0.16,7.1]
Ha 2010	12/58	10/66		0.53%	1.37[0.64,2.92]
Hartgrink 1998	7/55	0/53		0.03%	14.46[0.85,247.12]
Hendry 2010	0/30	2/38		0.13%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.11%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.42%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		1.96%	0.91[0.58,1.44]
Hoffmann 1988	0/16	5/43		0.17%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.3%	0.69[0.21,2.31]
Holyday 2012	4/71	1/72		0.06%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.18%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.09%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.04%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.09%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.04%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]
Johansen 2004	24/108	17/104		0.98%	1.36[0.78,2.38]
Kaur 2005	6/50	12/50		0.68%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.23%	1.17[0.39,3.56]
Keele 1997	2/43	1/43		0.06%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		2.83%	0.64[0.42,0.96]
Ledinghen 1997	5/12	2/10		0.12%	2.08[0.51,8.52]
Lidder 2013a	2/32	6/30		0.35%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		0.42%	0.29[0.07,1.24]
Liu 1996b	1/16	2/18		0.11%	0.56[0.06,5.63]



Favours nutrition support

Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.38%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.06%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		1.77%	0.86[0.56,1.33]
Miller 2006a	2/24	1/25		0.06%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.03%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		1.99%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.06%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		0.71%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		0.69%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		0.51%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.62%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.09%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		0.29%	0.74[0.25,2.18]
Popp 1981	7/21	6/21		0.34%	1.17[0.47,2.89]
Potter 2001	21/183	33/193		1.82%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.22%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.4%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.13%	0.24[0.01,4.47]
Reissman 1995	0/80	1/81		0.08%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.11%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.05%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.05%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.12%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.06%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.06%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.06%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.22%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.06%	4[0.48,33.33]
Smith 1988	3/17	6/17		0.34%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.14%	0.22[0.01,4.08]
Soop 2004	0/9	1/9		0.09%	0.33[0.02,7.24]
Starke 2011	9/66	6/66		0.34%	1.5[0.57,3.98]
Sullivan 1998	2/8	5/10		0.25%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		0.32%	0.74[0.23,2.35]
Thompson 1981	2/12	1/9		0.06%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.2%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.2%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		1.63%	1.02[0.86,1.2]
Vicic 2013	5/52	10/49		0.58%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		0.8%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.08%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.08%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.16%	0.38[0.05,3.26]
Williams 1985	9/21	7/22		0.39%	1.35[0.61,2.96]
Williford 1991	54/192	57/203		3.15%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.46%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.61%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.53%	0.72[0.28,1.83]



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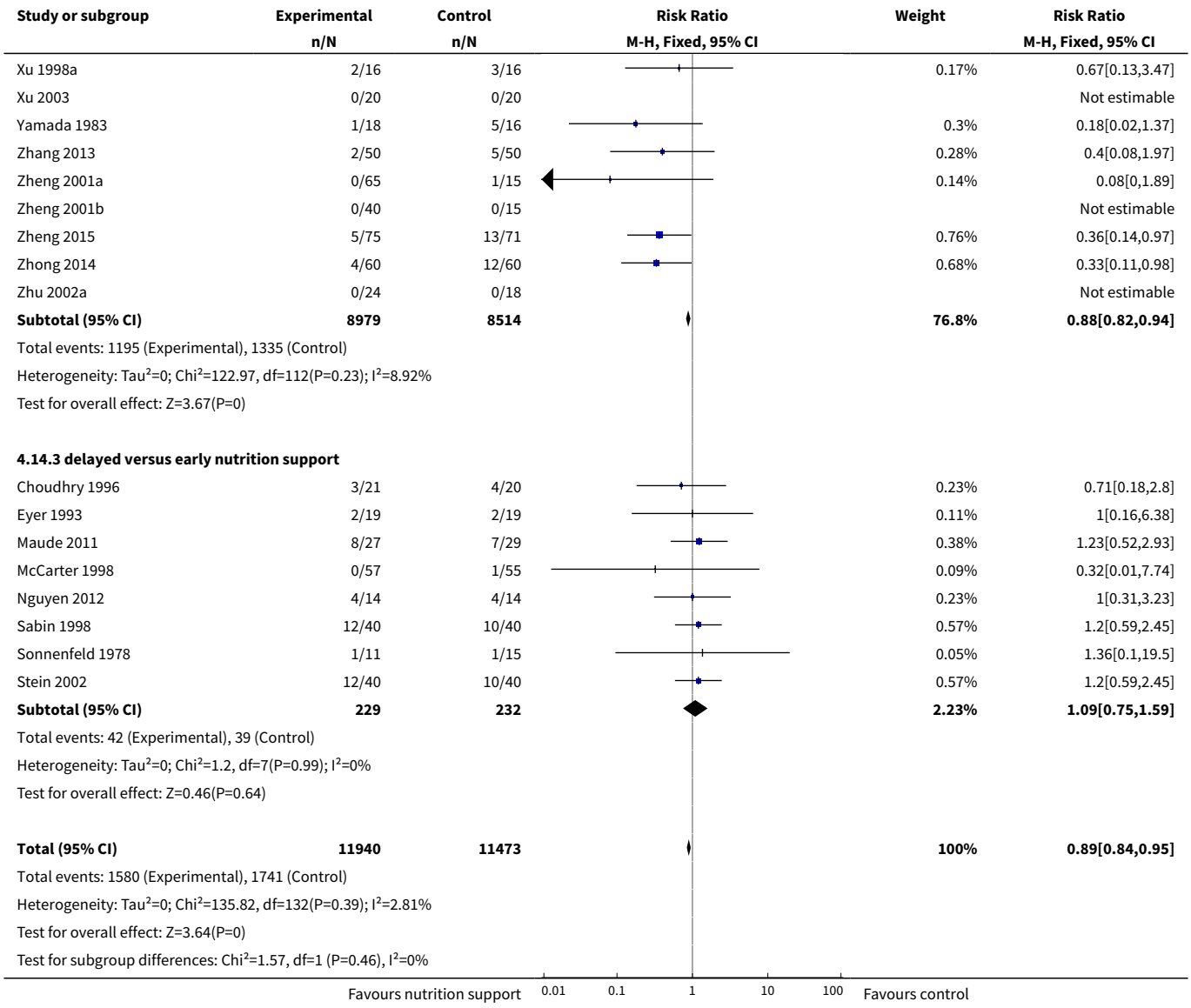
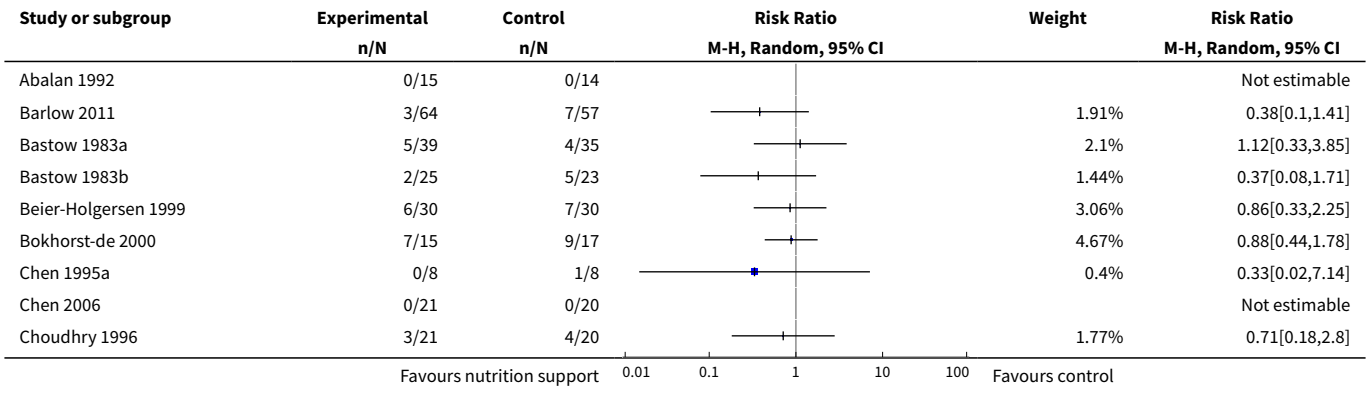
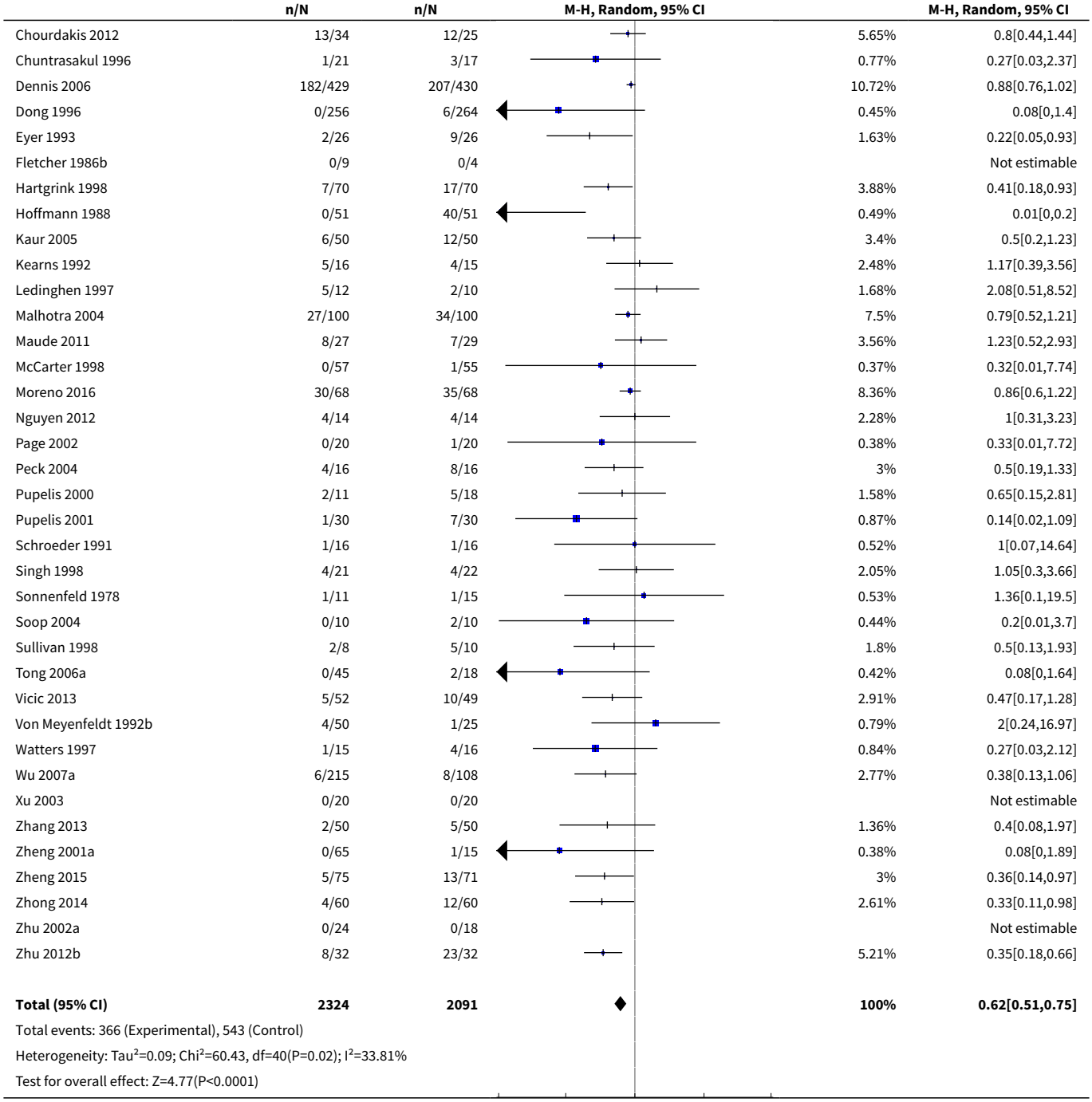


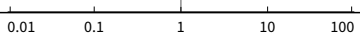
Analysis 4.15. Comparison 4 Serious adverse event maximum follow-up, Outcome 15 Serious adverse events - 'best-worse case' scenario (enteral nutrition).





Analysis 4.16. Comparison 4 Serious adverse event maximum follow-up, Outcome 16 Serious adverse events - 'worst-best case' scenario (enteral nutrition).

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Barlow 2011	3/64	7/57		1.51%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		1.67%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.1%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.61%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		4.48%	0.88[0.44,1.78]
Chen 1995a	0/8	1/8		0.29%	0.33[0.02,7.14]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		1.38%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		5.86%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.57%	0.27[0.03,2.37]
Dennis 2006	182/429	207/430		19.43%	0.88[0.76,1.02]
Dong 1996	0/256	6/264		0.33%	0.08[0,1.4]
Eyer 1993	9/26	2/26		1.26%	4.5[1.07,18.85]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	22/70	0/70		0.35%	45[2.78,727.58]
Hoffmann 1988	8/51	5/51		2.26%	1.6[0.56,4.56]
Kaur 2005	6/50	12/50		2.97%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		2.03%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		1.31%	2.08[0.51,8.52]
Malhotra 2004	29/100	31/100		9.18%	0.94[0.61,1.43]
Maude 2011	8/27	7/29		3.14%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.27%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		11.24%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1.84%	1[0.31,3.23]
Page 2002	0/20	1/20		0.27%	0.33[0.01,7.72]
Peck 2004	6/16	5/16		2.62%	1.2[0.46,3.15]
Pupelis 2000	2/11	5/18		1.22%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.65%	0.14[0.02,1.09]
Schroeder 1991	1/16	1/16		0.38%	1[0.07,14.64]
Singh 1998	4/21	4/22		1.63%	1.05[0.3,3.66]
Sonnenfeld 1978	1/11	1/15		0.38%	1.36[0.1,19.5]
Soop 2004	1/10	1/10		0.39%	1[0.07,13.87]
Sullivan 1998	2/8	5/10		1.41%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.3%	0.08[0,1.64]
Vicic 2013	5/52	10/49		2.45%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.59%	2[0.24,16.97]
Watters 1997	3/15	3/16		1.26%	1.07[0.25,4.49]
Wu 2007a	6/215	8/108		2.31%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		1.03%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.27%	0.08[0,1.89]
Zheng 2015	5/75	13/71		2.55%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		2.16%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/32		3.02%	1.14[0.47,2.78]
Total (95% CI)	**2324**	**2091**		**100%**	**0.81[0.69,0.96]**
Total events: 403 (Experimental), 460 (Control)					



Favours nutrition support

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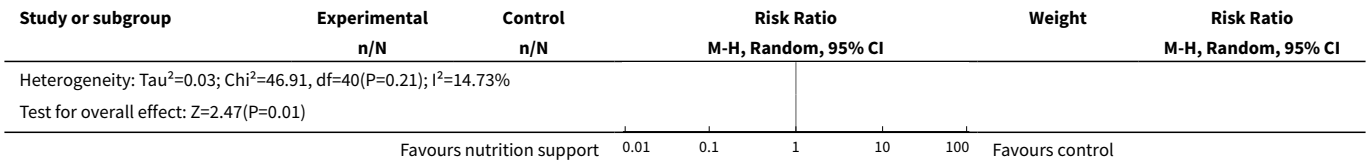
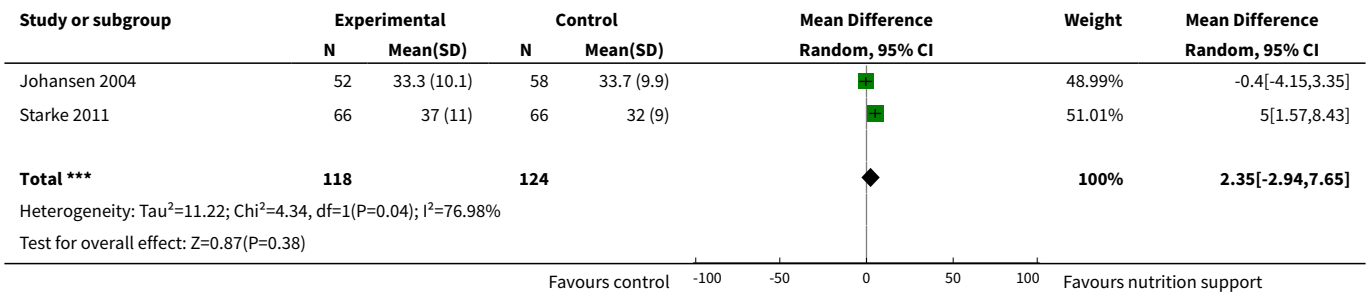


Comparison 5. Quality of life (SF36 - Physical performance) - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Quality of life - overall	2	242	Mean Difference (IV, Random, 95% CI)	2.35 [-2.94, 7.65]

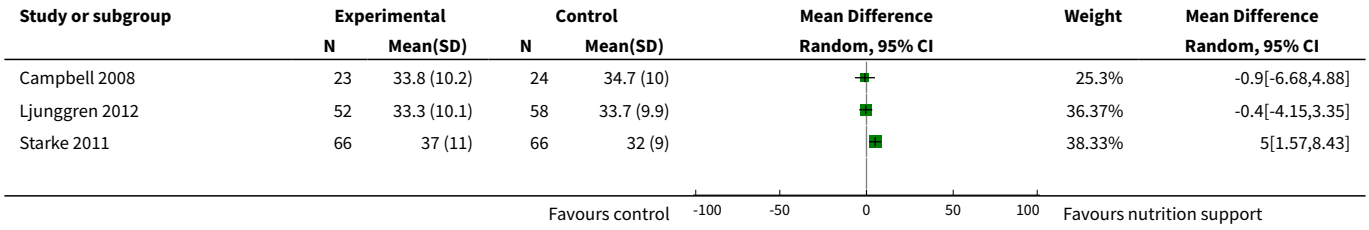
Analysis 5.1. Comparison 5 Quality of life (SF36 - Physical performance) - end of intervention, Outcome 1 Quality of life - overall.

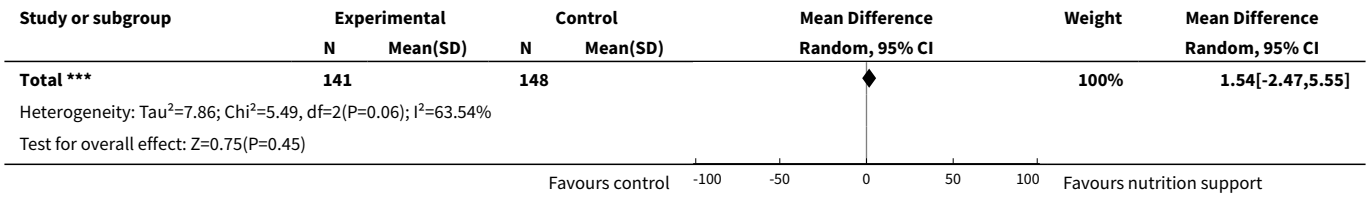


Comparison 6. Quality of life (SF36 - Physical performance) - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Quality of life - overall	3	289	Mean Difference (IV, Random, 95% CI)	1.54 [-2.47, 5.55]

Analysis 6.1. Comparison 6 Quality of life (SF36 - Physical performance) - maximum follow-up, Outcome 1 Quality of life - overall.

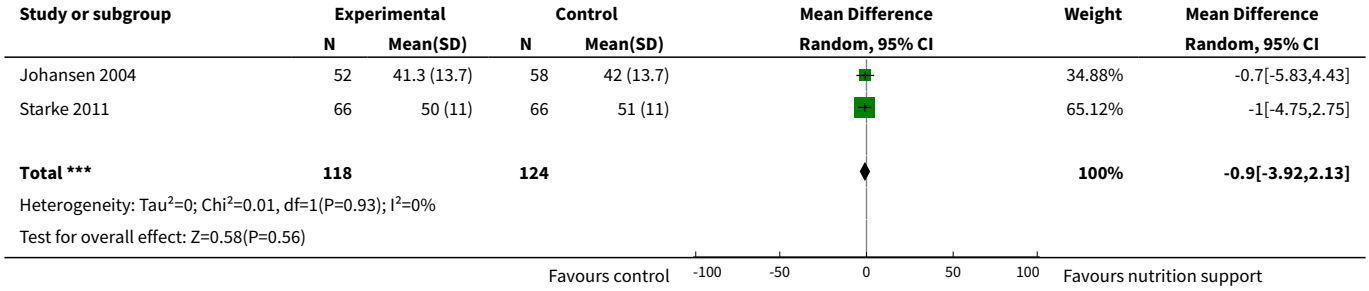




Comparison 7. Quality of life (SF36 - Mental performance - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Quality of life - overall	2	242	Mean Difference (IV, Random, 95% CI)	-0.90 [-3.92, 2.13]

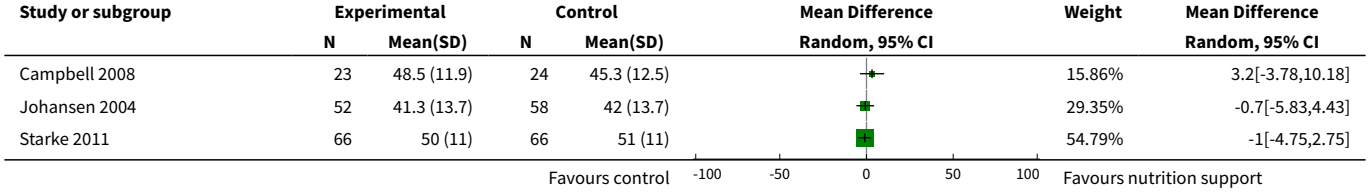
Analysis 7.1. Comparison 7 Quality of life (SF36 - Mental performance - end of intervention, Outcome 1 Quality of life - overall.

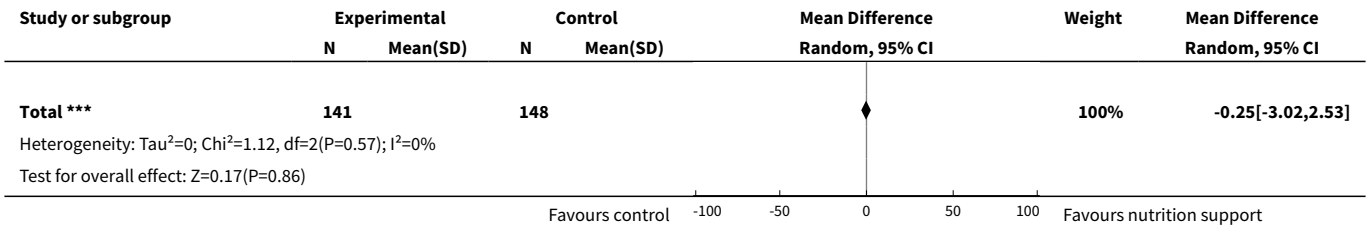


Comparison 8. Quality of life (SF36 - Mental performance) - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Quality of life - overall	3	289	Mean Difference (IV, Random, 95% CI)	-0.25 [-3.02, 2.53]

Analysis 8.1. Comparison 8 Quality of life (SF36 - Mental performance) - maximum follow-up, Outcome 1 Quality of life - overall.

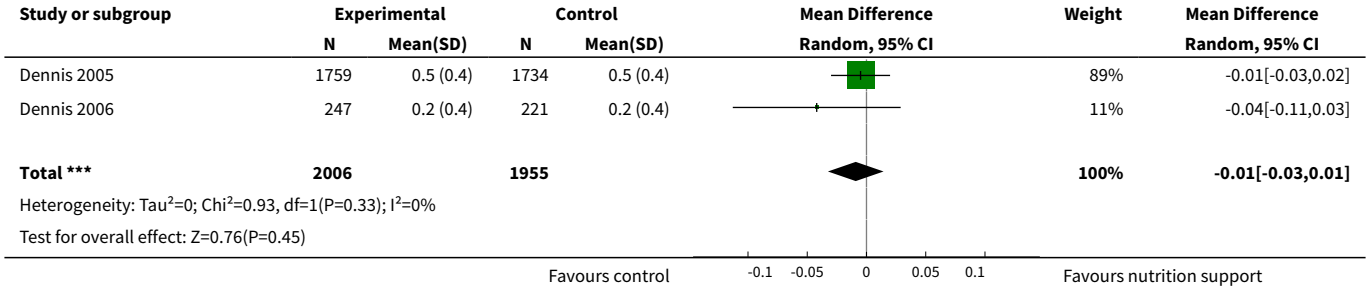




Comparison 9. Quality of life (EuroQoL) - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Quality of life - overall	2	3961	Mean Difference (IV, Random, 95% CI)	-0.01 [-0.03, 0.01]

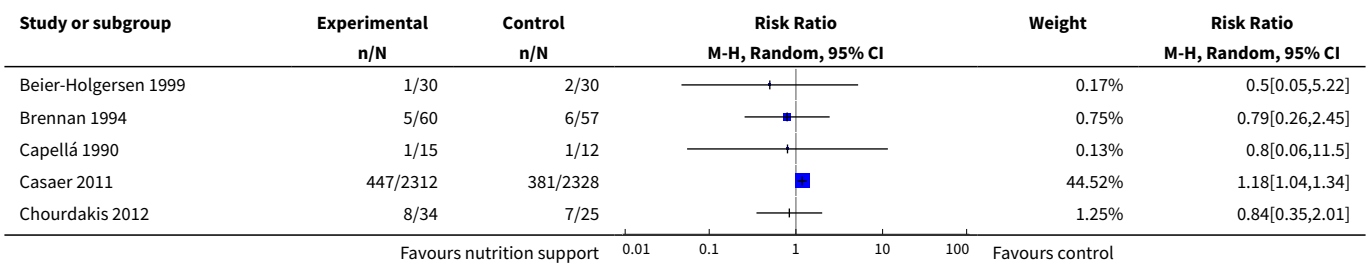
Analysis 9.1. Comparison 9 Quality of life (EuroQoL) - maximum follow-up, Outcome 1 Quality of life - overall.

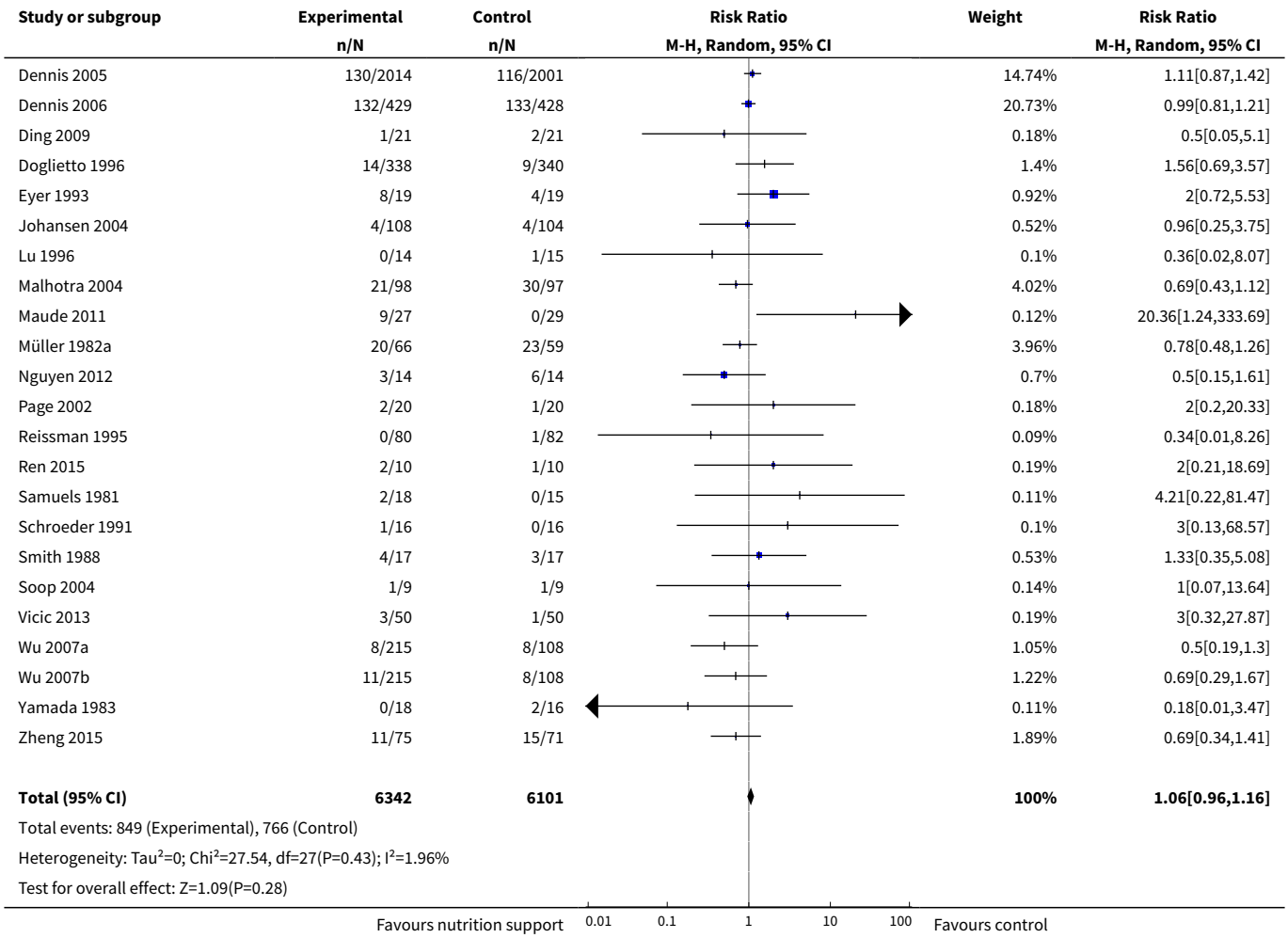


Comparison 10. Pneumonia

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Pneumonia	28	12443	Risk Ratio (M-H, Random, 95% CI)	1.06 [0.96, 1.16]

Analysis 10.1. Comparison 10 Pneumonia, Outcome 1 Pneumonia.

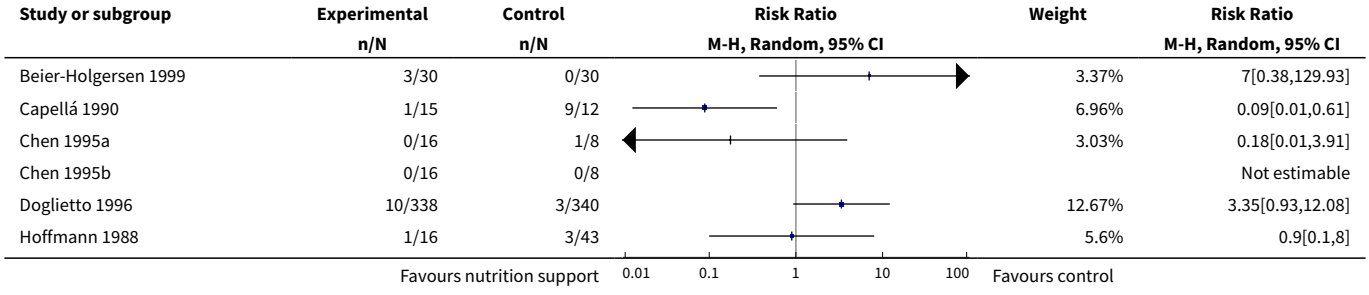


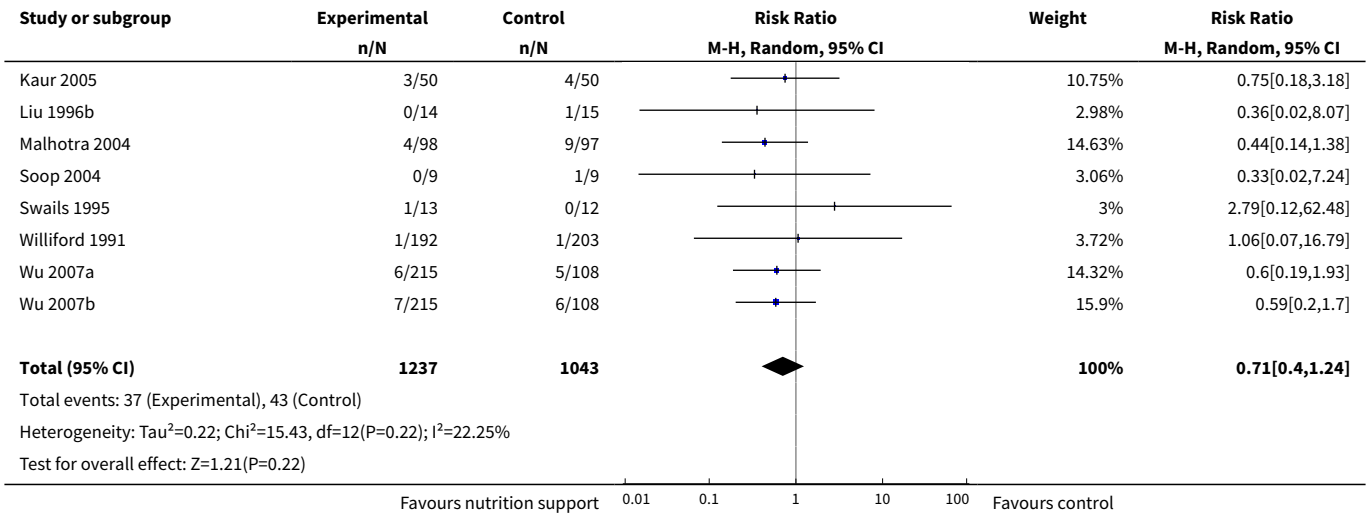


Comparison 11. Wound dehiscence

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Wound dehiscence	14	2280	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.40, 1.24]

Analysis 11.1. Comparison 11 Wound dehiscence, Outcome 1 Wound dehiscence.

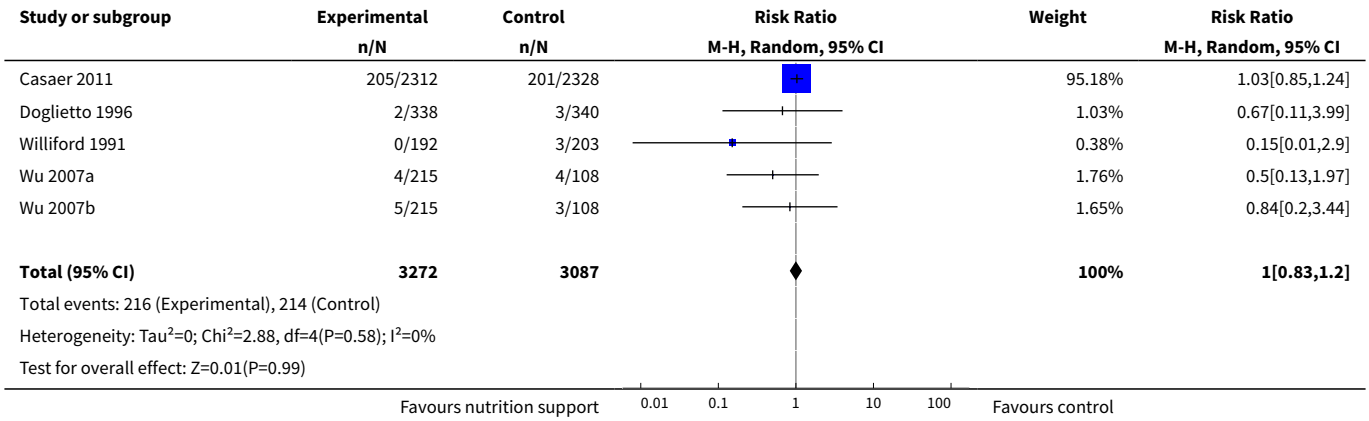




Comparison 12. Renal failure

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Renal failure	5	6359	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.83, 1.20]

Analysis 12.1. Comparison 12 Renal failure, Outcome 1 Renal failure.

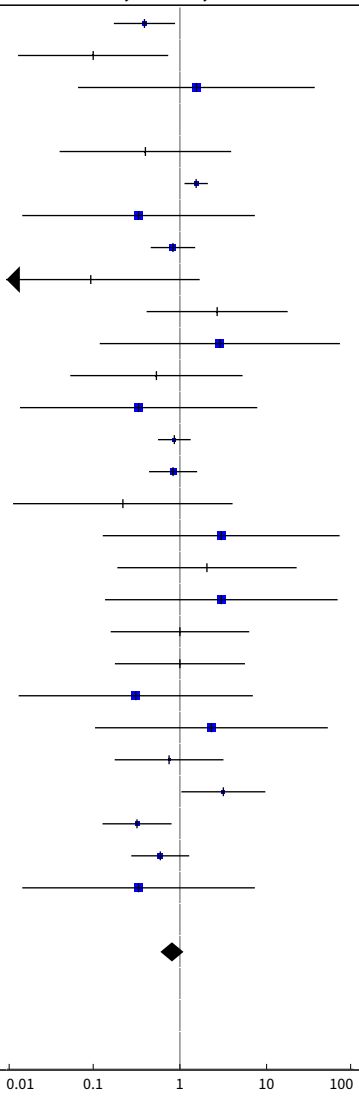


Comparison 13. Wound infection

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Wound infection	28	8324	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.60, 1.10]

Analysis 13.1. Comparison 13 Wound infection, Outcome 1 Wound infection.

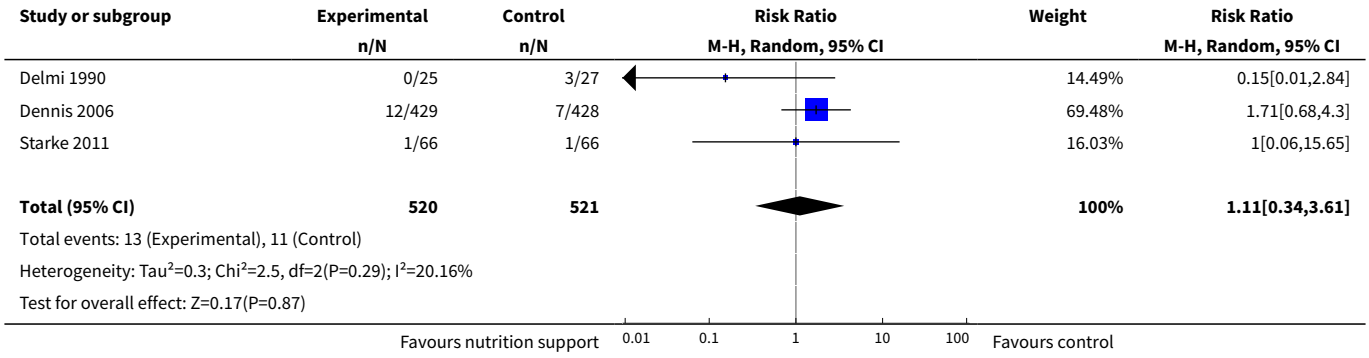
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	7/64	16/57		7.49%	0.39[0.17,0.88]
Beier-Holgersen 1999	1/30	10/30		2.06%	0.1[0.01,0.73]
Botella-Carretero 2008a	1/30	0/15		0.9%	1.55[0.07,35.89]
Botella-Carretero 2008b	0/30	0/15			Not estimable
Capellá 1990	1/15	2/12		1.63%	0.4[0.04,3.9]
Casaer 2011	98/2312	64/2328		13.63%	1.54[1.13,2.1]
Chen 2000a	0/10	1/10		0.93%	0.33[0.02,7.32]
Chen 2000b	19/338	23/340		10%	0.83[0.46,1.5]
Doglietto 1996	0/256	5/264		1.05%	0.09[0.01,1.69]
Dong 1996	2/16	2/43		2.29%	2.69[0.41,17.51]
Hoffmann 1988	1/108	0/104		0.87%	2.89[0.12,70.15]
Johansen 2004	1/14	2/15		1.61%	0.54[0.05,5.28]
Liu 1996b	0/24	1/24		0.89%	0.33[0.01,7.8]
Liu 2008	27/98	31/97		12.03%	0.86[0.56,1.33]
Malhotra 2004	14/66	15/59		9.39%	0.83[0.44,1.58]
Müller 1982a	0/9	2/10		1.04%	0.22[0.01,4.05]
Neuvonen 1984	1/20	0/20		0.9%	3[0.13,69.52]
Page 2002	2/80	1/82		1.5%	2.05[0.19,22.16]
Reissman 1995	1/10	0/10		0.93%	3[0.14,65.9]
Ren 2015	2/17	2/17		2.36%	1[0.16,6.3]
Smith 1988	2/9	2/9		2.63%	1[0.18,5.63]
Soop 2004	0/13	1/12		0.92%	0.31[0.01,6.94]
Swails 1995	1/12	0/9		0.93%	2.31[0.1,50.85]
Thompson 1981	3/50	4/50		3.51%	0.75[0.18,3.18]
Vicic 2013	12/192	4/203		5.12%	3.17[1.04,9.67]
Williford 1991	7/215	11/108		6.54%	0.32[0.13,0.8]
Wu 2007a	13/215	11/108		7.93%	0.59[0.28,1.28]
Wu 2007b	0/10	1/10		0.93%	0.33[0.02,7.32]
Total (95% CI)	**4263**	**4061**		**100%**	**0.81[0.6,1.1]**
Total events: 216 (Experimental), 211 (Control)					
Heterogeneity: Tau^2=0.15; Chi^2=40.43, df=26(P=0.04); I^2=35.69%					
Test for overall effect: Z=1.35(P=0.18)					



Comparison 14. Heart failure

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Heart failure	3	1041	Risk Ratio (M-H, Random, 95% CI)	1.11 [0.34, 3.61]

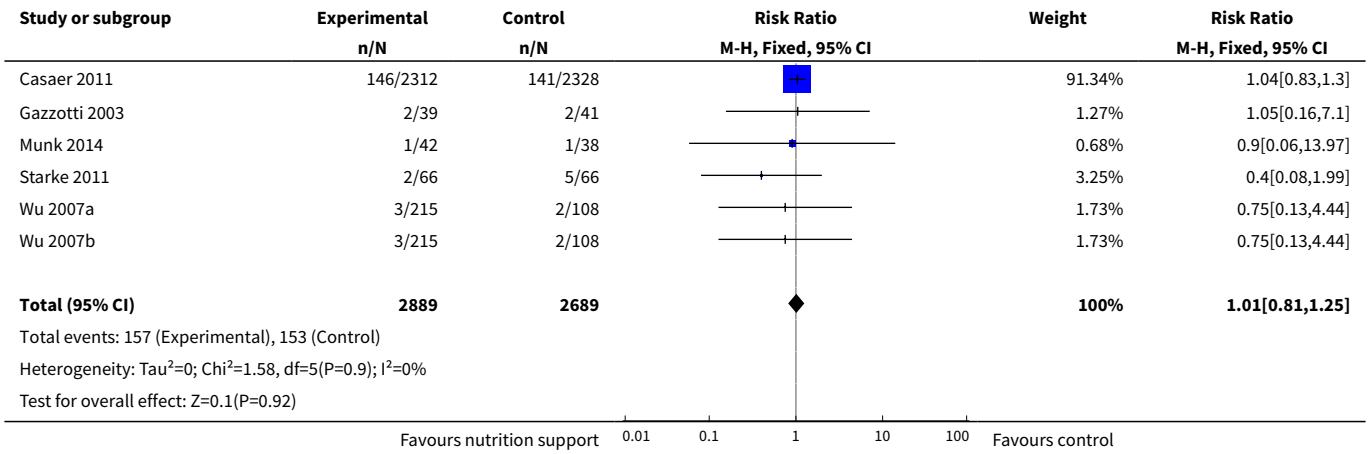
Analysis 14.1. Comparison 14 Heart failure, Outcome 1 Heart failure.



Comparison 15. Clearly adequate and screening tool

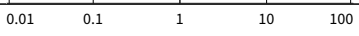
Outcome or sub-group title	No. of studies	No. of partici-pants	Statistical method	Effect size
1 AcM - EoI	6	5578	Risk Ratio (M-H, Fixed, 95% CI)	1.01 [0.81, 1.25]
2 AcM - MF	6	5578	Risk Ratio (M-H, Random, 95% CI)	1.01 [0.86, 1.18]
3 SaE - EoI	6	5578	Risk Ratio (M-H, Fixed, 95% CI)	0.96 [0.78, 1.19]
4 SaE - MF	6	5578	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.84, 1.14]

Analysis 15.1. Comparison 15 Clearly adequate and screening tool, Outcome 1 AcM - EoI.



Analysis 15.2. Comparison 15 Clearly adequate and screening tool, Outcome 2 AcM - MF.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Casaer 2011	255/2312	257/2328		94.7%	1[0.85,1.18]
Gazzotti 2003	2/39	2/41		0.69%	1.05[0.16,7.1]
Munk 2014	1/42	1/38		0.34%	0.9[0.06,13.97]
Starke 2011	9/66	6/66		2.66%	1.5[0.57,3.98]
Wu 2007a	3/215	2/108		0.8%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.8%	0.75[0.13,4.44]
Total (95% CI)	**2889**	**2689**		**100%**	**1.01[0.86,1.18]**
Total events: 273 (Experimental), 270 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.86, df=5(P=0.97); I^2=0%					
Test for overall effect: Z=0.07(P=0.95)					



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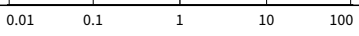
Analysis 15.3. Comparison 15 Clearly adequate and screening tool, Outcome 3 SaE - EoI.

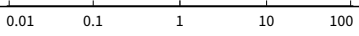
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Casaer 2011	146/2312	141/2328		83.4%	1.04[0.83,1.3]
Gazzotti 2003	2/39	2/41		1.16%	1.05[0.16,7.1]
Munk 2014	1/42	1/38		0.62%	0.9[0.06,13.97]
Starke 2011	2/66	5/66		2.97%	0.4[0.08,1.99]
Wu 2007a	6/215	8/108		6.32%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		5.53%	0.72[0.28,1.83]
Total (95% CI)	**2889**	**2689**		**100%**	**0.96[0.78,1.19]**
Total events: 167 (Experimental), 164 (Control)					
Heterogeneity: Tau^2=0; Chi^2=5.19, df=5(P=0.39); I^2=3.74%					
Test for overall effect: Z=0.36(P=0.72)					



Favours nutrition support — Favours control

Analysis 15.4. Comparison 15 Clearly adequate and screening tool, Outcome 4 SaE - MF.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Casaer 2011	255/2312	257/2328		91.38%	1[0.85,1.18]
Gazzotti 2003	2/39	2/41		0.67%	1.05[0.16,7.1]
Munk 2014	1/42	1/38		0.33%	0.9[0.06,13.97]
Starke 2011	9/66	6/66		2.57%	1.5[0.57,3.98]
Wu 2007a	6/215	8/108		2.29%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		2.77%	0.72[0.28,1.83]
Total (95% CI)	**2889**	**2689**		**100%**	**0.98[0.84,1.14]**
Total events: 283 (Experimental), 281 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.51, df=5(P=0.48); I^2=0%					
Test for overall effect: Z=0.28(P=0.78)					



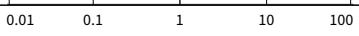
Favours nutrition support — Favours control

Comparison 16. Clearly adequate + (NRS component/at risk due to condition)

Outcome or sub-group title	No. of studies	No. of partici-pants	Statistical method	Effect size
1 AcM - EoI	17	6760	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.82, 1.20]
2 AcM - MF	20	6978	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.82, 1.09]
3 SaE - EoI	20	6794	Risk Ratio (M-H, Fixed, 95% CI)	0.96 [0.81, 1.14]
4 SaE - MF	23	7012	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.80, 1.03]

Analysis 16.1. Comparison 16 Clearly adequate + (NRS component/at risk due to condition), Outcome 1 AcM - EoI.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Casaer 2011	146/2312	141/2328		70.58%	1.04[0.83,1.3]
Chuntrasakul 1996	1/21	1/17		0.49%	0.81[0.05,12.01]
Eneroth 2005	0/40	0/40			Not estimable
Gariballa 1998	2/20	3/20		1.26%	0.67[0.12,3.57]
Gazzotti 2003	2/39	2/41		0.97%	1.05[0.16,7.1]
Heidegger 2013	8/153	12/152		4.73%	0.66[0.28,1.57]
Keele 1997	2/47	0/53		0.39%	5.63[0.28,114.27]
Malhotra 2004	12/98	16/97		7.37%	0.74[0.37,1.49]
Neelemaat 2012	14/105	11/105		6.44%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Roth 2013	1/74	1/83		0.47%	1.12[0.07,17.62]
Sullivan 1998	0/8	3/10		0.44%	0.17[0.01,2.96]
Sullivan 2004	1/27	0/30		0.36%	3.32[0.14,78.25]
Woolfson 1989	8/62	8/60		4.25%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		1.13%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		1.13%	0.75[0.13,4.44]
Total (95% CI)	**3472**	**3288**		**100%**	**0.99[0.82,1.2]**
Total events: 203 (Experimental), 202 (Control)					
Heterogeneity: Tau^2=0; Chi^2=5.85, df=13(P=0.95); I^2=0%					
Test for overall effect: Z=0.06(P=0.95)					



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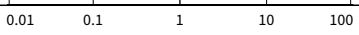
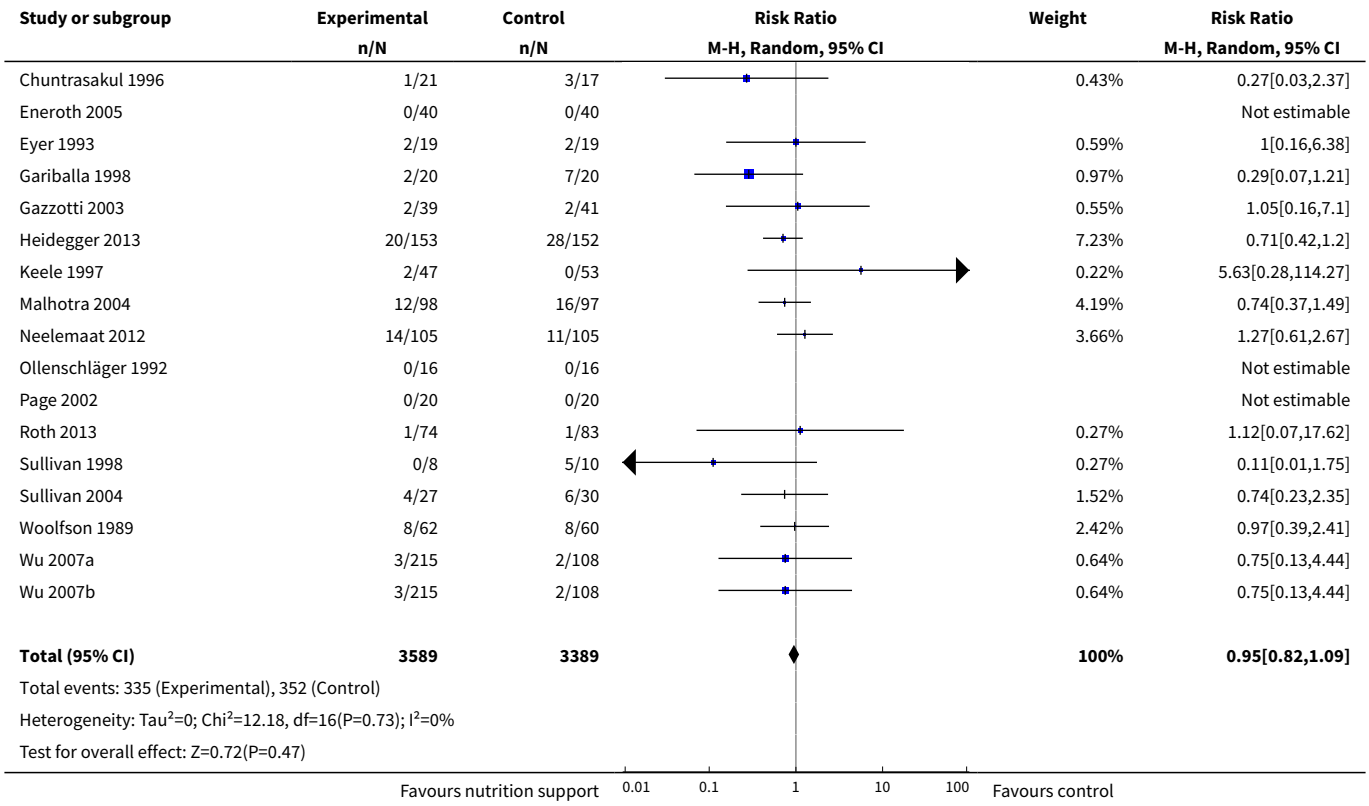
Analysis 16.2. Comparison 16 Clearly adequate + (NRS component/at risk due to condition), Outcome 2 AcM - MF.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	3/64	0/57		0.23%	6.25[0.33,118.38]
Casaer 2011	255/2312	257/2328		75.5%	1[0.85,1.18]
Chourdakis 2012	3/34	2/25		0.69%	1.1[0.2,6.12]

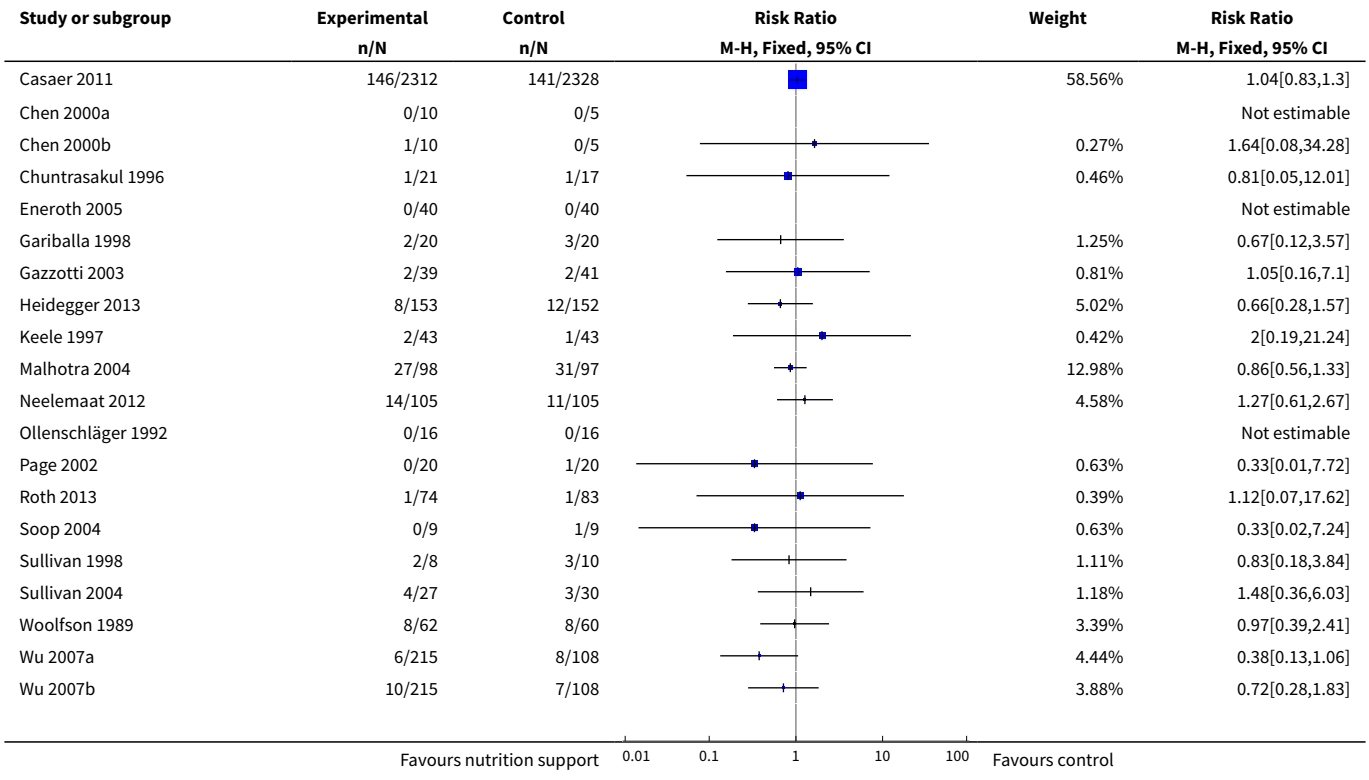


Favours nutrition support — Favours control



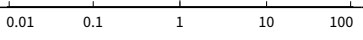
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chuntrasakul 1996	1/21	3/17		0.43%	0.27[0.03,2.37]
Eneroth 2005	0/40	0/40			Not estimable
Eyer 1993	2/19	2/19		0.59%	1[0.16,6.38]
Gariballa 1998	2/20	7/20		0.97%	0.29[0.07,1.21]
Gazzotti 2003	2/39	2/41		0.55%	1.05[0.16,7.1]
Heidegger 2013	20/153	28/152		7.23%	0.71[0.42,1.2]
Keele 1997	2/47	0/53		0.22%	5.63[0.28,114.27]
Malhotra 2004	12/98	16/97		4.19%	0.74[0.37,1.49]
Neelemaat 2012	14/105	11/105		3.66%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Roth 2013	1/74	1/83		0.27%	1.12[0.07,17.62]
Sullivan 1998	0/8	5/10		0.27%	0.11[0.01,1.75]
Sullivan 2004	4/27	6/30		1.52%	0.74[0.23,2.35]
Woolfson 1989	8/62	8/60		2.42%	0.97[0.39,2.41]
Wu 2007a	3/215	2/108		0.64%	0.75[0.13,4.44]
Wu 2007b	3/215	2/108		0.64%	0.75[0.13,4.44]
Total (95% CI)	**3589**	**3389**		**100%**	**0.95[0.82,1.09]**
Total events: 335 (Experimental), 352 (Control)					
Heterogeneity: Tau²=0; Chi²=12.18, df=16(P=0.73); I²=0%					
Test for overall effect: Z=0.72(P=0.47)					

Analysis 16.3. Comparison 16 Clearly adequate + (NRS component/at risk due to condition), Outcome 3 SaE - EoI.



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Casaer 2011	146/2312	141/2328		58.56%	1.04[0.83,1.3]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.27%	1.64[0.08,34.28]
Chuntrasakul 1996	1/21	1/17		0.46%	0.81[0.05,12.01]
Eneroth 2005	0/40	0/40			Not estimable
Gariballa 1998	2/20	3/20		1.25%	0.67[0.12,3.57]
Gazzotti 2003	2/39	2/41		0.81%	1.05[0.16,7.1]
Heidegger 2013	8/153	12/152		5.02%	0.66[0.28,1.57]
Keele 1997	2/43	1/43		0.42%	2[0.19,21.24]
Malhotra 2004	27/98	31/97		12.98%	0.86[0.56,1.33]
Neelemaat 2012	14/105	11/105		4.58%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.63%	0.33[0.01,7.72]
Roth 2013	1/74	1/83		0.39%	1.12[0.07,17.62]
Soop 2004	0/9	1/9		0.63%	0.33[0.02,7.24]
Sullivan 1998	2/8	3/10		1.11%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		1.18%	1.48[0.36,6.03]
Woolfson 1989	8/62	8/60		3.39%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		4.44%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		3.88%	0.72[0.28,1.83]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Total (95% CI)	**3497**	**3297**		**100%**	**0.96[0.81,1.14]**
Total events: 234 (Experimental), 234 (Control)					
Heterogeneity: Tau^2=0; Chi^2=7.53, df=16(P=0.96); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					



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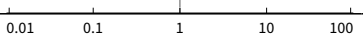
Analysis 16.4. Comparison 16 Clearly adequate + (NRS component/at risk due to condition), Outcome 4 SaE - MF.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	3/64	7/57		1.01%	0.38[0.1,1.41]
Casaer 2011	255/2312	257/2328		64.46%	1[0.85,1.18]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.19%	1.64[0.08,34.28]
Chourdakis 2012	13/34	12/25		4.93%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.37%	0.27[0.03,2.37]
Eneroth 2005	0/40	0/40			Not estimable
Eyer 1993	2/19	2/19		0.5%	1[0.16,6.38]
Gariballa 1998	2/20	7/20		0.83%	0.29[0.07,1.21]
Gazzotti 2003	2/39	2/41		0.47%	1.05[0.16,7.1]
Heidegger 2013	20/153	28/152		6.17%	0.71[0.42,1.2]
Keele 1997	2/43	1/43		0.31%	2[0.19,21.24]
Malhotra 2004	27/98	31/97		9.18%	0.86[0.56,1.33]
Neelemaat 2012	14/105	11/105		3.13%	1.27[0.61,2.67]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.17%	0.33[0.01,7.72]
Roth 2013	1/74	1/83		0.23%	1.12[0.07,17.62]
Soop 2004	0/9	1/9		0.18%	0.33[0.02,7.24]
Sullivan 1998	2/8	5/10		0.94%	0.5[0.13,1.93]
Sullivan 2004	4/27	6/30		1.29%	0.74[0.23,2.35]
Woolfson 1989	8/62	8/60		2.06%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		1.61%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		1.96%	0.72[0.28,1.83]
Total (95% CI)	**3614**	**3398**		**100%**	**0.91[0.8,1.03]**
Total events: 373 (Experimental), 398 (Control)					
Heterogeneity: Tau^2=0; Chi^2=13.89, df=19(P=0.79); I^2=0%					
Test for overall effect: Z=1.46(P=0.14)					



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Comparison 17. Oral - All cause mortality - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All-cause mortality - overall	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
2 All-cause mortality - bias	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
2.1 High risk of bias	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 All-cause mortality - medical speciality	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.80, 1.12]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	1	36	Risk Ratio (M-H, Random, 95% CI)	0.45 [0.10, 2.01]
3.3 Geriatrics	9	1559	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.56, 0.99]
3.4 Pulmonary disease	2	93	Risk Ratio (M-H, Random, 95% CI)	0.49 [0.16, 1.54]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	11	1267	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.65, 2.38]
3.11 Trauma surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.12 Orthopaedics	4	371	Risk Ratio (M-H, Random, 95% CI)	1.69 [0.53, 5.36]
3.13 Plastic, reconstructive and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.15 Transplant surgery	1	37	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.02, 8.09]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	3	4092	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.76, 1.27]
3.24 Oncology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	2	1074	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.73, 2.12]
4 All-cause mortality - based on adequacy of the amount of calories	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
4.1 Clearly adequate in experimental group and clearly inadequate in control group	4	260	Risk Ratio (M-H, Random, 95% CI)	1.08 [0.34, 3.47]
4.2 Inadequate in the experimental group or adequate in the control group	12	5540	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.76, 1.17]
4.3 Experimental group is overfed	2	69	Risk Ratio (M-H, Random, 95% CI)	0.53 [0.14, 1.98]
4.4 Unclear intake in experimental group or control group	15	2660	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.62, 1.38]

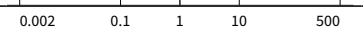
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5 All-cause mortality - different screening tools	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
5.1 NRS 2002	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	2	117	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.12, 3.18]
5.4 SGA	1	525	Risk Ratio (M-H, Random, 95% CI)	1.51 [0.99, 2.31]
5.5 Other means	30	7887	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.73, 1.04]
6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
6.1 Major surgery	13	1364	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.49, 1.72]
6.2 Stroke	2	4063	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.74, 1.24]
6.3 ICU participants including trauma	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	9	953	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.55, 1.30]
6.5 Participants do not fall into one of the categories above	9	2149	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.62, 1.39]
7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
7.1 BMI less than 20.5 kg/m2	1	37	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.02, 8.09]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
7.5 Participants characterised as 'at nutritional risk' by other means	32	8492	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.12]
8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
8.1 Biomarkers	1	60	Risk Ratio (M-H, Random, 95% CI)	0.43 [0.12, 1.50]
8.2 Anthropometric measures	6	1111	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.52, 1.16]
8.3 Characterised by other means	26	7358	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.80, 1.25]
9 All-cause mortality - randomisation year	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960-1979	1	60	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.24, 2.43]
9.3 1980-1999	18	7002	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.72, 1.04]
9.4 After 1999	14	1467	Risk Ratio (M-H, Random, 95% CI)	1.11 [0.64, 1.92]
10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]
10.1 Three days or more	26	7797	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.74, 1.04]
10.2 Less than three days	6	207	Risk Ratio (M-H, Random, 95% CI)	0.18 [0.01, 3.91]
10.3 Unknown	1	525	Risk Ratio (M-H, Random, 95% CI)	1.51 [0.99, 2.31]
11 All-cause mortality - 'best-worst case' scenario	33	8793	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.55, 0.95]
12 All-cause mortality - 'worst-best case' scenario	33	8793	Risk Ratio (M-H, Random, 95% CI)	1.33 [0.95, 1.86]
13 All-cause mortality co-interventions	33	8529	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.79, 1.11]

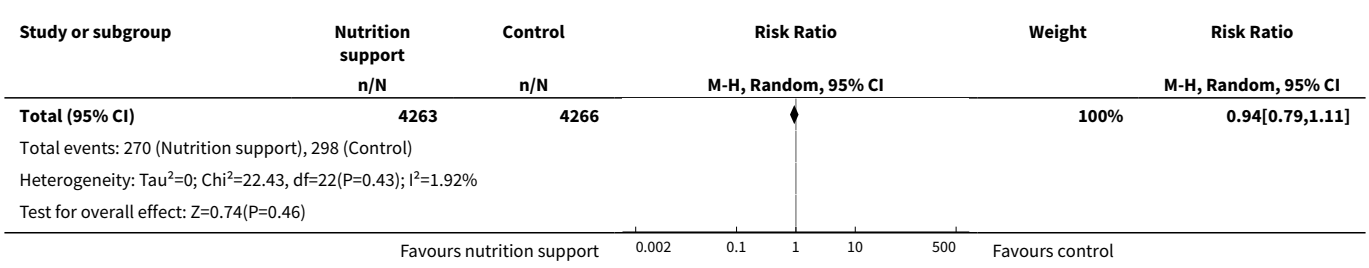
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
13.1 received nutrition support as co-intervention	1	60	Risk Ratio (M-H, Random, 95% CI)	0.43 [0.12, 1.50]
13.2 did not receive nutrition support as co-intervention	32	8469	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.81, 1.12]
13.3 delayed versus early nutrition support	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Analysis 17.1. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 1 All-cause mortality - overall.

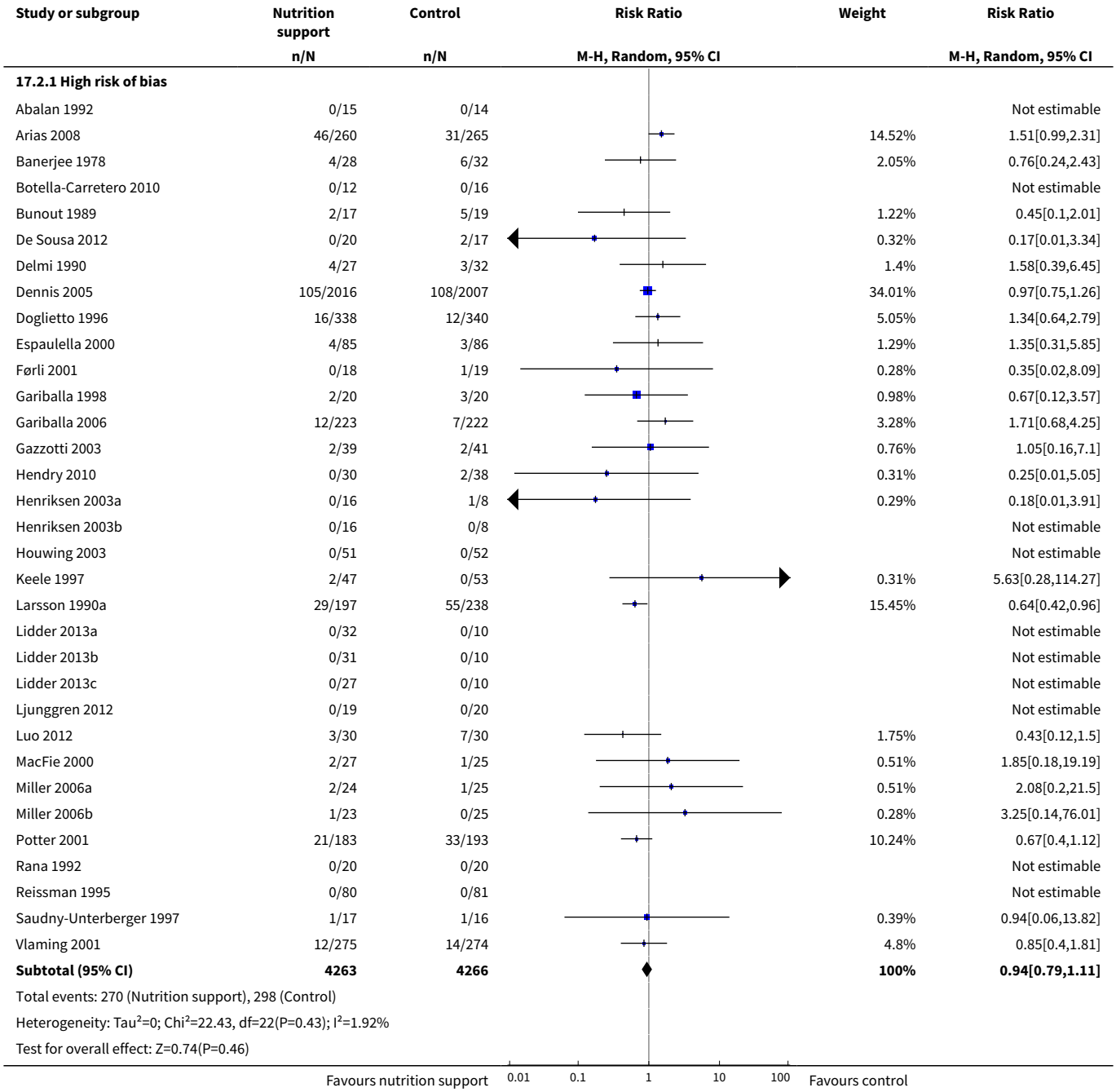
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/260	31/265		14.52%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.05%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.22%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.32%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		1.4%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		34.01%	0.97[0.75,1.26]
Doglietto 1996	16/338	12/340		5.05%	1.34[0.64,2.79]
Espaulella 2000	4/85	3/86		1.29%	1.35[0.31,5.85]
Førli 2001	0/18	1/19		0.28%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.98%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		3.28%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.76%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.31%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.29%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.31%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		15.45%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		1.75%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.51%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.51%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.28%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		10.24%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Saudny-Unterberger 1997	1/17	1/16		0.39%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		4.8%	0.85[0.4,1.81]

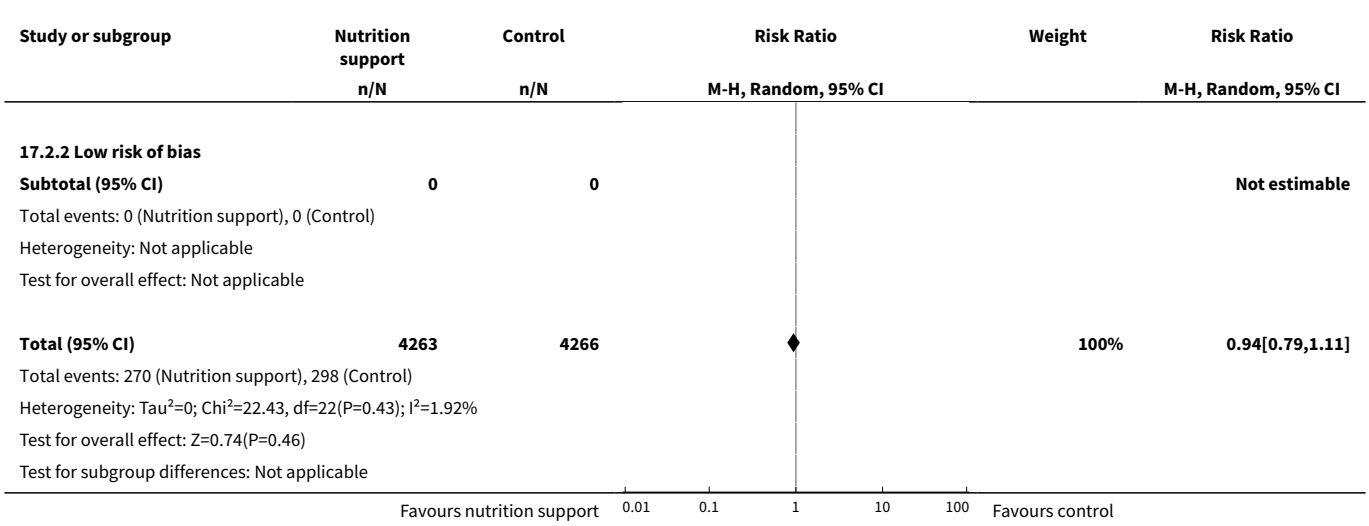


Favours nutrition support | Favours control

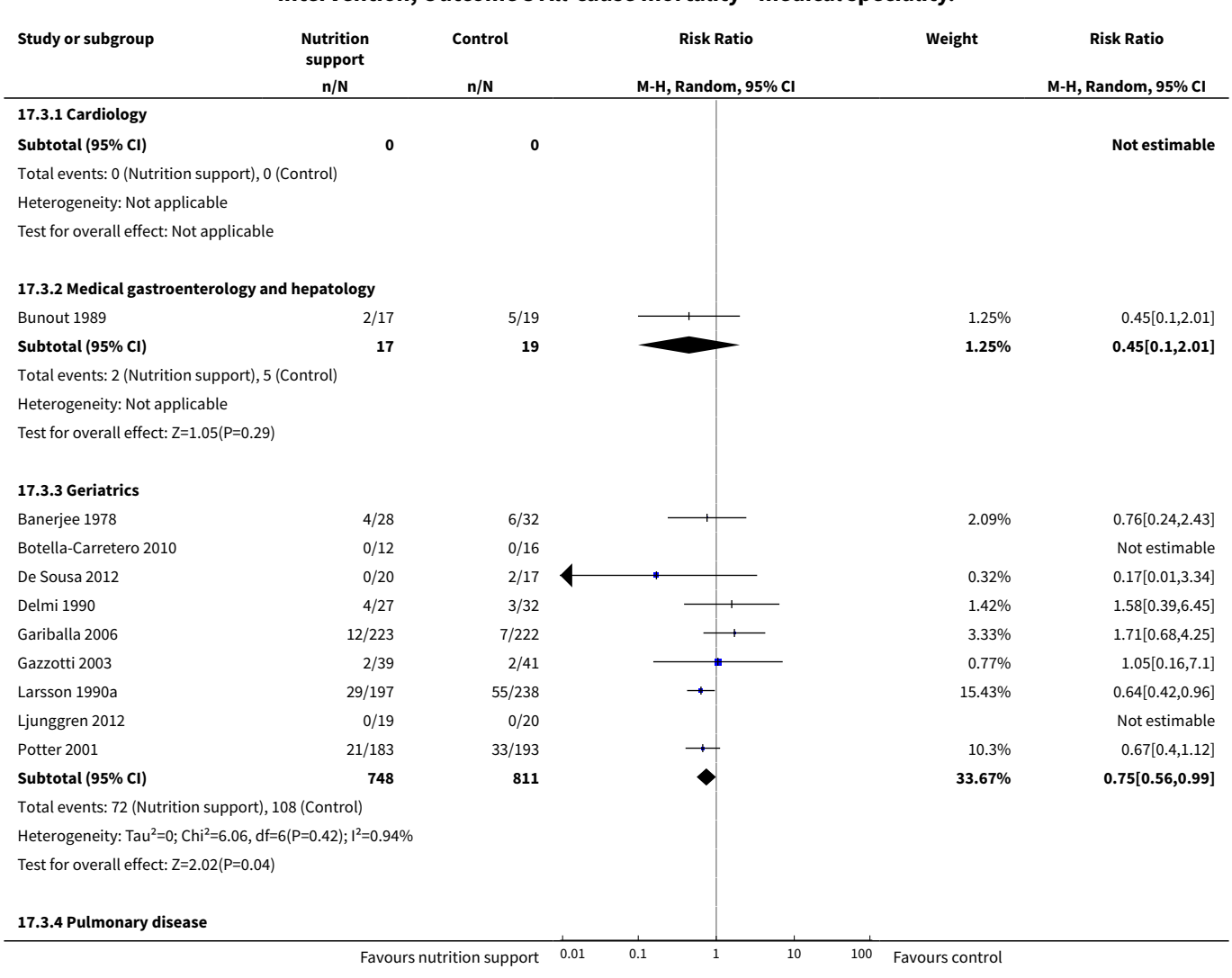


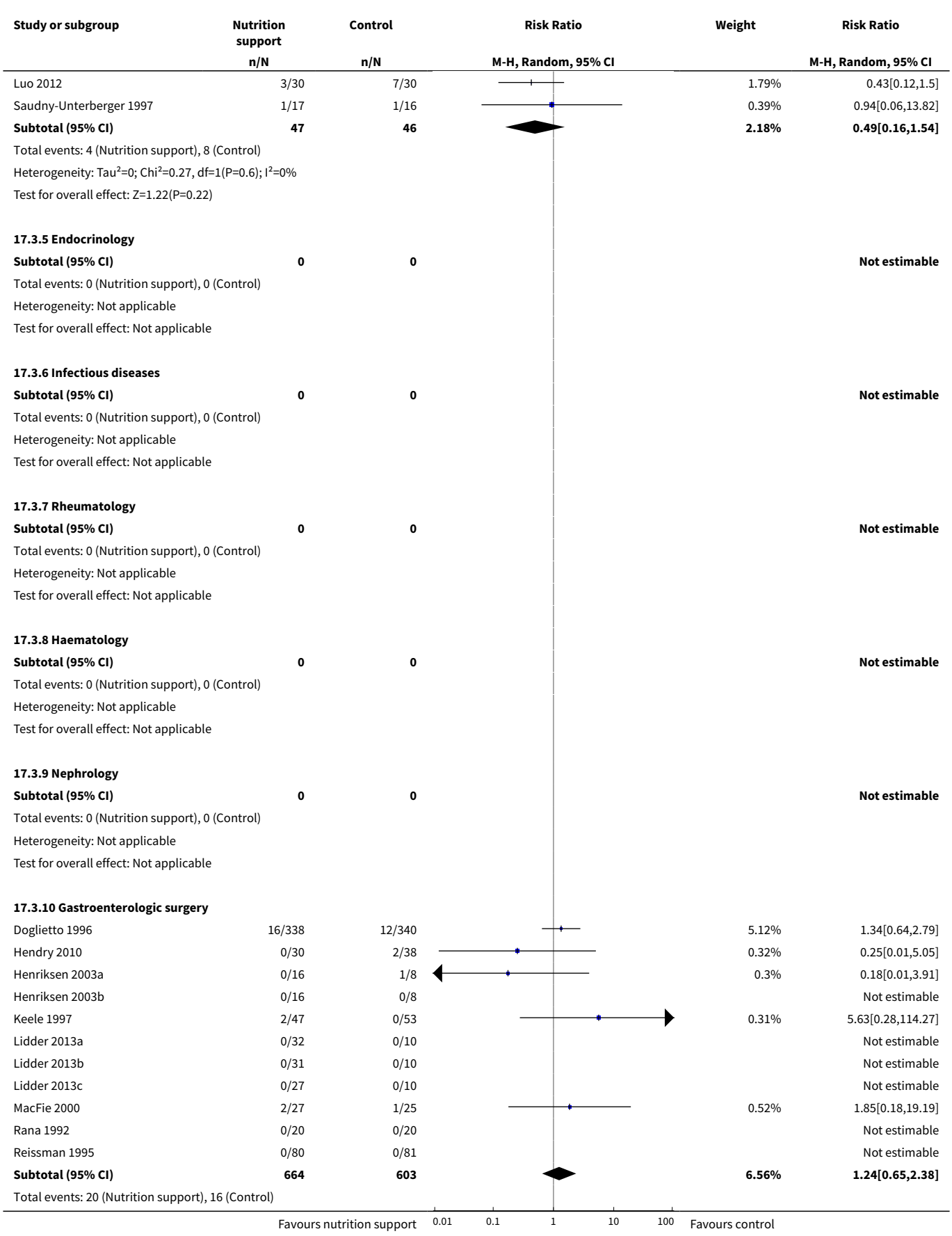
Analysis 17.2. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 2 All-cause mortality - bias.



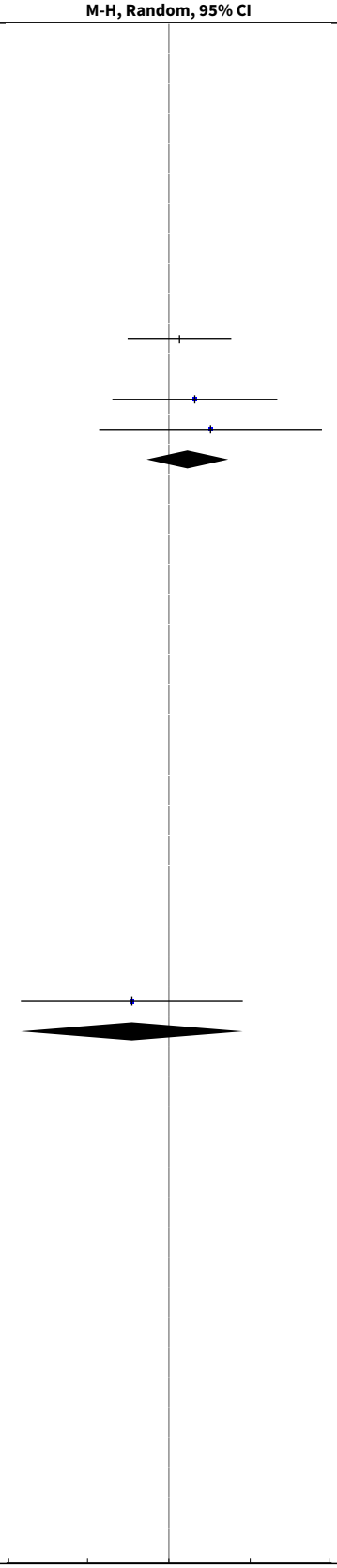


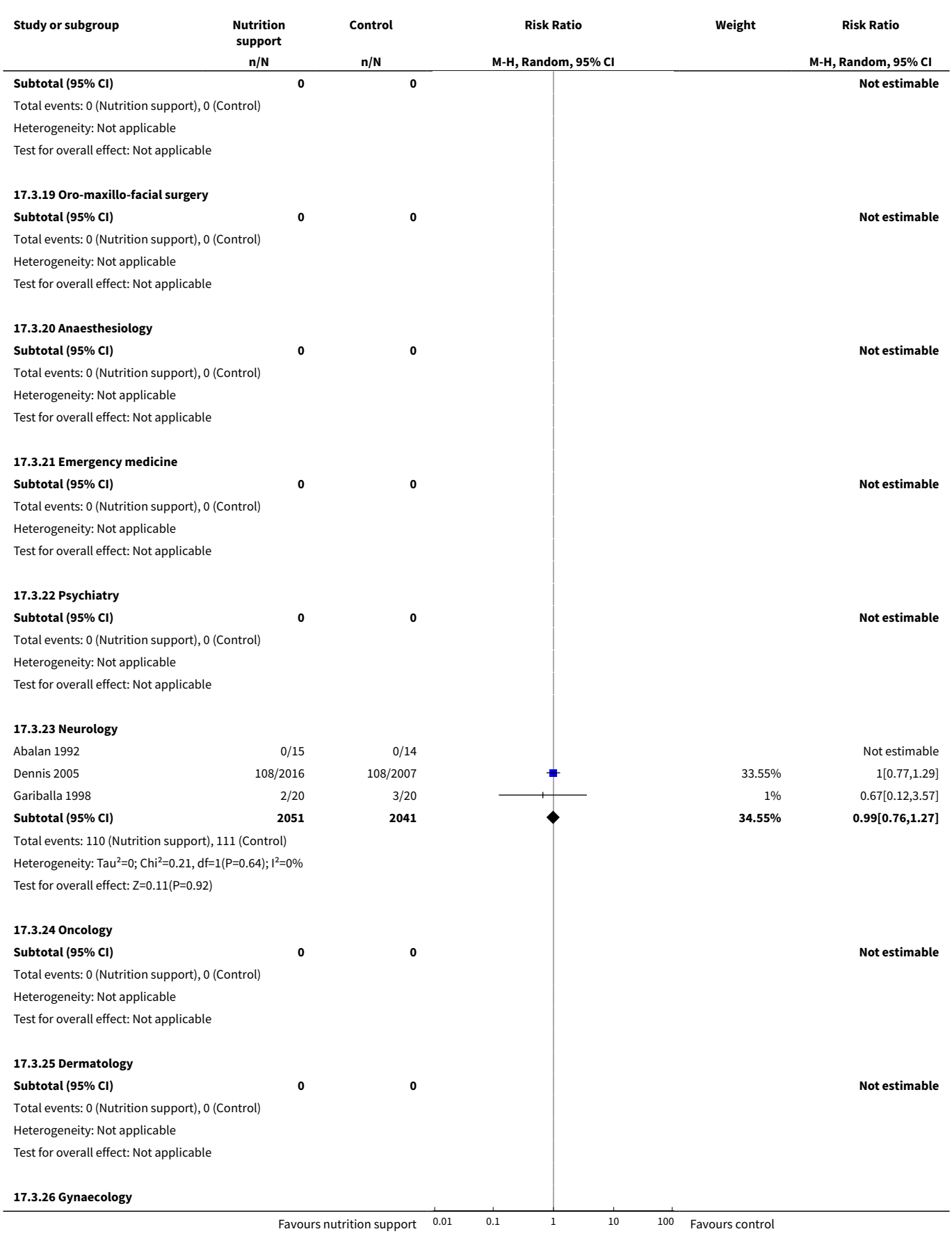
Analysis 17.3. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 3 All-cause mortality - medical speciality.

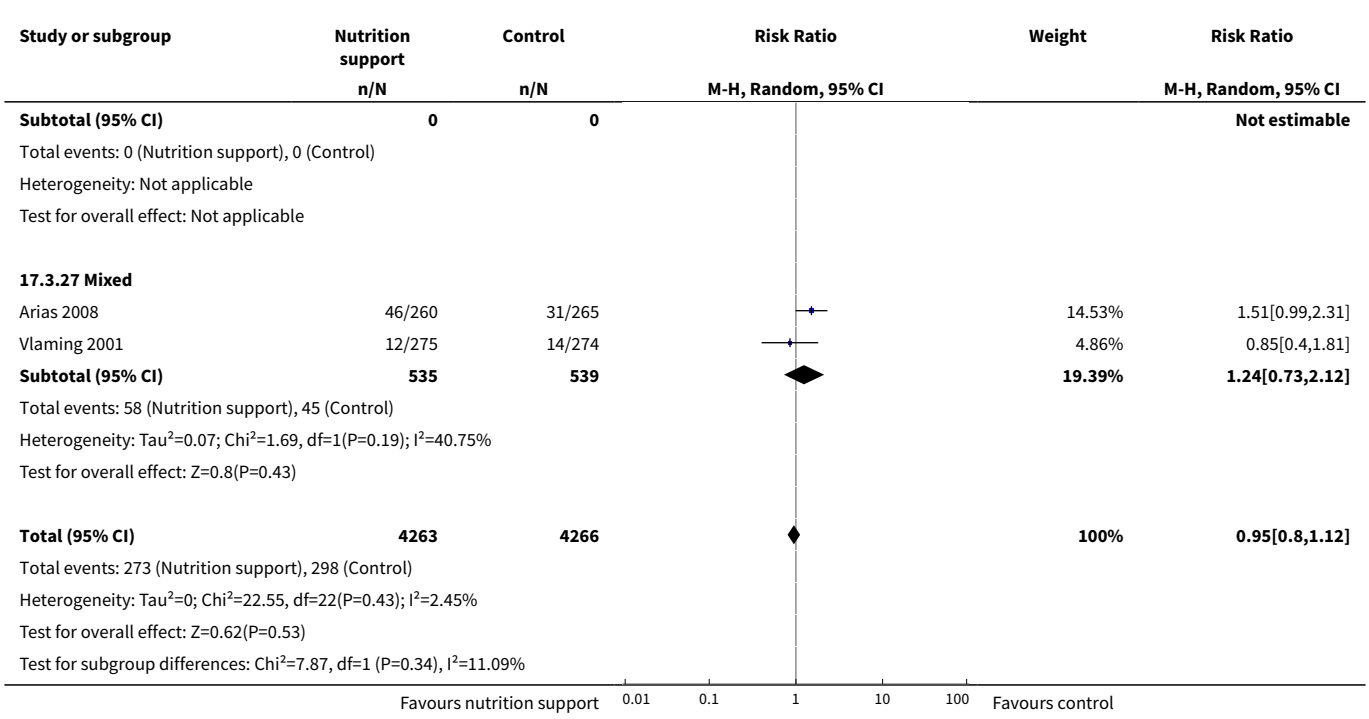




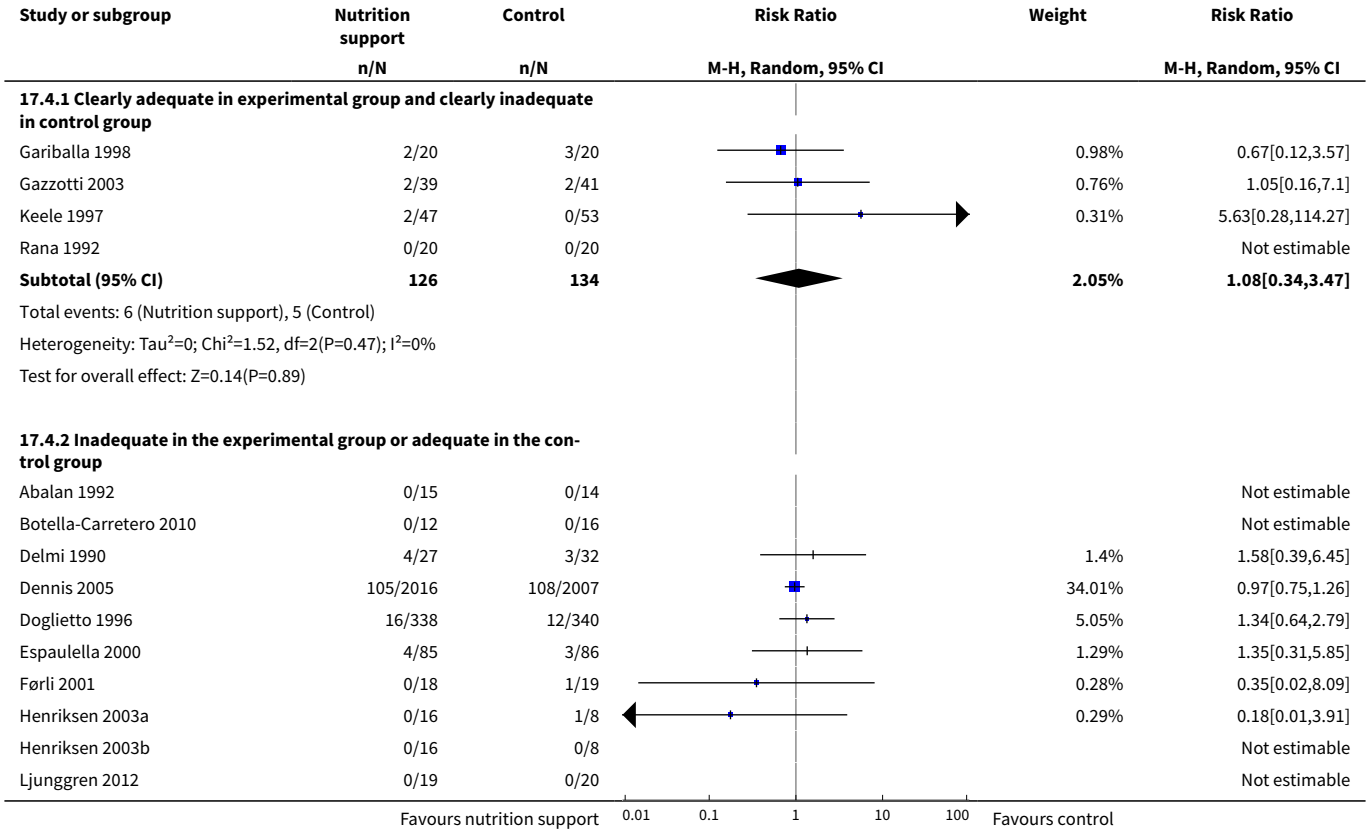
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Tau²=0; Chi²=3.74, df=4(P=0.44); I²=0%					
Test for overall effect: Z=0.66(P=0.51)					
17.3.11 Trauma surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.3.12 Orthopaedics					
Espaulella 2000	4/85	3/86		1.31%	1.35[0.31,5.85]
Houwing 2003	0/51	0/52			Not estimable
Miller 2006a	2/24	1/25		0.52%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.29%	3.25[0.14,76.01]
Subtotal (95% CI)	**183**	**188**		**2.11%**	**1.69[0.53,5.36]**
Total events: 7 (Nutrition support), 4 (Control)					
Heterogeneity: Tau²=0; Chi²=0.29, df=2(P=0.87); I²=0%					
Test for overall effect: Z=0.89(P=0.37)					
17.3.13 Plastic, reconstructive and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.3.14 Vascular surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.3.15 Transplant surgery					
Førli 2001	0/18	1/19		0.29%	0.35[0.02,8.09]
Subtotal (95% CI)	**18**	**19**		**0.29%**	**0.35[0.02,8.09]**
Total events: 0 (Nutrition support), 1 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.65(P=0.51)					
17.3.16 Urology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.3.17 Thoracic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.3.18 Neurological surgery					

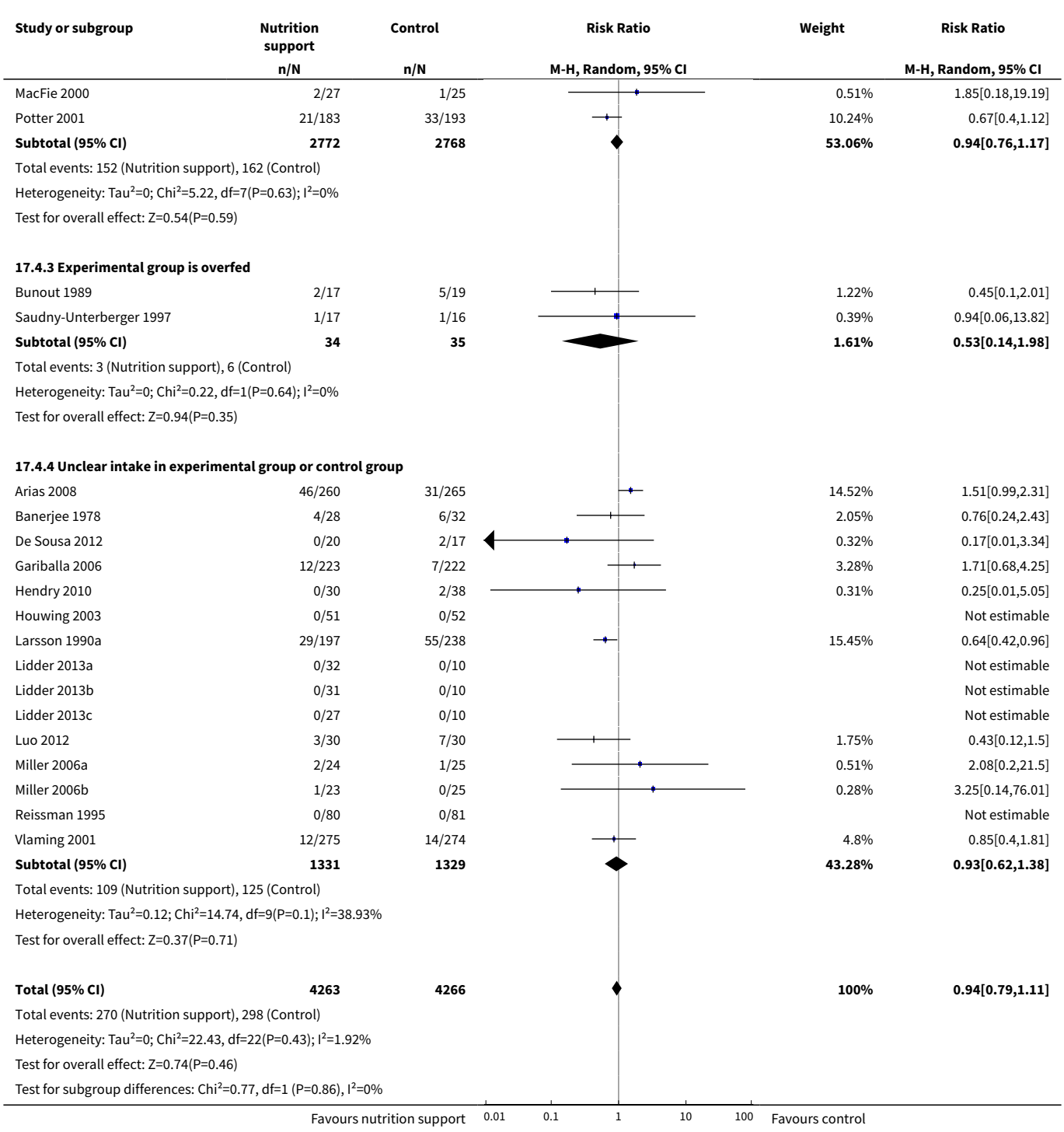






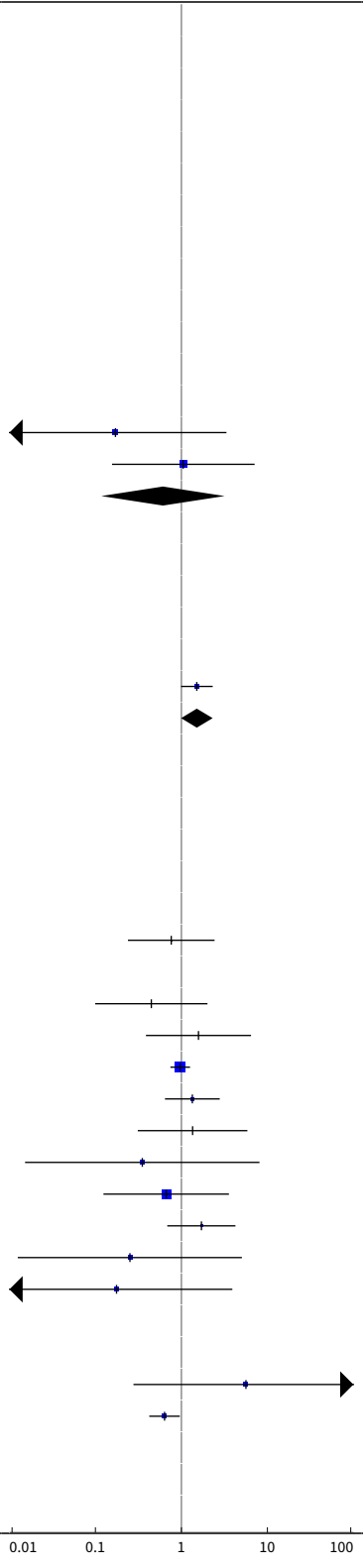
Analysis 17.4. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 4 All-cause mortality - based on adequacy of the amount of calories.

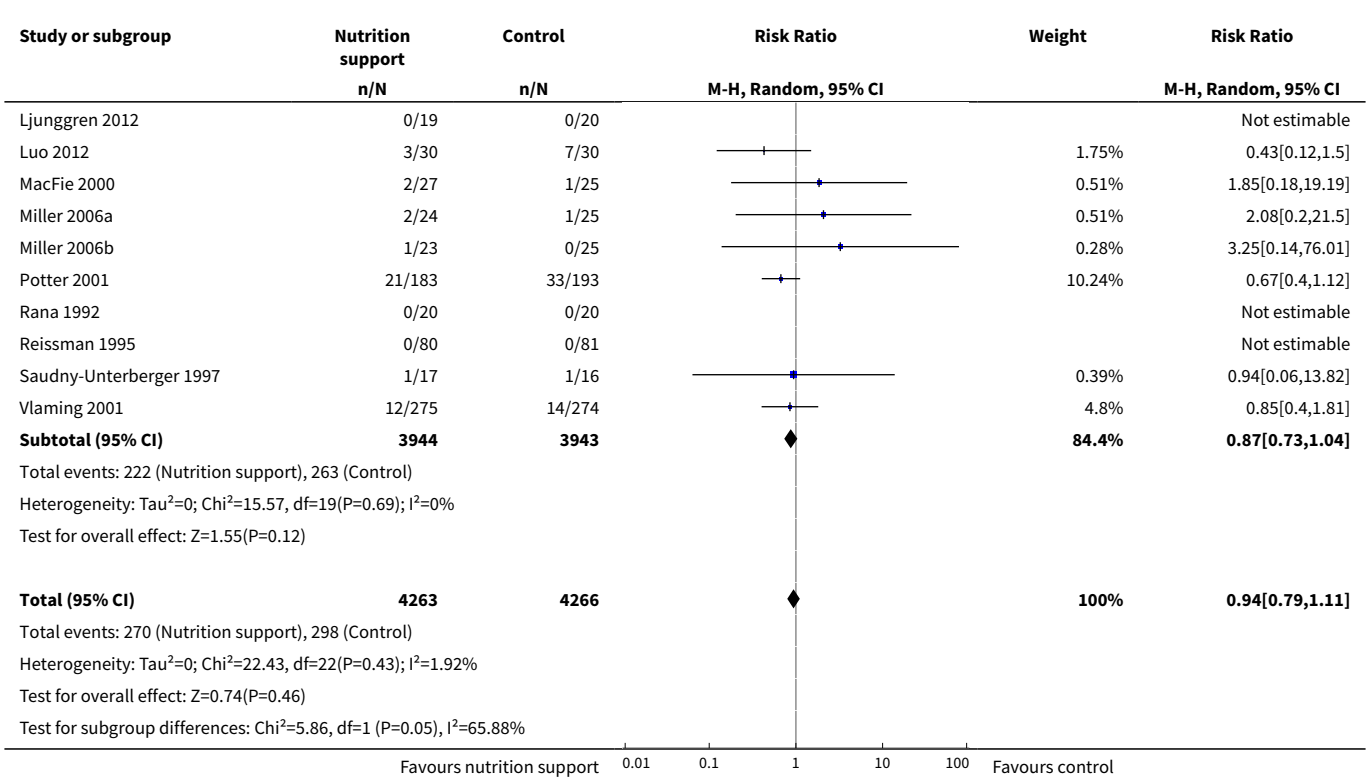




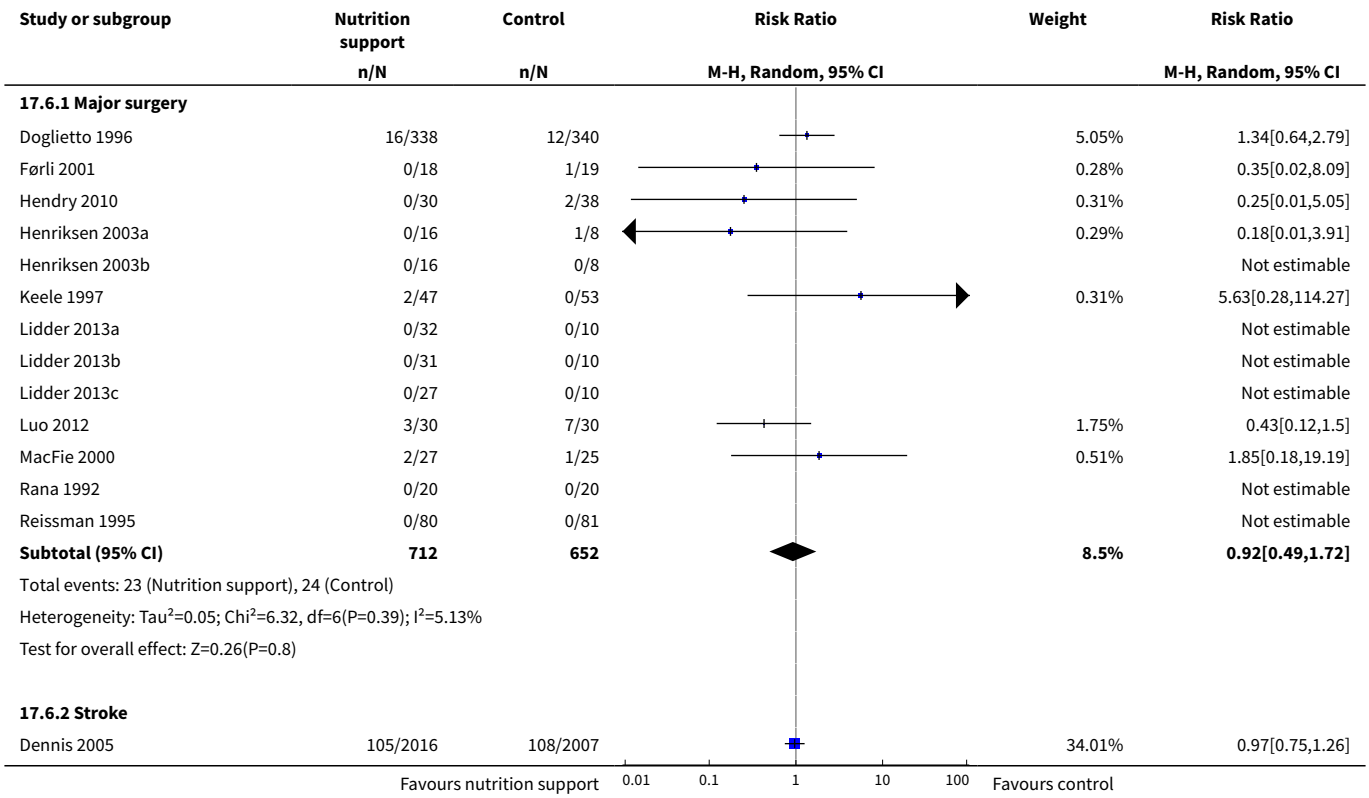
Analysis 17.5. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 5 All-cause mortality - different screening tools.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
17.5.1 NRS 2002					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.5.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.5.3 MNA					
De Sousa 2012	0/20	2/17		0.32%	0.17[0.01,3.34]
Gazzotti 2003	2/39	2/41		0.76%	1.05[0.16,7.1]
Subtotal (95% CI)	**59**	**58**		**1.08%**	**0.61[0.12,3.18]**
Total events: 2 (Nutrition support), 4 (Control)					
Heterogeneity: Tau^2=0.06; Chi^2=1.04, df=1(P=0.31); I^2=3.81%					
Test for overall effect: Z=0.59(P=0.56)					
17.5.4 SGA					
Arias 2008	46/260	31/265		14.52%	1.51[0.99,2.31]
Subtotal (95% CI)	**260**	**265**		**14.52%**	**1.51[0.99,2.31]**
Total events: 46 (Nutrition support), 31 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.92(P=0.05)					
17.5.5 Other means					
Abalan 1992	0/15	0/14			Not estimable
Banerjee 1978	4/28	6/32		2.05%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.22%	0.45[0.1,2.01]
Delmi 1990	4/27	3/32		1.4%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		34.01%	0.97[0.75,1.26]
Doglietto 1996	16/338	12/340		5.05%	1.34[0.64,2.79]
Espaulella 2000	4/85	3/86		1.29%	1.35[0.31,5.85]
Førli 2001	0/18	1/19		0.28%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.98%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		3.28%	1.71[0.68,4.25]
Hendry 2010	0/30	2/38		0.31%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.29%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.31%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		15.45%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable
Lidder 2013c	0/27	0/10			Not estimable

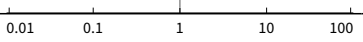




Analysis 17.6. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions.



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Gariballa 1998	2/20	3/20		0.98%	0.67[0.12,3.57]
Subtotal (95% CI)	**2036**	**2027**		**34.99%**	**0.96[0.74,1.24]**
Total events: 107 (Nutrition support), 111 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.19, df=1(P=0.67); I^2=0%					
Test for overall effect: Z=0.31(P=0.75)					
17.6.3 ICU participants including trauma					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.6.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	4/27	3/32		1.4%	1.58[0.39,6.45]
Espaulella 2000	4/85	3/86		1.29%	1.35[0.31,5.85]
Gazzotti 2003	2/39	2/41		0.76%	1.05[0.16,7.1]
Houwing 2003	0/51	0/52			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Miller 2006a	2/24	1/25		0.51%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.28%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		10.24%	0.67[0.4,1.12]
Subtotal (95% CI)	**463**	**490**		**14.47%**	**0.85[0.55,1.3]**
Total events: 34 (Nutrition support), 42 (Control)					
Heterogeneity: Tau^2=0; Chi^2=3.27, df=5(P=0.66); I^2=0%					
Test for overall effect: Z=0.76(P=0.44)					
17.6.5 Participants do not fall into one of the categories above					
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/260	31/265		14.52%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.05%	0.76[0.24,2.43]
Bunout 1989	2/17	5/19		1.22%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.32%	0.17[0.01,3.34]
Gariballa 2006	12/223	7/222		3.28%	1.71[0.68,4.25]
Larsson 1990a	29/197	55/238		15.45%	0.64[0.42,0.96]
Saudny-Unterberger 1997	1/17	1/16		0.39%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		4.8%	0.85[0.4,1.81]
Subtotal (95% CI)	**1052**	**1097**		**42.04%**	**0.93[0.62,1.39]**
Total events: 106 (Nutrition support), 121 (Control)					
Heterogeneity: Tau^2=0.12; Chi^2=12.38, df=7(P=0.09); I^2=43.47%					
Test for overall effect: Z=0.36(P=0.72)					
Total (95% CI)	**4263**	**4266**		**100%**	**0.94[0.79,1.11]**
Total events: 270 (Nutrition support), 298 (Control)					
Heterogeneity: Tau^2=0; Chi^2=22.43, df=22(P=0.43); I^2=1.92%					
Test for overall effect: Z=0.74(P=0.46)					
Test for subgroup differences: Chi^2=0.24, df=1 (P=0.97), I^2=0%					

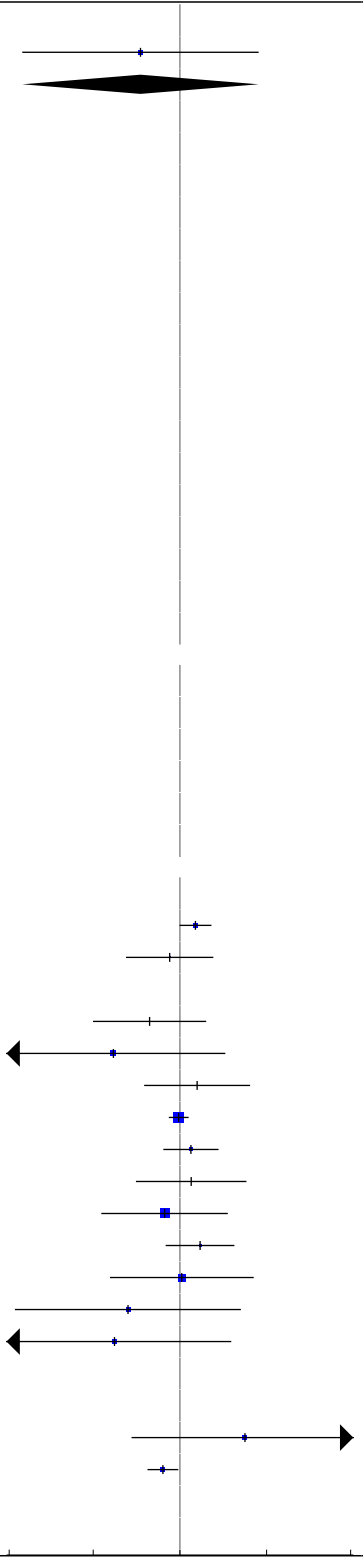


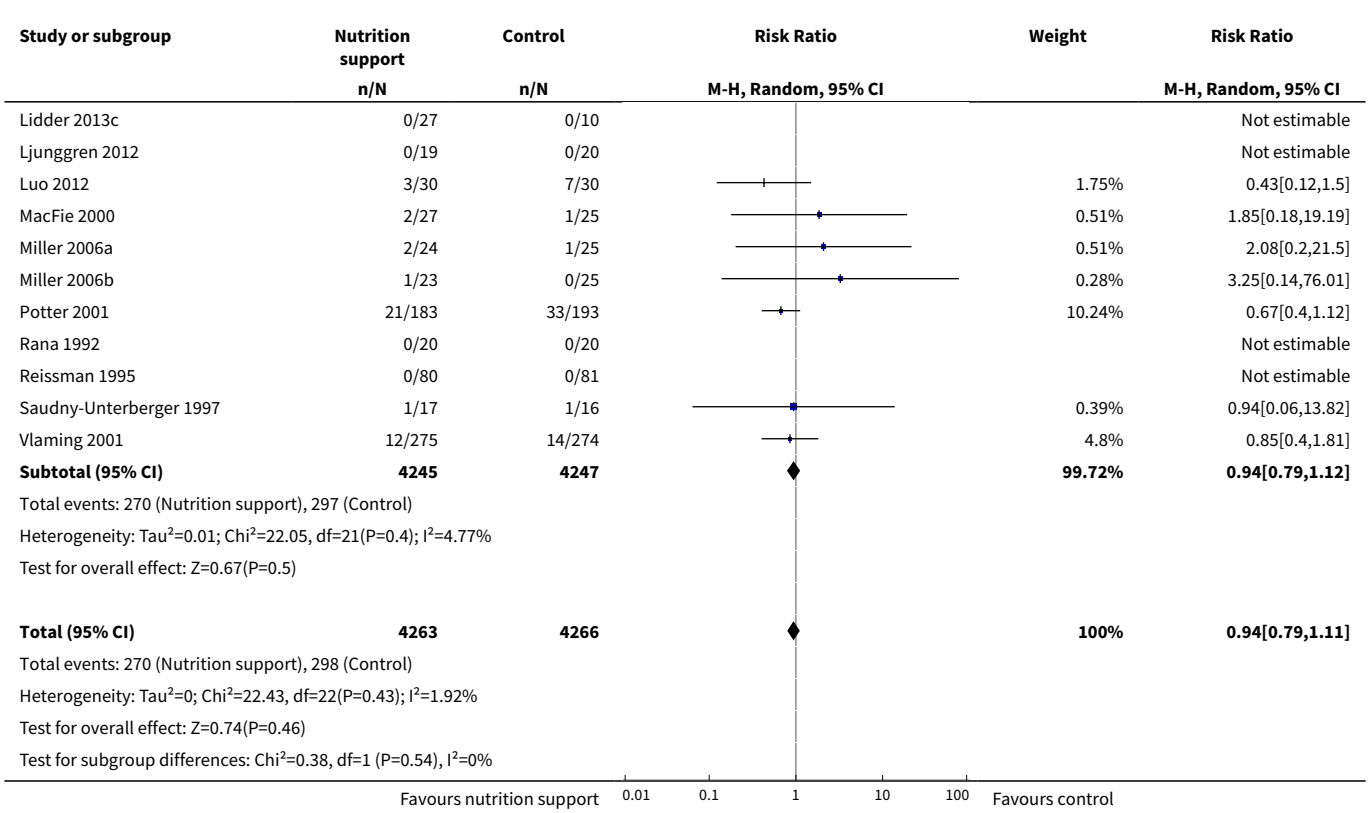
Favours nutrition support

Favours control

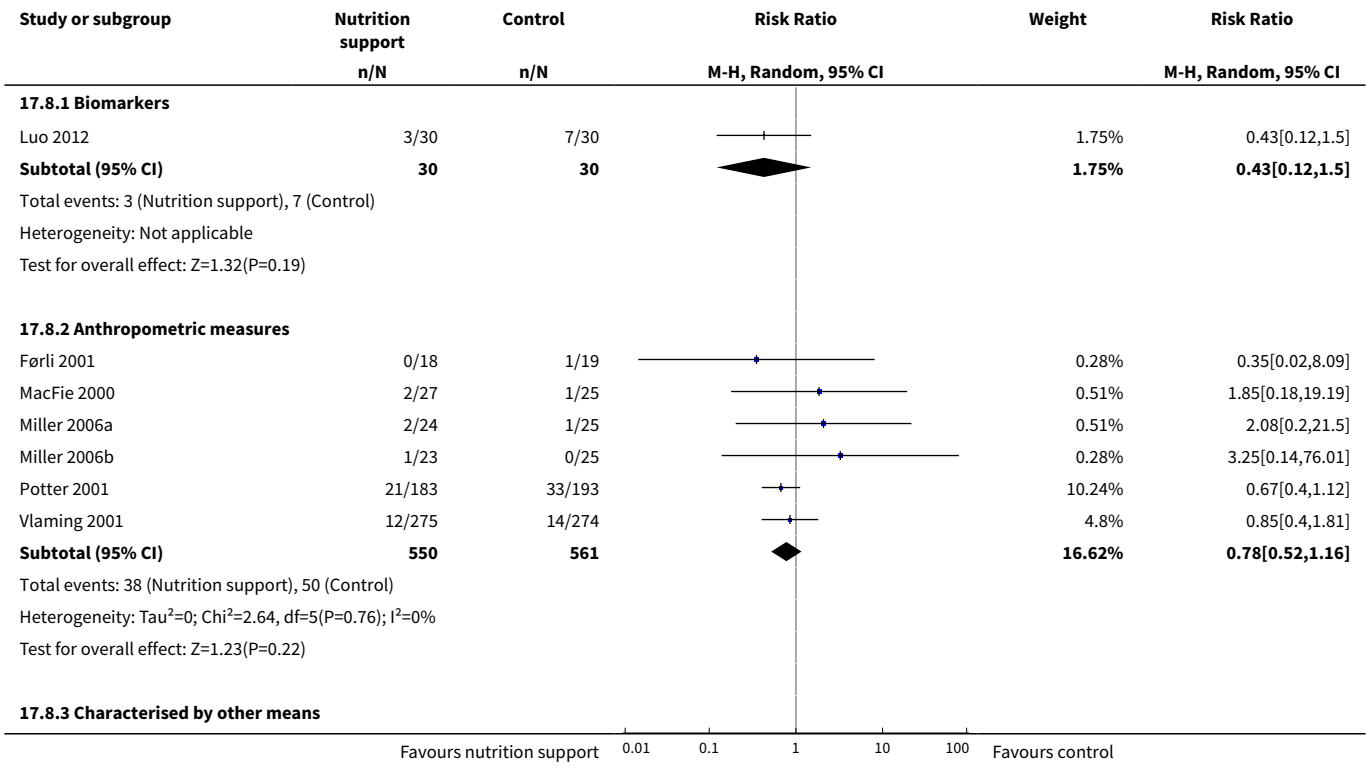
Analysis 17.7. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria.

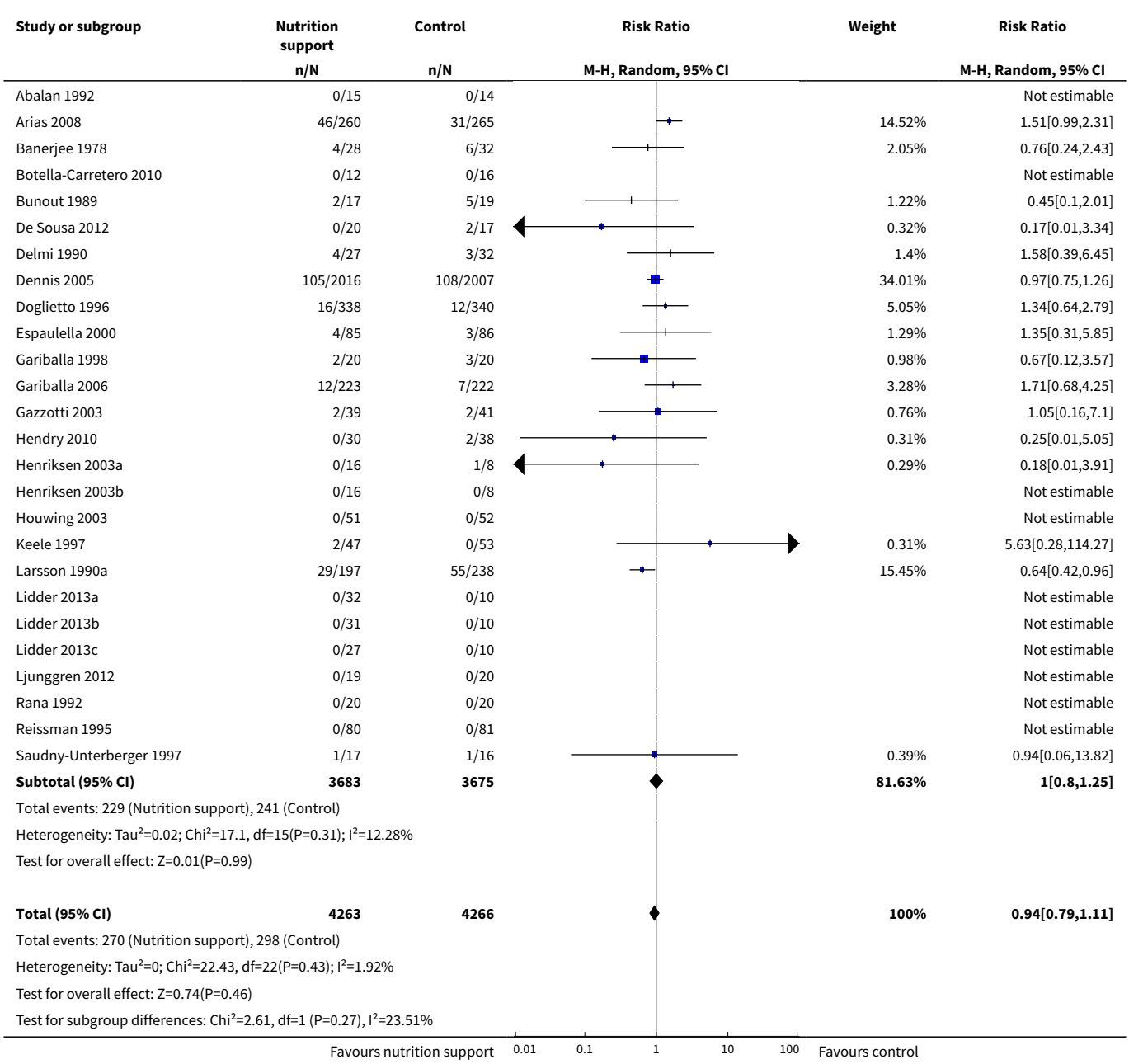
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
17.7.1 BMI less than 20.5 kg/m2					
Førli 2001	0/18	1/19		0.28%	0.35[0.02,8.09]
Subtotal (95% CI)	**18**	**19**		**0.28%**	**0.35[0.02,8.09]**
Total events: 0 (Nutrition support), 1 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.65(P=0.51)					
17.7.2 Weight loss of at least 5% during the last three months					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.7.3 Weight loss of at least 10% during the last six months					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.7.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
17.7.5 Participants characterised as 'at nutritional risk' by other means					
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/260	31/265		14.52%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.05%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.22%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.32%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		1.4%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		34.01%	0.97[0.75,1.26]
Doglietto 1996	16/338	12/340		5.05%	1.34[0.64,2.79]
Espaulella 2000	4/85	3/86		1.29%	1.35[0.31,5.85]
Gariballa 1998	2/20	3/20		0.98%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		3.28%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.76%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.31%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.29%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.31%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		15.45%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/10			Not estimable
Lidder 2013b	0/31	0/10			Not estimable



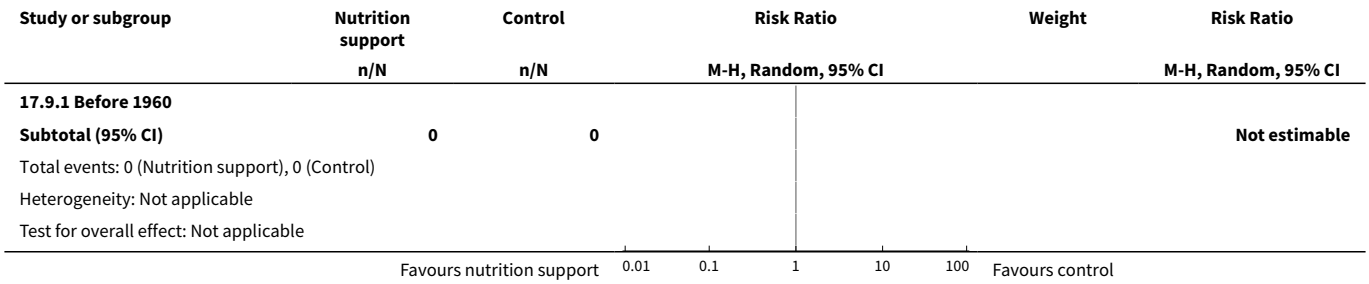


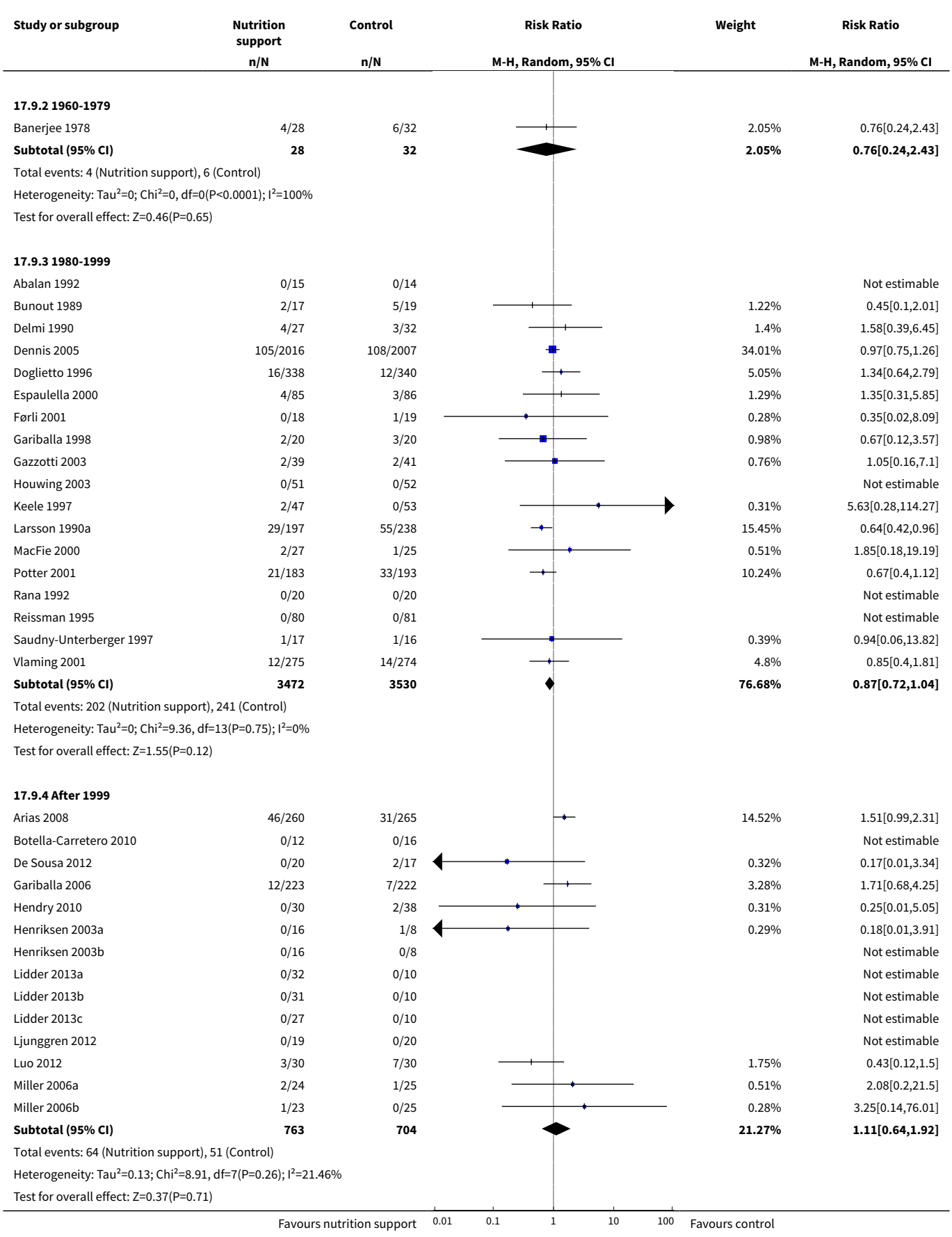
Analysis 17.8. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

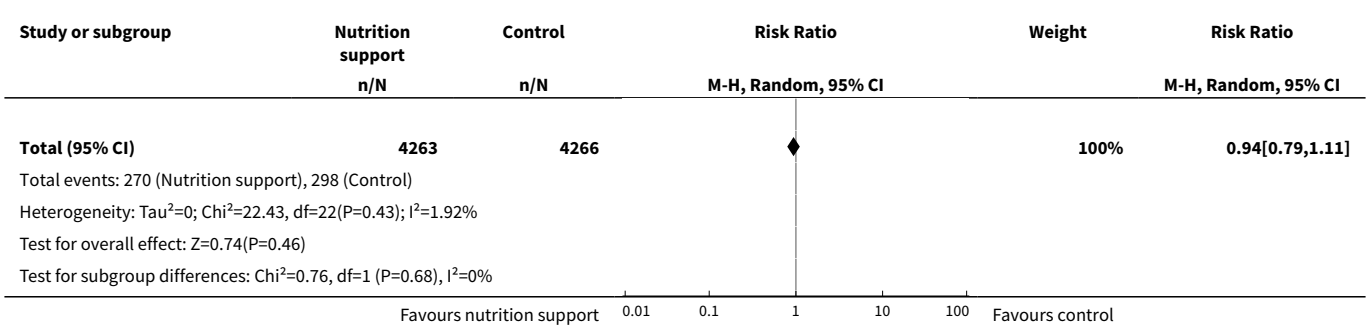




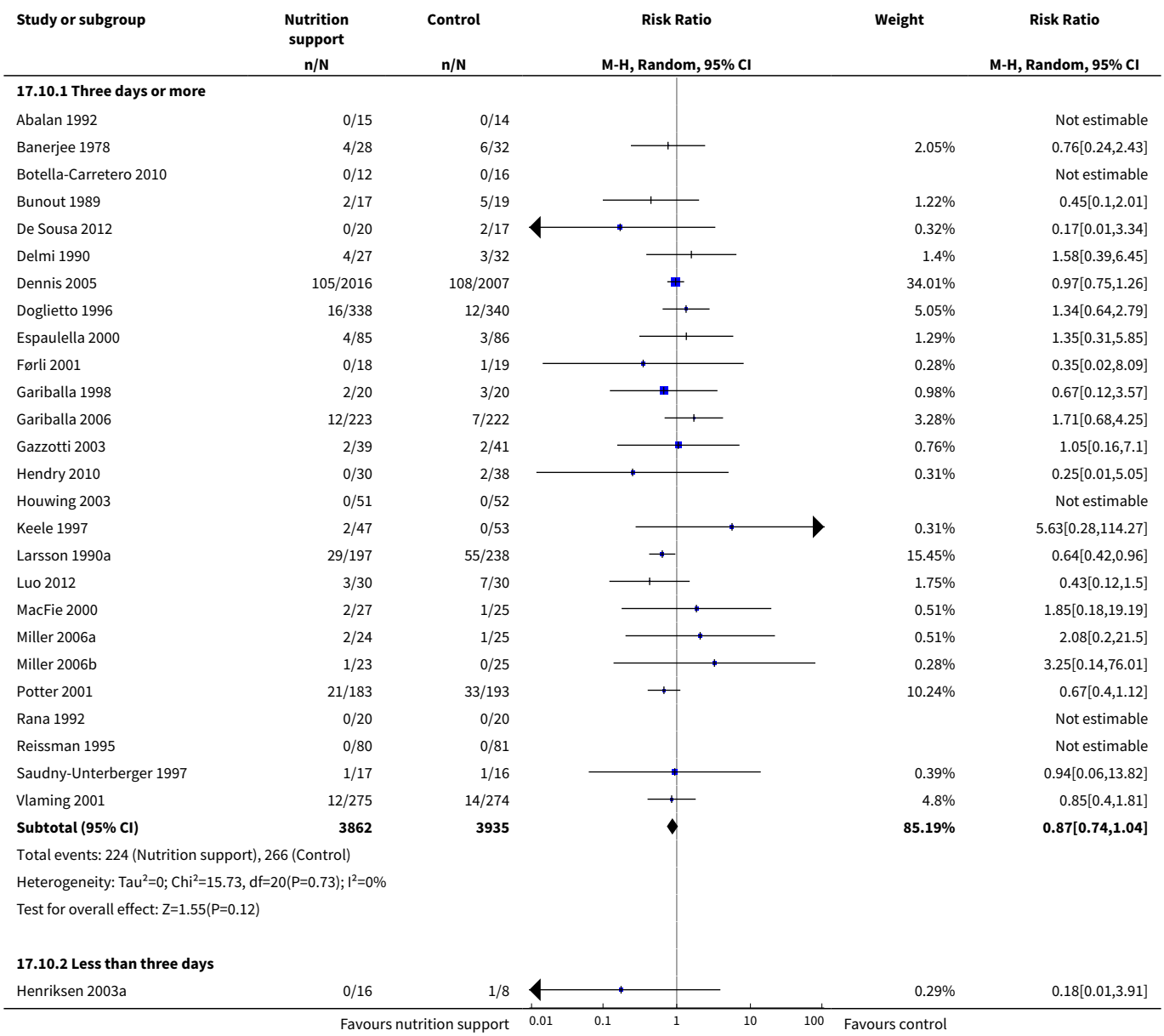
Analysis 17.9. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 9 All-cause mortality - randomisation year.

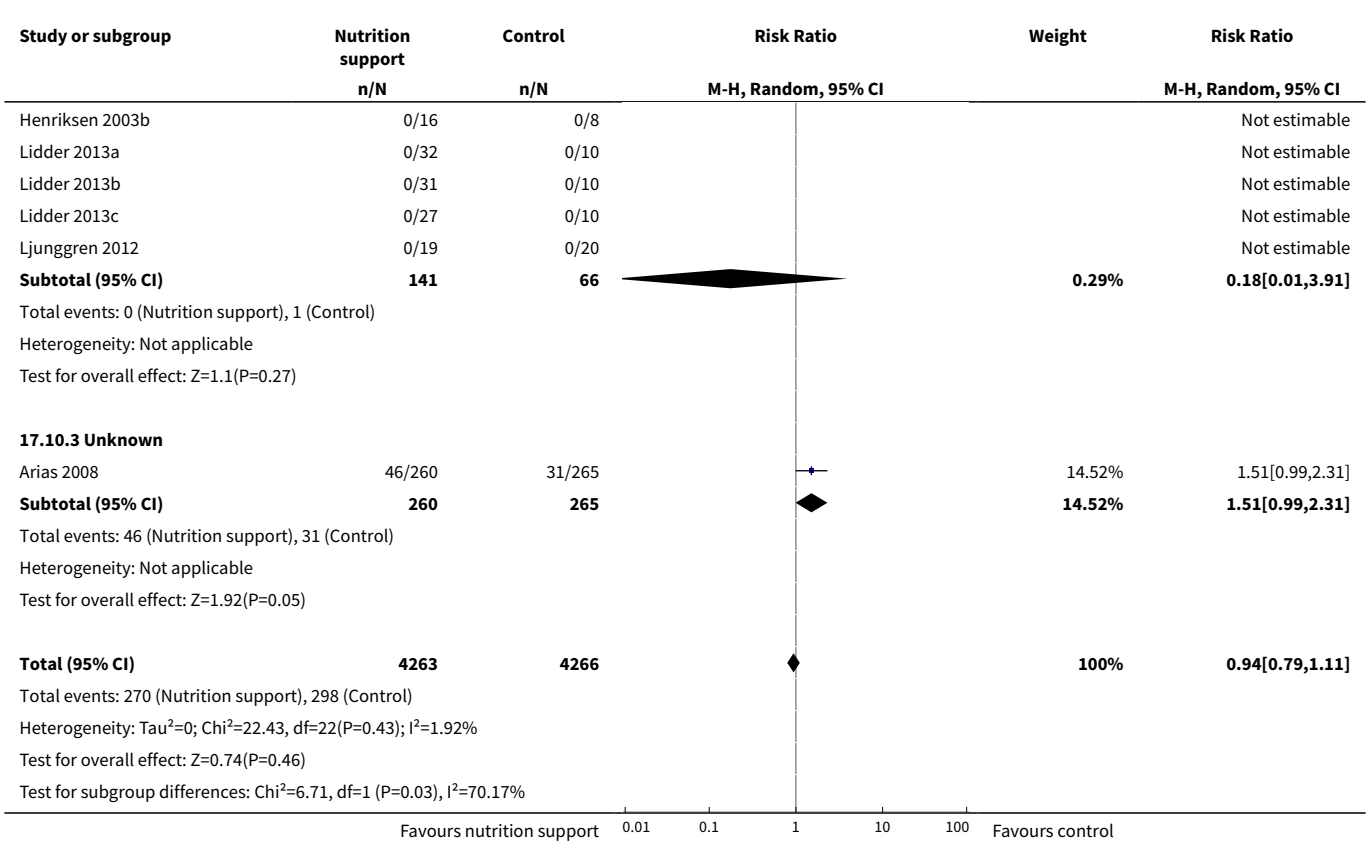




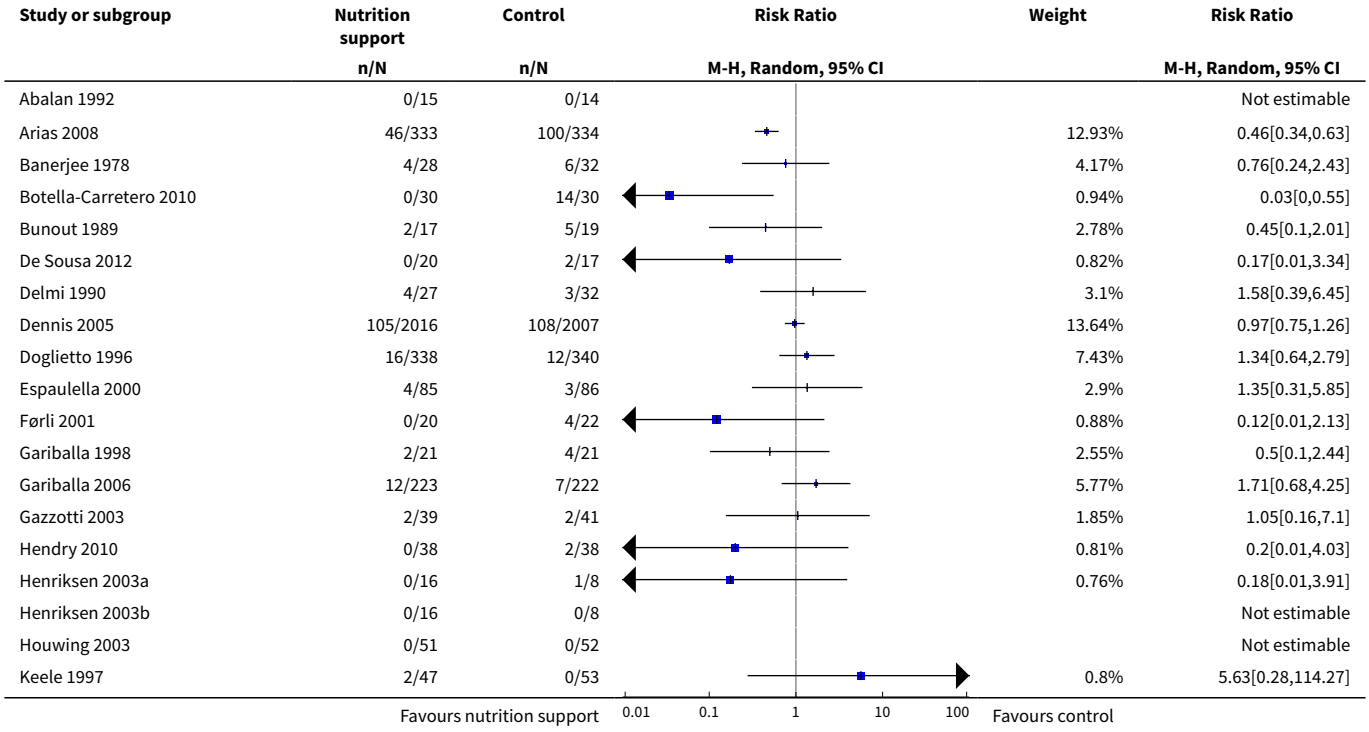


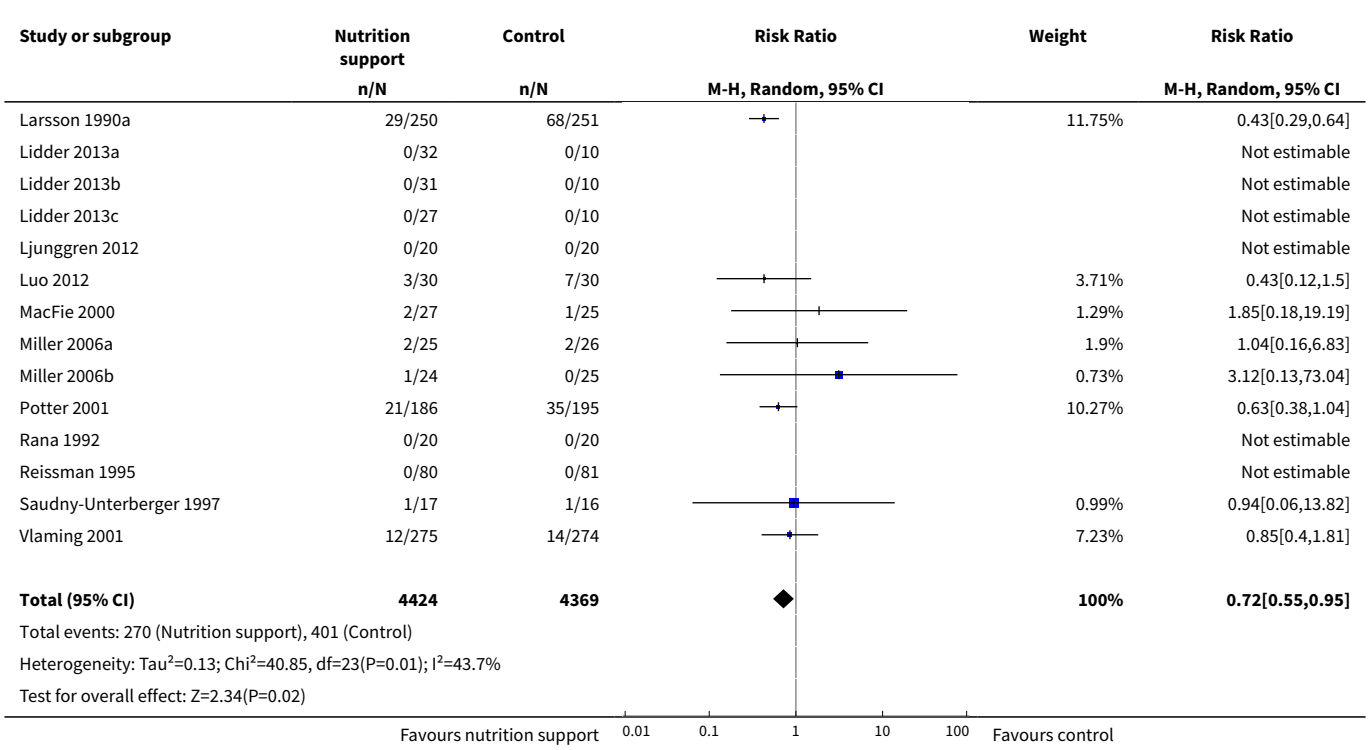
Analysis 17.10. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.



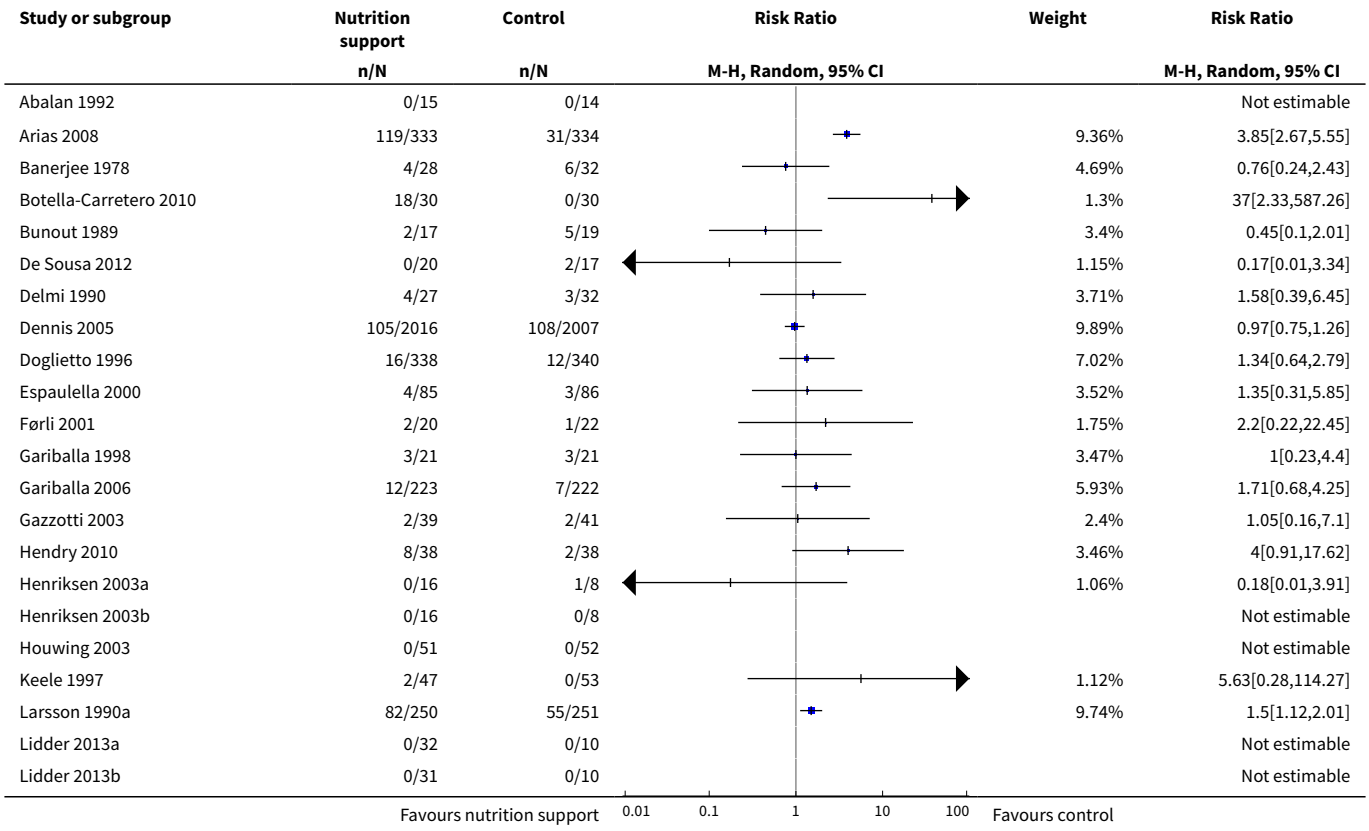


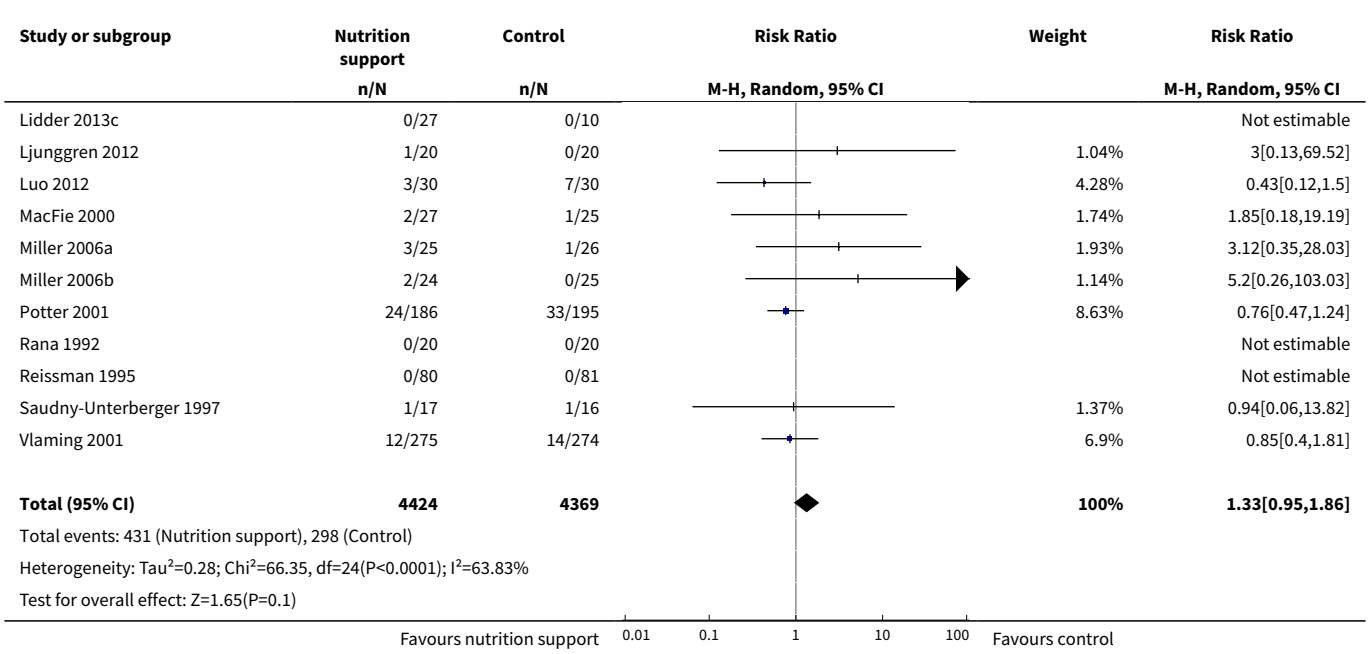
Analysis 17.11. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 11 All-cause mortality - 'best-worst case' scenario.





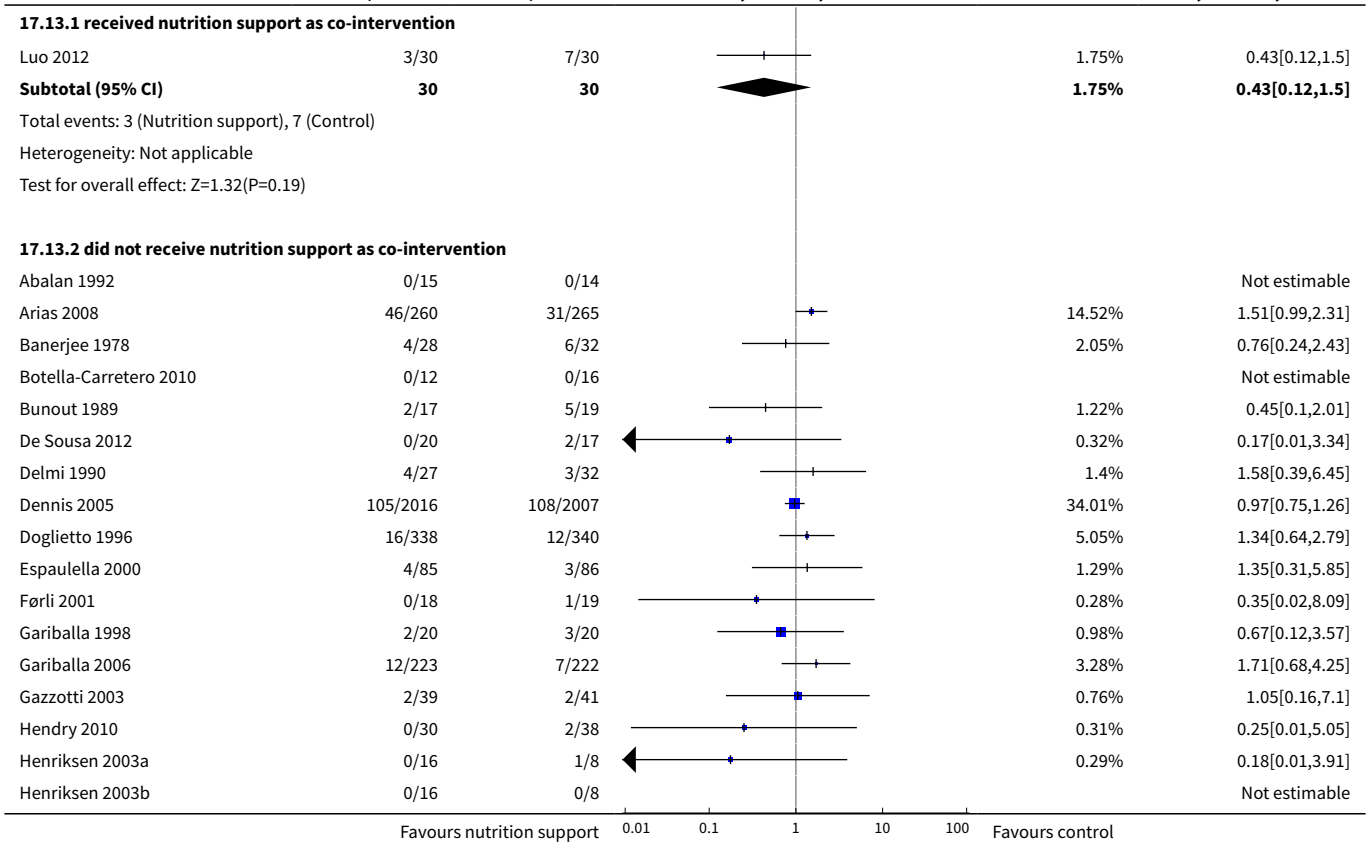
Analysis 17.12. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 12 All-cause mortality - 'worst-best case' scenario.



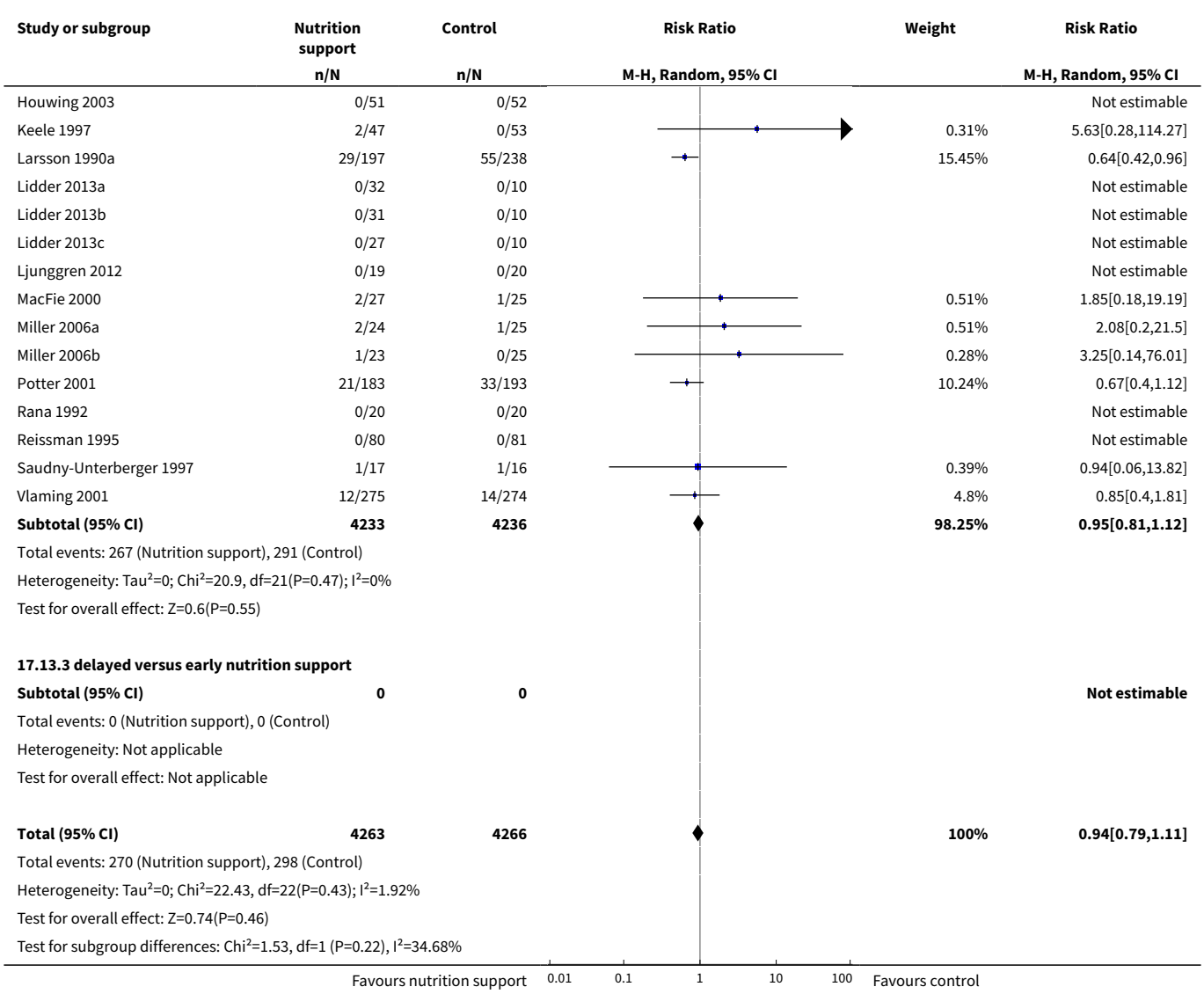


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Lidder 2013c	0/27	0/10			Not estimable
Ljunggren 2012	1/20	0/20		1.04%	3[0.13,69.52]
Luo 2012	3/30	7/30		4.28%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		1.74%	1.85[0.18,19.19]
Miller 2006a	3/25	1/26		1.93%	3.12[0.35,28.03]
Miller 2006b	2/24	0/25		1.14%	5.2[0.26,103.03]
Potter 2001	24/186	33/195		8.63%	0.76[0.47,1.24]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Saudny-Unterberger 1997	1/17	1/16		1.37%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		6.9%	0.85[0.4,1.81]
Total (95% CI)	**4424**	**4369**		**100%**	**1.33[0.95,1.86]**
Total events: 431 (Nutrition support), 298 (Control)					
Heterogeneity: Tau²=0.28; Chi²=66.35, df=24(P<0.0001); I²=63.83%					
Test for overall effect: Z=1.65(P=0.1)					

Analysis 17.13. Comparison 17 Oral - All cause mortality - end of intervention, Outcome 13 All-cause mortality co-interventions.



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
17.13.1 received nutrition support as co-intervention					
Luo 2012	3/30	7/30		1.75%	0.43[0.12,1.5]
Subtotal (95% CI)	**30**	**30**		**1.75%**	**0.43[0.12,1.5]**
Total events: 3 (Nutrition support), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.32(P=0.19)					
17.13.2 did not receive nutrition support as co-intervention					
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/260	31/265		14.52%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.05%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.22%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.32%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		1.4%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		34.01%	0.97[0.75,1.26]
Doglietto 1996	16/338	12/340		5.05%	1.34[0.64,2.79]
Espaulella 2000	4/85	3/86		1.29%	1.35[0.31,5.85]
Førli 2001	0/18	1/19		0.28%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.98%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		3.28%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.76%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.31%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.29%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable



Comparison 18. Oral - All cause mortality - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All-cause mortality - overall	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
2 All-cause mortality - bias	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
2.1 High risk of bias	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3 All-cause mortality - medical speciality	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	1	36	Risk Ratio (M-H, Random, 95% CI)	0.45 [0.10, 2.01]
3.3 Geriatrics	9	1552	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.55, 1.19]
3.4 Pulmonary disease	2	93	Risk Ratio (M-H, Random, 95% CI)	0.49 [0.16, 1.54]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	10	1267	Risk Ratio (M-H, Random, 95% CI)	1.14 [0.61, 2.12]
3.11 Trauma surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.12 Ortopaedics	4	361	Risk Ratio (M-H, Random, 95% CI)	1.80 [0.92, 3.52]
3.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Transplant surgery	1	37	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.02, 8.09]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	3	4081	Risk Ratio (M-H, Random, 95% CI)	0.65 [0.22, 1.93]
3.24 Oncology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	2	1074	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.73, 2.12]
4 All-cause mortality - based on adequacy of the amount of calories	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
4.1 Clearly adequate in intervention and clearly inadequate in control	4	260	Risk Ratio (M-H, Random, 95% CI)	0.80 [0.17, 3.70]
4.2 Inadequate in the experimental or adequate in the control	12	5512	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.76, 1.17]
4.3 Experimental group is overfed	2	69	Risk Ratio (M-H, Random, 95% CI)	0.53 [0.14, 1.98]
4.4 Unclear intake in control or experimental	14	2660	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.65, 1.38]
5 All-cause mortality - different screening tools	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
5.1 NRS 2002	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

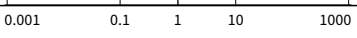
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5.3 MNA	2	117	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.12, 3.18]
5.4 SGA	1	525	Risk Ratio (M-H, Random, 95% CI)	1.51 [0.99, 2.31]
5.5 Other means	29	7859	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.73, 1.09]
6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
6.1 Major surgery	11	1304	Risk Ratio (M-H, Random, 95% CI)	1.09 [0.59, 2.00]
6.2 Stroke	2	4052	Risk Ratio (M-H, Random, 95% CI)	0.65 [0.22, 1.93]
6.3 ICU participants including trauma	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	10	996	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.57, 1.34]
6.5 Participants do not fall into one of the categories above	9	2149	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.64, 1.46]
7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
7.1 BMI less than 20.5 kg/m2	1	37	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.02, 8.09]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	31	8464	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.16]
8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
8.1 Biomarkers	1	60	Risk Ratio (M-H, Random, 95% CI)	0.43 [0.12, 1.50]
8.2 Anthropometric measures	6	1111	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.52, 1.16]
8.3 Both anthropometrics and biomarkers	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.4 Characterised by other means	25	7330	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.77, 1.26]
9 All-cause mortality - randomisation year	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	1	60	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.24, 2.43]
9.3 1980 to 1999	18	6974	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.71, 1.05]
9.4 After 1999	13	1467	Risk Ratio (M-H, Random, 95% CI)	1.19 [0.77, 1.83]
10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
10.1 Three days or more	31	8462	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.77, 1.15]
10.2 Less than three days	1	39	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
10.3 Unknown	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
11 All-cause mortality - 'best-worst case' scenario	32	8793	Risk Ratio (M-H, Random, 95% CI)	0.70 [0.54, 0.91]
12 All-cause mortality - 'worst-best case' scenario	32	8793	Risk Ratio (M-H, Random, 95% CI)	1.27 [0.93, 1.73]
13 All-cause mortality co-interventions	131	22435	Risk Ratio (M-H, Fixed, 95% CI)	0.91 [0.86, 0.98]
13.1 received nutrition support as co-intervention	8	5185	Risk Ratio (M-H, Fixed, 95% CI)	0.93 [0.80, 1.08]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
13.2 did not receive nutrition support as co-intervention	120	17017	Risk Ratio (M-H, Fixed, 95% CI)	0.91 [0.84, 0.98]
13.3 delayed versus early nutrition support	3	233	Risk Ratio (M-H, Fixed, 95% CI)	0.99 [0.53, 1.83]

Analysis 18.1. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 1 All-cause mortality - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/260	31/265		11.77%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.65%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.65%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.44%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		4.49%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		21.19%	0.95[0.8,1.12]
Doglietto 1996	16/338	12/340		5.71%	1.34[0.64,2.79]
Espaulella 2000	17/80	10/81		5.91%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.4%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		1.78%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		8.89%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		1.05%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.44%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.41%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.43%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		12.18%	0.64[0.42,0.96]
Lidder 2013a	1/32	1/30		0.53%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.44%	0.23[0.01,4.56]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		2.3%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.71%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.71%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.4%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		9.51%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Saudny-Unterberger 1997	1/17	1/16		0.54%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		5.49%	0.85[0.4,1.81]
Total (95% CI)	**4221**	**4280**		**100%**	**0.94[0.77,1.15]**
Total events: 442 (Experimental), 476 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=31.2, df=24(P=0.15); I^2=23.08%					
Test for overall effect: Z=0.6(P=0.55)					



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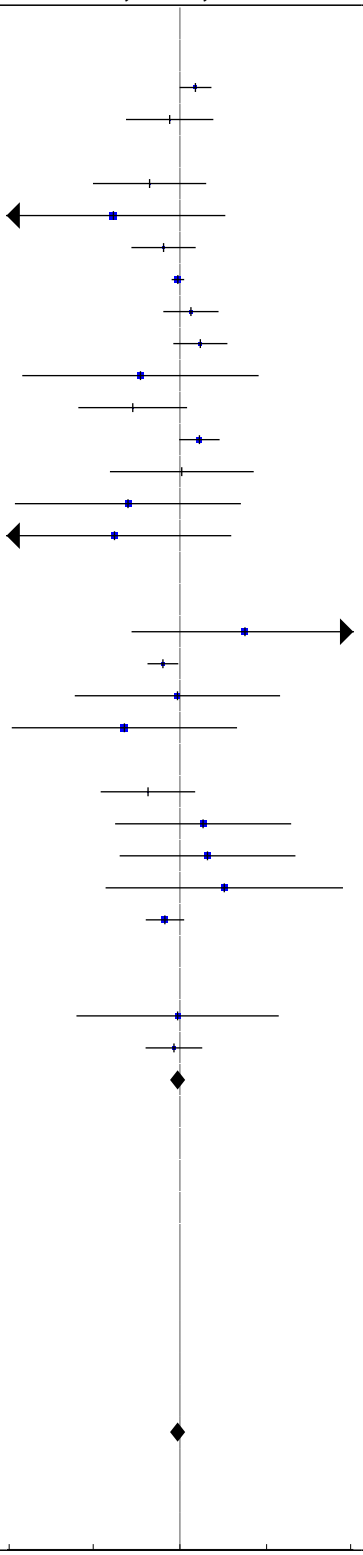
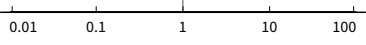
Analysis 18.2. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 2 All-cause mortality - bias.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
18.2.1 High risk of bias					
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/260	31/265		11.77%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.65%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.65%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.44%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		4.49%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		21.19%	0.95[0.8,1.12]
Doglietto 1996	16/338	12/340		5.71%	1.34[0.64,2.79]
Espaulella 2000	17/80	10/81		5.91%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.4%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		1.78%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		8.89%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		1.05%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.44%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.41%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.43%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		12.18%	0.64[0.42,0.96]
Lidder 2013a	1/32	1/30		0.53%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.44%	0.23[0.01,4.56]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		2.3%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.71%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.71%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.4%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		9.51%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Saudny-Unterberger 1997	1/17	1/16		0.54%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		5.49%	0.85[0.4,1.81]
Subtotal (95% CI)	**4221**	**4280**		**100%**	**0.94[0.77,1.15]**
Total events: 442 (Experimental), 476 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=31.2, df=24(P=0.15); I^2=23.08%					
Test for overall effect: Z=0.6(P=0.55)					
18.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**4221**	**4280**		**100%**	**0.94[0.77,1.15]**
Total events: 442 (Experimental), 476 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=31.2, df=24(P=0.15); I^2=23.08%					
Test for overall effect: Z=0.6(P=0.55)					



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for subgroup differences: Not applicable					



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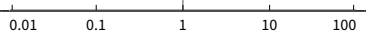
Analysis 18.3. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 3 All-cause mortality - medical speciality.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
18.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.3.2 Medical gastroenterology and hepatology					
Bunout 1989	2/17	5/19		1.65%	0.45[0.1,2.01]
Subtotal (95% CI)	**17**	**19**		**1.65%**	**0.45[0.1,2.01]**
Total events: 2 (Experimental), 5 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.05(P=0.29)					
18.3.3 Geriatrics					
Banerjee 1978	4/28	6/32		2.65%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
De Sousa 2012	0/20	2/17		0.44%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		4.49%	0.65[0.28,1.52]
Gariballa 2006	32/223	19/222		8.89%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		1.05%	1.05[0.16,7.1]
Larsson 1990a	29/197	55/238		12.18%	0.64[0.42,0.96]
Ljunggren 2012	0/19	0/20			Not estimable
Potter 2001	21/183	33/193		9.51%	0.67[0.4,1.12]
Subtotal (95% CI)	**746**	**806**		**39.22%**	**0.81[0.55,1.19]**
Total events: 94 (Experimental), 127 (Control)					
Heterogeneity: Tau^2=0.1; Chi^2=10.32, df=6(P=0.11); I^2=41.87%					
Test for overall effect: Z=1.07(P=0.29)					
18.3.4 Pulmonary disease					
Luo 2012	3/30	7/30		2.3%	0.43[0.12,1.5]
Saudny-Unterberger 1997	1/17	1/16		0.54%	0.94[0.06,13.82]
Subtotal (95% CI)	**47**	**46**		**2.84%**	**0.49[0.16,1.54]**
Total events: 4 (Experimental), 8 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.27, df=1(P=0.6); I^2=0%					
Test for overall effect: Z=1.22(P=0.22)					
18.3.5 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					



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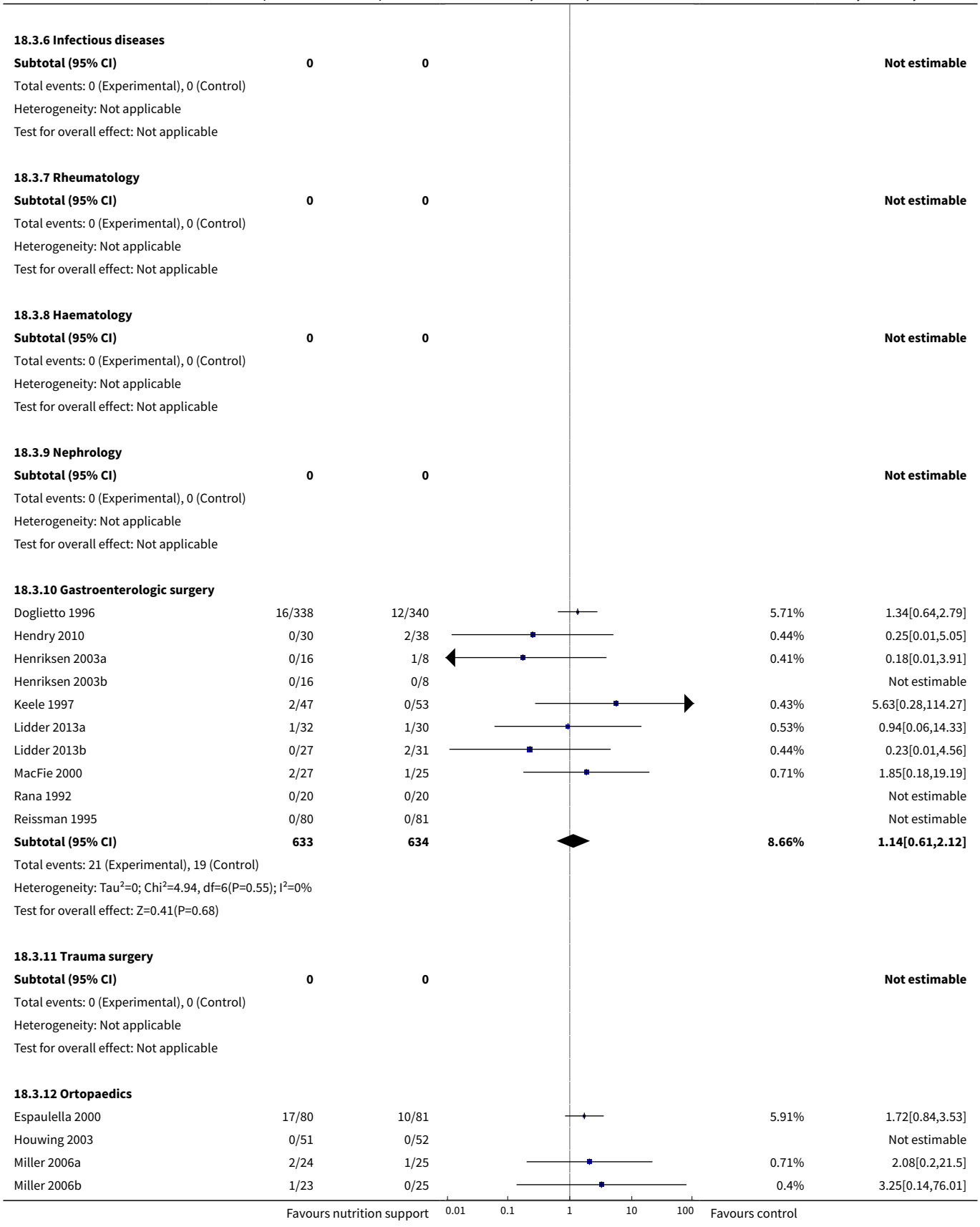
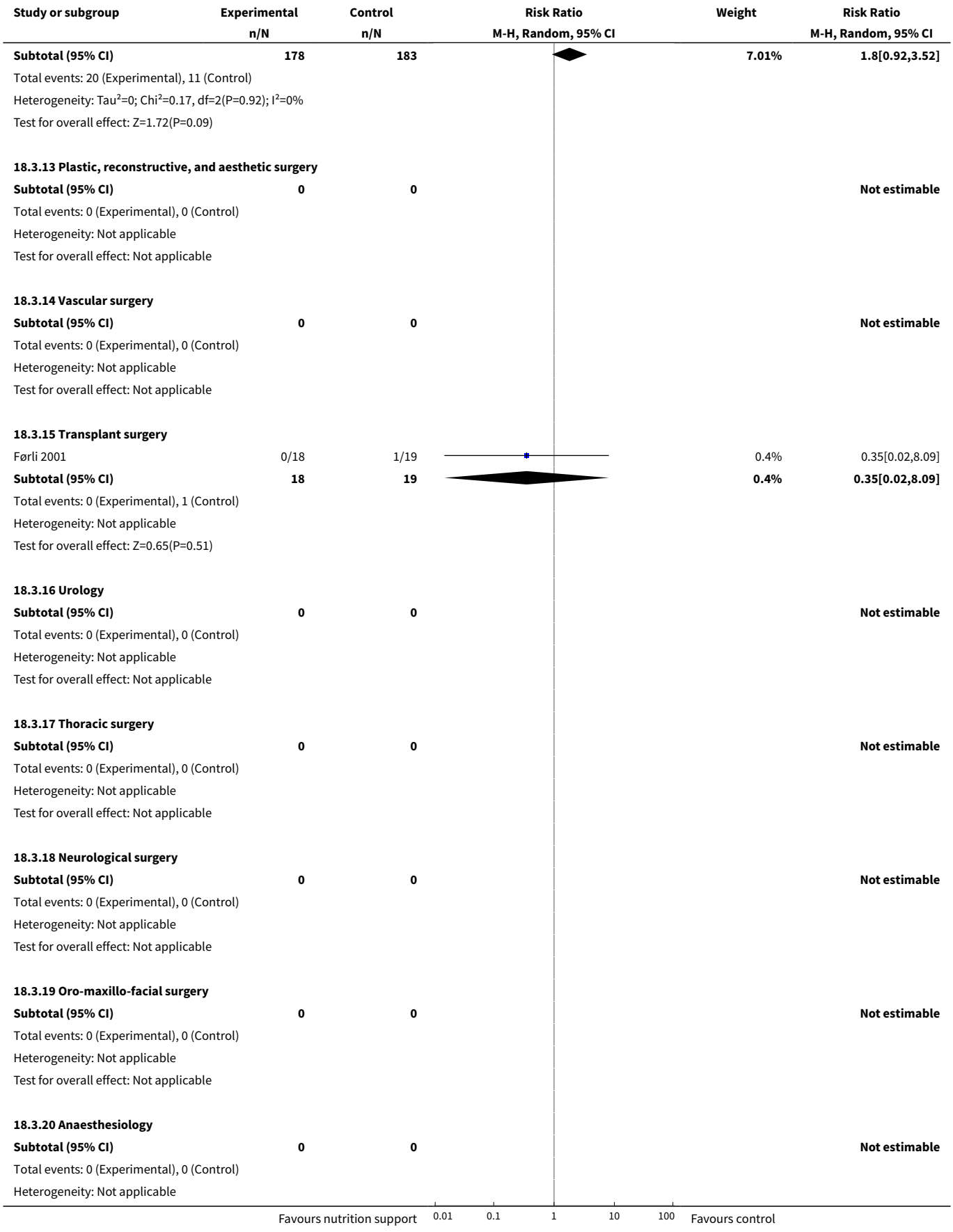
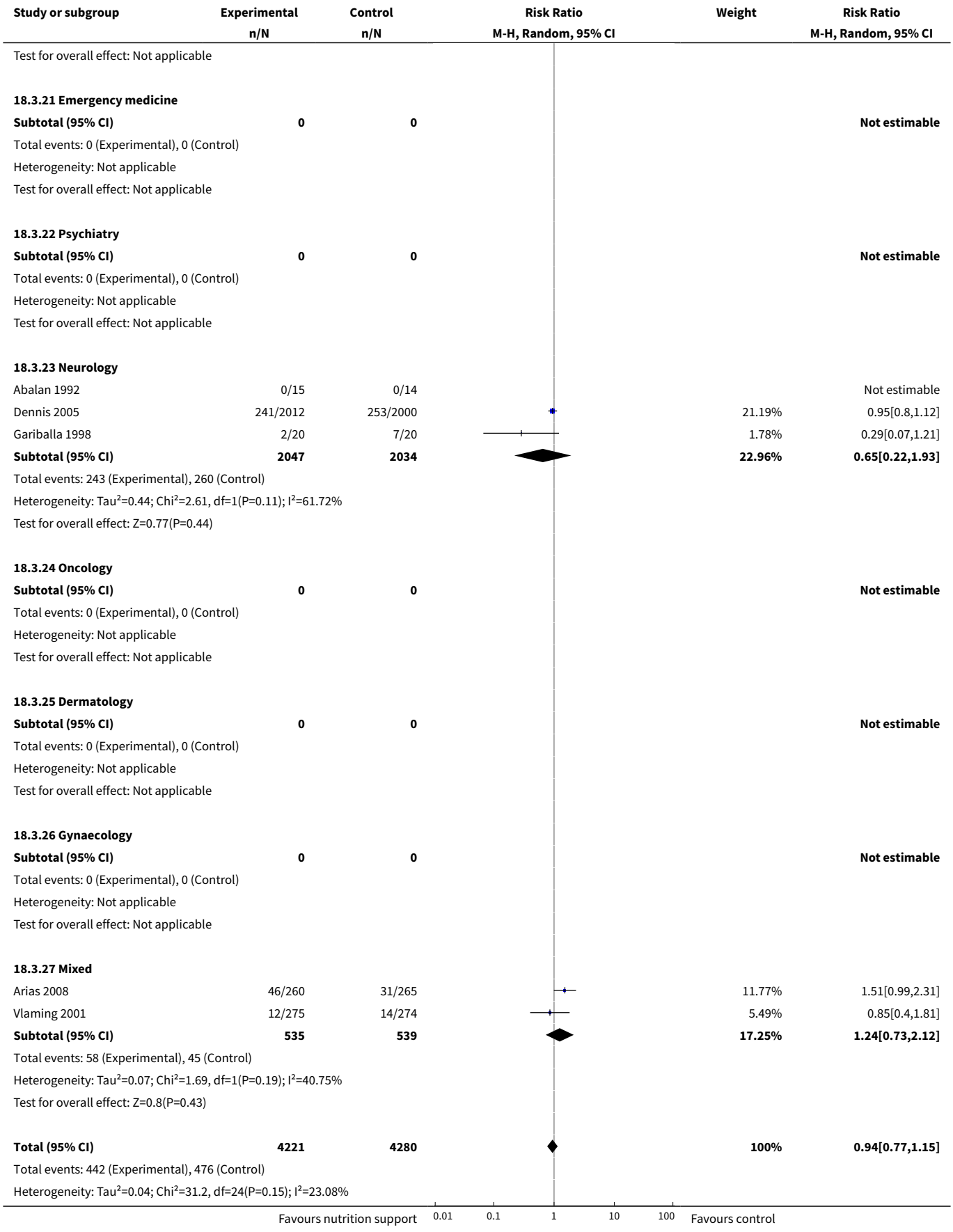
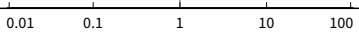


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
18.3.6 Infectious diseases					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.3.7 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.3.8 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.3.9 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.3.10 Gastroenterologic surgery					
Doglietto 1996	16/338	12/340		5.71%	1.34[0.64,2.79]
Hendry 2010	0/30	2/38		0.44%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.41%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Keele 1997	2/47	0/53		0.43%	5.63[0.28,114.27]
Lidder 2013a	1/32	1/30		0.53%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.44%	0.23[0.01,4.56]
MacFie 2000	2/27	1/25		0.71%	1.85[0.18,19.19]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Subtotal (95% CI)	**633**	**634**		**8.66%**	**1.14[0.61,2.12]**
Total events: 21 (Experimental), 19 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.94, df=6(P=0.55); I^2=0%					
Test for overall effect: Z=0.41(P=0.68)					
18.3.11 Trauma surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.3.12 Ortopaedics					
Espaulella 2000	17/80	10/81		5.91%	1.72[0.84,3.53]
Houwing 2003	0/51	0/52			Not estimable
Miller 2006a	2/24	1/25		0.71%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.4%	3.25[0.14,76.01]



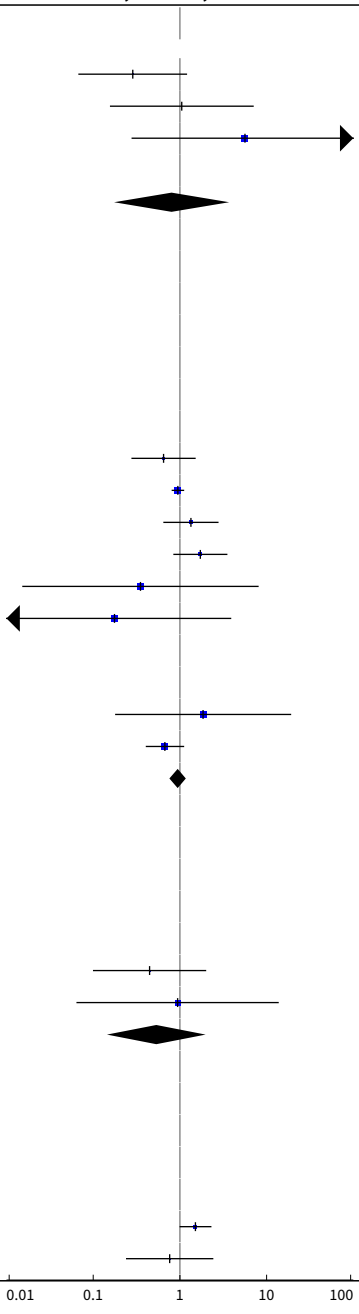


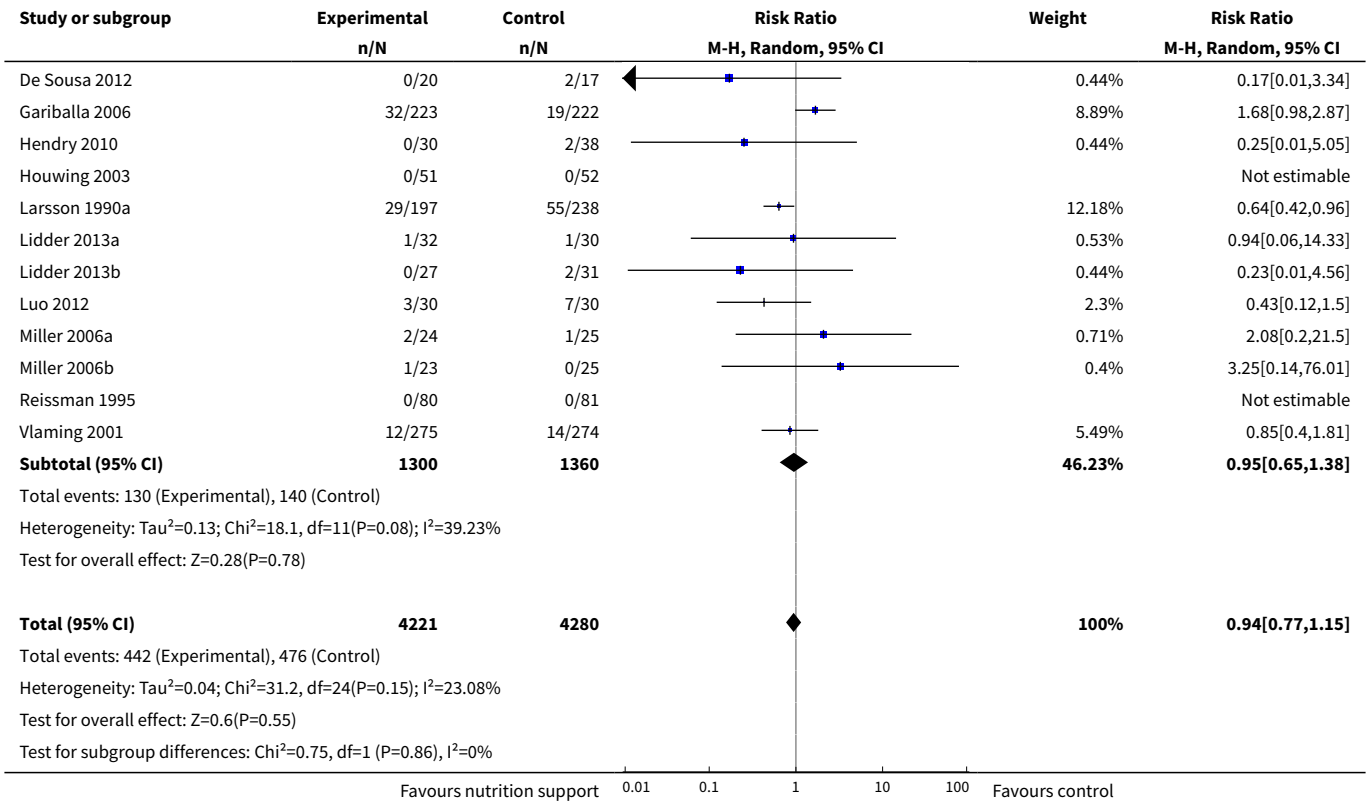
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.6(P=0.55)					
Test for subgroup differences: Chi²=8.48, df=1 (P=0.29), I²=17.41%					



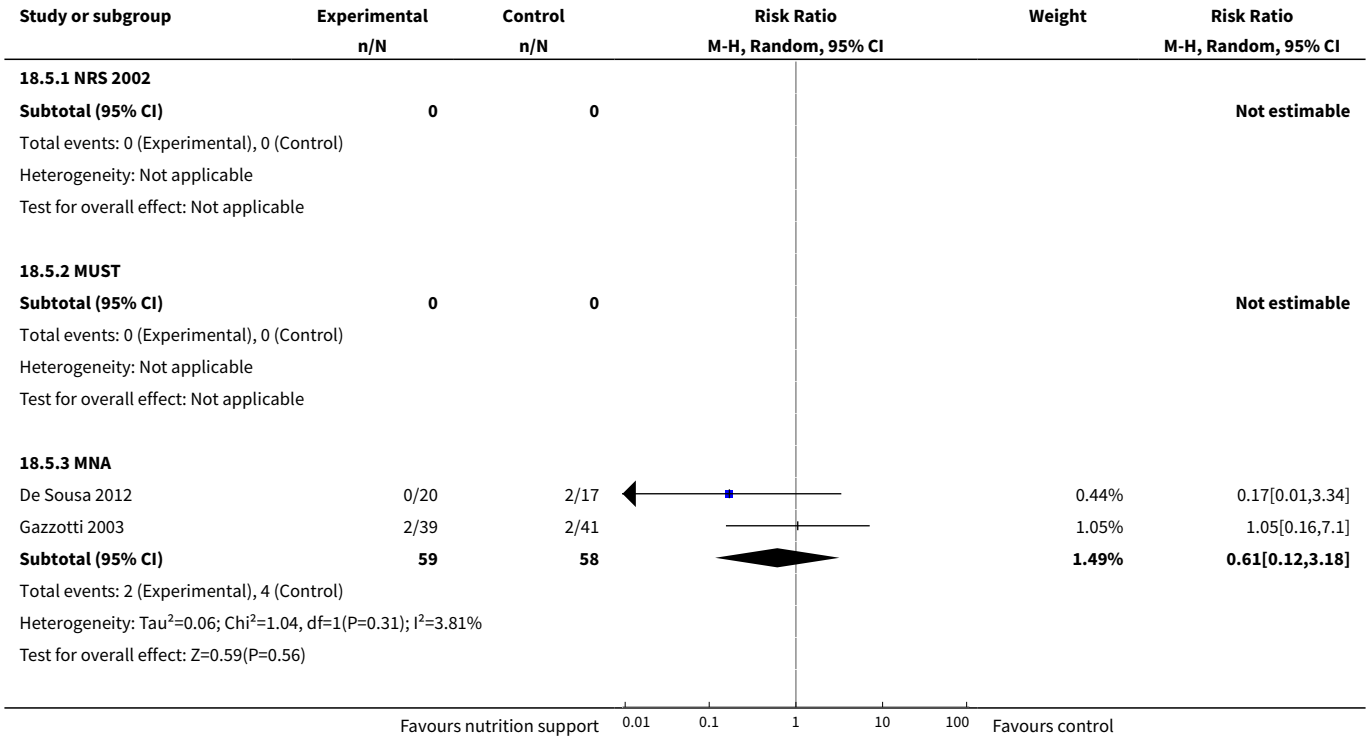
Analysis 18.4. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 4 All-cause mortality - based on adequacy of the amount of calories.

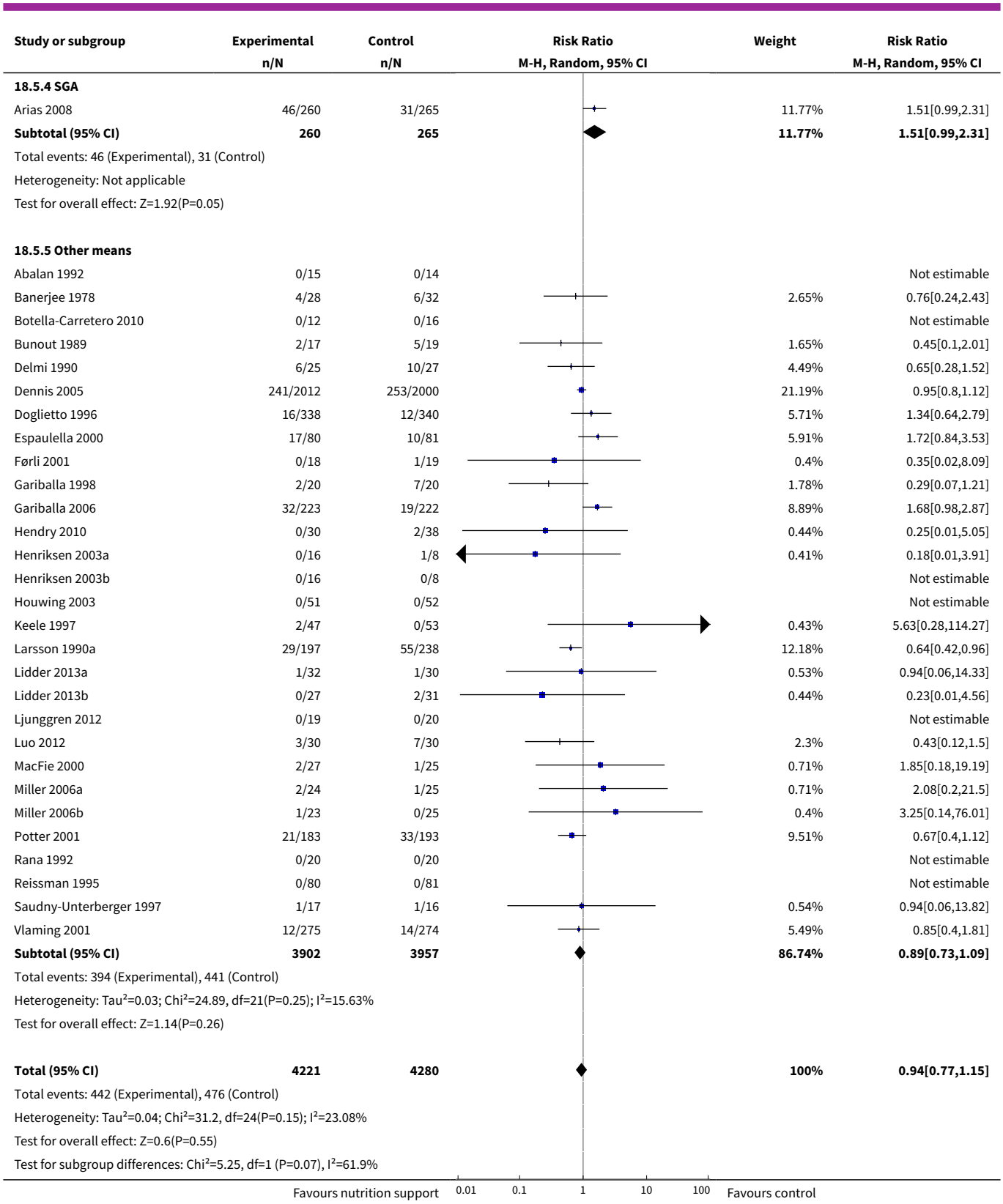
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
18.4.1 Clearly adequate in intervention and clearly inadequate in control					
Gariballa 1998	2/20	7/20		1.78%	0.29[0.07,1.21]
Gazzotti 2003	2/39	2/41		1.05%	1.05[0.16,7.1]
Keele 1997	2/47	0/53		0.43%	5.63[0.28,114.27]
Rana 1992	0/20	0/20			Not estimable
Subtotal (95% CI)	**126**	**134**		**3.26%**	**0.8[0.17,3.7]**
Total events: 6 (Experimental), 9 (Control)					
Heterogeneity: Tau²=0.79; Chi²=3.5, df=2(P=0.17); I²=42.92%					
Test for overall effect: Z=0.28(P=0.78)					
18.4.2 Inadequate in the experimental or adequate in the control					
Abalan 1992	0/15	0/14			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	6/25	10/27		4.49%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		21.19%	0.95[0.8,1.12]
Doglietto 1996	16/338	12/340		5.71%	1.34[0.64,2.79]
Espaulella 2000	17/80	10/81		5.91%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.4%	0.35[0.02,8.09]
Henriksen 2003a	0/16	1/8		0.41%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
MacFie 2000	2/27	1/25		0.71%	1.85[0.18,19.19]
Potter 2001	21/183	33/193		9.51%	0.67[0.4,1.12]
Subtotal (95% CI)	**2761**	**2751**		**48.32%**	**0.94[0.76,1.17]**
Total events: 303 (Experimental), 321 (Control)					
Heterogeneity: Tau²=0.01; Chi²=7.88, df=7(P=0.34); I²=11.17%					
Test for overall effect: Z=0.53(P=0.6)					
18.4.3 Experimental group is overfed					
Bunout 1989	2/17	5/19		1.65%	0.45[0.1,2.01]
Saudny-Unterberger 1997	1/17	1/16		0.54%	0.94[0.06,13.82]
Subtotal (95% CI)	**34**	**35**		**2.19%**	**0.53[0.14,1.98]**
Total events: 3 (Experimental), 6 (Control)					
Heterogeneity: Tau²=0; Chi²=0.22, df=1(P=0.64); I²=0%					
Test for overall effect: Z=0.94(P=0.35)					
18.4.4 Unclear intake in control or experimental					
Arias 2008	46/260	31/265		11.77%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.65%	0.76[0.24,2.43]





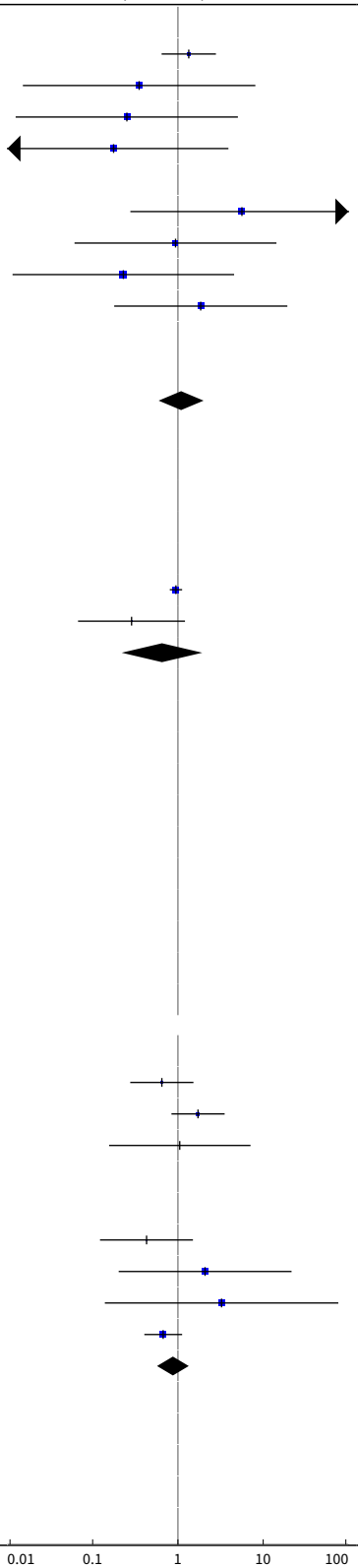
Analysis 18.5. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 5 All-cause mortality - different screening tools.

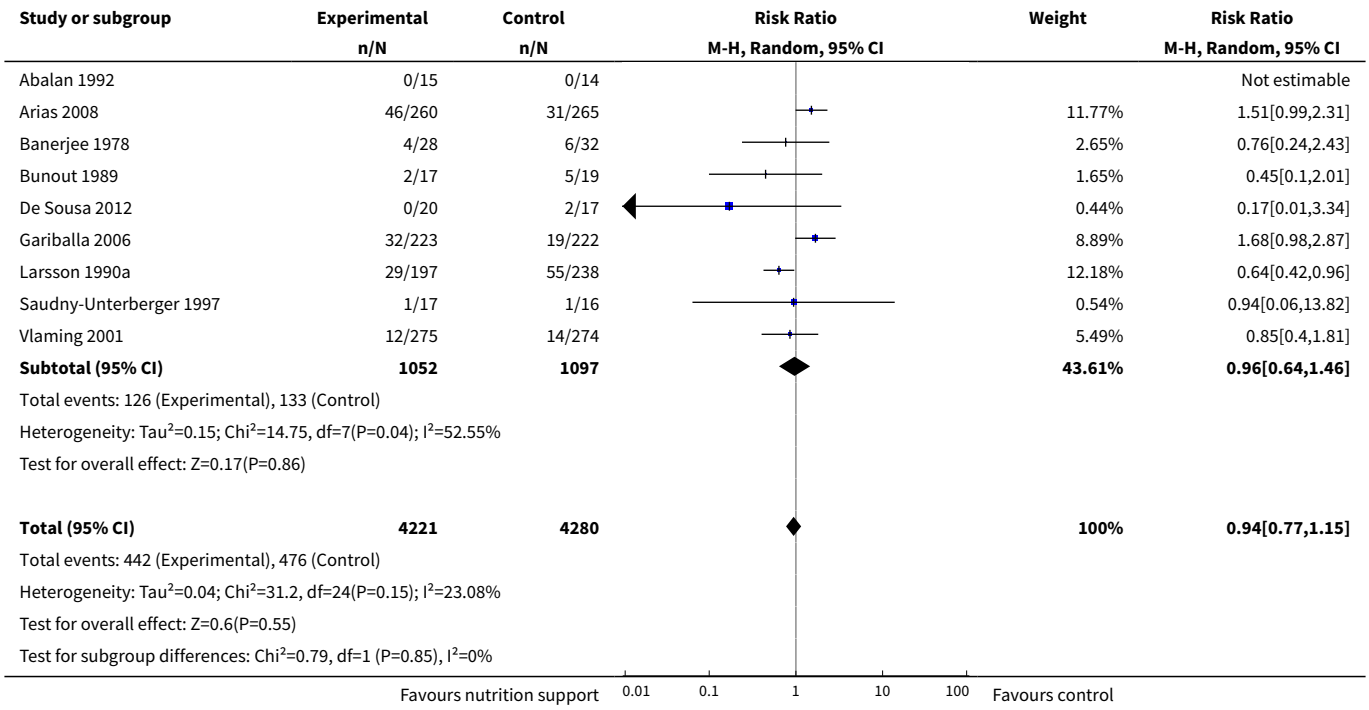




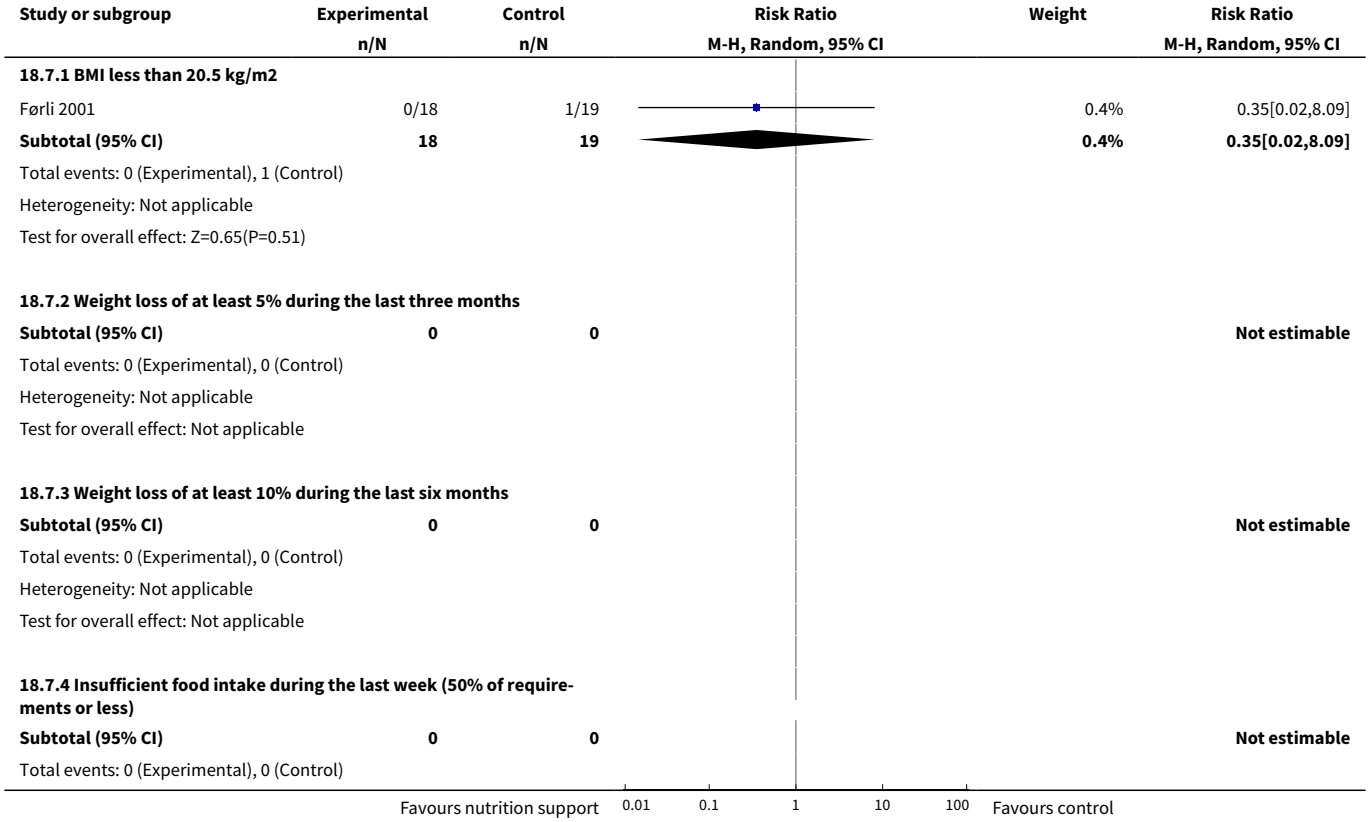
Analysis 18.6. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions.

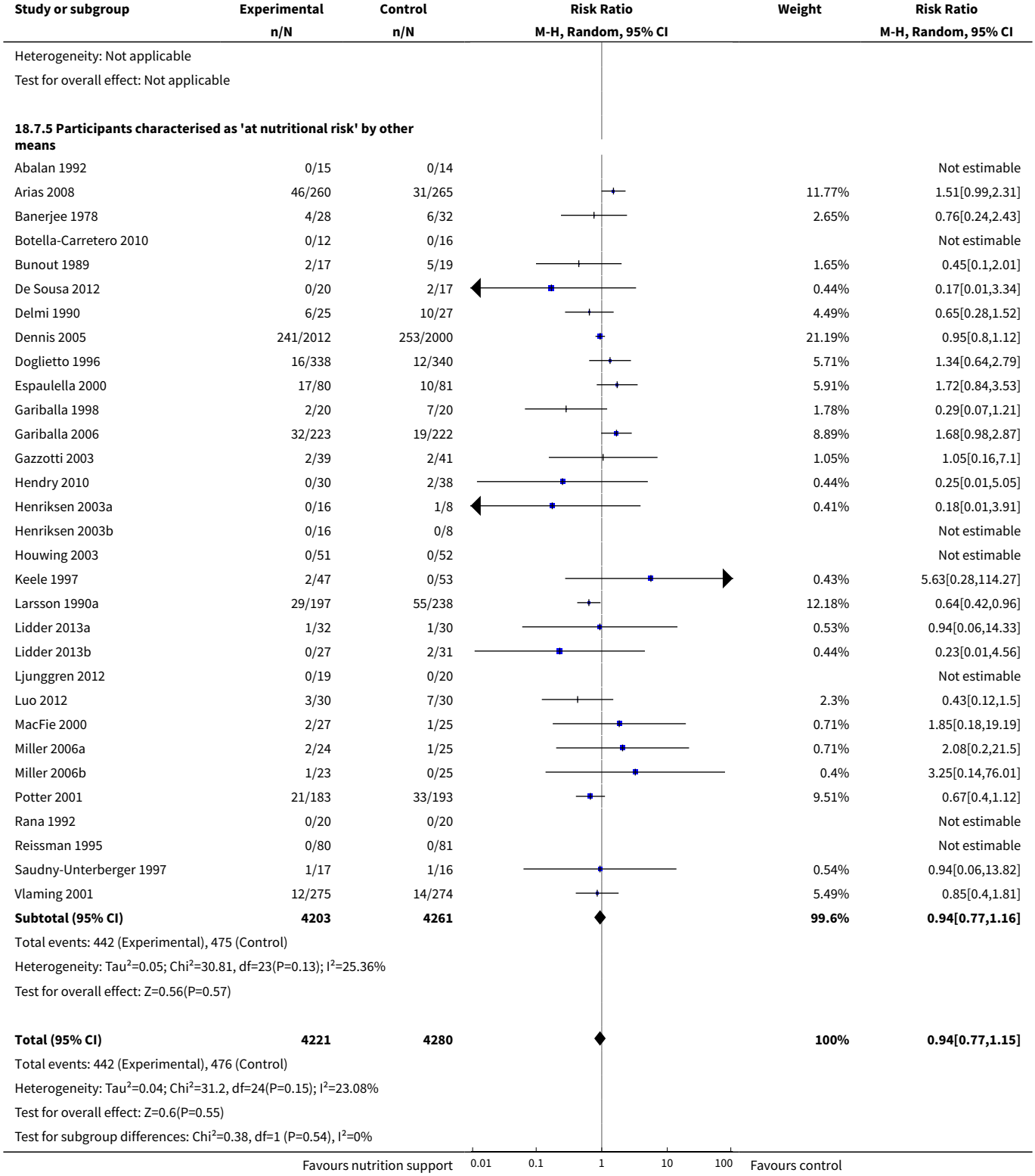
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
18.6.1 Major surgery					
Doglietto 1996	16/338	12/340		5.71%	1.34[0.64,2.79]
Førli 2001	0/18	1/19		0.4%	0.35[0.02,8.09]
Hendry 2010	0/30	2/38		0.44%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.41%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Keele 1997	2/47	0/53		0.43%	5.63[0.28,114.27]
Lidder 2013a	1/32	1/30		0.53%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.44%	0.23[0.01,4.56]
MacFie 2000	2/27	1/25		0.71%	1.85[0.18,19.19]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Subtotal (95% CI)	**651**	**653**		**9.06%**	**1.09[0.59,2]**
Total events: 21 (Experimental), 20 (Control)					
Heterogeneity: Tau^2=0; Chi^2=5.47, df=7(P=0.6); I^2=0%					
Test for overall effect: Z=0.28(P=0.78)					
18.6.2 Stroke					
Dennis 2005	241/2012	253/2000		21.19%	0.95[0.8,1.12]
Gariballa 1998	2/20	7/20		1.78%	0.29[0.07,1.21]
Subtotal (95% CI)	**2032**	**2020**		**22.96%**	**0.65[0.22,1.93]**
Total events: 243 (Experimental), 260 (Control)					
Heterogeneity: Tau^2=0.44; Chi^2=2.61, df=1(P=0.11); I^2=61.72%					
Test for overall effect: Z=0.77(P=0.44)					
18.6.3 ICU participants including trauma					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.6.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	6/25	10/27		4.49%	0.65[0.28,1.52]
Espaulella 2000	17/80	10/81		5.91%	1.72[0.84,3.53]
Gazzotti 2003	2/39	2/41		1.05%	1.05[0.16,7.1]
Houwing 2003	0/51	0/52			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		2.3%	0.43[0.12,1.5]
Miller 2006a	2/24	1/25		0.71%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.4%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		9.51%	0.67[0.4,1.12]
Subtotal (95% CI)	**486**	**510**		**24.36%**	**0.87[0.57,1.34]**
Total events: 52 (Experimental), 63 (Control)					
Heterogeneity: Tau^2=0.06; Chi^2=7.39, df=6(P=0.29); I^2=18.86%					
Test for overall effect: Z=0.62(P=0.53)					
18.6.5 Participants do not fall into one of the categories above					





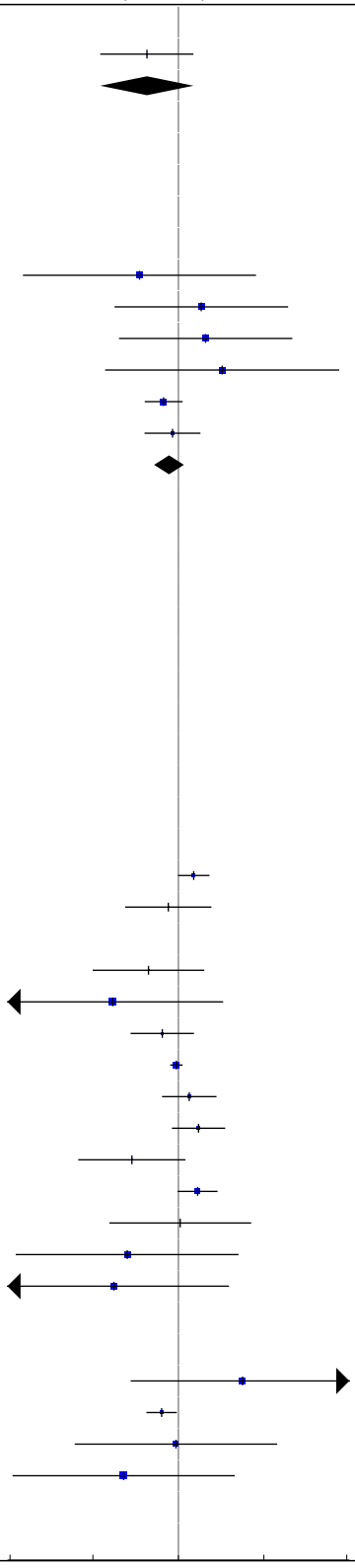
Analysis 18.7. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria.



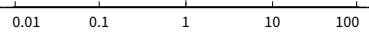


Analysis 18.8. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
18.8.1 Biomarkers					
Luo 2012	3/30	7/30		2.3%	0.43[0.12,1.5]
Subtotal (95% CI)	**30**	**30**		**2.3%**	**0.43[0.12,1.5]**
Total events: 3 (Experimental), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.32(P=0.19)					
18.8.2 Anthropometric measures					
Førli 2001	0/18	1/19		0.4%	0.35[0.02,8.09]
MacFie 2000	2/27	1/25		0.71%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.71%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.4%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		9.51%	0.67[0.4,1.12]
Vlaming 2001	12/275	14/274		5.49%	0.85[0.4,1.81]
Subtotal (95% CI)	**550**	**561**		**17.22%**	**0.78[0.52,1.16]**
Total events: 38 (Experimental), 50 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.64, df=5(P=0.76); I^2=0%					
Test for overall effect: Z=1.23(P=0.22)					
18.8.3 Both anthropometrics and biomarkers					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.8.4 Characterised by other means					
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/260	31/265		11.77%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.65%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.65%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.44%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		4.49%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		21.19%	0.95[0.8,1.12]
Doglietto 1996	16/338	12/340		5.71%	1.34[0.64,2.79]
Espaulella 2000	17/80	10/81		5.91%	1.72[0.84,3.53]
Gariballa 1998	2/20	7/20		1.78%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		8.89%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		1.05%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.44%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.41%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.43%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		12.18%	0.64[0.42,0.96]
Lidder 2013a	1/32	1/30		0.53%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.44%	0.23[0.01,4.56]
Ljunggren 2012	0/19	0/20			Not estimable
Rana 1992	0/20	0/20			Not estimable



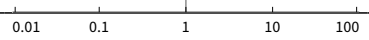
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Reissman 1995	0/80	0/81			Not estimable
Saudny-Unterberger 1997	1/17	1/16		0.54%	0.94[0.06,13.82]
Subtotal (95% CI)	**3641**	**3689**		**80.48%**	**0.99[0.77,1.26]**
Total events: 401 (Experimental), 419 (Control)					
Heterogeneity: Tau^2=0.06; Chi^2=25.85, df=17(P=0.08); I^2=34.24%					
Test for overall effect: Z=0.11(P=0.91)					
Total (95% CI)	**4221**	**4280**		**100%**	**0.94[0.77,1.15]**
Total events: 442 (Experimental), 476 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=31.2, df=24(P=0.15); I^2=23.08%					
Test for overall effect: Z=0.6(P=0.55)					
Test for subgroup differences: Chi^2=2.37, df=1 (P=0.31), I^2=15.72%					



Favours nutrition support — Favours control

Analysis 18.9. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 9 All-cause mortality - randomisation year.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
18.9.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.9.2 1960 to 1979					
Banerjee 1978	4/28	6/32		2.65%	0.76[0.24,2.43]
Subtotal (95% CI)	**28**	**32**		**2.65%**	**0.76[0.24,2.43]**
Total events: 4 (Experimental), 6 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0, df=0(P<0.0001); I^2=100%					
Test for overall effect: Z=0.46(P=0.65)					
18.9.3 1980 to 1999					
Abalan 1992	0/15	0/14			Not estimable
Bunout 1989	2/17	5/19		1.65%	0.45[0.1,2.01]
Delmi 1990	6/25	10/27		4.49%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		21.19%	0.95[0.8,1.12]
Doglietto 1996	16/338	12/340		5.71%	1.34[0.64,2.79]
Espaulella 2000	17/80	10/81		5.91%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.4%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		1.78%	0.29[0.07,1.21]
Gazzotti 2003	2/39	2/41		1.05%	1.05[0.16,7.1]
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.43%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		12.18%	0.64[0.42,0.96]
MacFie 2000	2/27	1/25		0.71%	1.85[0.18,19.19]
Potter 2001	21/183	33/193		9.51%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable



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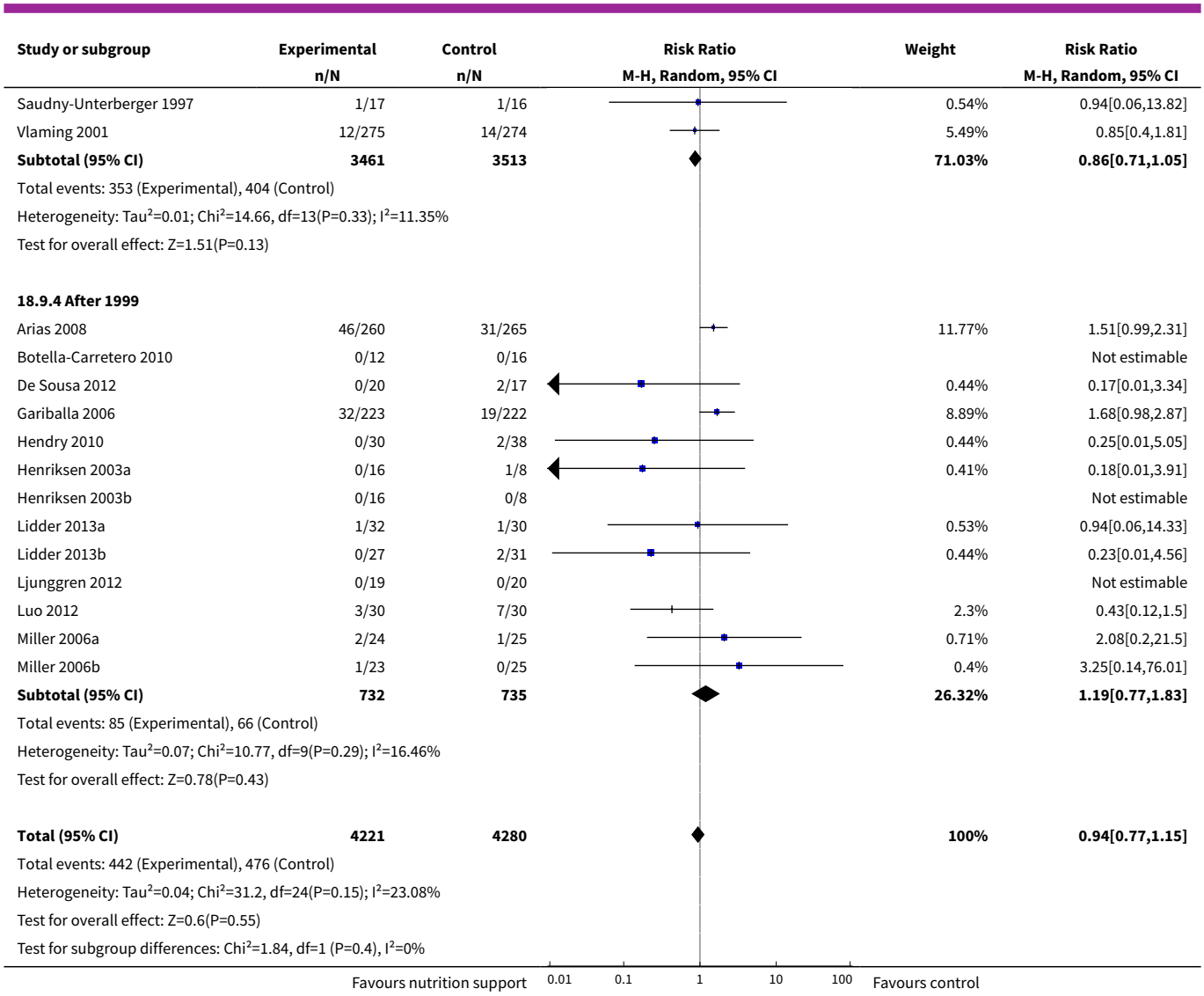
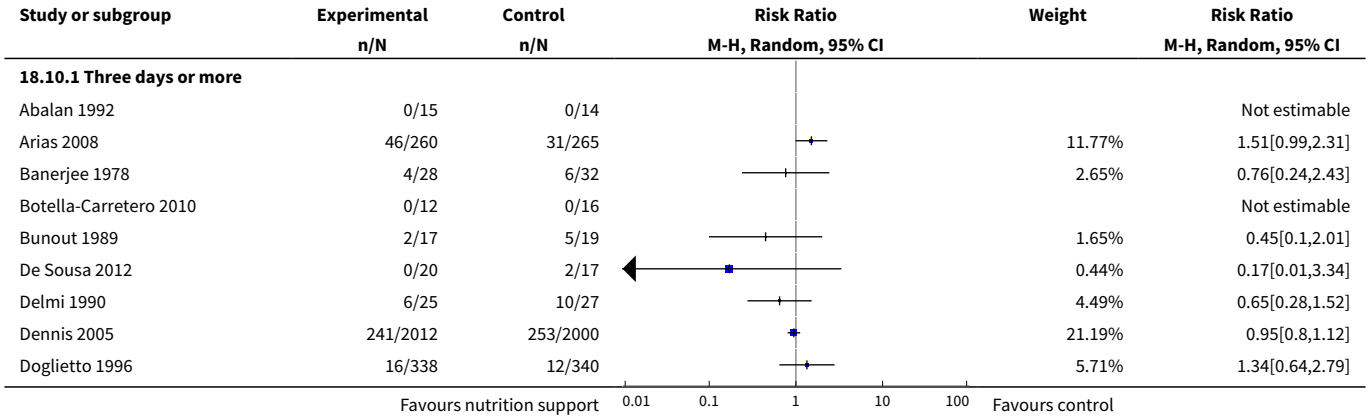
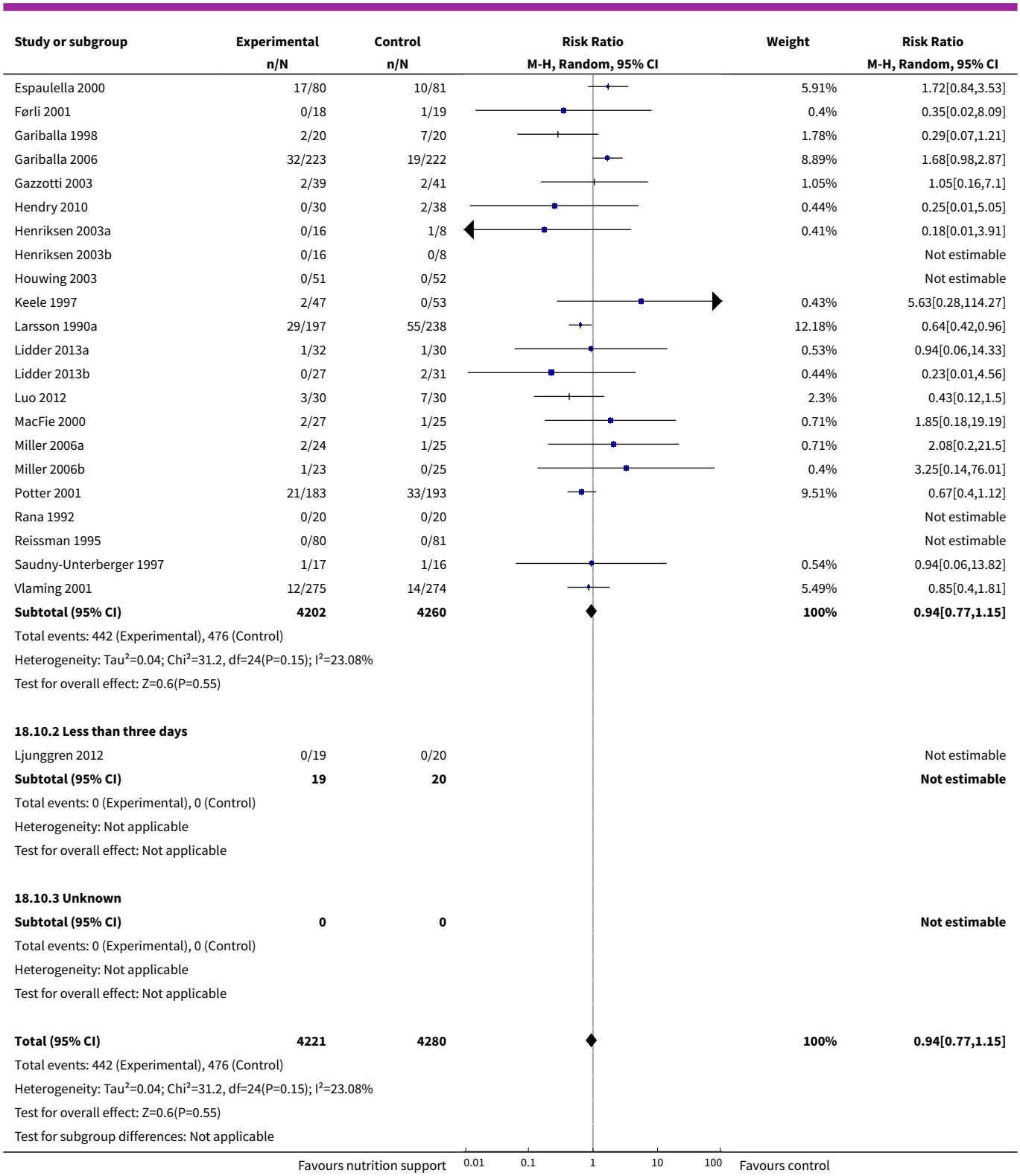


Analysis 18.10. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Espaulella 2000	17/80	10/81		5.91%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.4%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		1.78%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		8.89%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		1.05%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.44%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.41%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.43%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		12.18%	0.64[0.42,0.96]
Lidder 2013a	1/32	1/30		0.53%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.44%	0.23[0.01,4.56]
Luo 2012	3/30	7/30		2.3%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.71%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.71%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.4%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		9.51%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Saudny-Unterberger 1997	1/17	1/16		0.54%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		5.49%	0.85[0.4,1.81]
Subtotal (95% CI)	**4202**	**4260**		**100%**	**0.94[0.77,1.15]**
Total events: 442 (Experimental), 476 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=31.2, df=24(P=0.15); I^2=23.08%					
Test for overall effect: Z=0.6(P=0.55)					
18.10.2 Less than three days					
Ljunggren 2012	0/19	0/20			Not estimable
Subtotal (95% CI)	**19**	**20**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
18.10.3 Unknown					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**4221**	**4280**		**100%**	**0.94[0.77,1.15]**
Total events: 442 (Experimental), 476 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=31.2, df=24(P=0.15); I^2=23.08%					
Test for overall effect: Z=0.6(P=0.55)					
Test for subgroup differences: Not applicable					

Analysis 18.11. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 11 All-cause mortality - 'best-worst case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/333	100/334		10.68%	0.46[0.34,0.63]
Banerjee 1978	4/28	6/32		3.7%	0.76[0.24,2.43]
Botella-Carretero 2010	0/30	14/30		0.85%	0.03[0,0.55]
Bunout 1989	2/17	5/19		2.5%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.75%	0.17[0.01,3.34]
Delmi 1990	6/27	15/32		5.9%	0.47[0.21,1.05]
Dennis 2005	241/2016	260/2007		11.99%	0.92[0.78,1.09]
Doglietto 1996	16/338	12/340		6.42%	1.34[0.64,2.79]
Espaulella 2000	17/85	15/86		7.4%	1.15[0.61,2.14]
Førli 2001	0/20	4/22		0.81%	0.12[0.01,2.13]
Gariballa 1998	2/21	8/21		2.72%	0.25[0.06,1.04]
Gariballa 2006	32/223	19/222		8.31%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		1.68%	1.05[0.16,7.1]
Hendry 2010	0/38	2/38		0.74%	0.2[0.01,4.03]
Henriksen 2003a	0/16	1/8		0.69%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.73%	5.63[0.28,114.27]
Larsson 1990a	29/250	68/251		9.8%	0.43[0.29,0.64]
Lidder 2013a	1/32	1/30		0.88%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.74%	0.23[0.01,4.56]
Ljunggren 2012	0/20	0/20			Not estimable
Luo 2012	3/30	7/30		3.31%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		1.17%	1.85[0.18,19.19]
Miller 2006a	2/25	2/26		1.72%	1.04[0.16,6.83]
Miller 2006b	1/24	0/25		0.67%	3.12[0.13,73.04]
Potter 2001	21/186	35/195		8.67%	0.63[0.38,1.04]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Saudny-Unterberger 1997	1/17	1/16		0.91%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		6.25%	0.85[0.4,1.81]
Total (95% CI)	**4393**	**4400**		**100%**	**0.7[0.54,0.91]**
Total events: 442 (Experimental), 596 (Control)					
Heterogeneity: Tau^2=0.15; Chi^2=53.94, df=25(P=0); I^2=53.65%					
Test for overall effect: Z=2.65(P=0.01)					

Favours nutrition support — Favours control

Analysis 18.12. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 12 All-cause mortality - 'worst-best case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	119/333	31/334		8.42%	3.85[2.67,5.55]
Banerjee 1978	4/28	6/32		4.1%	0.76[0.24,2.43]

Favours nutrition support — Favours control

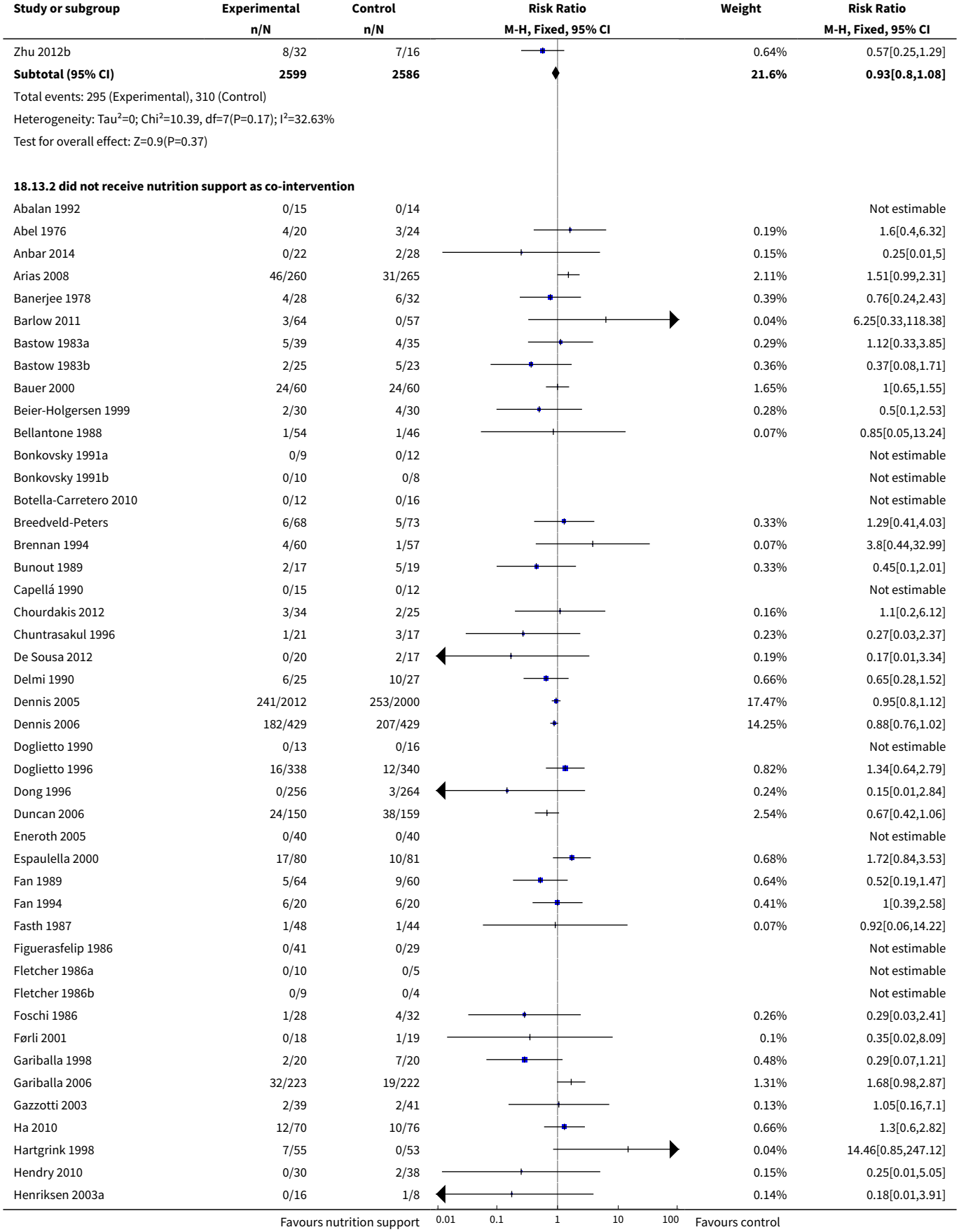
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Botella-Carretero 2010	18/30	0/30		1.12%	37[2.33,587.26]
Bunout 1989	2/17	5/19		2.95%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.98%	0.17[0.01,3.34]
Delmi 1990	8/27	10/32		5.98%	0.95[0.44,2.06]
Dennis 2005	245/2016	253/2007		9.28%	0.96[0.82,1.14]
Doglietto 1996	16/338	12/340		6.23%	1.34[0.64,2.79]
Espaulella 2000	22/85	10/86		6.52%	2.23[1.12,4.41]
Førli 2001	2/20	1/22		1.51%	2.2[0.22,22.45]
Gariballa 1998	3/21	7/21		3.9%	0.43[0.13,1.44]
Gariballa 2006	32/223	19/222		7.42%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		2.07%	1.05[0.16,7.1]
Hendry 2010	8/38	2/38		3.01%	4[0.91,17.62]
Henriksen 2003a	0/16	1/8		0.91%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	0/53		0.96%	5.63[0.28,114.27]
Larsson 1990a	82/250	55/251		8.78%	1.5[1.12,2.01]
Lidder 2013a	1/32	1/30		1.14%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.97%	0.23[0.01,4.56]
Ljunggren 2012	1/20	0/20		0.89%	3[0.13,69.52]
Luo 2012	3/30	7/30		3.73%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		1.49%	1.85[0.18,19.19]
Miller 2006a	3/25	1/26		1.66%	3.12[0.35,28.03]
Miller 2006b	2/24	0/25		0.97%	5.2[0.26,103.03]
Potter 2001	24/186	33/195		7.73%	0.76[0.47,1.24]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	0/81			Not estimable
Saudny-Unterberger 1997	1/17	1/16		1.17%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		6.11%	0.85[0.4,1.81]
Total (95% CI)	**4393**	**4400**		**100%**	**1.27[0.93,1.73]**
Total events: 614 (Experimental), 476 (Control)					
Heterogeneity: Tau^2=0.26; Chi^2=81.76, df=26(P<0.0001); I^2=68.2%					
Test for overall effect: Z=1.5(P=0.13)					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 18.13. Comparison 18 Oral - All cause mortality - maximum follow-up, Outcome 13 All-cause mortality co-interventions.

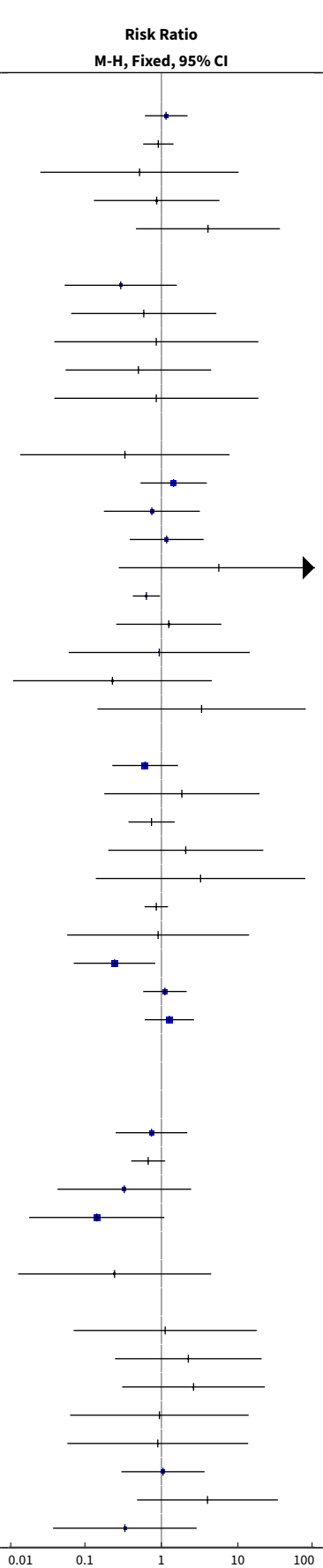
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
18.13.1 received nutrition support as co-intervention					
Abrishami 2010	1/9	2/10		0.13%	0.56[0.06,5.14]
Bokhorst-de 2000	1/15	0/17		0.03%	3.38[0.15,77.12]
Casaer 2011	255/2312	257/2328		17.63%	1[0.85,1.18]
Heidegger 2013	20/153	28/152		1.93%	0.71[0.42,1.2]
Luo 2012	3/30	7/30		0.48%	0.43[0.12,1.5]
Simon 1988	4/15	3/17		0.19%	1.51[0.4,5.69]
Zhu 2012a	3/33	6/16		0.56%	0.24[0.07,0.85]

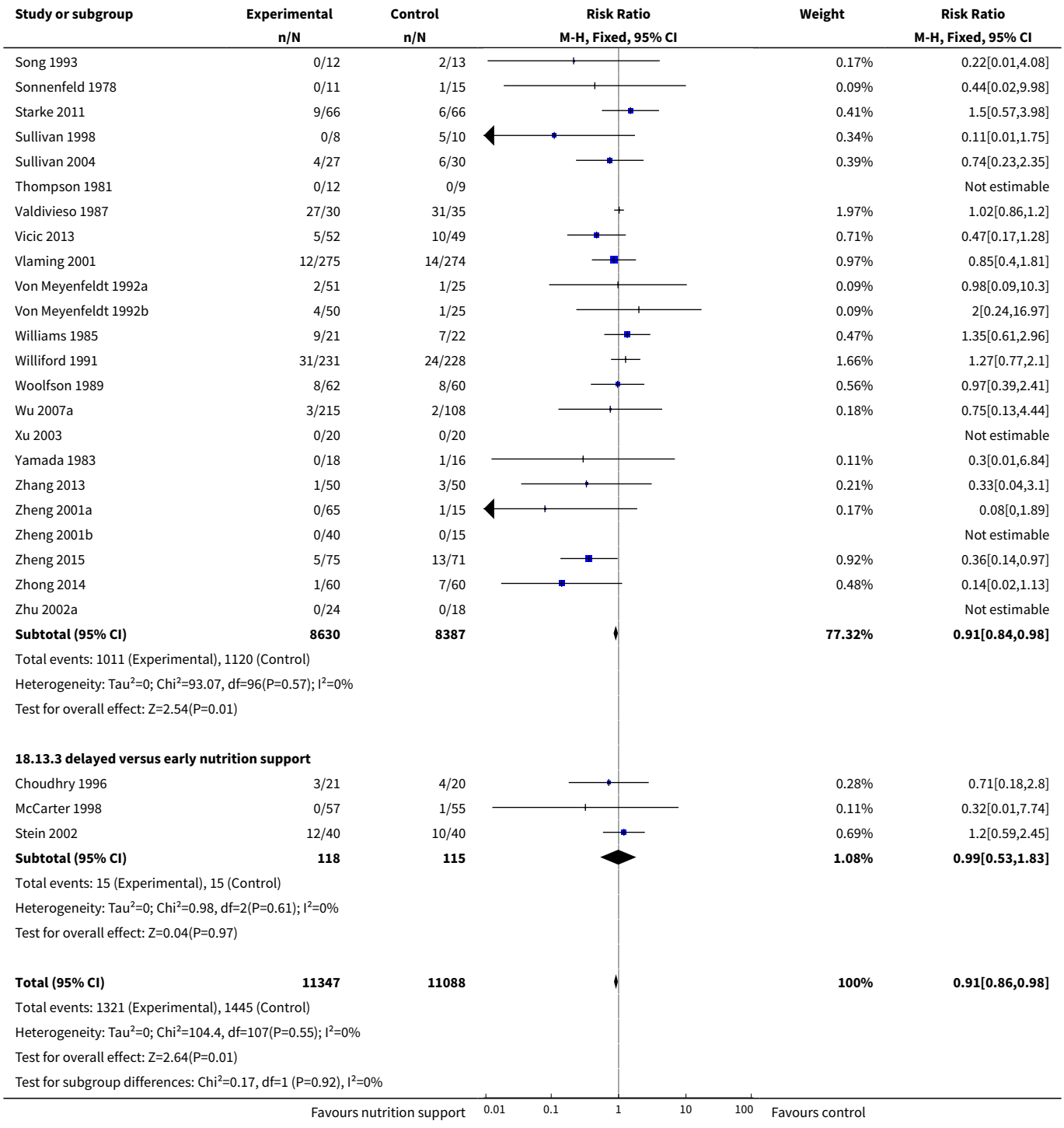
Favours nutrition support 0.01 0.1 1 10 100 Favours control



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Zhu 2012b	8/32	7/16		0.64%	0.57[0.25,1.29]
Subtotal (95% CI)	**2599**	**2586**		**21.6%**	**0.93[0.8,1.08]**
Total events: 295 (Experimental), 310 (Control)					
Heterogeneity: Tau²=0; Chi²=10.39, df=7(P=0.17); I²=32.63%					
Test for overall effect: Z=0.9(P=0.37)					
18.13.2 did not receive nutrition support as co-intervention					
Abalan 1992	0/15	0/14			Not estimable
Abel 1976	4/20	3/24		0.19%	1.6[0.4,6.32]
Anbar 2014	0/22	2/28		0.15%	0.25[0.01,5]
Arias 2008	46/260	31/265		2.11%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		0.39%	0.76[0.24,2.43]
Barlow 2011	3/64	0/57		0.04%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.36%	0.37[0.08,1.71]
Bauer 2000	24/60	24/60		1.65%	1[0.65,1.55]
Beier-Holgersen 1999	2/30	4/30		0.28%	0.5[0.1,2.53]
Bellantone 1988	1/54	1/46		0.07%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Botella-Carretero 2010	0/12	0/16			Not estimable
Breedveld-Peters	6/68	5/73		0.33%	1.29[0.41,4.03]
Brennan 1994	4/60	1/57		0.07%	3.8[0.44,32.99]
Bunout 1989	2/17	5/19		0.33%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Chourdakis 2012	3/34	2/25		0.16%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.23%	0.27[0.03,2.37]
De Sousa 2012	0/20	2/17		0.19%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		0.66%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		17.47%	0.95[0.8,1.12]
Dennis 2006	182/429	207/429		14.25%	0.88[0.76,1.02]
Doglietto 1990	0/13	0/16			Not estimable
Doglietto 1996	16/338	12/340		0.82%	1.34[0.64,2.79]
Dong 1996	0/256	3/264		0.24%	0.15[0.01,2.84]
Duncan 2006	24/150	38/159		2.54%	0.67[0.42,1.06]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	17/80	10/81		0.68%	1.72[0.84,3.53]
Fan 1989	5/64	9/60		0.64%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		0.41%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.07%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.26%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.1%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		0.48%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		1.31%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.13%	1.05[0.16,7.1]
Ha 2010	12/70	10/76		0.66%	1.3[0.6,2.82]
Hartgrink 1998	7/55	0/53		0.04%	14.46[0.85,247.12]
Hendry 2010	0/30	2/38		0.15%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.14%	0.18[0.01,3.91]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.51%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		2.38%	0.91[0.58,1.44]
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.15%	0.87[0.13,5.73]
Holyday 2012	4/71	1/72		0.07%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jauch 1995a	2/17	2/5		0.21%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.11%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.05%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.11%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.05%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.1%	0.33[0.01,7.78]
Johansen 2004	9/108	6/104		0.42%	1.44[0.53,3.92]
Kaur 2005	3/50	4/50		0.28%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		0.28%	1.17[0.39,3.56]
Keele 1997	2/47	0/53		0.03%	5.63[0.28,114.27]
Larsson 1990a	29/197	55/238		3.43%	0.64[0.42,0.96]
Ledinghen 1997	3/12	2/10		0.15%	1.25[0.26,6.07]
Lidder 2013a	1/32	1/30		0.07%	0.94[0.06,14.33]
Lidder 2013b	0/27	2/31		0.16%	0.23[0.01,4.56]
Liu 1996b	1/16	0/18		0.03%	3.35[0.15,76.93]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.47%	0.61[0.23,1.65]
MacFie 2000	2/27	1/25		0.07%	1.85[0.18,19.19]
Malhotra 2004	12/98	16/97		1.11%	0.74[0.37,1.49]
Miller 2006a	2/24	1/25		0.07%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.03%	3.25[0.14,76.01]
Moreno 2016	30/68	35/68		2.41%	0.86[0.6,1.22]
Munk 2014	1/42	1/38		0.07%	0.9[0.06,13.97]
Müller 1982a	3/66	11/59		0.8%	0.24[0.07,0.83]
Naveau 1986	10/20	9/20		0.62%	1.11[0.58,2.14]
Neelemaat 2012	14/105	11/105		0.76%	1.27[0.61,2.67]
Neuvonen 1984	0/9	0/10			Not estimable
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		0.36%	0.74[0.25,2.18]
Potter 2001	21/183	33/193		2.21%	0.67[0.4,1.12]
Pupelis 2000	1/11	5/18		0.26%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	2/10		0.15%	0.24[0.01,4.47]
Reissman 1995	0/80	0/81			Not estimable
Roth 2013	1/74	1/83		0.06%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.06%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.07%	2.63[0.31,22.46]
Saudny-Unterberger 1997	1/17	1/16		0.07%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.07%	0.9[0.06,13.62]
Singh 1998	4/21	4/22		0.27%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.07%	4[0.48,33.33]
Smith 1988	1/17	3/17		0.21%	0.33[0.04,2.89]





Comparison 19. Oral - Serious adverse event end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Serious adverse events - overall	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
2 Serious adverse events - bias	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
2.1 High risk of bias	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Serious adverse events - by medical specialty	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	1	36	Risk Ratio (M-H, Random, 95% CI)	0.45 [0.10, 2.01]
3.3 Geriatrics	10	1609	Risk Ratio (M-H, Random, 95% CI)	0.74 [0.56, 0.97]
3.4 Pulmonary disease	2	93	Risk Ratio (M-H, Random, 95% CI)	0.49 [0.16, 1.54]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	10	1253	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.66, 1.25]
3.11 Trauma surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.12 Ortopaedics	4	371	Risk Ratio (M-H, Random, 95% CI)	1.69 [0.53, 5.36]
3.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.14 Vascular surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Transplant surgery	1	37	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.02, 8.09]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	3	4092	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.74, 1.24]
3.24 Oncology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	2	1078	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.73, 2.12]
4 Serious adverse events - based on adequacy of the amount of calories	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
4.1 Clearly adequate in intervention and clearly inadequate in control	4	246	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.33, 3.02]
4.2 Inadequate in the experimental or adequate in the control	13	5590	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.76, 1.10]
4.3 Experimental group is overfed	2	69	Risk Ratio (M-H, Random, 95% CI)	0.53 [0.14, 1.98]

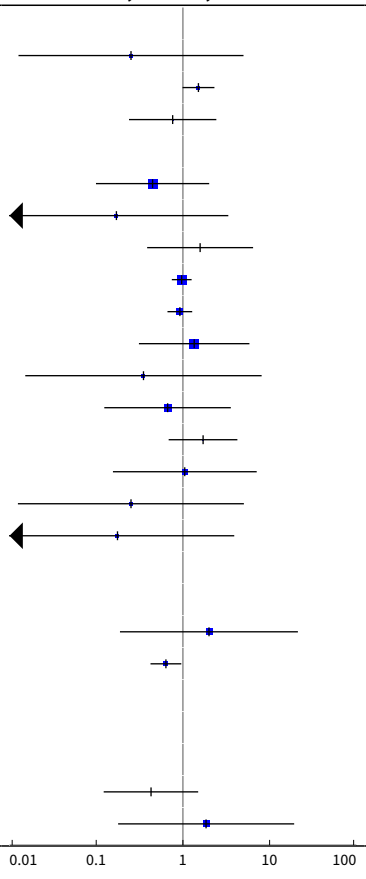
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.4 Unclear intake in control or experimental	14	2664	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.63, 1.34]
5 Serious adverse events - different screening tools	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
5.1 NRS 2002	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	2	117	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.12, 3.18]
5.4 SGA	1	529	Risk Ratio (M-H, Random, 95% CI)	1.51 [0.99, 2.31]
5.5 Other means	30	7923	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.74, 1.01]
6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
6.1 Major surgery	10	612	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.22, 2.08]
6.2 Stroke	2	4063	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.74, 1.24]
6.3 ICU participants including trauma	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	11	1063	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.52, 1.15]
6.5 Participants do not fall into one of the categories above	10	2831	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.70, 1.26]
7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
7.1 BMI less than 20.5 kg/m2	1	37	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.02, 8.09]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

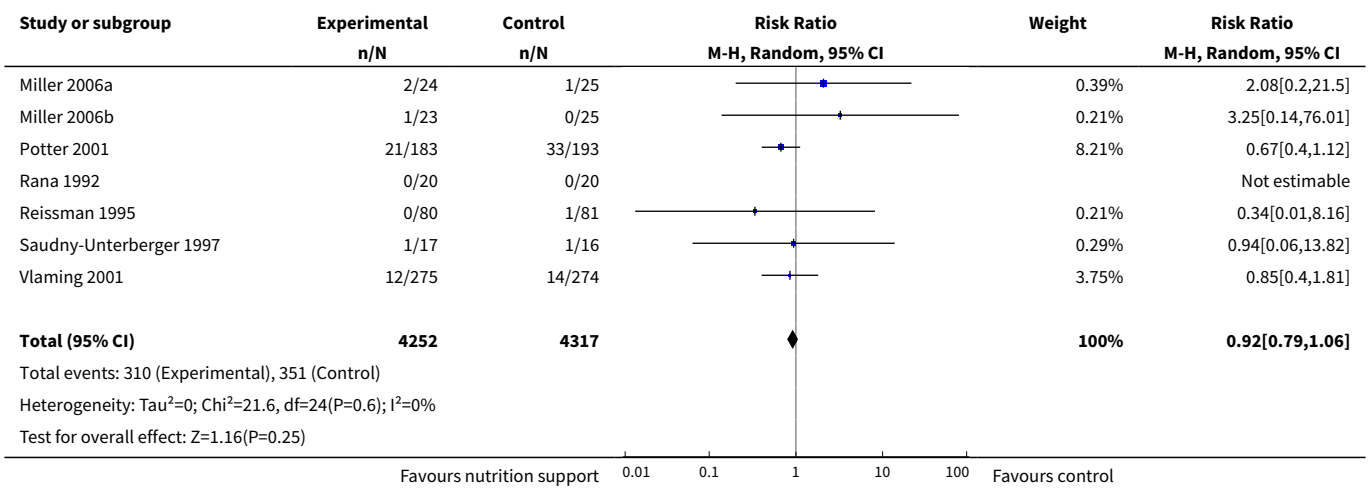
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	32	8532	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
8.1 Biomarkers	1	60	Risk Ratio (M-H, Random, 95% CI)	0.43 [0.12, 1.50]
8.2 Anthropometric measures	6	1111	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.52, 1.16]
8.3 Mixed	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.4 Characterised by other means	26	7398	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.81, 1.12]
9 Serious adverse events - randomisation year	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	1	60	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.24, 2.43]
9.3 1980 to 1999	18	6988	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.73, 1.01]
9.4 After 1999	14	1521	Risk Ratio (M-H, Random, 95% CI)	1.05 [0.61, 1.82]
10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	33	8569	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.06]
10.1 Three days or more	31	8480	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.80, 1.06]
10.2 Less than three days	1	39	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
10.3 Unknown	1	50	Risk Ratio (M-H, Random, 95% CI)	0.25 [0.01, 5.00]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
11 Serious adverse events - 'best-worst case' scenario	33	8844	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.52, 0.86]
12 Serious adverse events - 'worst-best case' scenario	33	8844	Risk Ratio (M-H, Random, 95% CI)	1.27 [0.92, 1.75]
13 Serious adverse events co-interventions	134	21960	Risk Ratio (M-H, Fixed, 95% CI)	0.91 [0.84, 0.99]
13.1 received nutrition support as co-intervention	8	5178	Risk Ratio (M-H, Fixed, 95% CI)	0.96 [0.79, 1.17]
13.2 did not receive nutrition support as co-intervention	119	16359	Risk Ratio (M-H, Fixed, 95% CI)	0.90 [0.83, 0.99]
13.3 delayed versus early nutrition support	7	423	Risk Ratio (M-H, Fixed, 95% CI)	0.89 [0.51, 1.57]

Analysis 19.1. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 1 Serious adverse events - overall.

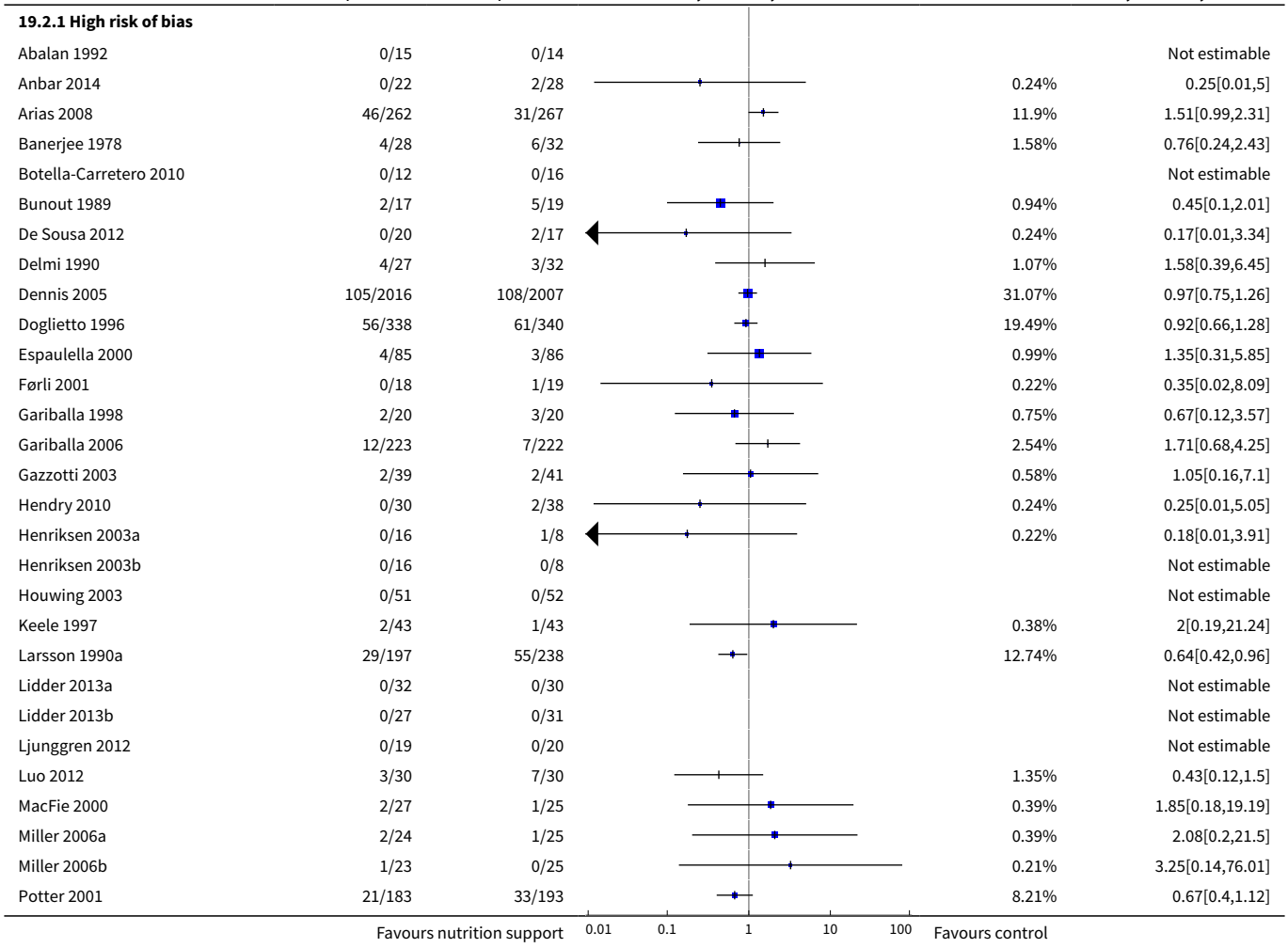
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.24%	0.25[0.01,5]
Arias 2008	46/262	31/267		11.9%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		1.58%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		0.94%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.24%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		1.07%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		31.07%	0.97[0.75,1.26]
Doglietto 1996	56/338	61/340		19.49%	0.92[0.66,1.28]
Espaulella 2000	4/85	3/86		0.99%	1.35[0.31,5.85]
Førli 2001	0/18	1/19		0.22%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.75%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		2.54%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.58%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.24%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.22%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.38%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		12.74%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		1.35%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.39%	1.85[0.18,19.19]



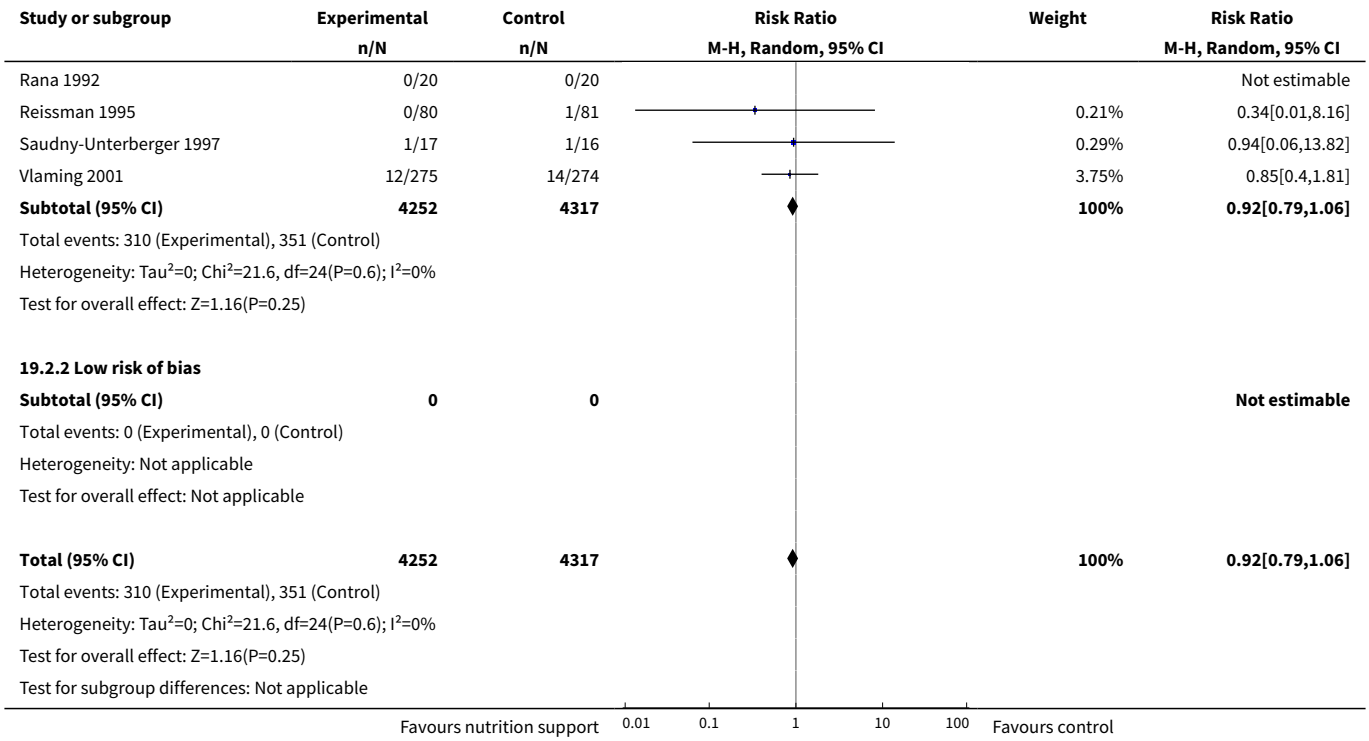


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Miller 2006a	2/24	1/25		0.39%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.21%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		8.21%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.21%	0.34[0.01,8.16]
Saudny-Unterberger 1997	1/17	1/16		0.29%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		3.75%	0.85[0.4,1.81]
Total (95% CI)	**4252**	**4317**		**100%**	**0.92[0.79,1.06]**
Total events: 310 (Experimental), 351 (Control)					
Heterogeneity: Tau^2=0; Chi^2=21.6, df=24(P=0.6); I^2=0%					
Test for overall effect: Z=1.16(P=0.25)					

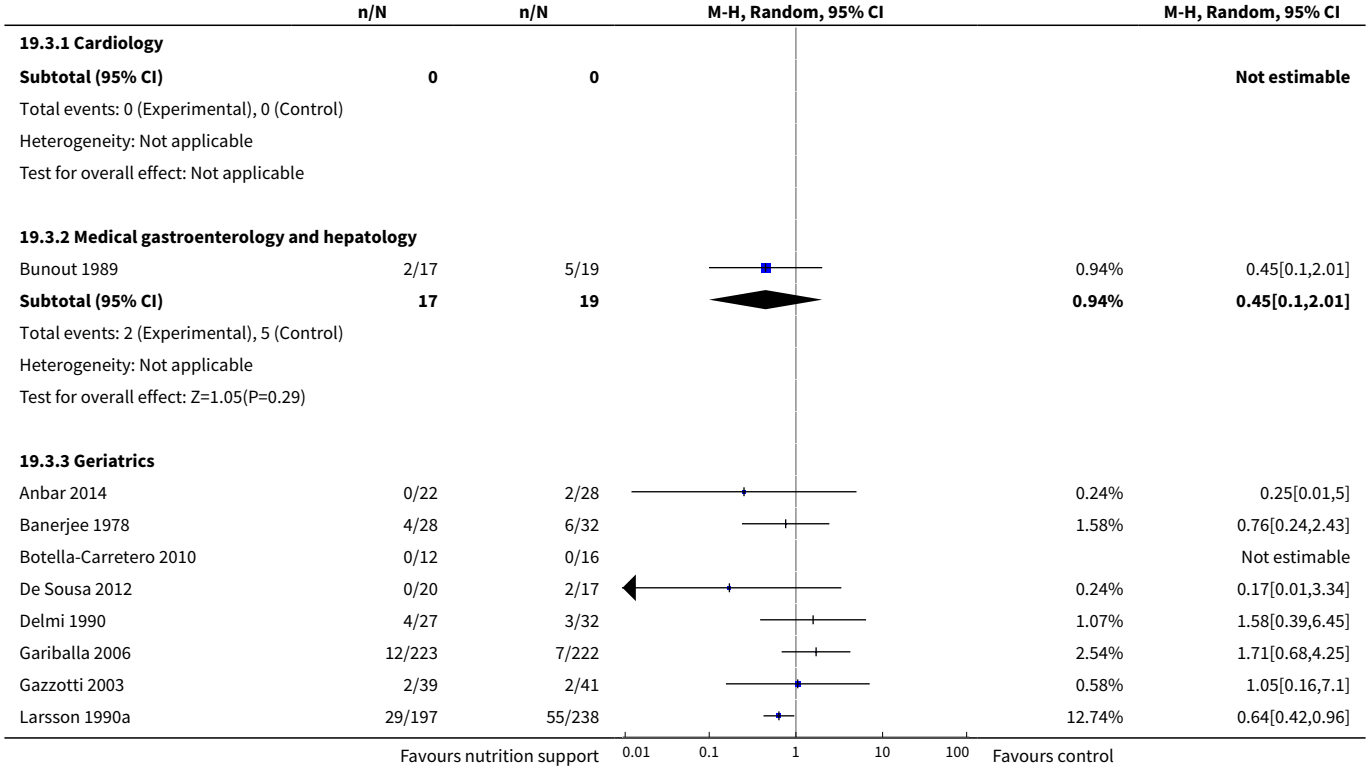
Analysis 19.2. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 2 Serious adverse events - bias.

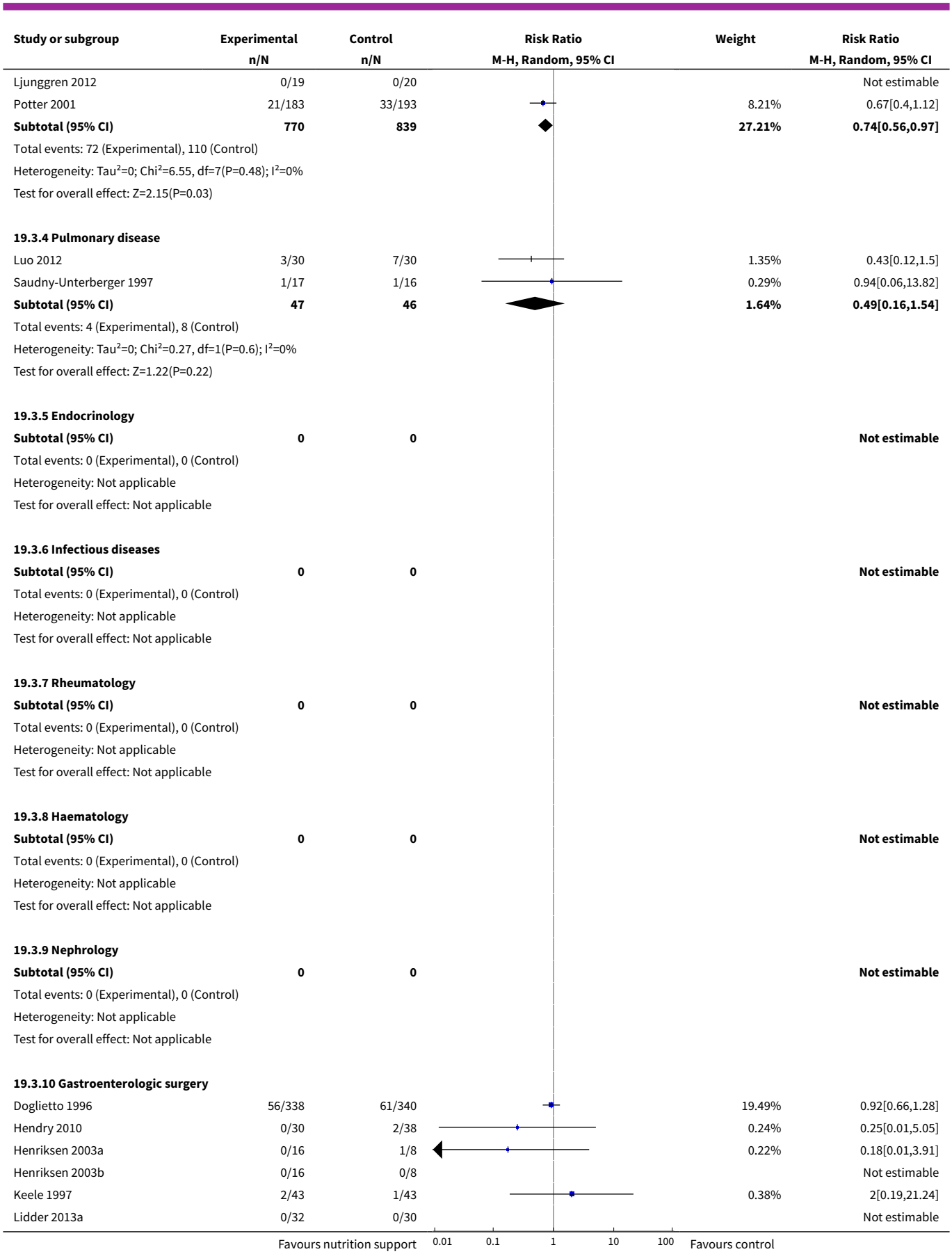


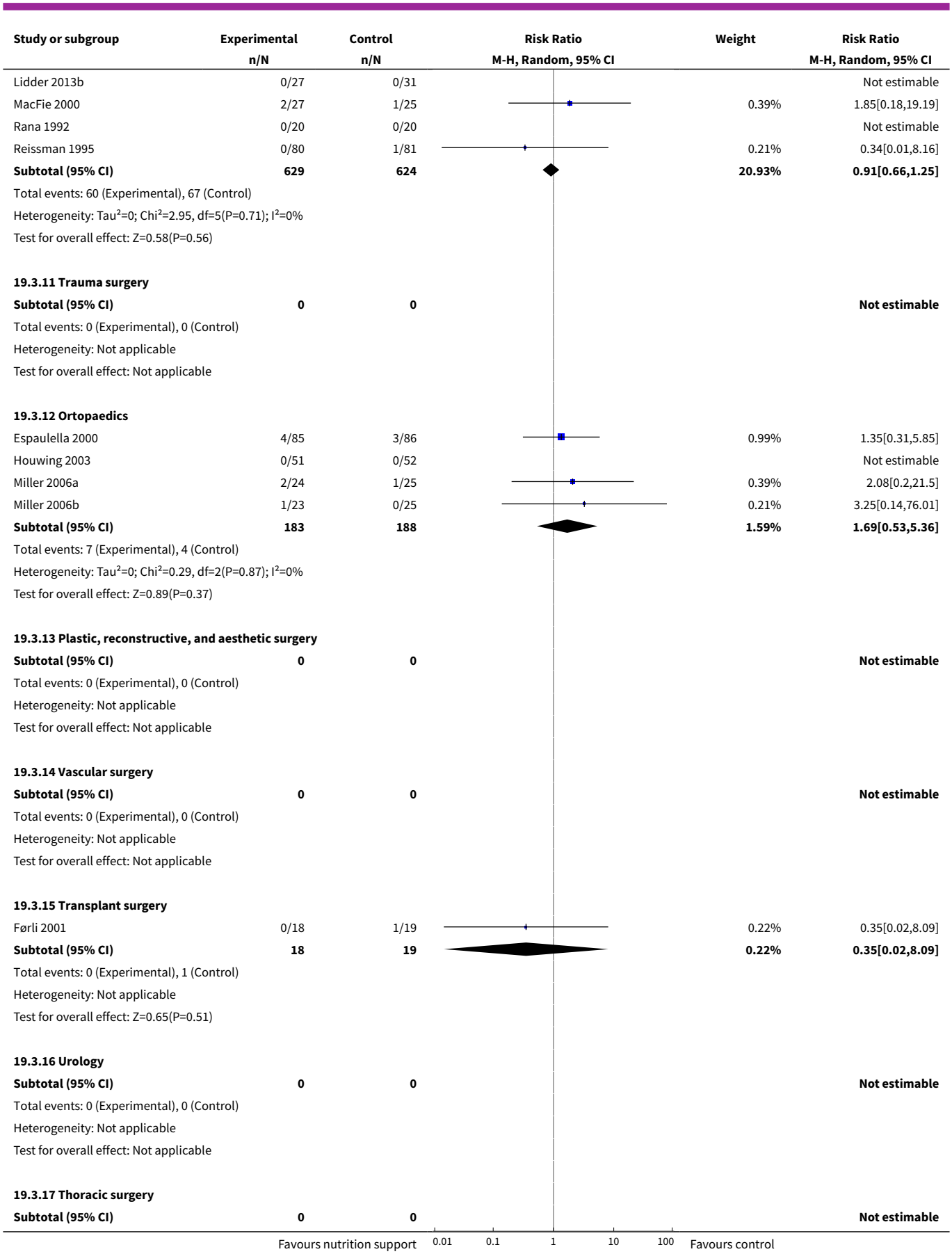
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
19.2.1 High risk of bias					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.24%	0.25[0.01,5]
Arias 2008	46/262	31/267		11.9%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		1.58%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		0.94%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.24%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		1.07%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		31.07%	0.97[0.75,1.26]
Doglietto 1996	56/338	61/340		19.49%	0.92[0.66,1.28]
Espaulella 2000	4/85	3/86		0.99%	1.35[0.31,5.85]
Førli 2001	0/18	1/19		0.22%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.75%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		2.54%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.58%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.24%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.22%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.38%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		12.74%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		1.35%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.39%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.39%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.21%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		8.21%	0.67[0.4,1.12]



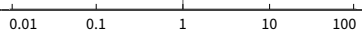
Analysis 19.3. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 3 Serious adverse events - by medical specialty.



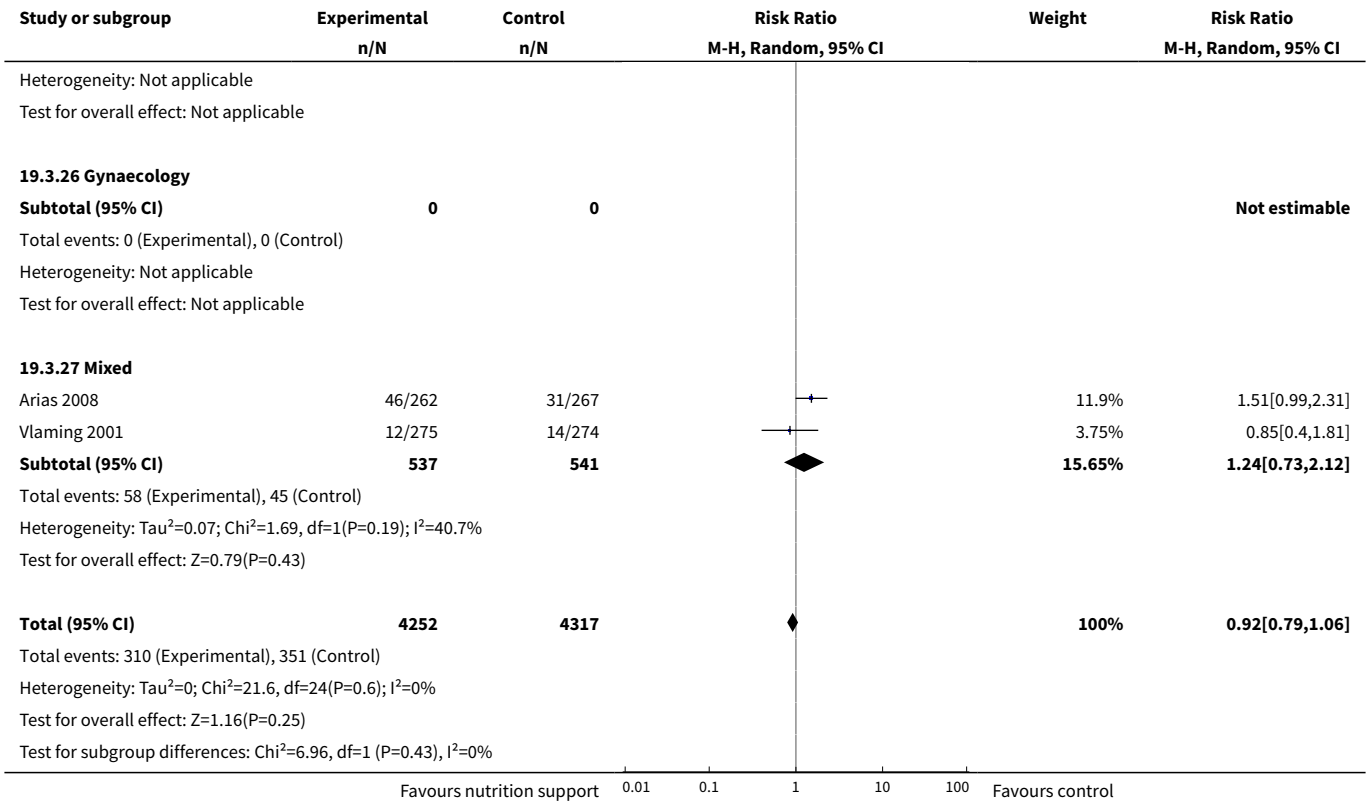




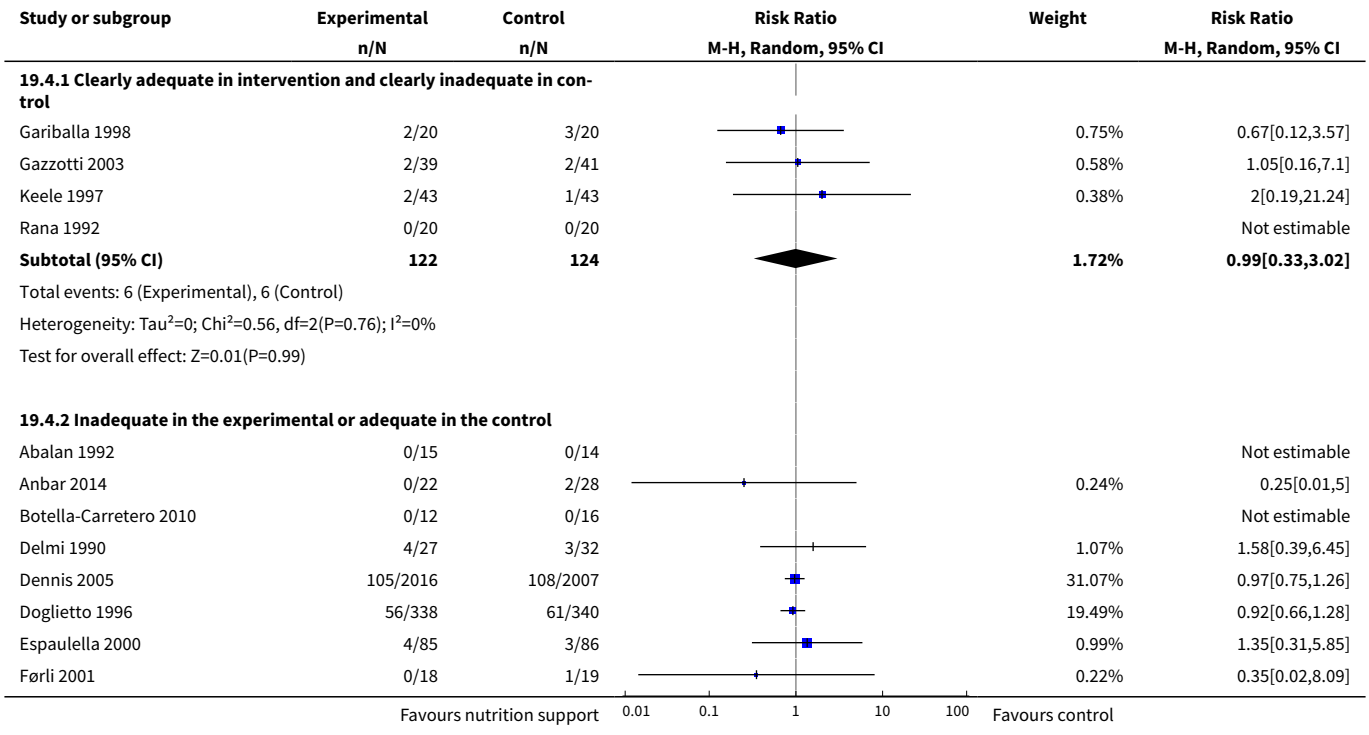
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.3.18 Neurological surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.3.19 Oro-maxillo-facial surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.3.20 Anaesthesiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.3.21 Emergency medicine					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.3.22 Psychiatry					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.3.23 Neurology					
Abalan 1992	0/15	0/14			Not estimable
Dennis 2005	105/2016	108/2007		31.07%	0.97[0.75,1.26]
Gariballa 1998	2/20	3/20		0.75%	0.67[0.12,3.57]
Subtotal (95% CI)	**2051**	**2041**		**31.82%**	**0.96[0.74,1.24]**
Total events: 107 (Experimental), 111 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.19, df=1(P=0.67); I^2=0%					
Test for overall effect: Z=0.31(P=0.75)					
19.3.24 Oncology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.3.25 Dermatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					

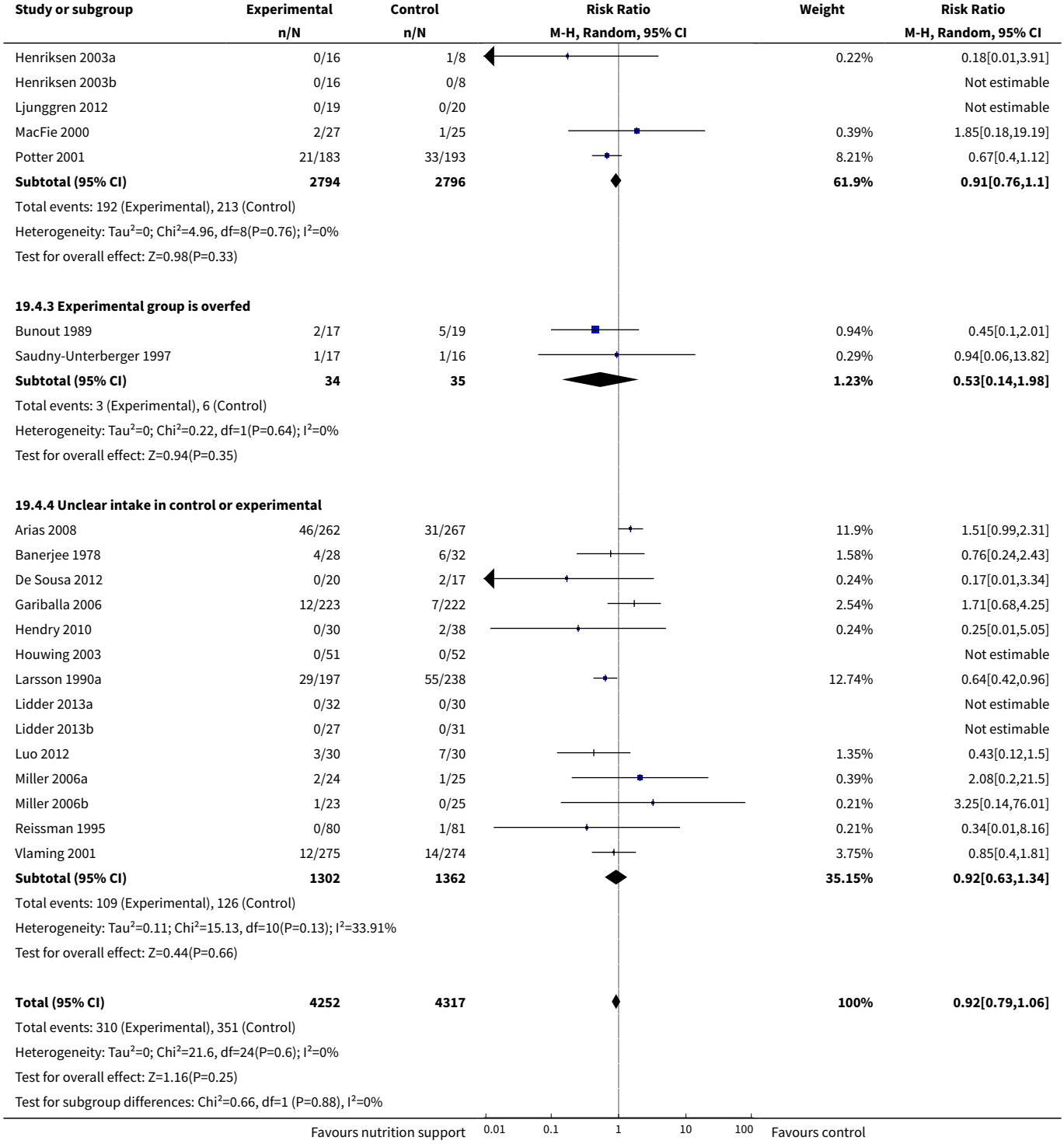


Favours nutrition support — Favours control



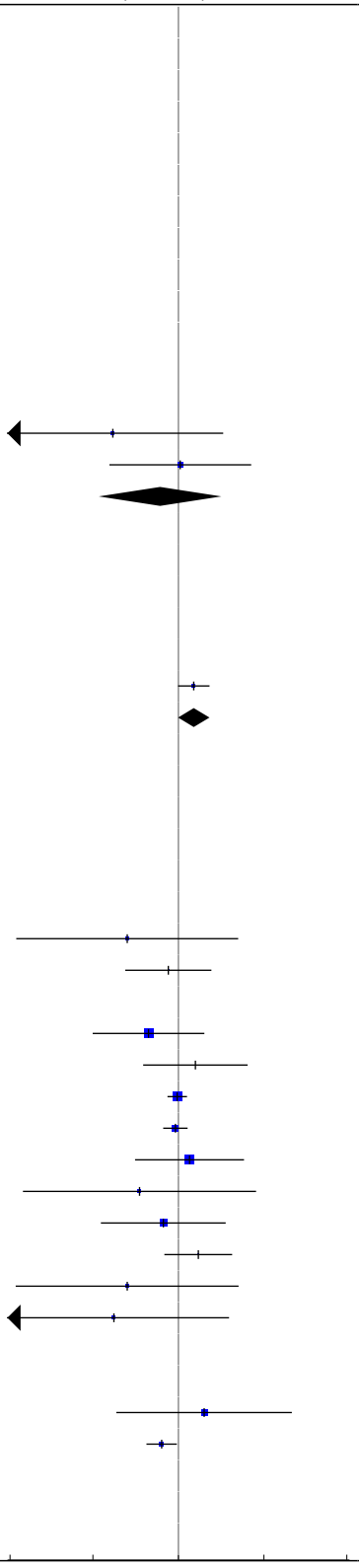
Analysis 19.4. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 4 Serious adverse events - based on adequacy of the amount of calories.

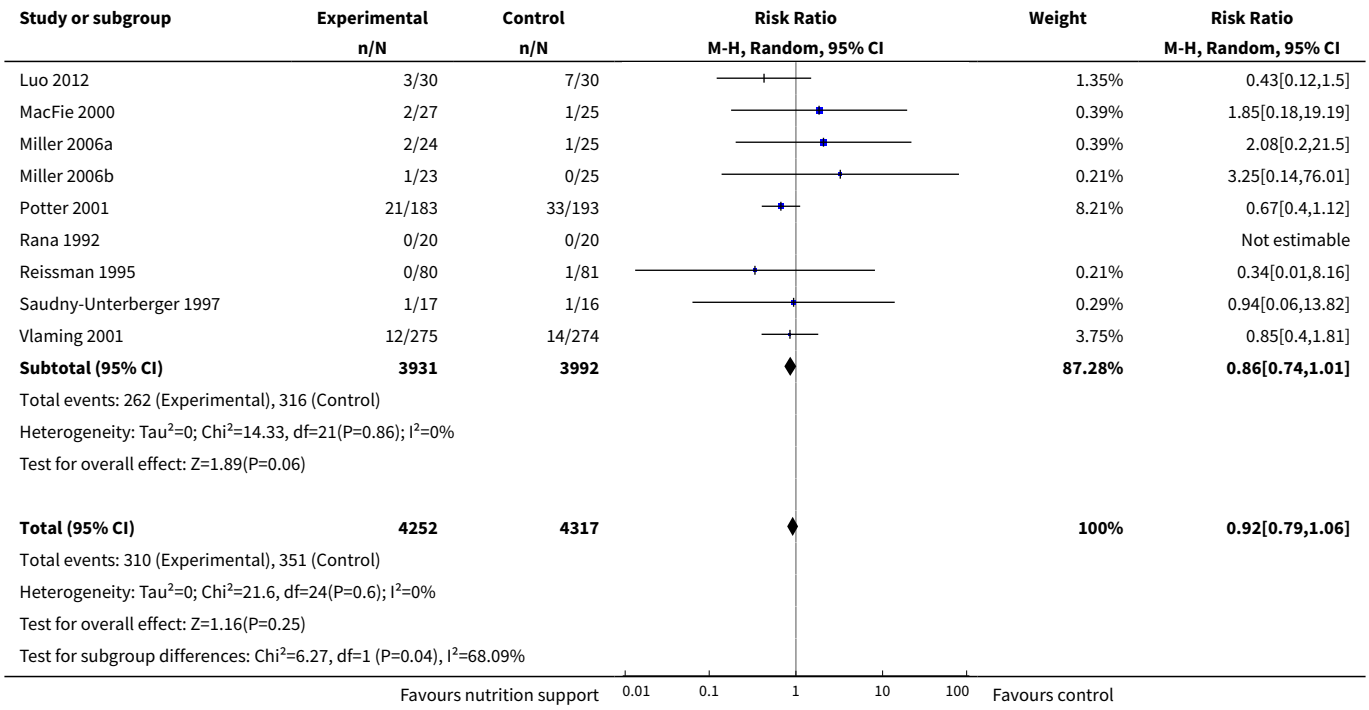




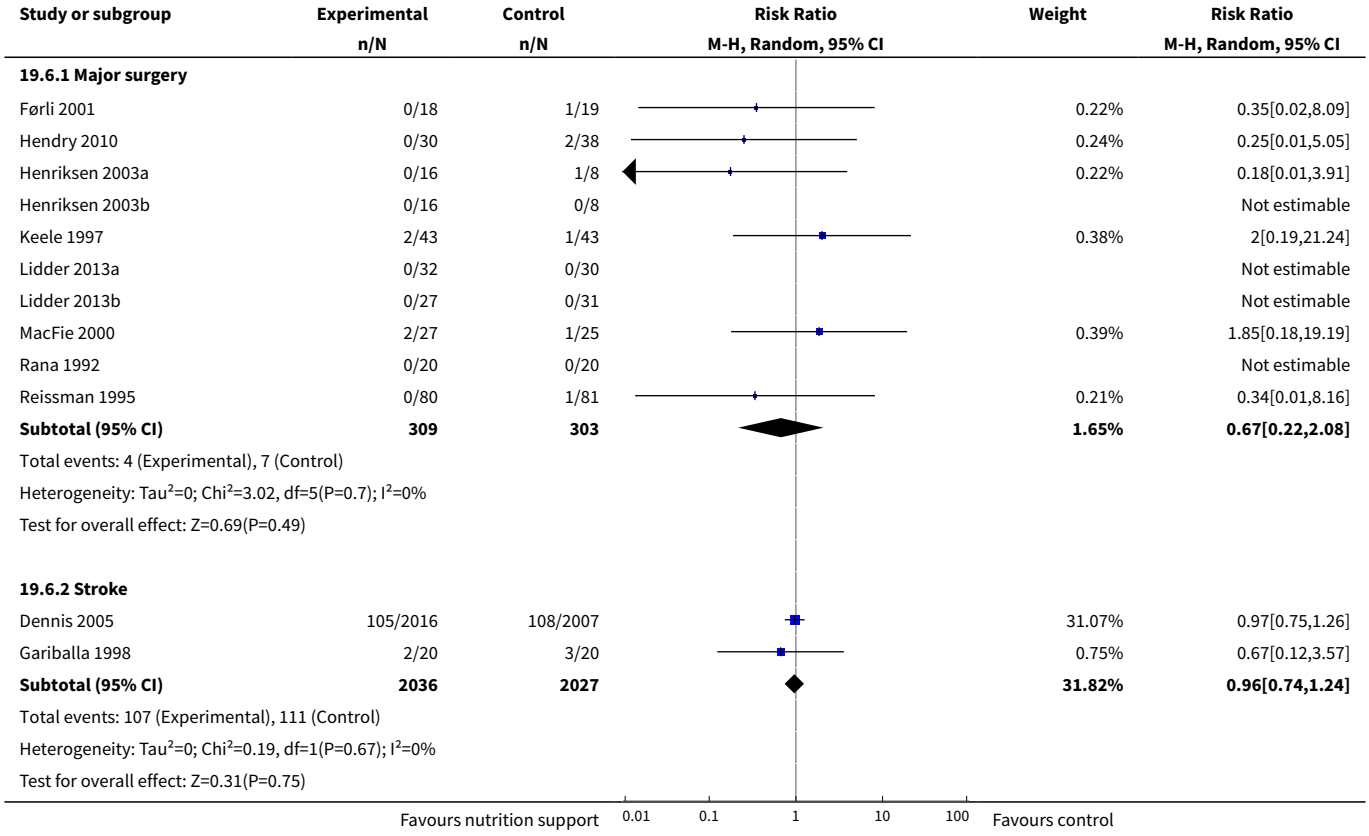
Analysis 19.5. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 5 Serious adverse events - different screening tools.

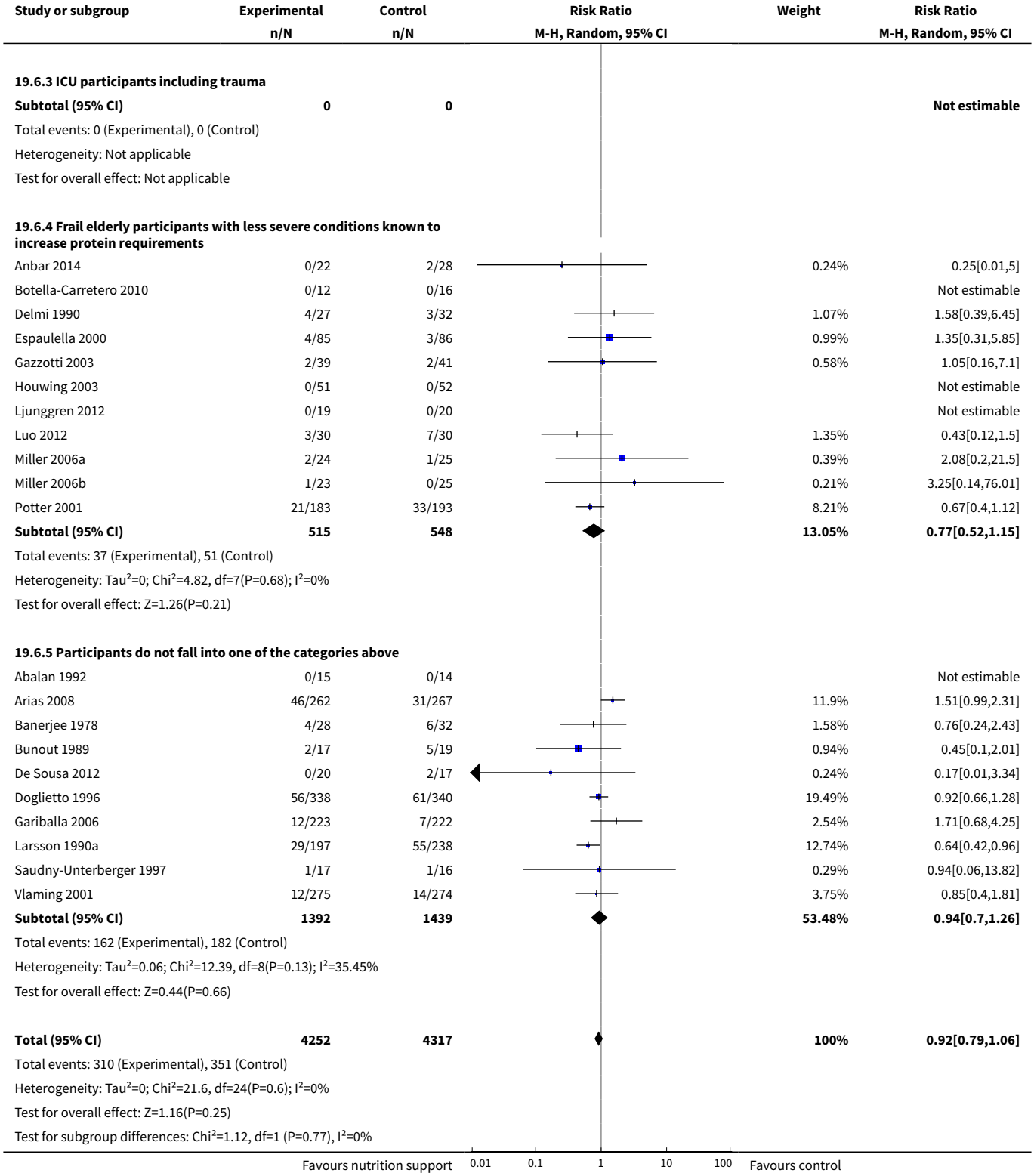
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
19.5.1 NRS 2002					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.5.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.5.3 MNA					
De Sousa 2012	0/20	2/17		0.24%	0.17[0.01,3.34]
Gazzotti 2003	2/39	2/41		0.58%	1.05[0.16,7.1]
Subtotal (95% CI)	**59**	**58**		**0.82%**	**0.61[0.12,3.18]**
Total events: 2 (Experimental), 4 (Control)					
Heterogeneity: Tau^2=0.06; Chi^2=1.04, df=1(P=0.31); I^2=3.81%					
Test for overall effect: Z=0.59(P=0.56)					
19.5.4 SGA					
Arias 2008	46/262	31/267		11.9%	1.51[0.99,2.31]
Subtotal (95% CI)	**262**	**267**		**11.9%**	**1.51[0.99,2.31]**
Total events: 46 (Experimental), 31 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.92(P=0.05)					
19.5.5 Other means					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.24%	0.25[0.01,5]
Banerjee 1978	4/28	6/32		1.58%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		0.94%	0.45[0.1,2.01]
Delmi 1990	4/27	3/32		1.07%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		31.07%	0.97[0.75,1.26]
Doglietto 1996	56/338	61/340		19.49%	0.92[0.66,1.28]
Espaulella 2000	4/85	3/86		0.99%	1.35[0.31,5.85]
Førli 2001	0/18	1/19		0.22%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.75%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		2.54%	1.71[0.68,4.25]
Hendry 2010	0/30	2/38		0.24%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.22%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.38%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		12.74%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable





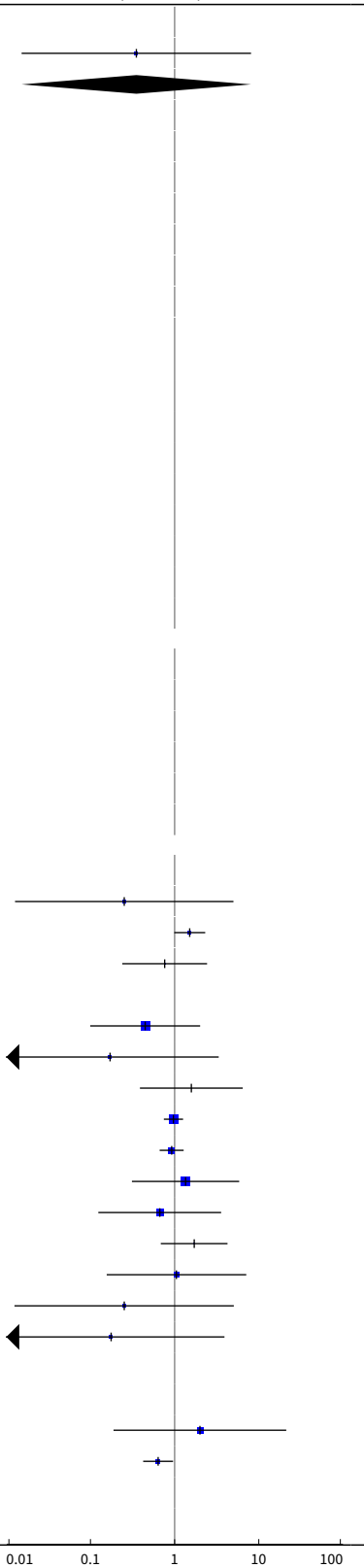
Analysis 19.6. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions.

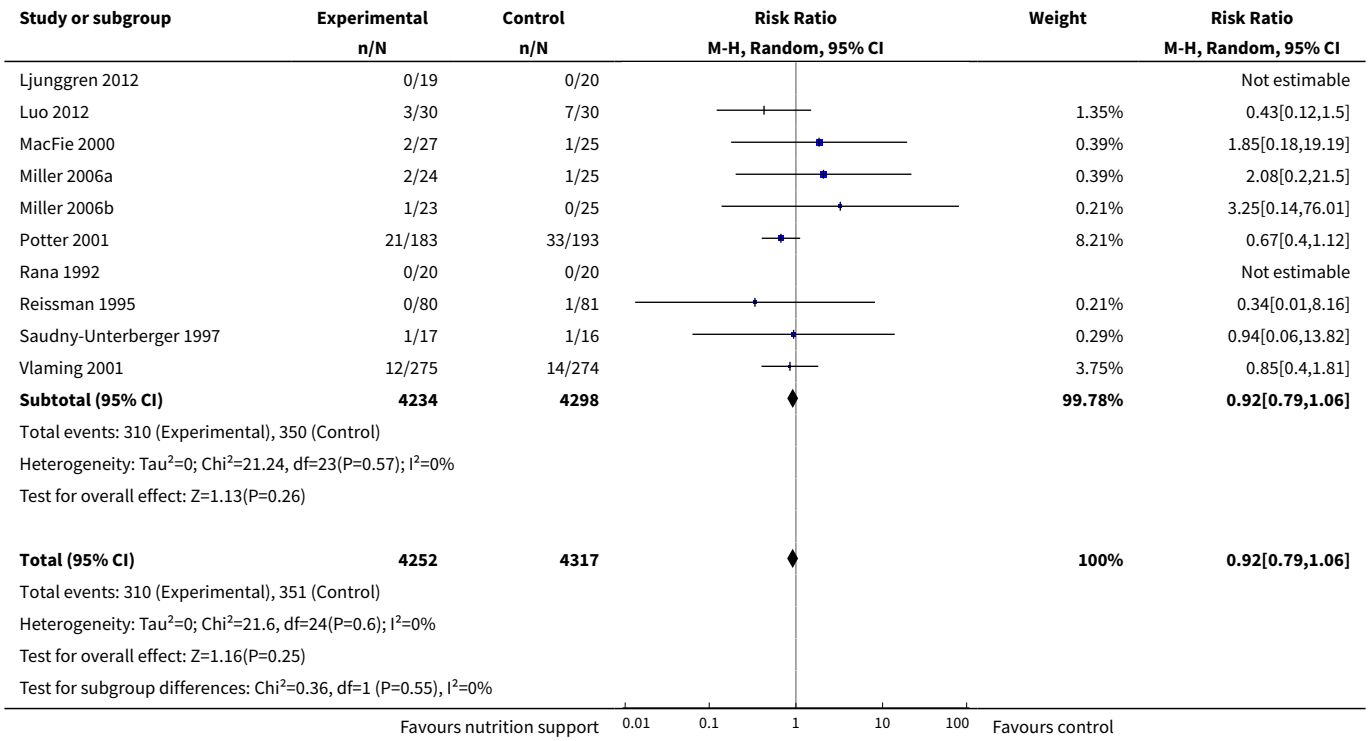




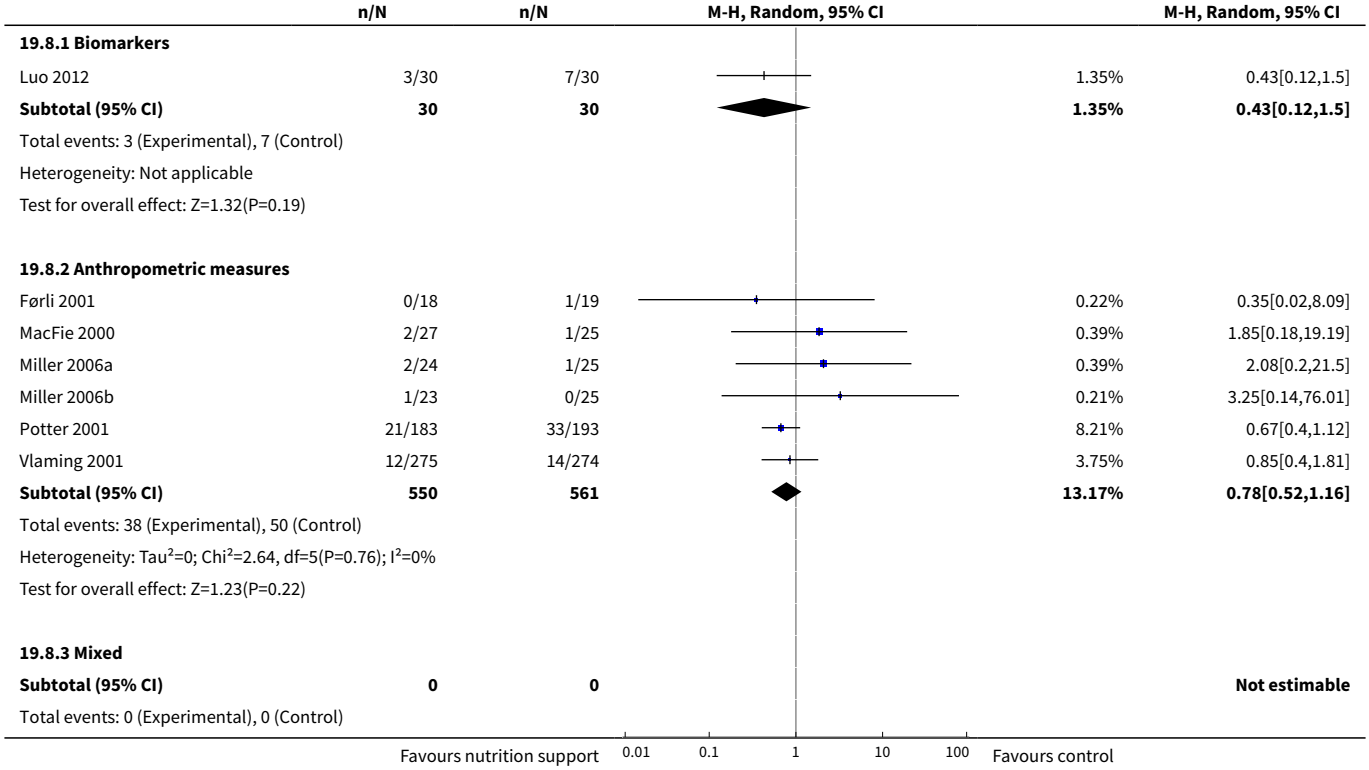
Analysis 19.7. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria.

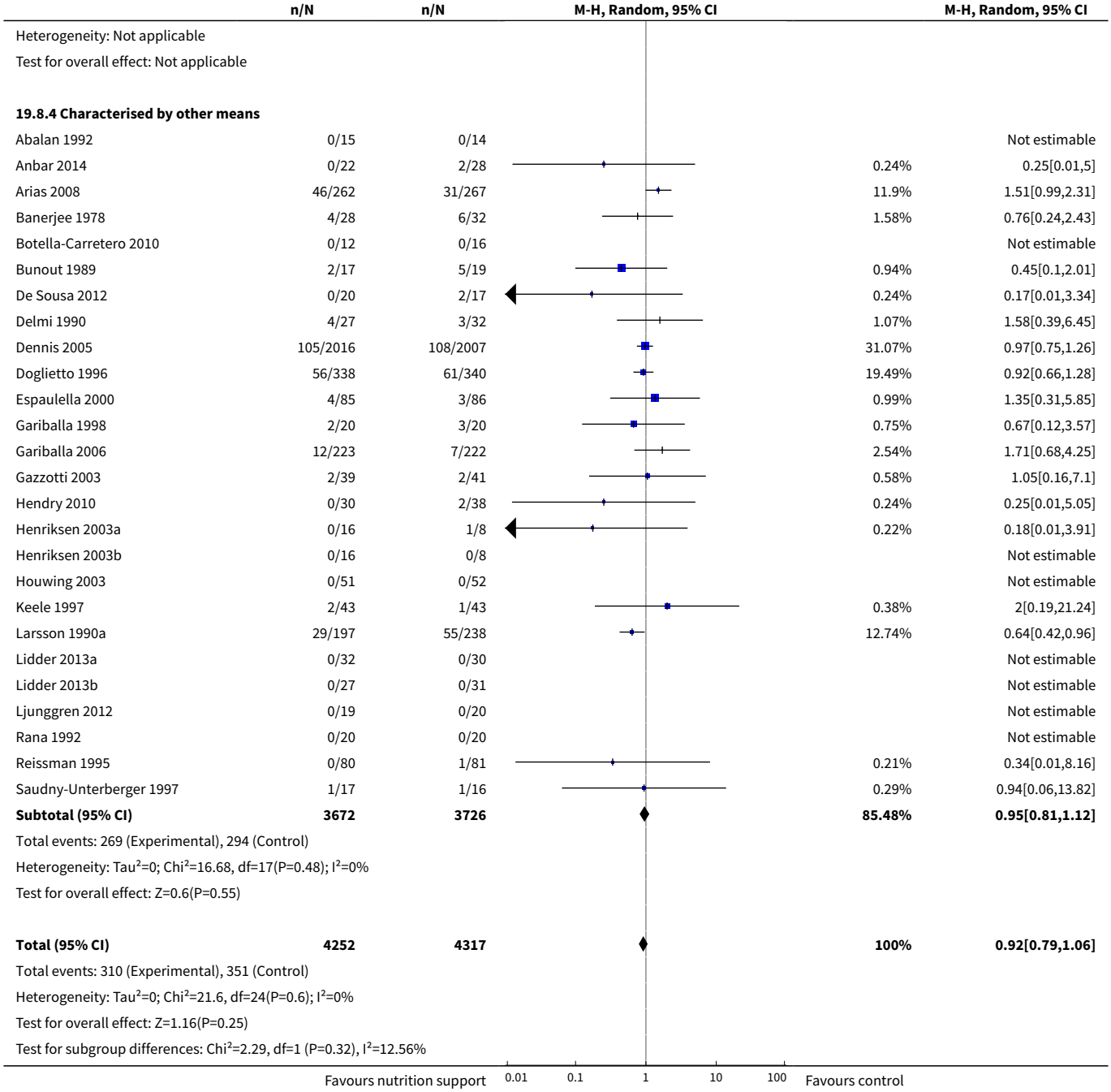
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
19.7.1 BMI less than 20.5 kg/m2					
Førli 2001	0/18	1/19		0.22%	0.35[0.02,8.09]
Subtotal (95% CI)	**18**	**19**		**0.22%**	**0.35[0.02,8.09]**
Total events: 0 (Experimental), 1 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.65(P=0.51)					
19.7.2 Weight loss of at least 5% during the last three months					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.7.3 Weight loss of at least 10% during the last six months					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.7.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
19.7.5 Participants characterised as 'at nutritional risk' by other means					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.24%	0.25[0.01,5]
Arias 2008	46/262	31/267		11.9%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		1.58%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		0.94%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.24%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		1.07%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		31.07%	0.97[0.75,1.26]
Doglietto 1996	56/338	61/340		19.49%	0.92[0.66,1.28]
Espaulella 2000	4/85	3/86		0.99%	1.35[0.31,5.85]
Gariballa 1998	2/20	3/20		0.75%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		2.54%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.58%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.24%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.22%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.38%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		12.74%	0.64[0.42,0.96]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable



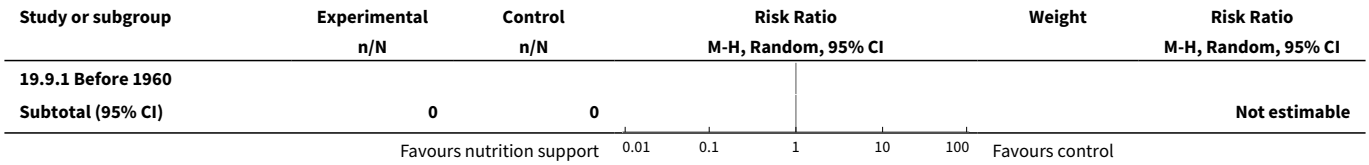


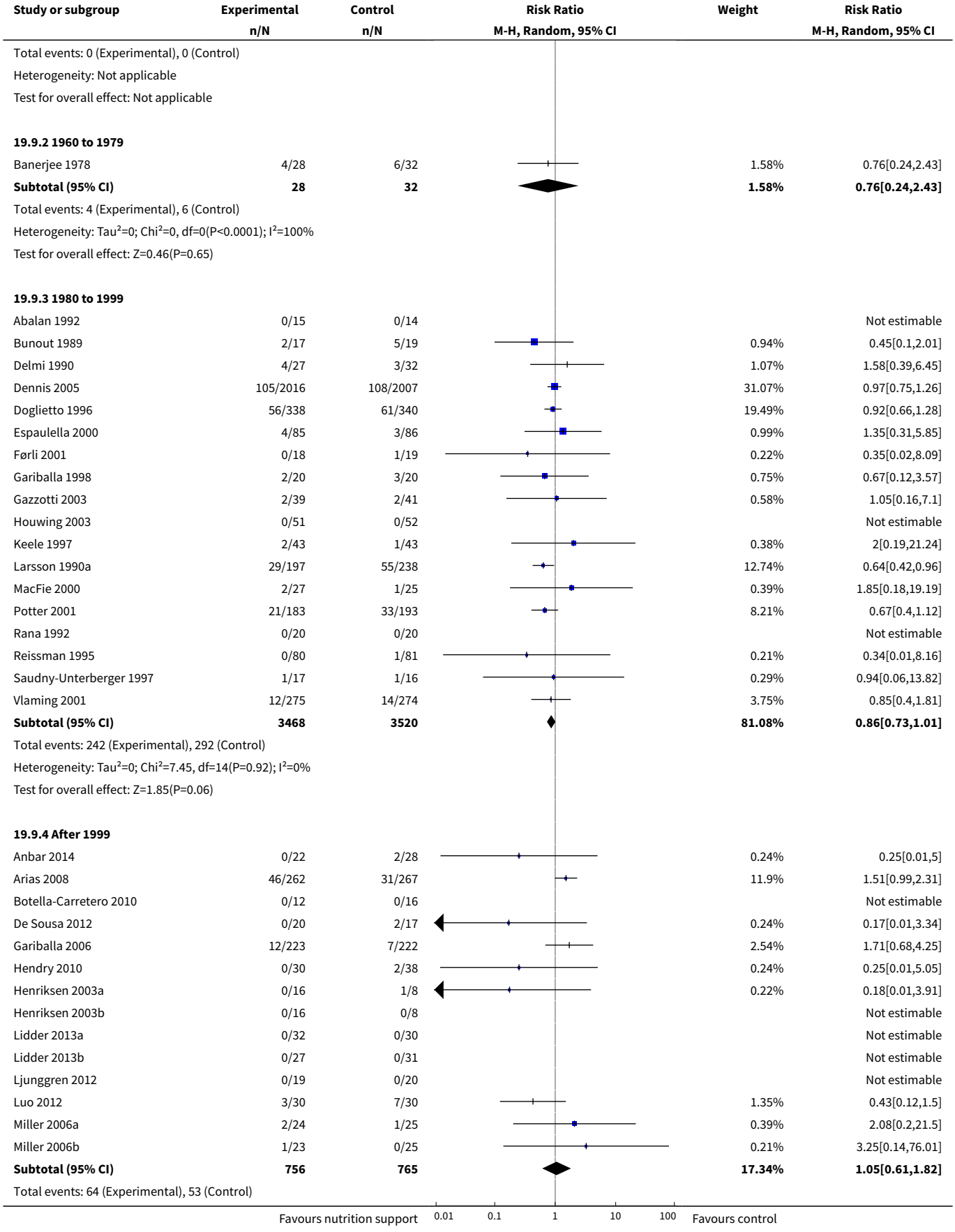
Analysis 19.8. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

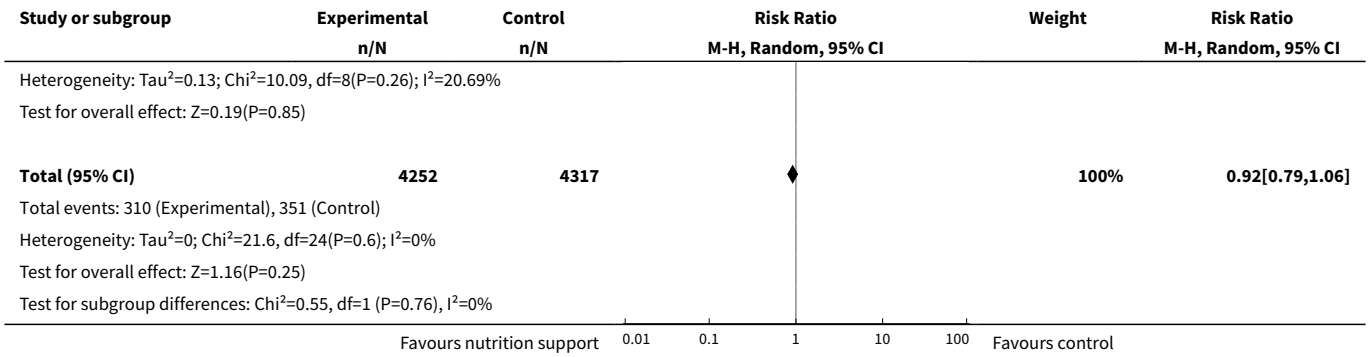




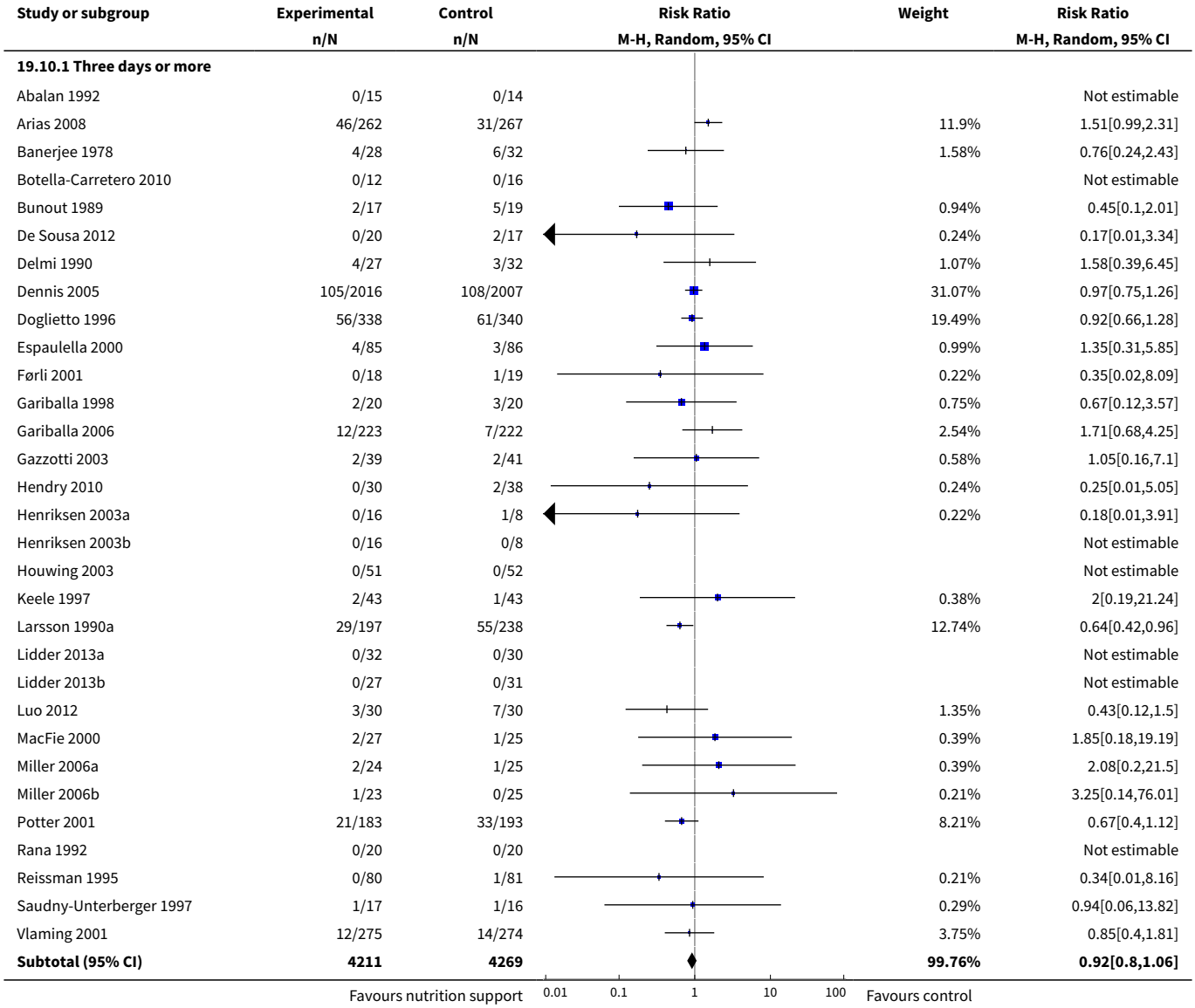
Analysis 19.9. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 9 Serious adverse events - randomisation year.

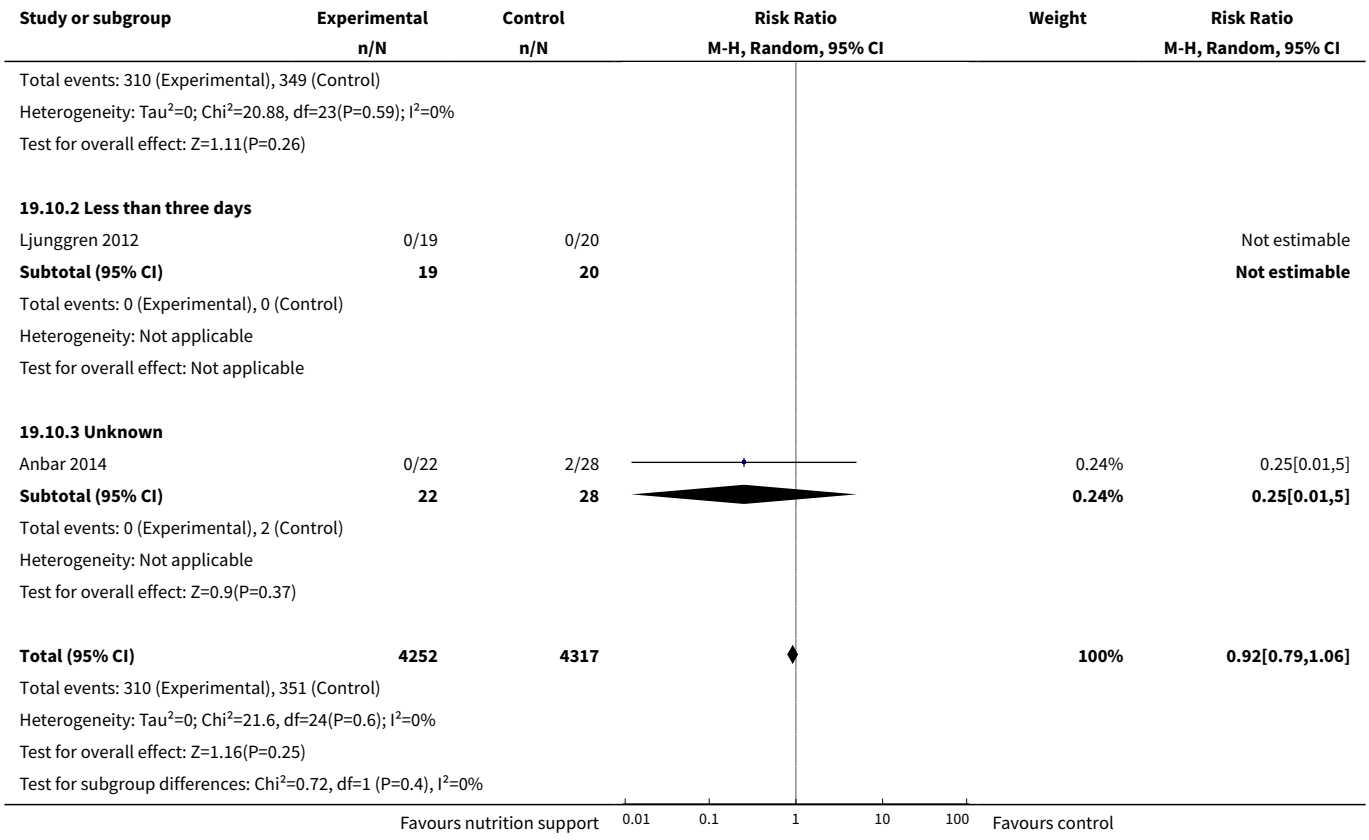




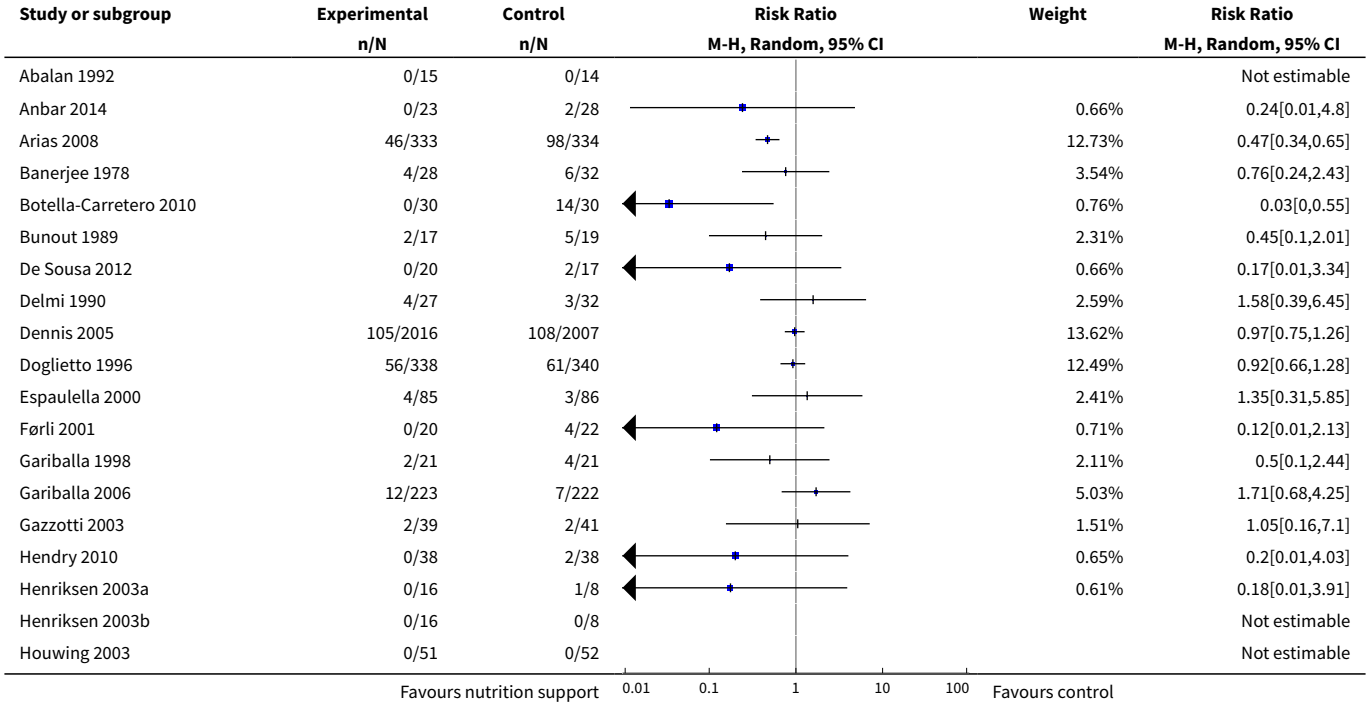


Analysis 19.10. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

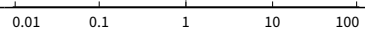




Analysis 19.11. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 11 Serious adverse events - 'best-worst case' scenario.

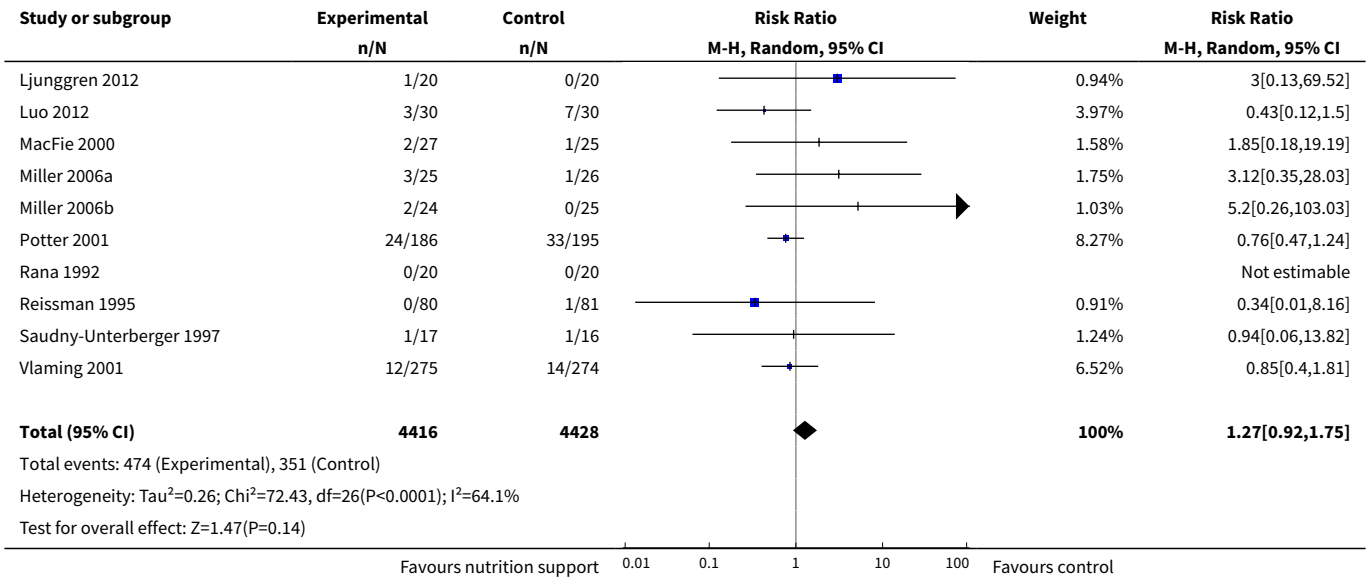


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Keele 1997	2/47	11/53		2.45%	0.21[0.05,0.88]
Larsson 1990a	29/250	68/251		11.35%	0.43[0.29,0.64]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Ljunggren 2012	0/20	0/20			Not estimable
Luo 2012	3/30	7/30		3.13%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		1.04%	1.85[0.18,19.19]
Miller 2006a	2/25	2/26		1.56%	1.04[0.16,6.83]
Miller 2006b	1/24	0/25		0.59%	3.12[0.13,73.04]
Potter 2001	21/186	35/195		9.66%	0.63[0.38,1.04]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.58%	0.34[0.01,8.16]
Saudny-Unterberger 1997	1/17	1/16		0.8%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		6.45%	0.85[0.4,1.81]
Total (95% CI)	**4416**	**4428**		**100%**	**0.67[0.52,0.86]**
Total events: 310 (Experimental), 462 (Control)					
Heterogeneity: Tau^2=0.1; Chi^2=41.6, df=25(P=0.02); I^2=39.9%					
Test for overall effect: Z=3.16(P=0)					

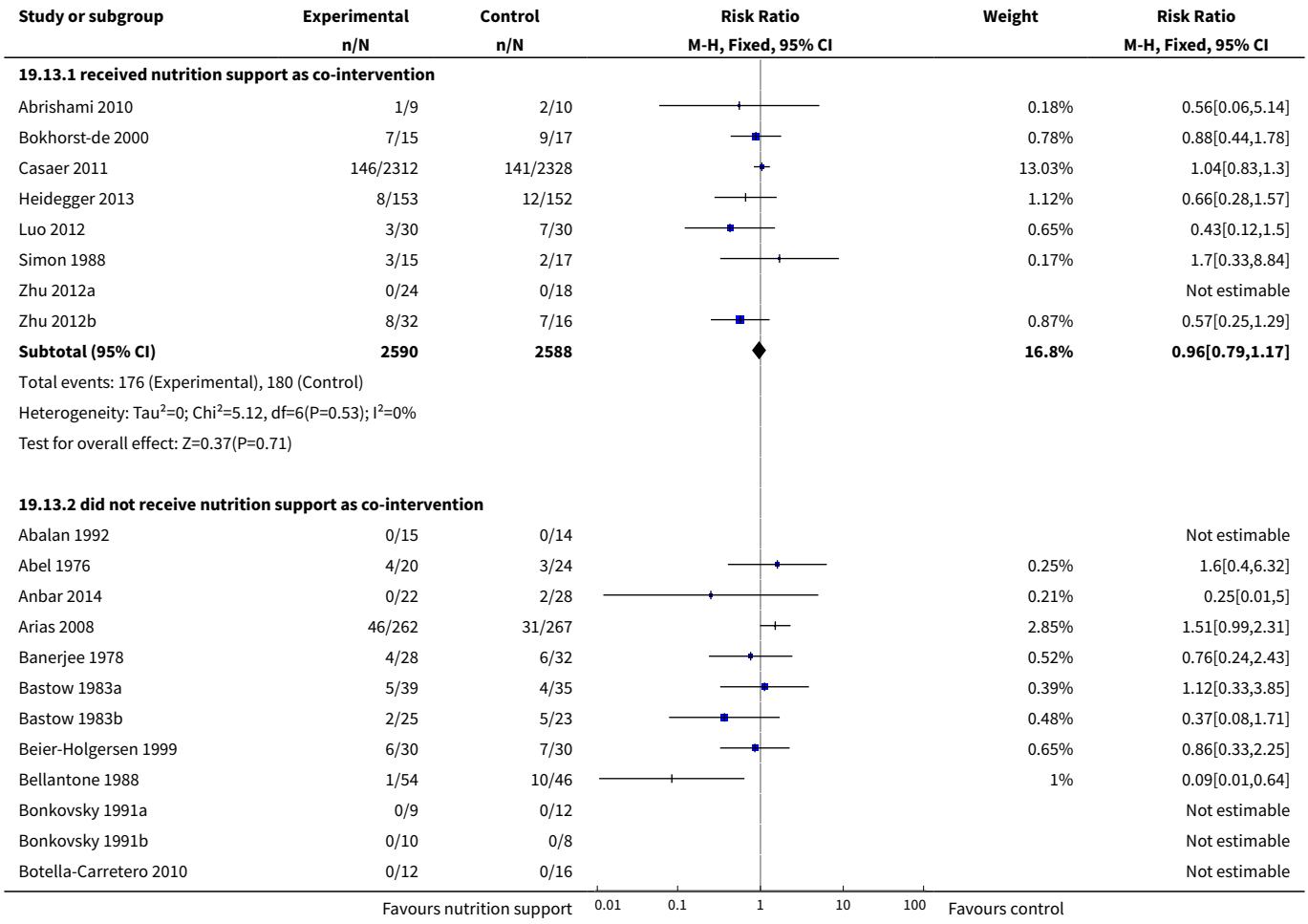


Analysis 19.12. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 12 Serious adverse events - 'worst-best case' scenario.

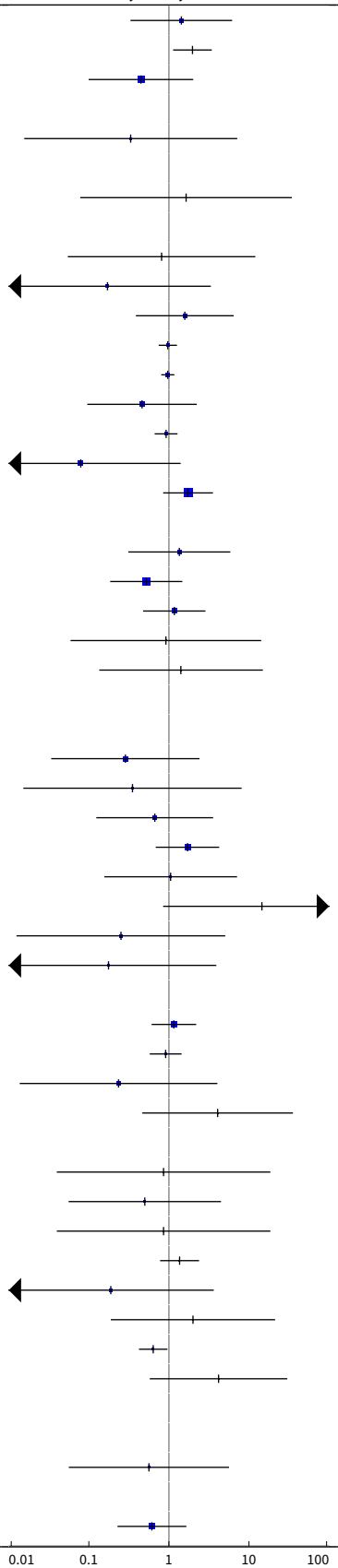
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	1/23	2/28		1.58%	0.61[0.06,6.3]
Arias 2008	117/333	31/334		9.02%	3.79[2.63,5.46]
Banerjee 1978	4/28	6/32		4.35%	0.76[0.24,2.43]
Botella-Carretero 2010	18/30	0/30		1.18%	37[2.33,587.26]
Bunout 1989	2/17	5/19		3.13%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		1.04%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		3.42%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		9.58%	0.97[0.75,1.26]
Doglietto 1996	56/338	61/340		9.23%	0.92[0.66,1.28]
Espaulella 2000	4/85	3/86		3.24%	1.35[0.31,5.85]
Førli 2001	2/20	1/22		1.59%	2.2[0.22,22.45]
Gariballa 1998	3/21	3/21		3.19%	1[0.23,4.4]
Gariballa 2006	12/223	7/222		5.57%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		2.19%	1.05[0.16,7.1]
Hendry 2010	8/38	2/38		3.19%	4[0.91,17.62]
Henriksen 2003a	0/16	1/8		0.96%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	6/47	1/53		1.91%	6.77[0.85,54.17]
Larsson 1990a	82/250	55/251		9.42%	1.5[1.12,2.01]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable

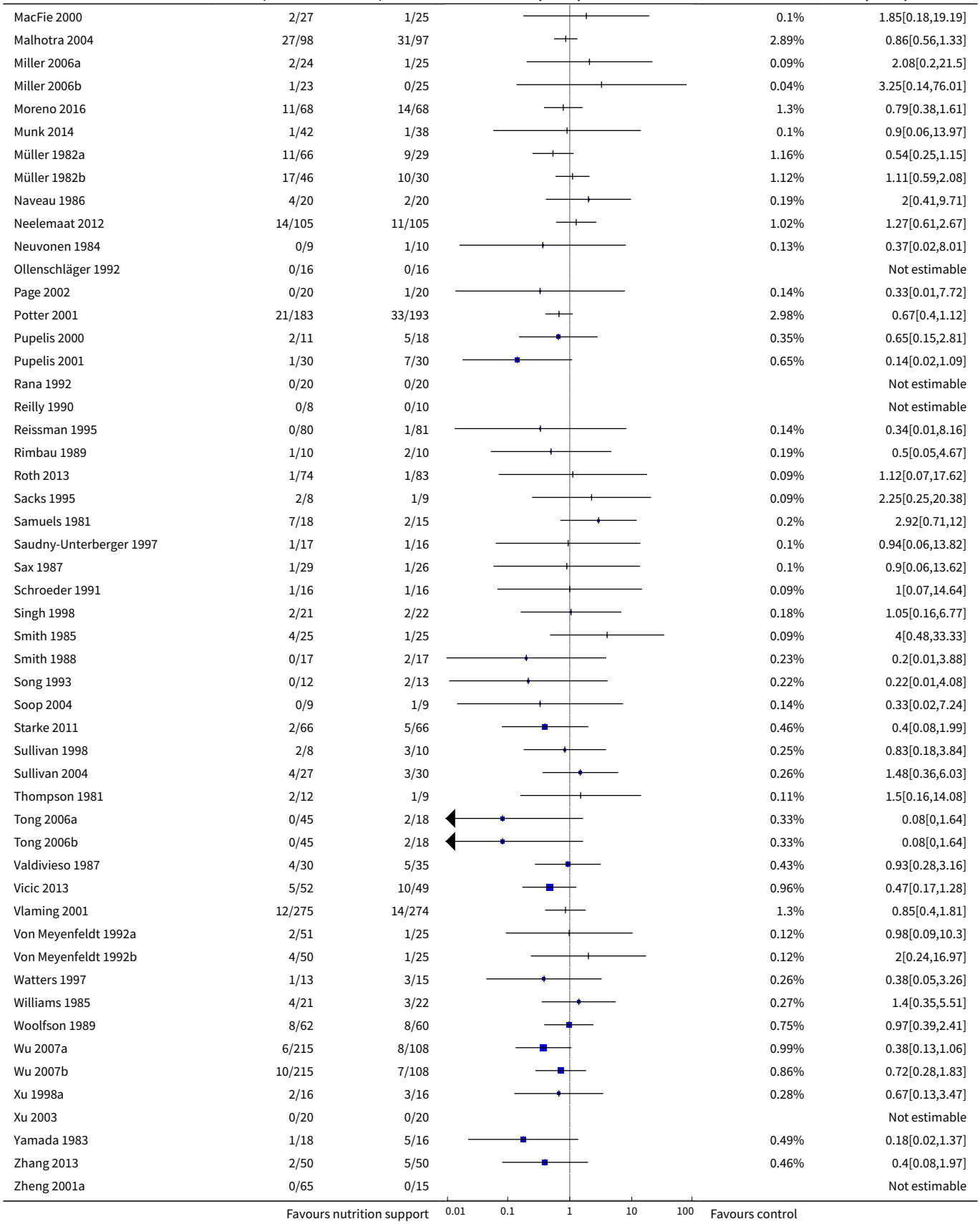


Analysis 19.13. Comparison 19 Oral - Serious adverse event end of intervention, Outcome 13 Serious adverse events co-interventions.

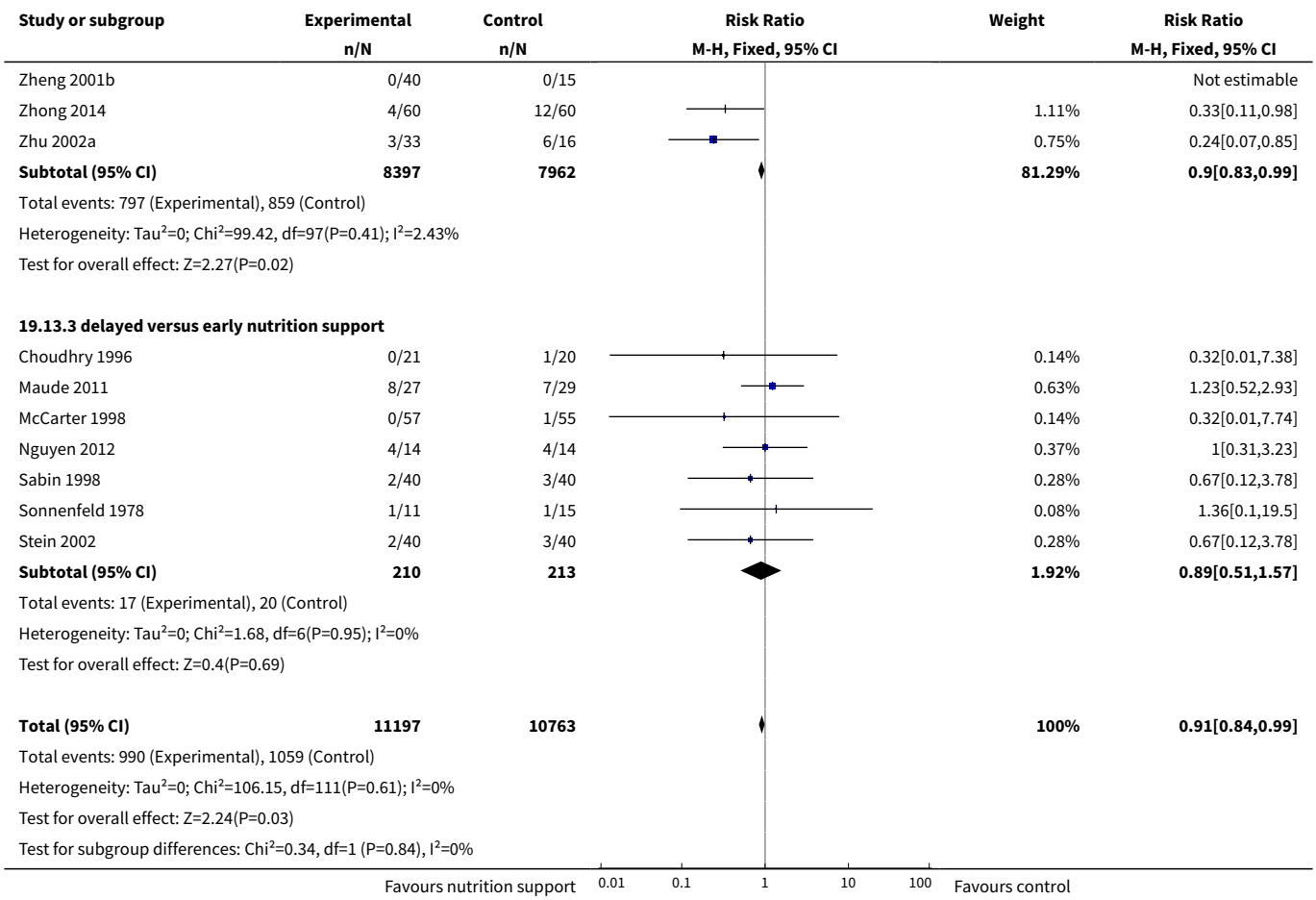


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Breedveld-Peters	4/70	3/75		0.27%	1.43[0.33,6.16]
Brennan 1994	27/60	13/57		1.24%	1.97[1.13,3.43]
Bunout 1989	2/17	5/19		0.44%	0.45[0.1,2.01]
Capellá 1990	0/15	0/12			Not estimable
Chen 1995a	0/8	1/8		0.14%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2000b	1/10	0/5		0.06%	1.64[0.08,34.28]
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	1/17		0.1%	0.81[0.05,12.01]
De Sousa 2012	0/20	2/17		0.25%	0.17[0.01,3.34]
Delmi 1990	4/27	3/32		0.25%	1.58[0.39,6.45]
Dennis 2005	105/2016	108/2007		10.04%	0.97[0.75,1.26]
Dennis 2006	142/429	147/430		13.62%	0.97[0.8,1.17]
Doglietto 1990	2/13	3/9		0.33%	0.46[0.1,2.23]
Doglietto 1996	56/338	61/340		5.64%	0.92[0.66,1.28]
Dong 1996	0/256	6/264		0.59%	0.08[0,1.4]
Duncan 2006	18/150	11/159		0.99%	1.73[0.85,3.55]
Eneroth 2005	0/40	0/40			Not estimable
Espaulella 2000	4/85	3/86		0.28%	1.35[0.31,5.85]
Fan 1989	5/64	9/60		0.86%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		0.56%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.1%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.11%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Fletcher 1986b	0/9	0/4			Not estimable
Foschi 1986	1/28	4/32		0.35%	0.29[0.03,2.41]
Førli 2001	0/18	1/19		0.14%	0.35[0.02,8.09]
Gariballa 1998	2/20	3/20		0.28%	0.67[0.12,3.57]
Gariballa 2006	12/223	7/222		0.65%	1.71[0.68,4.25]
Gazzotti 2003	2/39	2/41		0.18%	1.05[0.16,7.1]
Hartgrink 1998	7/55	0/53		0.05%	14.46[0.85,247.12]
Hendry 2010	0/30	2/38		0.21%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.18%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Herndon 1987	8/13	8/15		0.69%	1.15[0.61,2.19]
Hickson 2004	31/292	35/300		3.2%	0.91[0.58,1.44]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Holyday 2012	4/71	1/72		0.09%	4.06[0.46,35.41]
Houwing 2003	0/51	0/52			Not estimable
Jimenez 1995a	1/20	0/5		0.07%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.15%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.07%	0.86[0.04,18.45]
Johansen 2004	24/108	17/104		1.61%	1.36[0.78,2.38]
Kearns 1992	0/16	2/15		0.24%	0.19[0.01,3.63]
Keele 1997	2/43	1/43		0.09%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		4.62%	0.64[0.42,0.96]
Ledinghen 1997	5/12	1/10		0.1%	4.17[0.58,30.06]
Lidder 2013a	0/32	0/30			Not estimable
Lidder 2013b	0/27	0/31			Not estimable
Liu 1996b	1/16	2/18		0.17%	0.56[0.06,5.63]
Ljunggren 2012	0/19	0/20			Not estimable
Lough 1990	4/14	7/15		0.63%	0.61[0.23,1.65]





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
MacFie 2000	2/27	1/25		0.1%	1.85[0.18,19.19]
Malhotra 2004	27/98	31/97		2.89%	0.86[0.56,1.33]
Miller 2006a	2/24	1/25		0.09%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.04%	3.25[0.14,76.01]
Moreno 2016	11/68	14/68		1.3%	0.79[0.38,1.61]
Munk 2014	1/42	1/38		0.1%	0.9[0.06,13.97]
Müller 1982a	11/66	9/29		1.16%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		1.12%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.19%	2[0.41,9.71]
Neelemaat 2012	14/105	11/105		1.02%	1.27[0.61,2.67]
Neuvonen 1984	0/9	1/10		0.13%	0.37[0.02,8.01]
Ollenschläger 1992	0/16	0/16			Not estimable
Page 2002	0/20	1/20		0.14%	0.33[0.01,7.72]
Potter 2001	21/183	33/193		2.98%	0.67[0.4,1.12]
Pupelis 2000	2/11	5/18		0.35%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.65%	0.14[0.02,1.09]
Rana 1992	0/20	0/20			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Reissman 1995	0/80	1/81		0.14%	0.34[0.01,8.16]
Rimbau 1989	1/10	2/10		0.19%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.09%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.09%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.2%	2.92[0.71,12]
Saudny-Unterberger 1997	1/17	1/16		0.1%	0.94[0.06,13.82]
Sax 1987	1/29	1/26		0.1%	0.9[0.06,13.62]
Schroeder 1991	1/16	1/16		0.09%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.18%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.09%	4[0.48,33.33]
Smith 1988	0/17	2/17		0.23%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.22%	0.22[0.01,4.08]
Soop 2004	0/9	1/9		0.14%	0.33[0.02,7.24]
Starke 2011	2/66	5/66		0.46%	0.4[0.08,1.99]
Sullivan 1998	2/8	3/10		0.25%	0.83[0.18,3.84]
Sullivan 2004	4/27	3/30		0.26%	1.48[0.36,6.03]
Thompson 1981	2/12	1/9		0.11%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.33%	0.08[0,1.64]
Tong 2006b	0/45	2/18		0.33%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		0.43%	0.93[0.28,3.16]
Vicic 2013	5/52	10/49		0.96%	0.47[0.17,1.28]
Vlaming 2001	12/275	14/274		1.3%	0.85[0.4,1.81]
Von Meyenfeldt 1992a	2/51	1/25		0.12%	0.98[0.09,10.3]
Von Meyenfeldt 1992b	4/50	1/25		0.12%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Williams 1985	4/21	3/22		0.27%	1.4[0.35,5.51]
Woolfson 1989	8/62	8/60		0.75%	0.97[0.39,2.41]
Wu 2007a	6/215	8/108		0.99%	0.38[0.13,1.06]
Wu 2007b	10/215	7/108		0.86%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.28%	0.67[0.13,3.47]
Xu 2003	0/20	0/20			Not estimable
Yamada 1983	1/18	5/16		0.49%	0.18[0.02,1.37]
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable



Comparison 20. Oral - Serious adverse event maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Serious adverse events - overall	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
2 Serious adverse events - bias	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
2.1 High risk of bias	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Serious adverse events - by medical speciality	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.2 Medical gastroenterology and hepatology	1	36	Risk Ratio (M-H, Random, 95% CI)	0.45 [0.10, 2.01]
3.3 Geriatrics	10	1602	Risk Ratio (M-H, Random, 95% CI)	0.80 [0.55, 1.15]
3.4 Pulmonary disease	2	93	Risk Ratio (M-H, Random, 95% CI)	0.49 [0.16, 1.54]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	10	1253	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.61, 1.12]
3.11 Trauma surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.12 Ortopaedics	4	361	Risk Ratio (M-H, Random, 95% CI)	1.80 [0.92, 3.52]
3.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Transplant surgery	1	37	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.02, 8.09]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

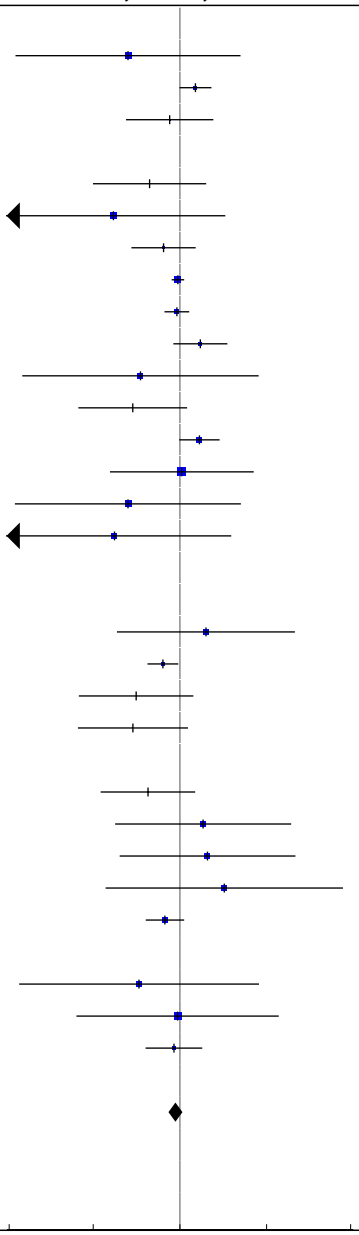
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	3	4081	Risk Ratio (M-H, Random, 95% CI)	0.65 [0.22, 1.93]
3.24 Oncology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	2	1078	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.73, 2.12]
4 Serious adverse events - based on adequacy of the amount of calories	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
4.1 Clearly adequate in intervention and clearly inadequate in control	4	246	Risk Ratio (M-H, Random, 95% CI)	0.64 [0.20, 2.00]
4.2 Inadequate in the experimental or adequate in the control	13	5562	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.81, 1.06]
4.3 Experimental group is overfed	2	69	Risk Ratio (M-H, Random, 95% CI)	0.53 [0.14, 1.98]
4.4 Unclear intake in control or experimental	14	2664	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.56, 1.23]
5 Serious adverse events - different screening tools	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
5.1 NRS 2002	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	2	117	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.12, 3.18]
5.4 SGA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5.5 Other means	31	8424	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.08]
6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
6.1 Major surgery	11	1290	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.61, 1.11]
6.2 Stroke	2	4052	Risk Ratio (M-H, Random, 95% CI)	0.65 [0.22, 1.93]
6.3 ICU participants including trauma	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	11	1046	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.57, 1.27]
6.5 Participants do not fall into one of the categories above	9	2153	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.64, 1.46]
7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
7.1 BMI less than 20.5 kg/m2	1	37	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.02, 8.09]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	32	8504	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
8.1 Biomarkers	1	60	Risk Ratio (M-H, Random, 95% CI)	0.43 [0.12, 1.50]
8.2 Anthropometric measures	6	1111	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.52, 1.16]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
8.3 Both	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.4 Characterised by other means	26	7370	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.72, 1.13]
9 Serious adverse events - randomisation year	33	8541	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	1	60	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.24, 2.43]
9.3 1980 to 1999	18	6960	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.78, 1.00]
9.4 After 1999	14	1521	Risk Ratio (M-H, Random, 95% CI)	0.79 [0.45, 1.39]
10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	32	8501	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
10.1 Three days or more	30	8412	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.74, 1.07]
10.2 Less than three days	1	39	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
10.3 Unknown	1	50	Risk Ratio (M-H, Random, 95% CI)	0.25 [0.01, 5.00]
11 Serious adverse events - 'best-worst case' scenario	33	8844	Risk Ratio (M-H, Random, 95% CI)	0.64 [0.50, 0.81]
12 Serious adverse events - 'worst-best case' scenario	33	8844	Risk Ratio (M-H, Random, 95% CI)	1.15 [0.86, 1.55]
13 Serious adverse events co-interventions	33	8541	Risk Ratio (M-H, Fixed, 95% CI)	0.92 [0.82, 1.03]
13.1 Received nutrition support as co-intervention	1	60	Risk Ratio (M-H, Fixed, 95% CI)	0.43 [0.12, 1.50]
13.2 did not receive nutrition support as co-intervention	32	8481	Risk Ratio (M-H, Fixed, 95% CI)	0.92 [0.82, 1.04]
13.3 delayed versus early nutrition support	0	0	Risk Ratio (M-H, Fixed, 95% CI)	0.0 [0.0, 0.0]

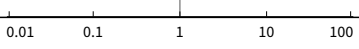
Analysis 20.1. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 1 Serious adverse events - overall.

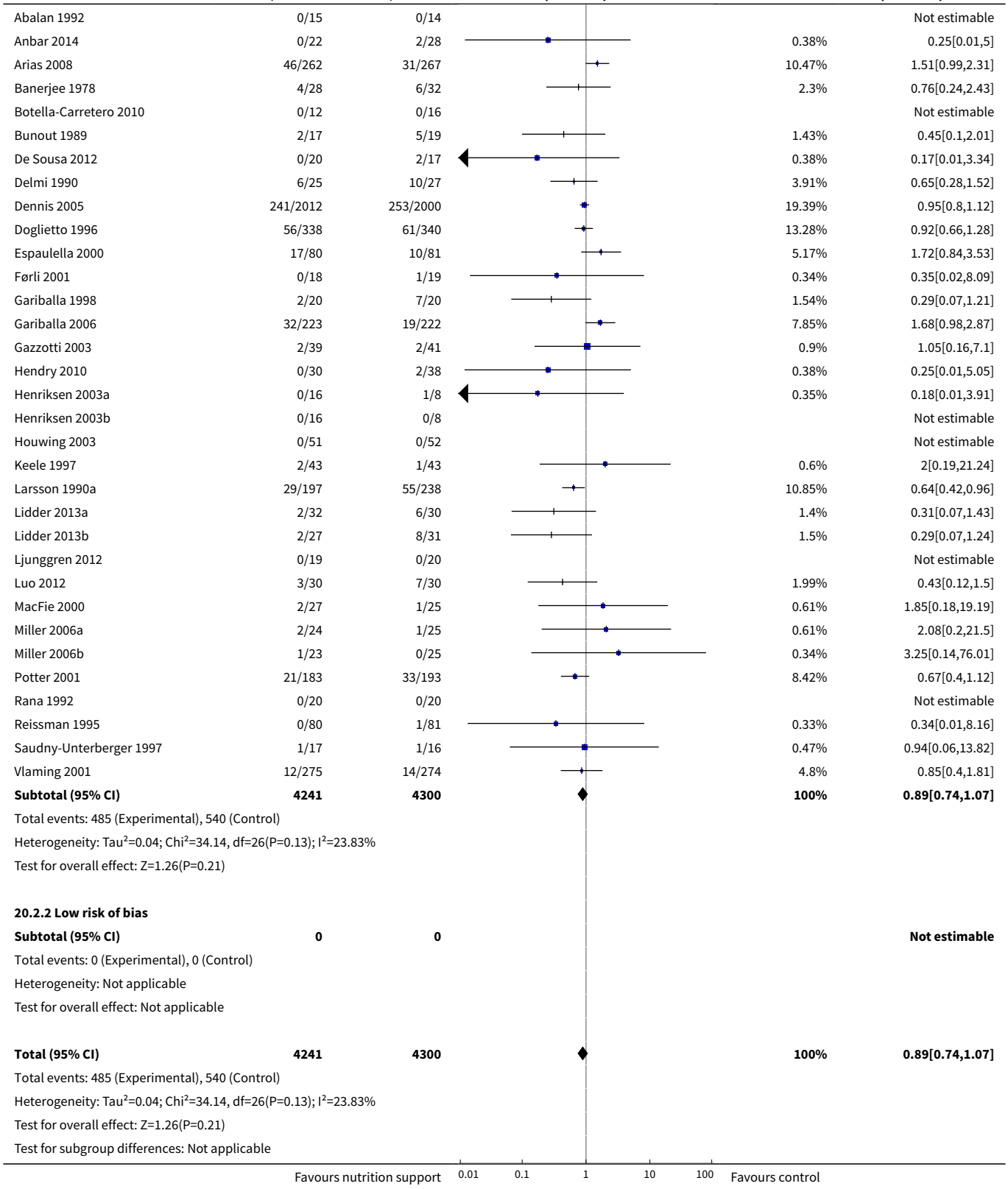
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.38%	0.25[0.01,5]
Arias 2008	46/262	31/267		10.47%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.3%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.43%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.38%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		3.91%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		19.39%	0.95[0.8,1.12]
Doglietto 1996	56/338	61/340		13.28%	0.92[0.66,1.28]
Espaulella 2000	17/80	10/81		5.17%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.34%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		1.54%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		7.85%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.9%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.38%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.35%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.6%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		10.85%	0.64[0.42,0.96]
Lidder 2013a	2/32	6/30		1.4%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		1.5%	0.29[0.07,1.24]
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		1.99%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.61%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.61%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.34%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		8.42%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.33%	0.34[0.01,8.16]
Saudny-Unterberger 1997	1/17	1/16		0.47%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		4.8%	0.85[0.4,1.81]
Total (95% CI)	**4241**	**4300**		**100%**	**0.89[0.74,1.07]**
Total events: 485 (Experimental), 540 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=34.14, df=26(P=0.13); I^2=23.83%					
Test for overall effect: Z=1.26(P=0.21)					



Analysis 20.2. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 2 Serious adverse events - bias.

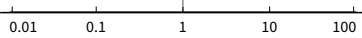
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
20.2.1 High risk of bias					





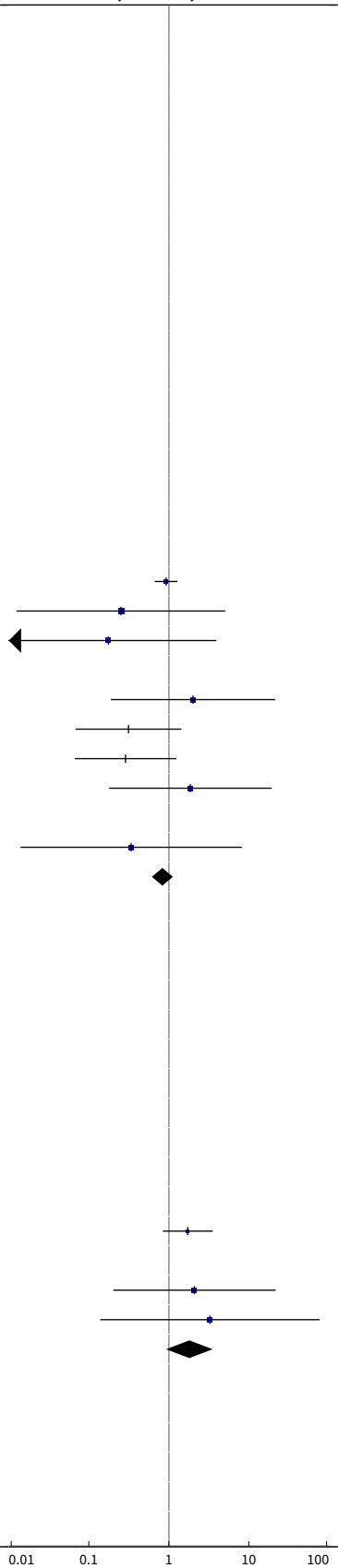
Analysis 20.3. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 3 Serious adverse events - by medical speciality.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
20.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.2 Medical gastroenterology and hepatology					
Bunout 1989	2/17	5/19		1.43%	0.45[0.1,2.01]
Subtotal (95% CI)	**17**	**19**		**1.43%**	**0.45[0.1,2.01]**
Total events: 2 (Experimental), 5 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.05(P=0.29)					
20.3.3 Geriatrics					
Anbar 2014	0/22	2/28		0.38%	0.25[0.01,5]
Banerjee 1978	4/28	6/32		2.3%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
De Sousa 2012	0/20	2/17		0.38%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		3.91%	0.65[0.28,1.52]
Gariballa 2006	32/223	19/222		7.85%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.9%	1.05[0.16,7.1]
Larsson 1990a	29/197	55/238		10.85%	0.64[0.42,0.96]
Ljunggren 2012	0/19	0/20			Not estimable
Potter 2001	21/183	33/193		8.42%	0.67[0.4,1.12]
Subtotal (95% CI)	**768**	**834**		**35%**	**0.8[0.55,1.15]**
Total events: 94 (Experimental), 129 (Control)					
Heterogeneity: Tau^2=0.09; Chi^2=10.89, df=7(P=0.14); I^2=35.74%					
Test for overall effect: Z=1.19(P=0.23)					
20.3.4 Pulmonary disease					
Luo 2012	3/30	7/30		1.99%	0.43[0.12,1.5]
Saudny-Unterberger 1997	1/17	1/16		0.47%	0.94[0.06,13.82]
Subtotal (95% CI)	**47**	**46**		**2.46%**	**0.49[0.16,1.54]**
Total events: 4 (Experimental), 8 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.27, df=1(P=0.6); I^2=0%					
Test for overall effect: Z=1.22(P=0.22)					
20.3.5 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.6 Infectious diseases					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					

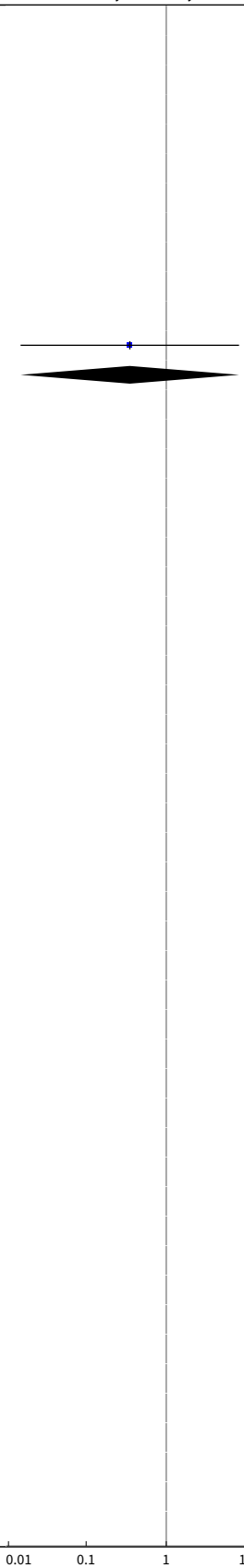


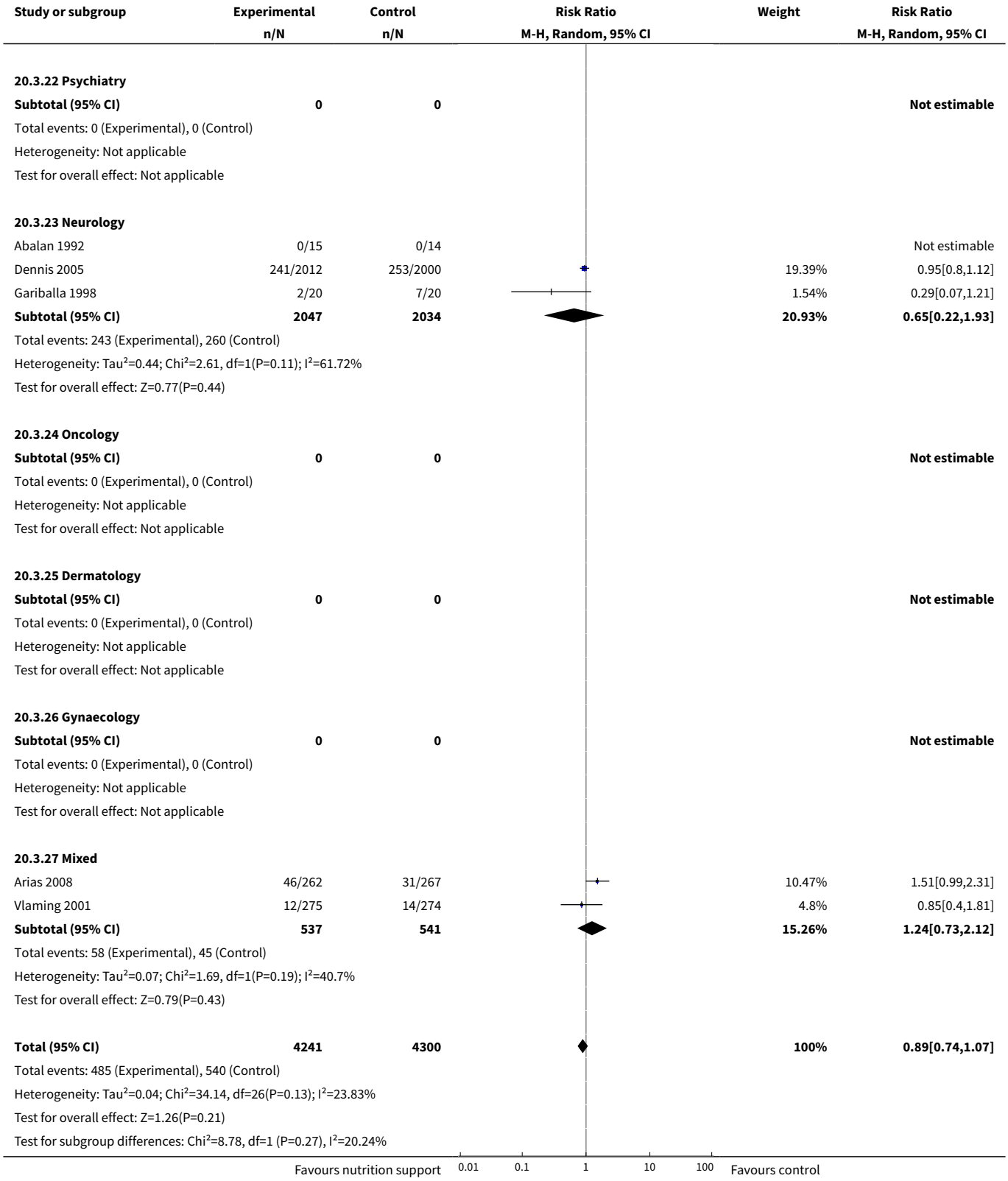
Favours nutrition support — Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
20.3.7 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.8 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.9 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.10 Gastroenterologic surgery					
Doglietto 1996	56/338	61/340		13.28%	0.92[0.66,1.28]
Hendry 2010	0/30	2/38		0.38%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.35%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Keele 1997	2/43	1/43		0.6%	2[0.19,21.24]
Lidder 2013a	2/32	6/30		1.4%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		1.5%	0.29[0.07,1.24]
MacFie 2000	2/27	1/25		0.61%	1.85[0.18,19.19]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.33%	0.34[0.01,8.16]
Subtotal (95% CI)	**629**	**624**		**18.45%**	**0.83[0.61,1.12]**
Total events: 64 (Experimental), 81 (Control)					
Heterogeneity: Tau^2=0; Chi^2=6.93, df=7(P=0.44); I^2=0%					
Test for overall effect: Z=1.21(P=0.23)					
20.3.11 Trauma surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.12 Ortopaedics					
Espaulella 2000	17/80	10/81		5.17%	1.72[0.84,3.53]
Houwing 2003	0/51	0/52			Not estimable
Miller 2006a	2/24	1/25		0.61%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.34%	3.25[0.14,76.01]
Subtotal (95% CI)	**178**	**183**		**6.13%**	**1.8[0.92,3.52]**
Total events: 20 (Experimental), 11 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.17, df=2(P=0.92); I^2=0%					
Test for overall effect: Z=1.72(P=0.09)					
20.3.13 Plastic, reconstructive, and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**



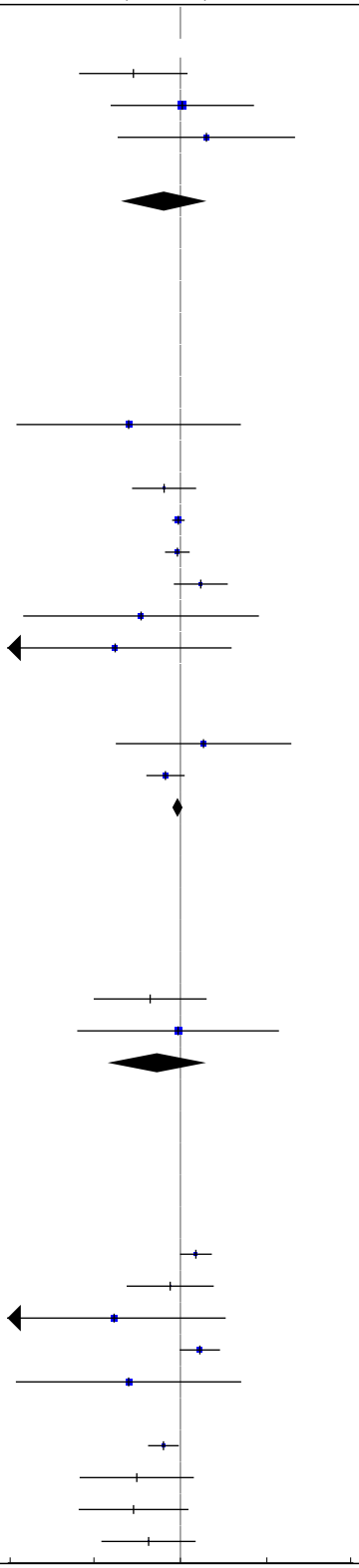
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.14 Vascular surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.15 Transplant surgery					
Førli 2001	0/18	1/19		0.34%	0.35[0.02,8.09]
Subtotal (95% CI)	**18**	**19**		**0.34%**	**0.35[0.02,8.09]**
Total events: 0 (Experimental), 1 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.65(P=0.51)					
20.3.16 Urology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.17 Thoracic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.18 Neurological surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.19 Oro-maxillo-facial surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.20 Anaesthesiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.3.21 Emergency medicine					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					

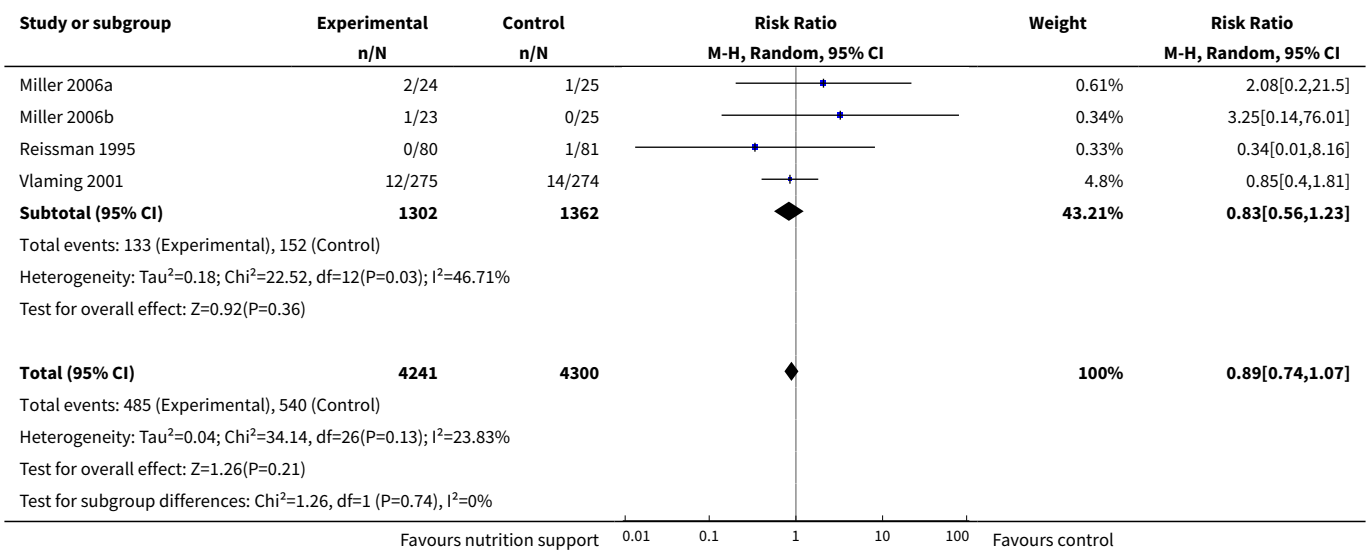




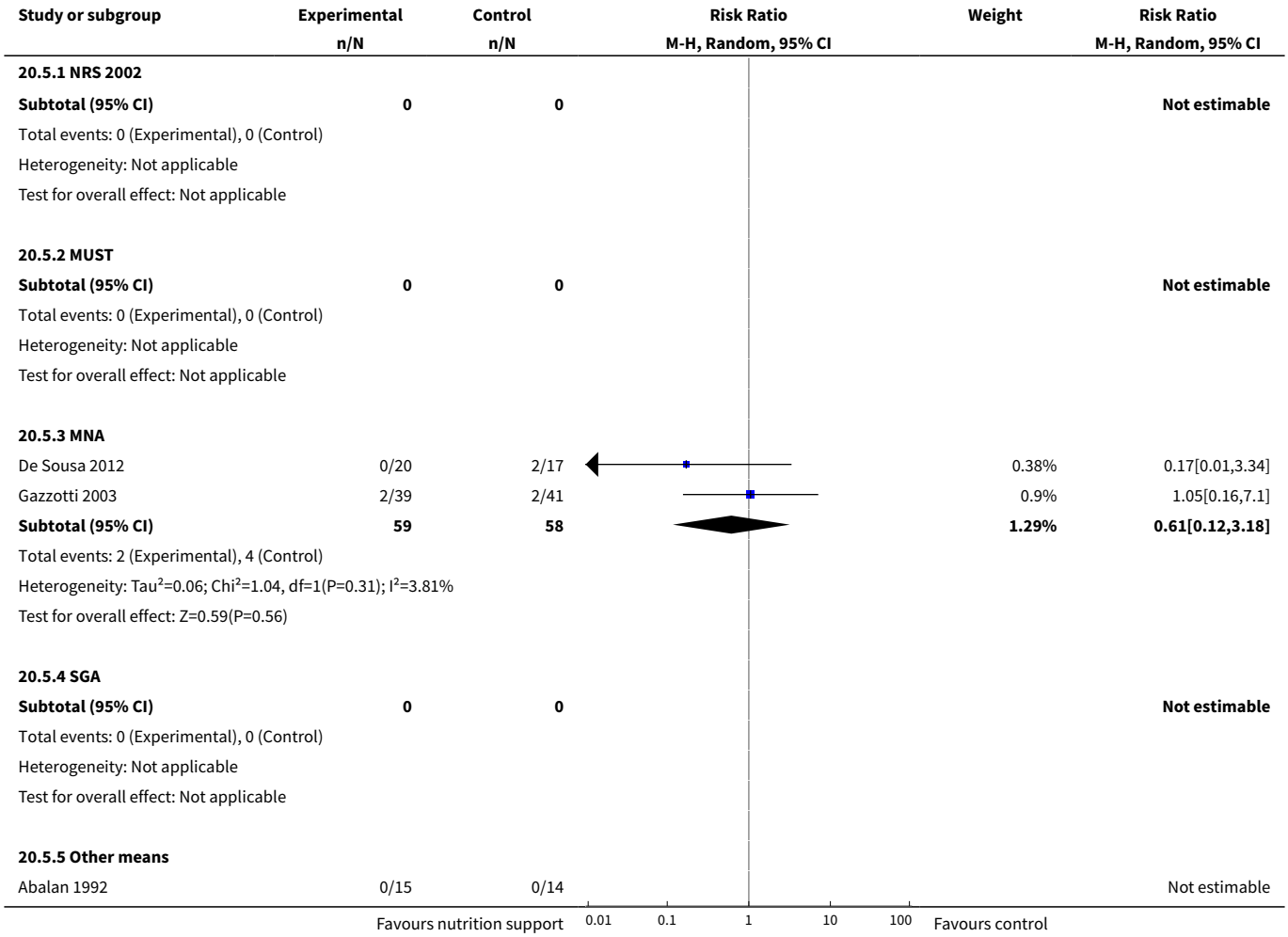
Analysis 20.4. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 4 Serious adverse events - based on adequacy of the amount of calories.

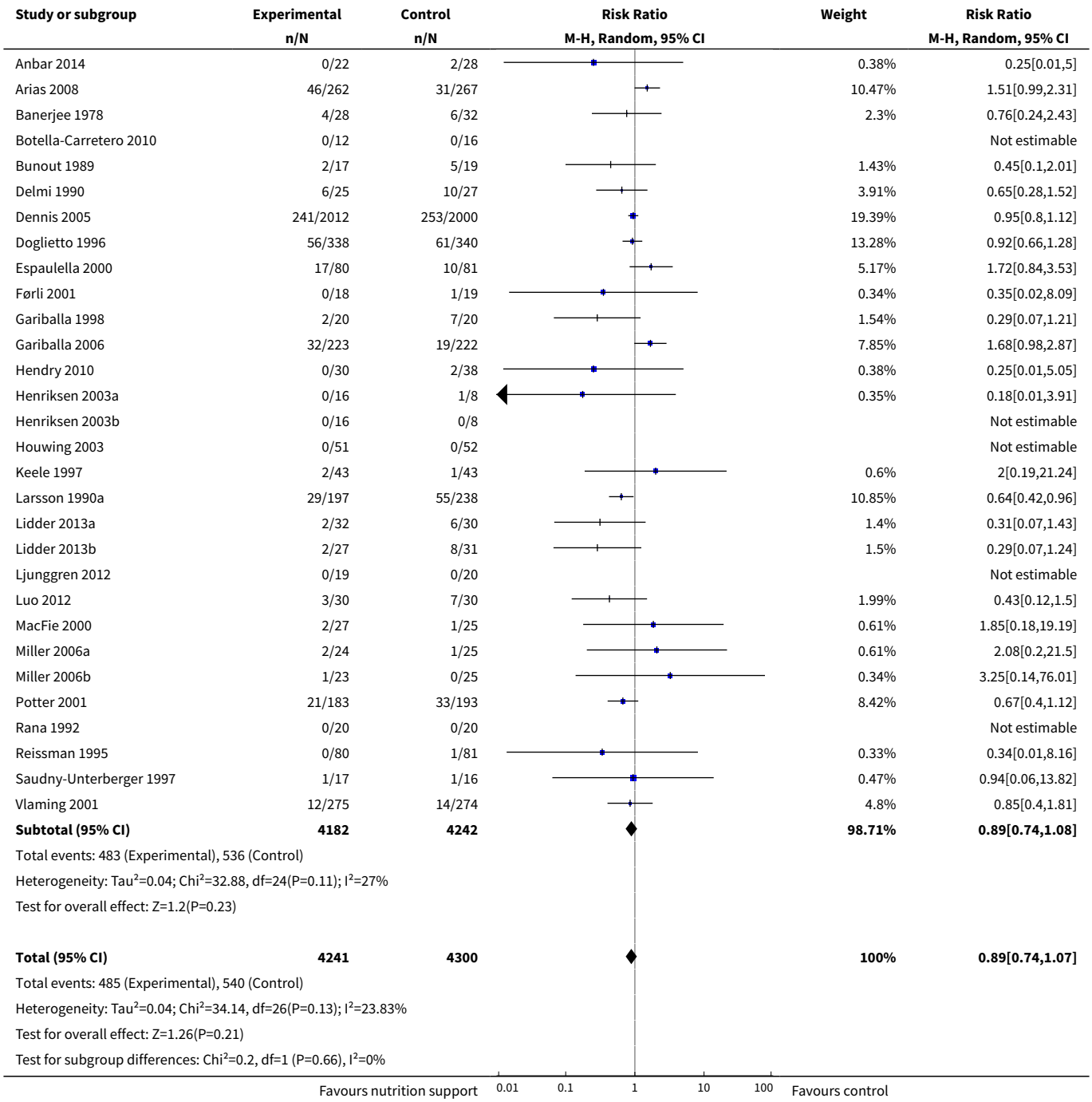
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
20.4.1 Clearly adequate in intervention and clearly inadequate in control					
Gariballa 1998	2/20	7/20		1.54%	0.29[0.07,1.21]
Gazzotti 2003	2/39	2/41		0.9%	1.05[0.16,7.1]
Keele 1997	2/43	1/43		0.6%	2[0.19,21.24]
Rana 1992	0/20	0/20			Not estimable
Subtotal (95% CI)	**122**	**124**		**3.04%**	**0.64[0.2,2]**
Total events: 6 (Experimental), 10 (Control)					
Heterogeneity: Tau^2=0.16; Chi^2=2.34, df=2(P=0.31); I^2=14.59%					
Test for overall effect: Z=0.77(P=0.44)					
20.4.2 Inadequate in the experimental or adequate in the control					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.38%	0.25[0.01,5]
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	6/25	10/27		3.91%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		19.39%	0.95[0.8,1.12]
Doglietto 1996	56/338	61/340		13.28%	0.92[0.66,1.28]
Espaulella 2000	17/80	10/81		5.17%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.34%	0.35[0.02,8.09]
Henriksen 2003a	0/16	1/8		0.35%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
MacFie 2000	2/27	1/25		0.61%	1.85[0.18,19.19]
Potter 2001	21/183	33/193		8.42%	0.67[0.4,1.12]
Subtotal (95% CI)	**2783**	**2779**		**51.85%**	**0.93[0.81,1.06]**
Total events: 343 (Experimental), 372 (Control)					
Heterogeneity: Tau^2=0; Chi^2=7.69, df=8(P=0.46); I^2=0%					
Test for overall effect: Z=1.11(P=0.27)					
20.4.3 Experimental group is overfed					
Bunout 1989	2/17	5/19		1.43%	0.45[0.1,2.01]
Saudny-Unterberger 1997	1/17	1/16		0.47%	0.94[0.06,13.82]
Subtotal (95% CI)	**34**	**35**		**1.89%**	**0.53[0.14,1.98]**
Total events: 3 (Experimental), 6 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.22, df=1(P=0.64); I^2=0%					
Test for overall effect: Z=0.94(P=0.35)					
20.4.4 Unclear intake in control or experimental					
Arias 2008	46/262	31/267		10.47%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.3%	0.76[0.24,2.43]
De Sousa 2012	0/20	2/17		0.38%	0.17[0.01,3.34]
Gariballa 2006	32/223	19/222		7.85%	1.68[0.98,2.87]
Hendry 2010	0/30	2/38		0.38%	0.25[0.01,5.05]
Houwing 2003	0/51	0/52			Not estimable
Larsson 1990a	29/197	55/238		10.85%	0.64[0.42,0.96]
Lidder 2013a	2/32	6/30		1.4%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		1.5%	0.29[0.07,1.24]
Luo 2012	3/30	7/30		1.99%	0.43[0.12,1.5]



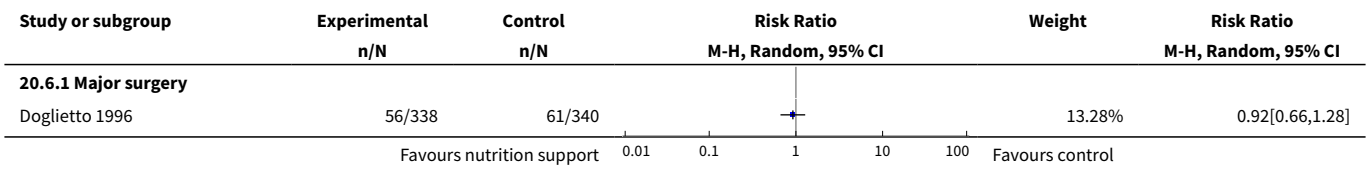


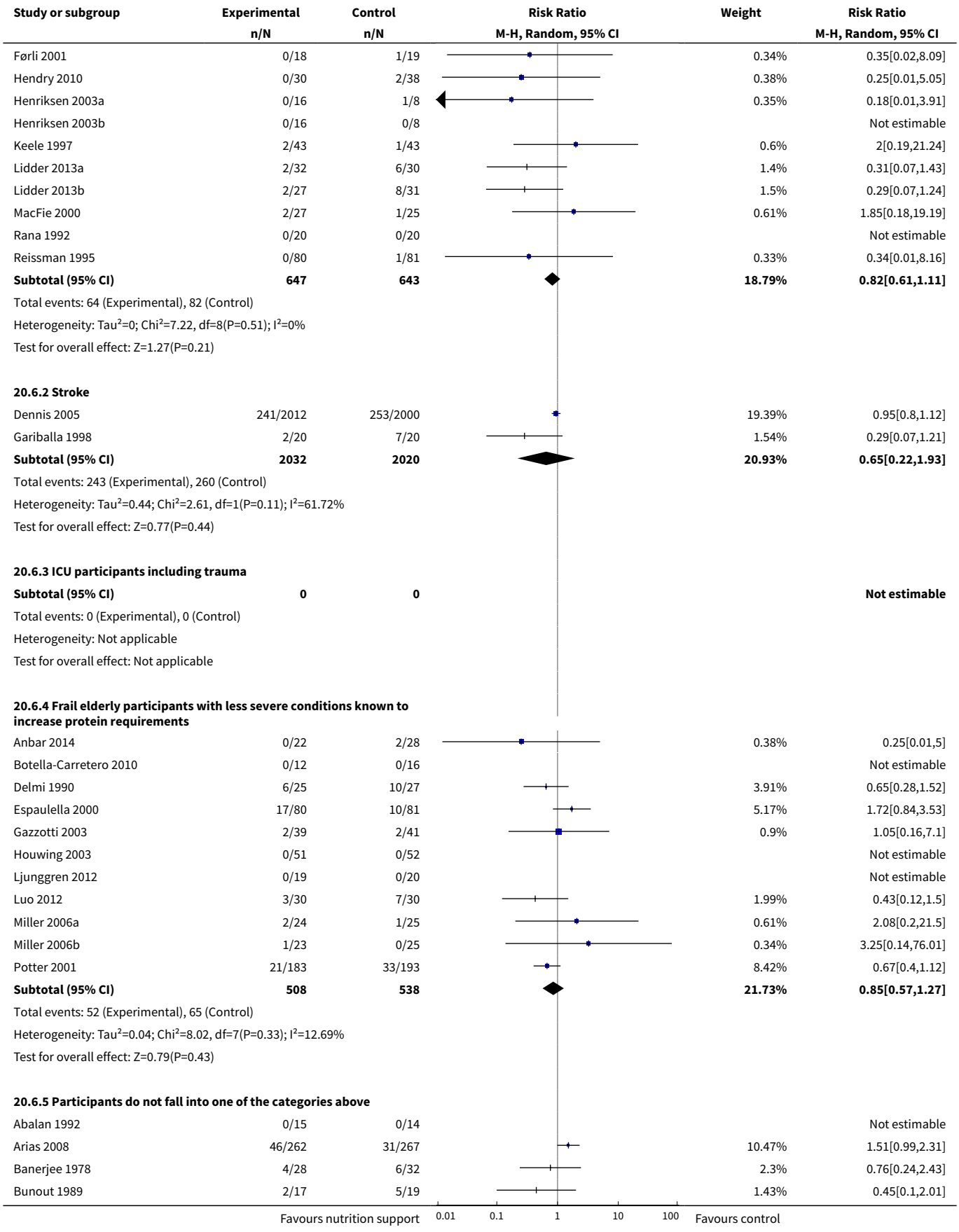
Analysis 20.5. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 5 Serious adverse events - different screening tools.



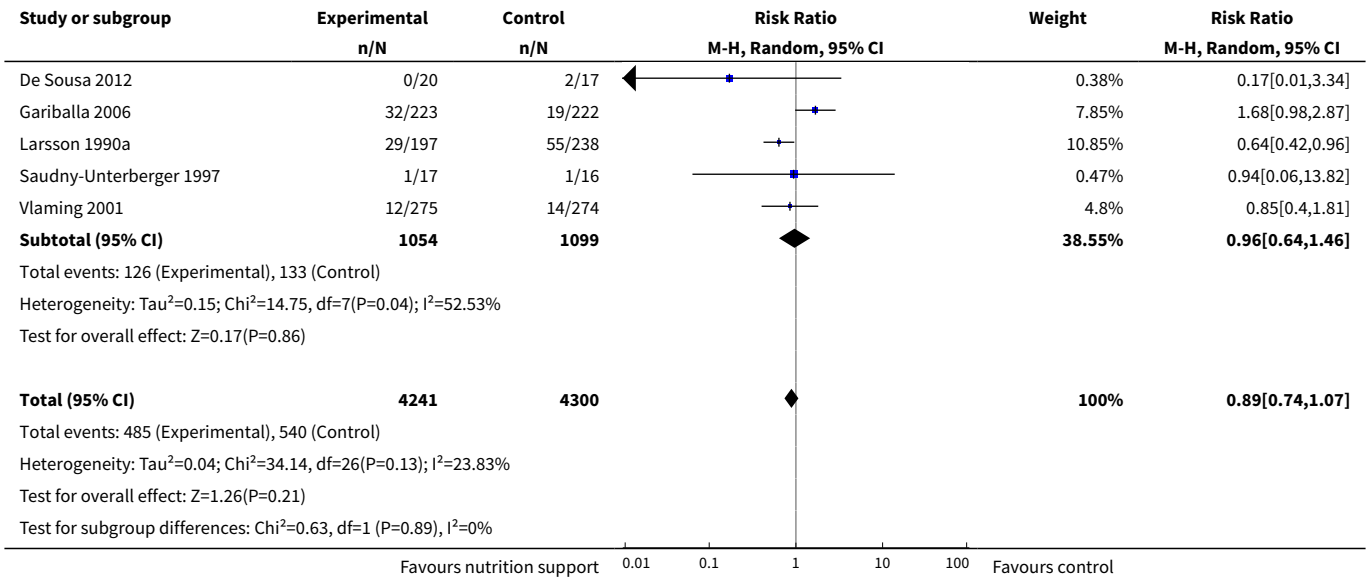


Analysis 20.6. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions.

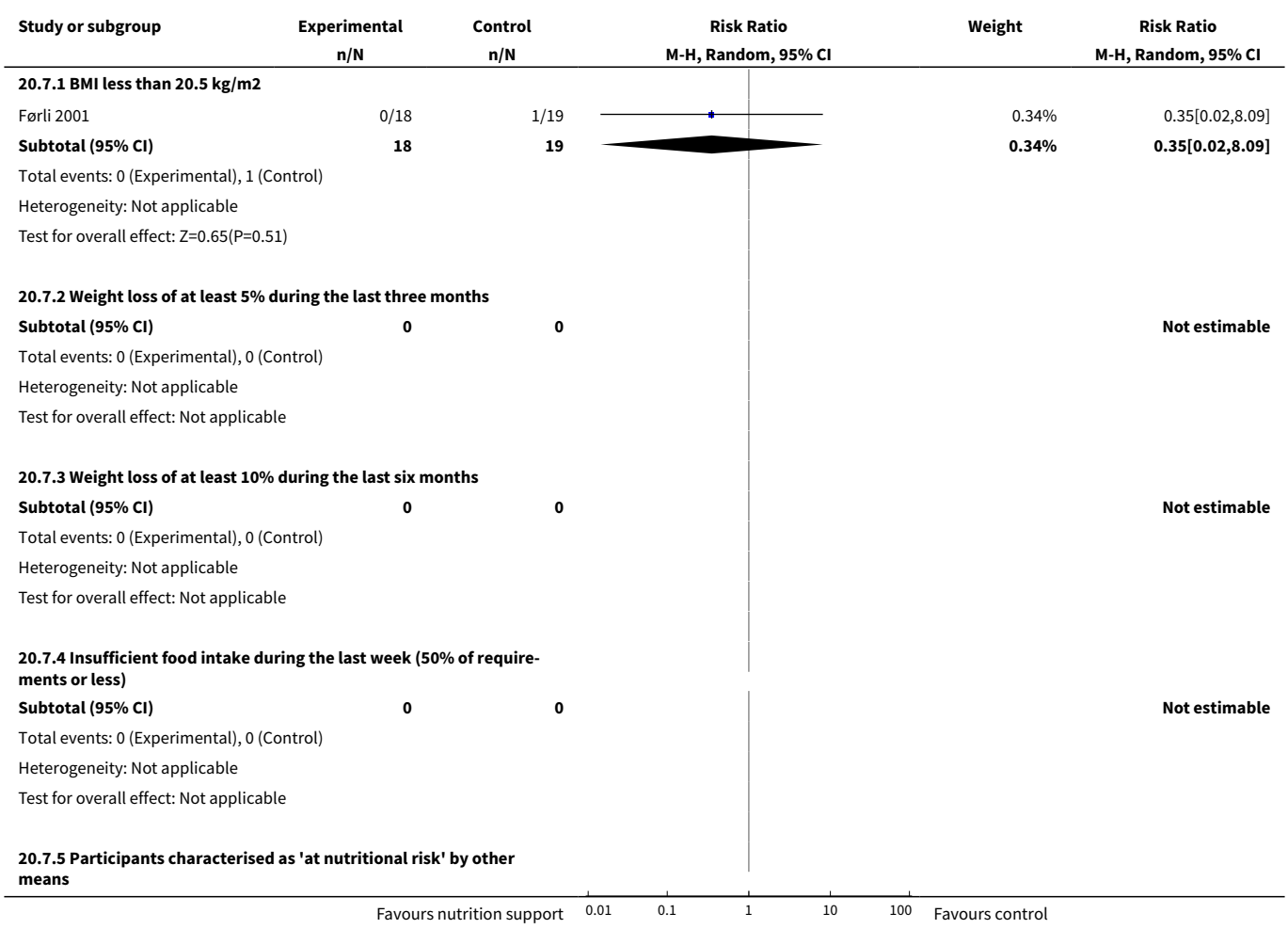


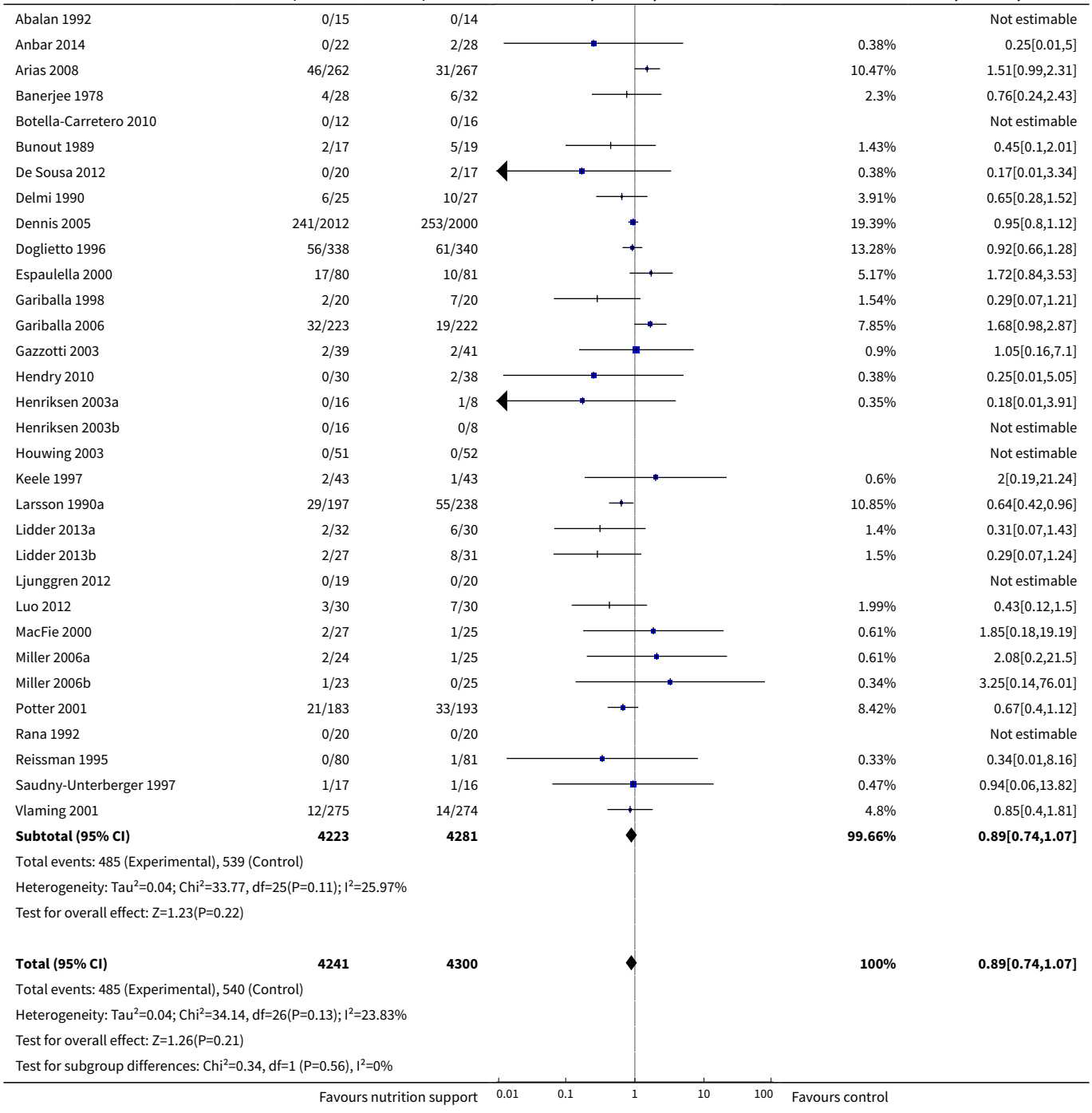


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Førli 2001	0/18	1/19		0.34%	0.35[0.02,8.09]
Hendry 2010	0/30	2/38		0.38%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.35%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Keele 1997	2/43	1/43		0.6%	2[0.19,21.24]
Lidder 2013a	2/32	6/30		1.4%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		1.5%	0.29[0.07,1.24]
MacFie 2000	2/27	1/25		0.61%	1.85[0.18,19.19]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.33%	0.34[0.01,8.16]
Subtotal (95% CI)	**647**	**643**		**18.79%**	**0.82[0.61,1.11]**
Total events: 64 (Experimental), 82 (Control)					
Heterogeneity: Tau²=0; Chi²=7.22, df=8(P=0.51); I²=0%					
Test for overall effect: Z=1.27(P=0.21)					
20.6.2 Stroke					
Dennis 2005	241/2012	253/2000		19.39%	0.95[0.8,1.12]
Gariballa 1998	2/20	7/20		1.54%	0.29[0.07,1.21]
Subtotal (95% CI)	**2032**	**2020**		**20.93%**	**0.65[0.22,1.93]**
Total events: 243 (Experimental), 260 (Control)					
Heterogeneity: Tau²=0.44; Chi²=2.61, df=1(P=0.11); I²=61.72%					
Test for overall effect: Z=0.77(P=0.44)					
20.6.3 ICU participants including trauma					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.6.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Anbar 2014	0/22	2/28		0.38%	0.25[0.01,5]
Botella-Carretero 2010	0/12	0/16			Not estimable
Delmi 1990	6/25	10/27		3.91%	0.65[0.28,1.52]
Espaulella 2000	17/80	10/81		5.17%	1.72[0.84,3.53]
Gazzotti 2003	2/39	2/41		0.9%	1.05[0.16,7.1]
Houwing 2003	0/51	0/52			Not estimable
Ljunggren 2012	0/19	0/20			Not estimable
Luo 2012	3/30	7/30		1.99%	0.43[0.12,1.5]
Miller 2006a	2/24	1/25		0.61%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.34%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		8.42%	0.67[0.4,1.12]
Subtotal (95% CI)	**508**	**538**		**21.73%**	**0.85[0.57,1.27]**
Total events: 52 (Experimental), 65 (Control)					
Heterogeneity: Tau²=0.04; Chi²=8.02, df=7(P=0.33); I²=12.69%					
Test for overall effect: Z=0.79(P=0.43)					
20.6.5 Participants do not fall into one of the categories above					
Abalan 1992	0/15	0/14			Not estimable
Arias 2008	46/262	31/267		10.47%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.3%	0.76[0.24,2.43]
Bunout 1989	2/17	5/19		1.43%	0.45[0.1,2.01]



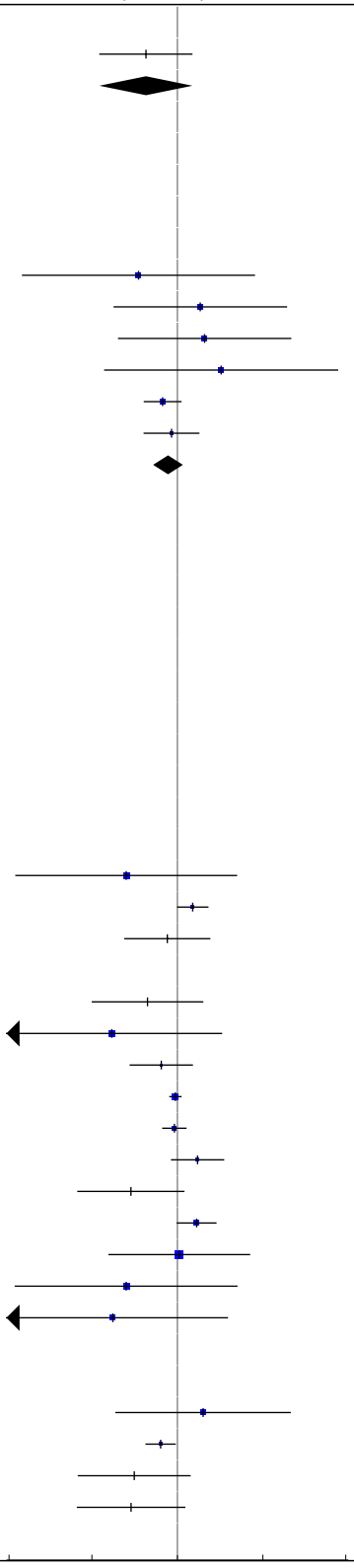
Analysis 20.7. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria.





Analysis 20.8. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
20.8.1 Biomarkers					
Luo 2012	3/30	7/30		1.99%	0.43[0.12,1.5]
Subtotal (95% CI)	**30**	**30**		**1.99%**	**0.43[0.12,1.5]**
Total events: 3 (Experimental), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.32(P=0.19)					
20.8.2 Anthropometric measures					
Førli 2001	0/18	1/19		0.34%	0.35[0.02,8.09]
MacFie 2000	2/27	1/25		0.61%	1.85[0.18,19.19]
Miller 2006a	2/24	1/25		0.61%	2.08[0.2,21.5]
Miller 2006b	1/23	0/25		0.34%	3.25[0.14,76.01]
Potter 2001	21/183	33/193		8.42%	0.67[0.4,1.12]
Vlaming 2001	12/275	14/274		4.8%	0.85[0.4,1.81]
Subtotal (95% CI)	**550**	**561**		**15.12%**	**0.78[0.52,1.16]**
Total events: 38 (Experimental), 50 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.64, df=5(P=0.76); I^2=0%					
Test for overall effect: Z=1.23(P=0.22)					
20.8.3 Both					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.8.4 Characterised by other means					
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/22	2/28		0.38%	0.25[0.01,5]
Arias 2008	46/262	31/267		10.47%	1.51[0.99,2.31]
Banerjee 1978	4/28	6/32		2.3%	0.76[0.24,2.43]
Botella-Carretero 2010	0/12	0/16			Not estimable
Bunout 1989	2/17	5/19		1.43%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.38%	0.17[0.01,3.34]
Delmi 1990	6/25	10/27		3.91%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		19.39%	0.95[0.8,1.12]
Doglietto 1996	56/338	61/340		13.28%	0.92[0.66,1.28]
Espaulella 2000	17/80	10/81		5.17%	1.72[0.84,3.53]
Gariballa 1998	2/20	7/20		1.54%	0.29[0.07,1.21]
Gariballa 2006	32/223	19/222		7.85%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		0.9%	1.05[0.16,7.1]
Hendry 2010	0/30	2/38		0.38%	0.25[0.01,5.05]
Henriksen 2003a	0/16	1/8		0.35%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.6%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		10.85%	0.64[0.42,0.96]
Lidder 2013a	2/32	6/30		1.4%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		1.5%	0.29[0.07,1.24]
Ljunggren 2012	0/19	0/20			Not estimable



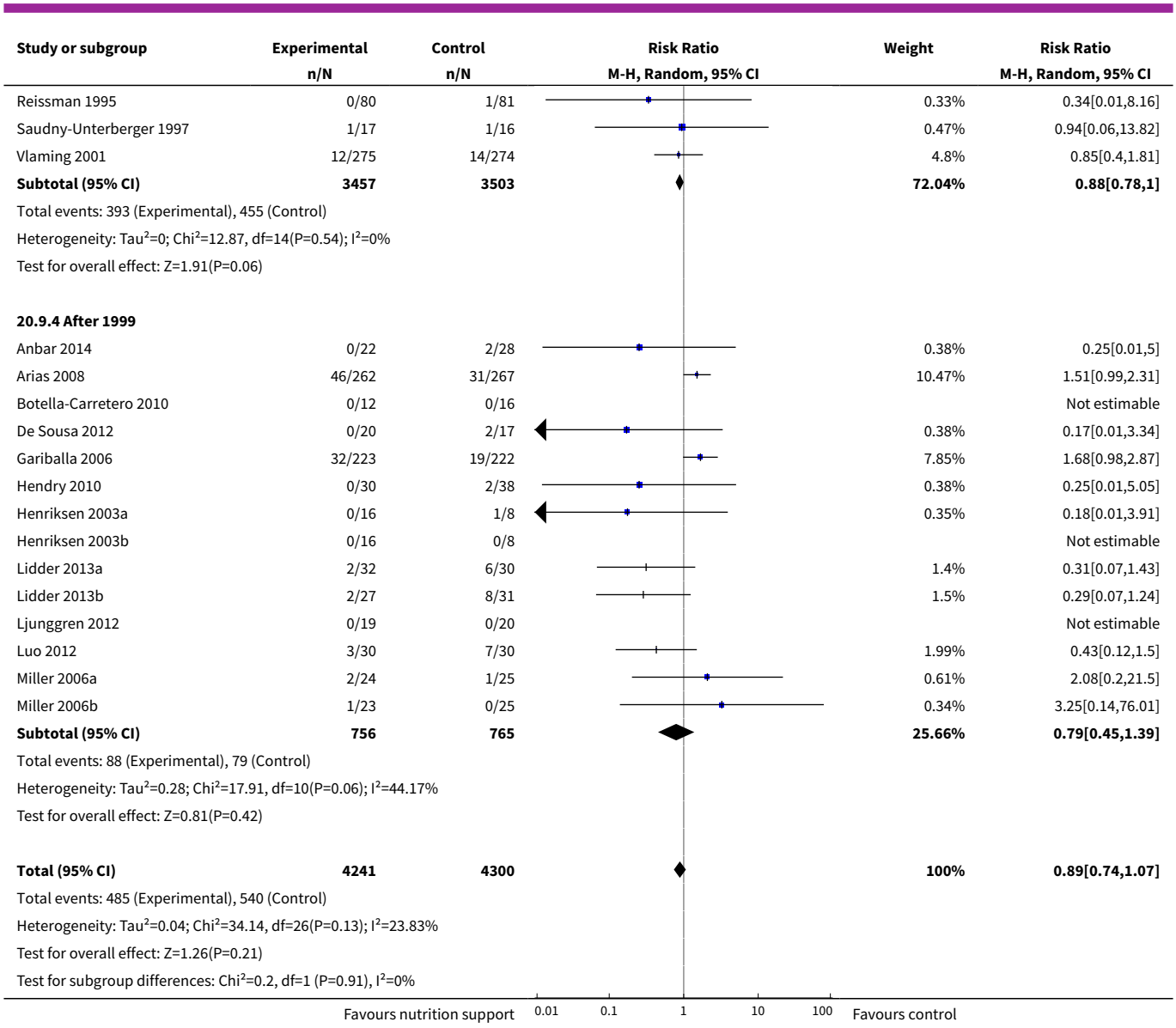
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.33%	0.34[0.01,8.16]
Saudny-Unterberger 1997	1/17	1/16		0.47%	0.94[0.06,13.82]
Subtotal (95% CI)	**3661**	**3709**		**82.88%**	**0.91[0.72,1.13]**
Total events: 444 (Experimental), 483 (Control)					
Heterogeneity: Tau^2=0.06; Chi^2=29.21, df=19(P=0.06); I^2=34.95%					
Test for overall effect: Z=0.87(P=0.38)					
Total (95% CI)	**4241**	**4300**		**100%**	**0.89[0.74,1.07]**
Total events: 485 (Experimental), 540 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=34.14, df=26(P=0.13); I^2=23.83%					
Test for overall effect: Z=1.26(P=0.21)					
Test for subgroup differences: Chi^2=1.62, df=1 (P=0.44), I^2=0%					

Favours nutrition support — Favours control

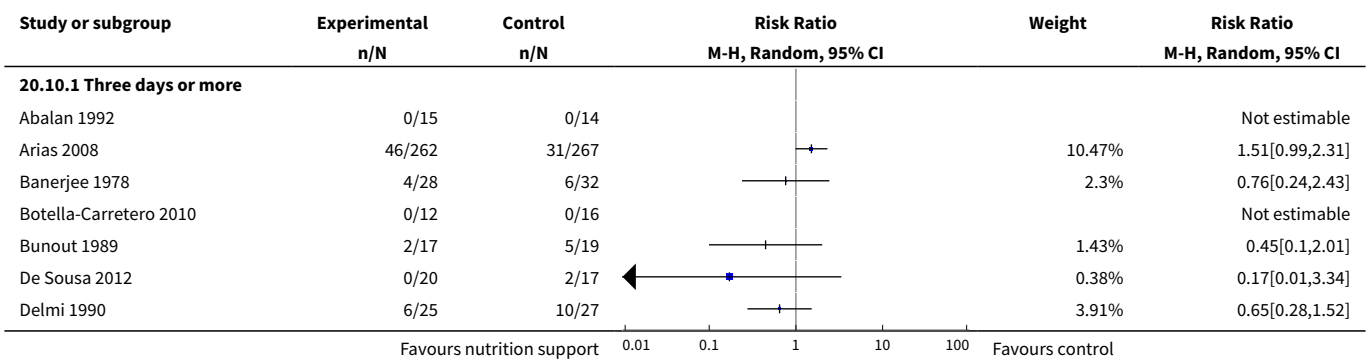
Analysis 20.9. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 9 Serious adverse events - randomisation year.

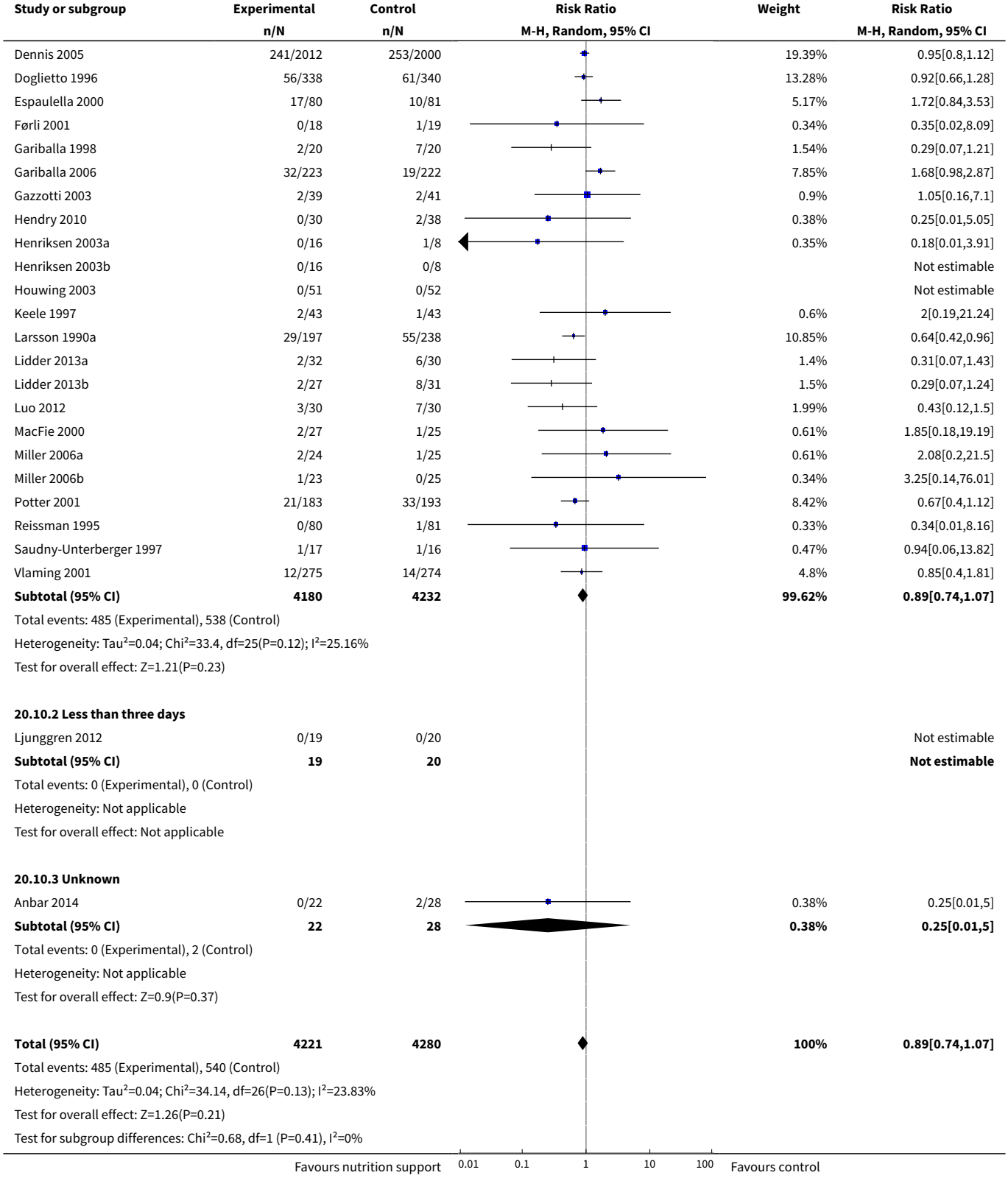
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
20.9.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
20.9.2 1960 to 1979					
Banerjee 1978	4/28	6/32		2.3%	0.76[0.24,2.43]
Subtotal (95% CI)	**28**	**32**		**2.3%**	**0.76[0.24,2.43]**
Total events: 4 (Experimental), 6 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0, df=0(P<0.0001); I^2=100%					
Test for overall effect: Z=0.46(P=0.65)					
20.9.3 1980 to 1999					
Abalan 1992	0/15	0/14			Not estimable
Bunout 1989	2/17	5/19		1.43%	0.45[0.1,2.01]
Delmi 1990	6/25	10/27		3.91%	0.65[0.28,1.52]
Dennis 2005	241/2012	253/2000		19.39%	0.95[0.8,1.12]
Doglietto 1996	56/338	61/340		13.28%	0.92[0.66,1.28]
Espaulella 2000	17/80	10/81		5.17%	1.72[0.84,3.53]
Førli 2001	0/18	1/19		0.34%	0.35[0.02,8.09]
Gariballa 1998	2/20	7/20		1.54%	0.29[0.07,1.21]
Gazzotti 2003	2/39	2/41		0.9%	1.05[0.16,7.1]
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/43	1/43		0.6%	2[0.19,21.24]
Larsson 1990a	29/197	55/238		10.85%	0.64[0.42,0.96]
MacFie 2000	2/27	1/25		0.61%	1.85[0.18,19.19]
Potter 2001	21/183	33/193		8.42%	0.67[0.4,1.12]
Rana 1992	0/20	0/20			Not estimable

Favours nutrition support — Favours control



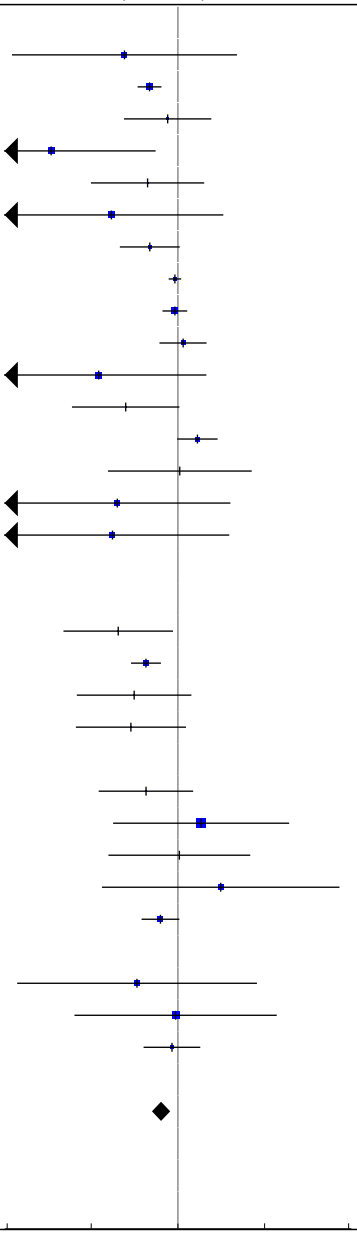
Analysis 20.10. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.





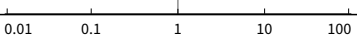
Analysis 20.11. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 11 Serious adverse events - 'best-worst case' scenario.

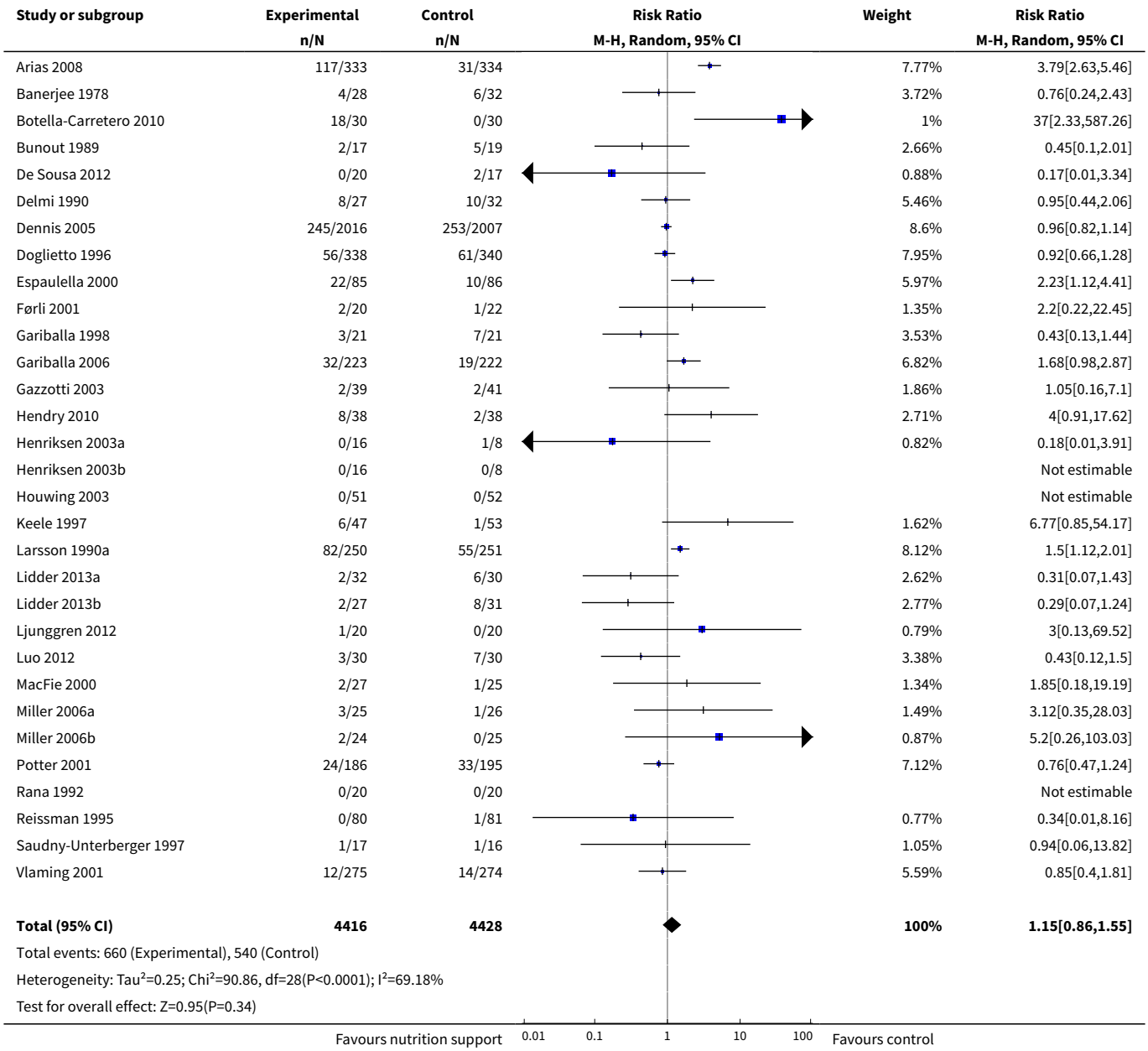
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	0/23	2/28		0.62%	0.24[0.01,4.8]
Arias 2008	46/333	98/334		9.99%	0.47[0.34,0.65]
Banerjee 1978	4/28	6/32		3.21%	0.76[0.24,2.43]
Botella-Carretero 2010	0/30	14/30		0.72%	0.03[0,0.55]
Bunout 1989	2/17	5/19		2.14%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.63%	0.17[0.01,3.34]
Delmi 1990	6/27	15/32		5.23%	0.47[0.21,1.05]
Dennis 2005	241/2016	260/2007		11.4%	0.92[0.78,1.09]
Doglietto 1996	56/338	61/340		9.84%	0.92[0.66,1.28]
Espaulella 2000	17/85	15/86		6.67%	1.15[0.61,2.14]
Førli 2001	0/20	4/22		0.68%	0.12[0.01,2.13]
Gariballa 1998	2/21	8/21		2.33%	0.25[0.06,1.04]
Gariballa 2006	32/223	19/222		7.57%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		1.42%	1.05[0.16,7.1]
Hendry 2010	0/38	2/38		0.62%	0.2[0.01,4.03]
Henriksen 2003a	0/16	1/8		0.58%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	2/47	11/53		2.26%	0.21[0.05,0.88]
Larsson 1990a	29/250	68/251		9.09%	0.43[0.29,0.64]
Lidder 2013a	2/32	6/30		2.1%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		2.24%	0.29[0.07,1.24]
Ljunggren 2012	0/20	0/20			Not estimable
Luo 2012	3/30	7/30		2.85%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		0.99%	1.85[0.18,19.19]
Miller 2006a	2/25	2/26		1.46%	1.04[0.16,6.83]
Miller 2006b	1/24	0/25		0.56%	3.12[0.13,73.04]
Potter 2001	21/186	35/195		7.93%	0.63[0.38,1.04]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.55%	0.34[0.01,8.16]
Saudny-Unterberger 1997	1/17	1/16		0.76%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		5.57%	0.85[0.4,1.81]
Total (95% CI)	**4416**	**4428**		**100%**	**0.64[0.5,0.81]**
Total events: 485 (Experimental), 668 (Control)					
Heterogeneity: Tau^2=0.13; Chi^2=56.92, df=27(P=0); I^2=52.57%					
Test for overall effect: Z=3.62(P=0)					



Analysis 20.12. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 12 Serious adverse events - 'worst-best case' scenario.

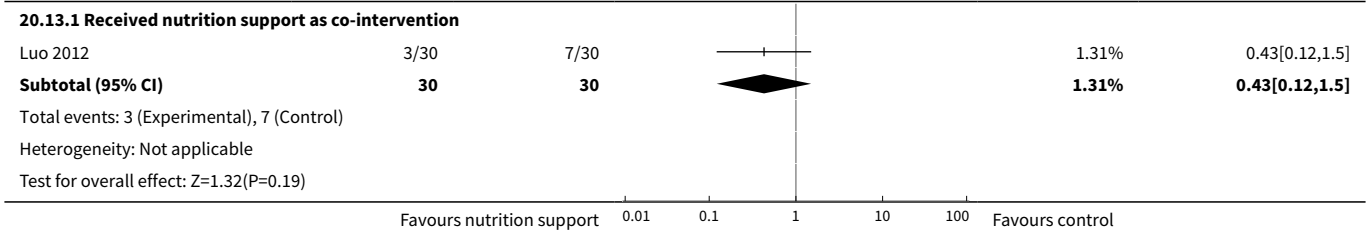
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Anbar 2014	1/23	2/28		1.34%	0.61[0.06,6.3]



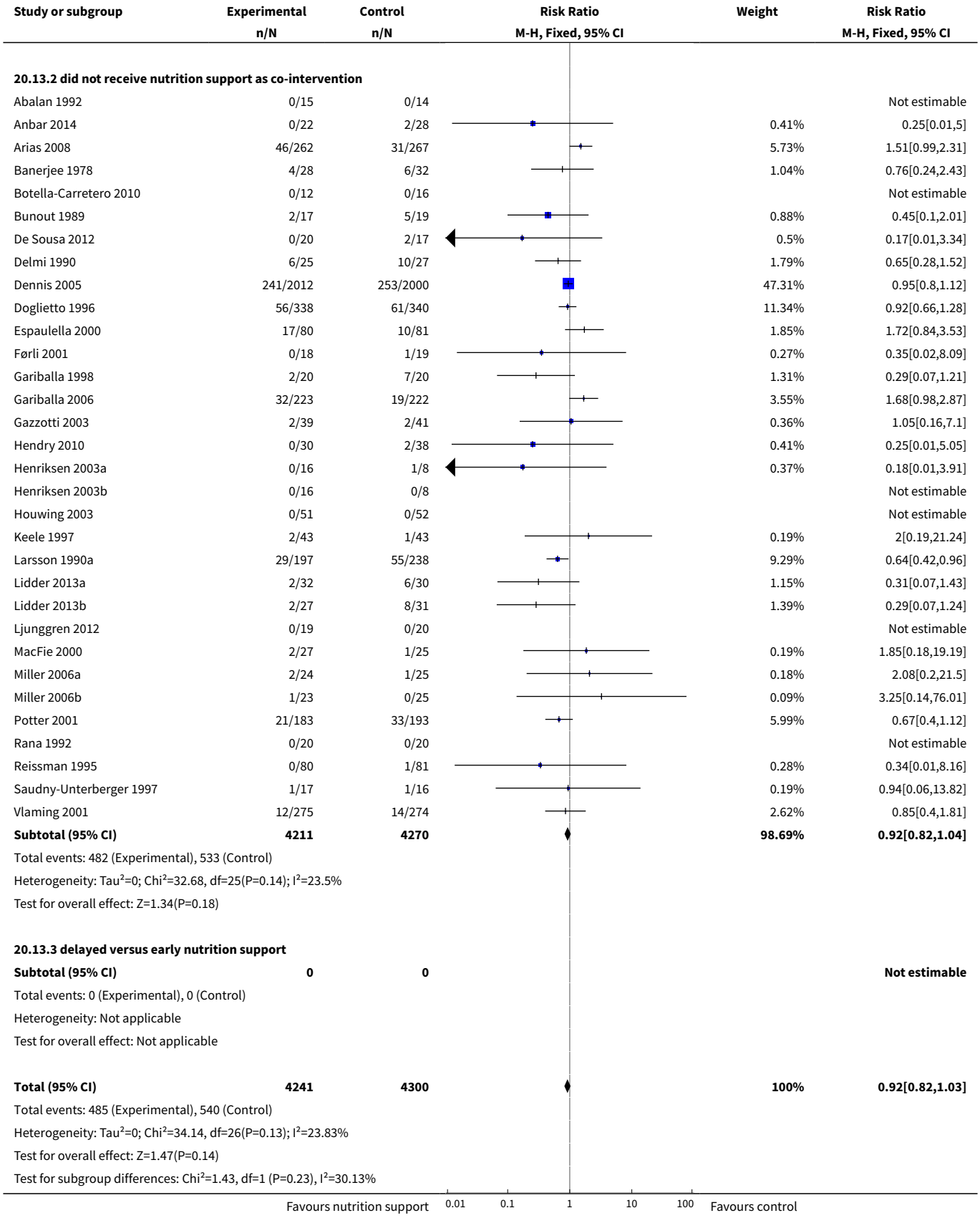


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Arias 2008	117/333	31/334		7.77%	3.79[2.63,5.46]
Banerjee 1978	4/28	6/32		3.72%	0.76[0.24,2.43]
Botella-Carretero 2010	18/30	0/30		1%	37[2.33,587.26]
Bunout 1989	2/17	5/19		2.66%	0.45[0.1,2.01]
De Sousa 2012	0/20	2/17		0.88%	0.17[0.01,3.34]
Delmi 1990	8/27	10/32		5.46%	0.95[0.44,2.06]
Dennis 2005	245/2016	253/2007		8.6%	0.96[0.82,1.14]
Doglietto 1996	56/338	61/340		7.95%	0.92[0.66,1.28]
Espaulella 2000	22/85	10/86		5.97%	2.23[1.12,4.41]
Førli 2001	2/20	1/22		1.35%	2.2[0.22,22.45]
Gariballa 1998	3/21	7/21		3.53%	0.43[0.13,1.44]
Gariballa 2006	32/223	19/222		6.82%	1.68[0.98,2.87]
Gazzotti 2003	2/39	2/41		1.86%	1.05[0.16,7.1]
Hendry 2010	8/38	2/38		2.71%	4[0.91,17.62]
Henriksen 2003a	0/16	1/8		0.82%	0.18[0.01,3.91]
Henriksen 2003b	0/16	0/8			Not estimable
Houwing 2003	0/51	0/52			Not estimable
Keele 1997	6/47	1/53		1.62%	6.77[0.85,54.17]
Larsson 1990a	82/250	55/251		8.12%	1.5[1.12,2.01]
Lidder 2013a	2/32	6/30		2.62%	0.31[0.07,1.43]
Lidder 2013b	2/27	8/31		2.77%	0.29[0.07,1.24]
Ljunggren 2012	1/20	0/20		0.79%	3[0.13,69.52]
Luo 2012	3/30	7/30		3.38%	0.43[0.12,1.5]
MacFie 2000	2/27	1/25		1.34%	1.85[0.18,19.19]
Miller 2006a	3/25	1/26		1.49%	3.12[0.35,28.03]
Miller 2006b	2/24	0/25		0.87%	5.2[0.26,103.03]
Potter 2001	24/186	33/195		7.12%	0.76[0.47,1.24]
Rana 1992	0/20	0/20			Not estimable
Reissman 1995	0/80	1/81		0.77%	0.34[0.01,8.16]
Saudny-Unterberger 1997	1/17	1/16		1.05%	0.94[0.06,13.82]
Vlaming 2001	12/275	14/274		5.59%	0.85[0.4,1.81]
Total (95% CI)	**4416**	**4428**		**100%**	**1.15[0.86,1.55]**
Total events: 660 (Experimental), 540 (Control)					
Heterogeneity: Tau²=0.25; Chi²=90.86, df=28(P<0.0001); I²=69.18%					
Test for overall effect: Z=0.95(P=0.34)					

Analysis 20.13. Comparison 20 Oral - Serious adverse event maximum follow-up, Outcome 13 Serious adverse events co-interventions.



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
20.13.1 Received nutrition support as co-intervention					
Luo 2012	3/30	7/30		1.31%	0.43[0.12,1.5]
Subtotal (95% CI)	**30**	**30**		**1.31%**	**0.43[0.12,1.5]**
Total events: 3 (Experimental), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.32(P=0.19)					



Comparison 21. Enteral - All cause mortality - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All-cause mortality - overall	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
2 All-cause mortality - bias	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
2.1 High risk of bias	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 All-cause mortality - medical speciality	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	4	289	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.40, 1.42]
3.3 Geriatrics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.4 Pulmonary disease	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	1	56	Risk Ratio (M-H, Random, 95% CI)	1.61 [0.66, 3.92]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	13	1063	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.44, 1.18]
3.11 Trauma surgery	2	139	Risk Ratio (M-H, Random, 95% CI)	0.50 [0.20, 1.28]
3.12 Orthopaedics	4	248	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.21, 3.81]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.13 Plastic, reconstructive and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	1	13	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Transplant surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	2	548	Risk Ratio (M-H, Random, 95% CI)	0.22 [0.03, 1.86]
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	1	32	Risk Ratio (M-H, Random, 95% CI)	3.38 [0.15, 77.12]
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	3	154	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.31, 1.94]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	3	1027	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.33, 1.37]
3.24 Oncology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	2	153	Risk Ratio (M-H, Random, 95% CI)	0.32 [0.03, 2.99]
4 All-cause mortality - based on adequacy of the amount of calories	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
4.1 Clearly adequate in experimental group and clearly inadequate in control group	7	736	Risk Ratio (M-H, Random, 95% CI)	0.70 [0.40, 1.25]
4.2 Inadequate in the experimental group or adequate in the control group	7	410	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.28, 1.85]

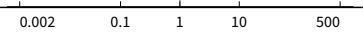
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.3 Experimental group is overfed	2	74	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.15, 3.79]
4.4 Unclear intake in experimental group or control group	20	2502	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.73, 1.08]
5 All-cause mortality - different screening tools	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
5.1 NRS 2002	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 SGA	1	323	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.13, 4.44]
5.5 Other means	35	3399	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
6.1 Major surgery	18	1746	Risk Ratio (M-H, Random, 95% CI)	0.69 [0.45, 1.06]
6.2 Stroke	3	1027	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.33, 1.37]
6.3 ICU participants including trauma	5	293	Risk Ratio (M-H, Random, 95% CI)	0.62 [0.32, 1.21]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	2	126	Risk Ratio (M-H, Random, 95% CI)	1.59 [0.02, 125.73]
6.5 Participants do not fall into one of the categories above	8	530	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.58, 1.56]
7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
7.1 BMI less than 20.5 kg/m2	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
7.3 Weight loss of at least 10% during the last six months	1	32	Risk Ratio (M-H, Random, 95% CI)	3.38 [0.15, 77.12]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	35	3690	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.02]
8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
8.1 Biomarkers	1	520	Risk Ratio (M-H, Random, 95% CI)	0.15 [0.01, 2.84]
8.2 Anthropometric measures	2	122	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.24, 2.08]
8.3 Characterised by other means	33	3080	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.76, 1.04]
9 All-cause mortality - randomisation year	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960-1979	1	26	Risk Ratio (M-H, Random, 95% CI)	0.44 [0.02, 9.98]
9.3 1980-1999	23	2463	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.78, 1.11]
9.4 After 1999	12	1233	Risk Ratio (M-H, Random, 95% CI)	0.73 [0.52, 1.00]
10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
10.1 Three days or more	30	3287	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
10.2 Less than three days	6	435	Risk Ratio (M-H, Random, 95% CI)	0.68 [0.28, 1.65]
10.3 Unknown	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
11 All-cause mortality - 'best-worst case' scenario	36	3759	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.72, 0.98]
12 All-cause mortality - 'worst-best case' scenario	36	3759	Risk Ratio (M-H, Fixed, 95% CI)	0.92 [0.79, 1.06]
13 All-cause mortality co-interventions	36	3722	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.75, 1.03]
13.1 received nutrition support as co-intervention	3	126	Risk Ratio (M-H, Random, 95% CI)	0.60 [0.28, 1.28]
13.2 did not receive nutrition support as co-intervention	27	3253	Risk Ratio (M-H, Random, 95% CI)	0.79 [0.62, 1.02]
13.3 delayed versus early nutrition support	6	343	Risk Ratio (M-H, Random, 95% CI)	1.06 [0.57, 1.97]

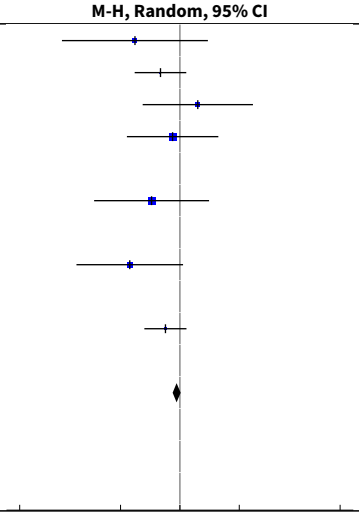
Analysis 21.1. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 1 All-cause mortality - overall.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983a	5/39	4/35		1.56%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.91%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.24%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.24%	0.33[0.01,7.55]
Choudhry 1996	0/21	1/20		0.24%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.33%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		67.39%	0.97[0.8,1.17]
Dong 1996	0/256	3/264		0.27%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.3%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.27%	0.22[0.01,4.29]
Kearns 1992	0/16	1/15		0.24%	0.31[0.01,7.15]
Ledinghen 1997	2/12	1/10		0.47%	1.67[0.18,15.8]
Malhotra 2004	12/98	16/97		4.94%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		3%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.24%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		4.66%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.73%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.59%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.58%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.79%	0.67[0.12,3.78]
Singh 1998	2/21	2/22		0.68%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.53%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.25%	0.44[0.02,9.98]



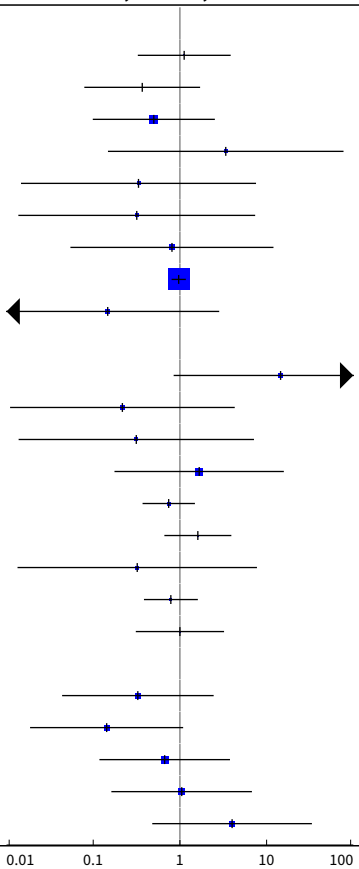
Favours nutrition support | Favours control

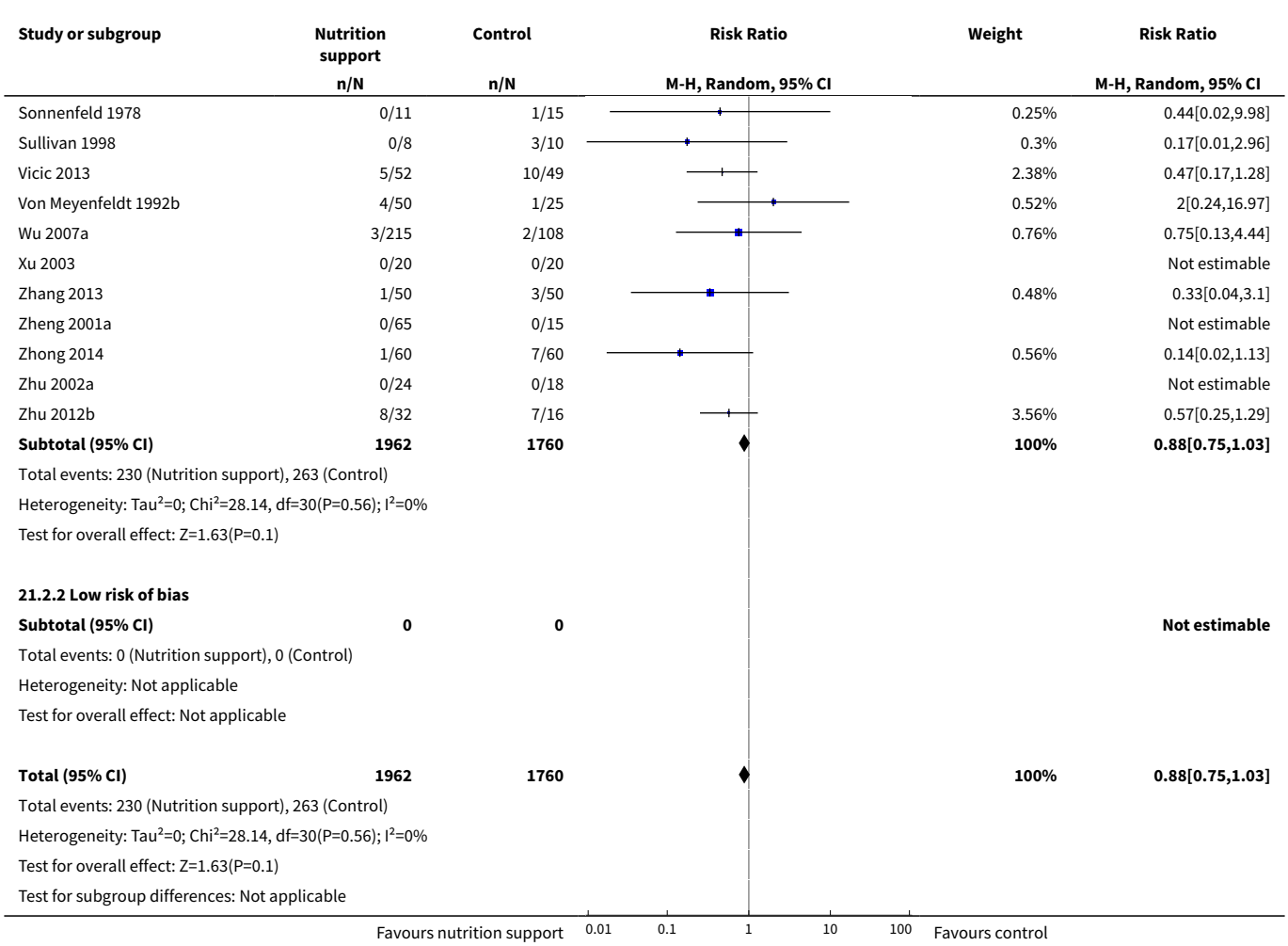
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sullivan 1998	0/8	3/10		0.3%	0.17[0.01,2.96]
Vicic 2013	5/52	10/49		2.38%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.52%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.76%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.48%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	1/60	7/60		0.56%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		3.56%	0.57[0.25,1.29]
Total (95% CI)	**1962**	**1760**		**100%**	**0.88[0.75,1.03]**
Total events: 230 (Nutrition support), 263 (Control)					
Heterogeneity: Tau²=0; Chi²=28.14, df=30(P=0.56); I²=0%					
Test for overall effect: Z=1.63(P=0.1)					



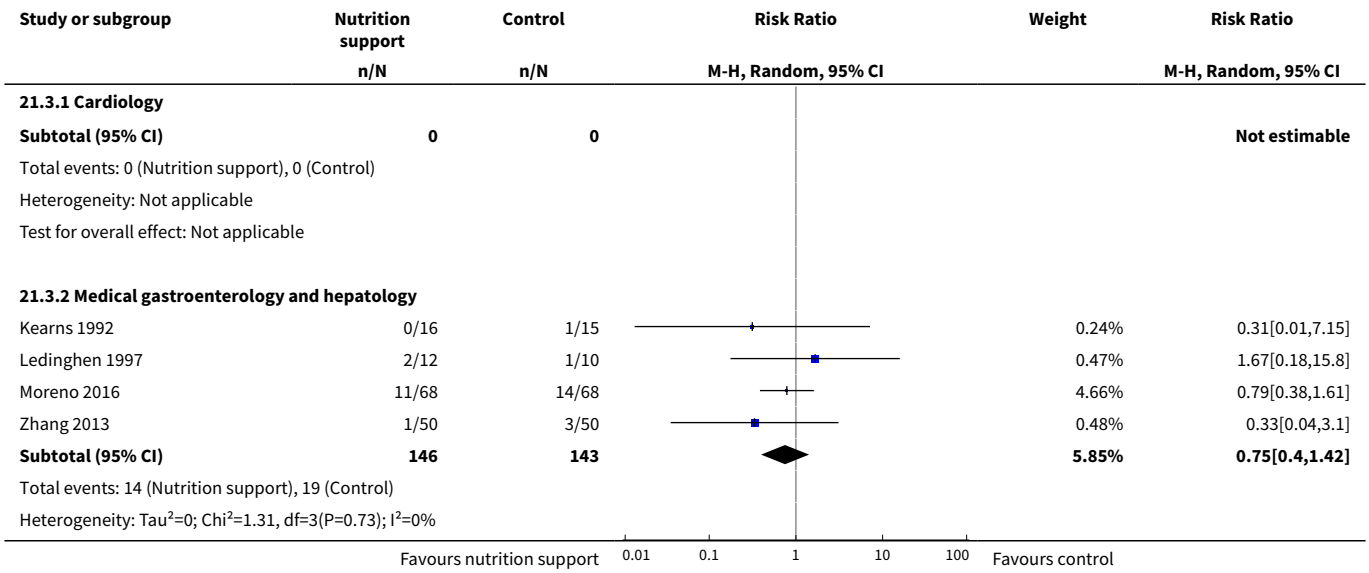
Analysis 21.2. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 2 All-cause mortality - bias.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
21.2.1 High risk of bias					
Bastow 1983a	5/39	4/35		1.56%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.91%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.24%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.24%	0.33[0.01,7.55]
Choudhry 1996	0/21	1/20		0.24%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.33%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		67.39%	0.97[0.8,1.17]
Dong 1996	0/256	3/264		0.27%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.3%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.27%	0.22[0.01,4.29]
Kearns 1992	0/16	1/15		0.24%	0.31[0.01,7.15]
Ledinghen 1997	2/12	1/10		0.47%	1.67[0.18,15.8]
Malhotra 2004	12/98	16/97		4.94%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		3%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.24%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		4.66%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.73%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.59%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.58%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.79%	0.67[0.12,3.78]
Singh 1998	2/21	2/22		0.68%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.53%	4[0.48,33.33]

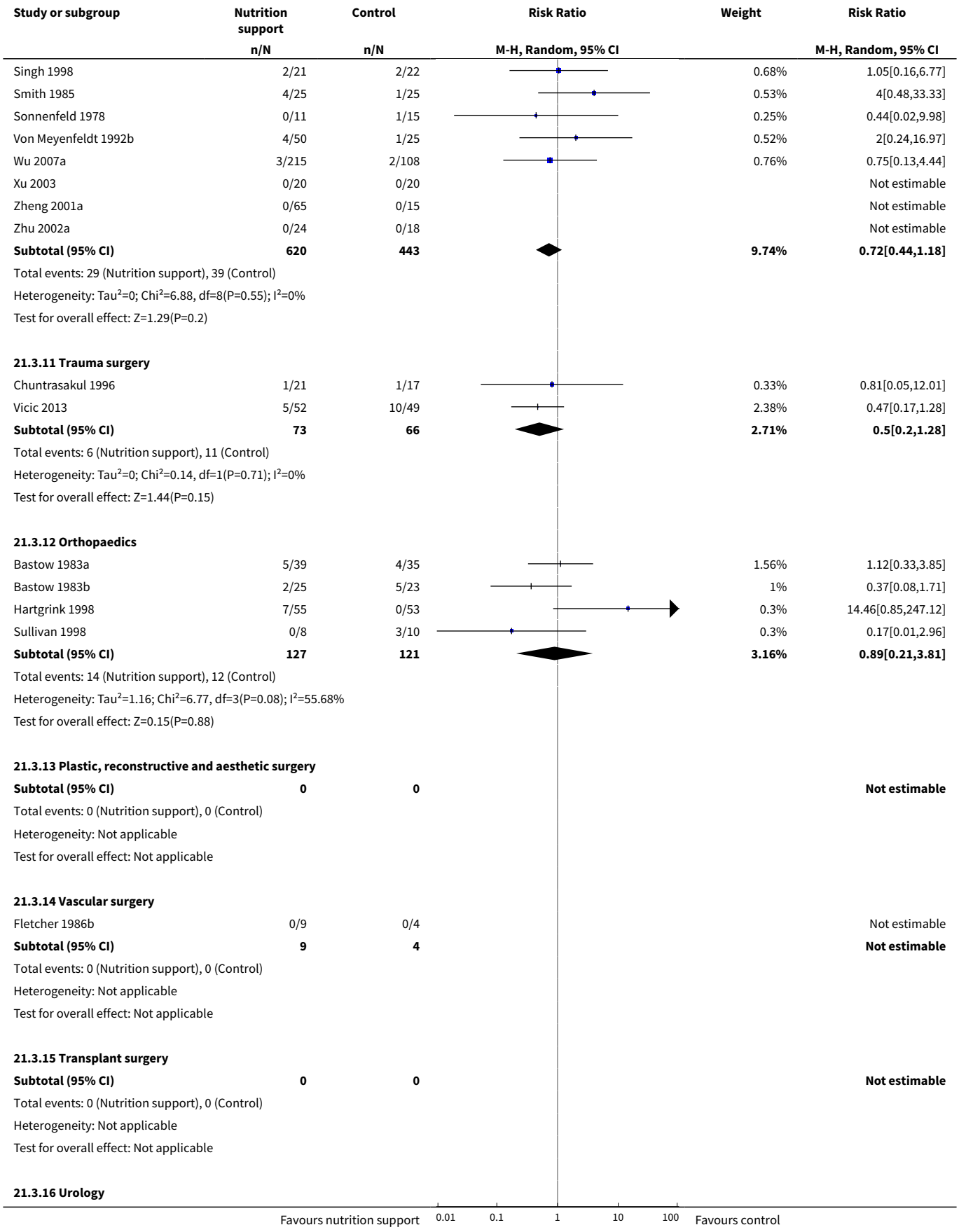




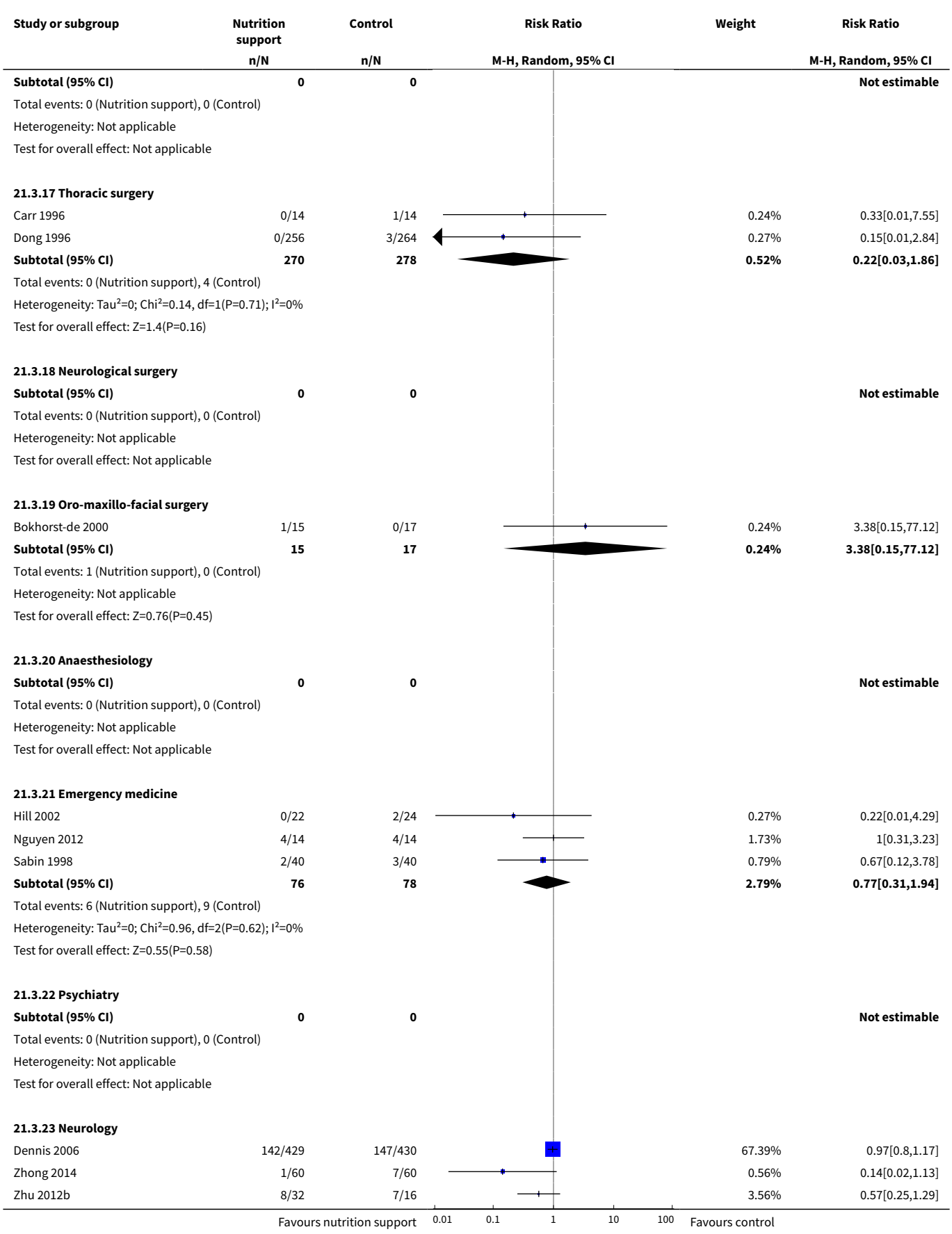
Analysis 21.3. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 3 All-cause mortality - medical speciality.

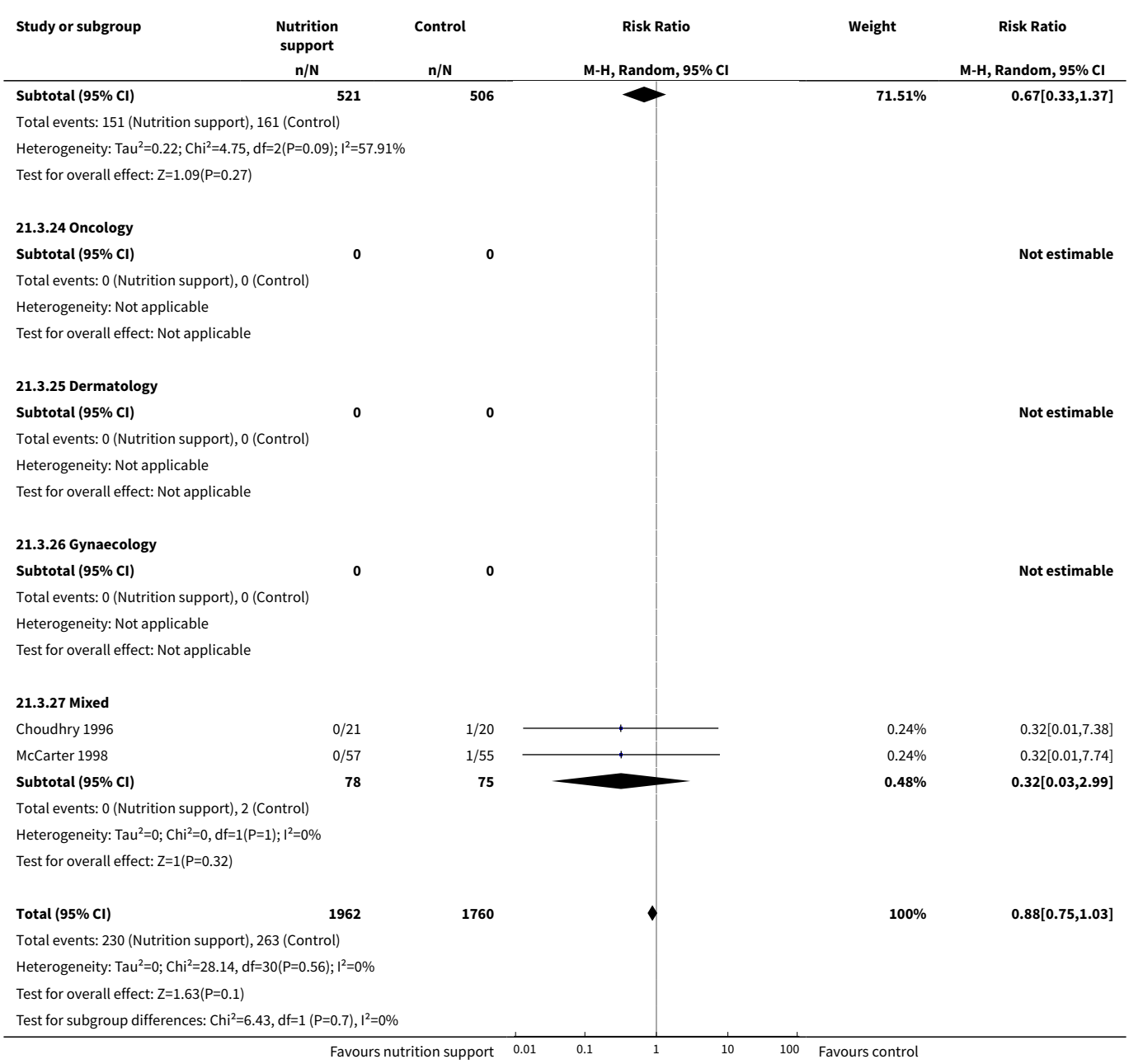


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.89(P=0.37)					
21.3.3 Geriatrics					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.4 Pulmonary disease					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.5 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.6 Infectious diseases					
Maude 2011	9/27	6/29		3%	1.61[0.66,3.92]
Subtotal (95% CI)	**27**	**29**		**3%**	**1.61[0.66,3.92]**
Total events: 9 (Nutrition support), 6 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.05(P=0.29)					
21.3.7 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.8 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.9 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.10 Gastroenterologic surgery					
Beier-Holgersen 1999	2/30	4/30		0.91%	0.5[0.1,2.53]
Malhotra 2004	12/98	16/97		4.94%	0.74[0.37,1.49]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.59%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.58%	0.14[0.02,1.09]

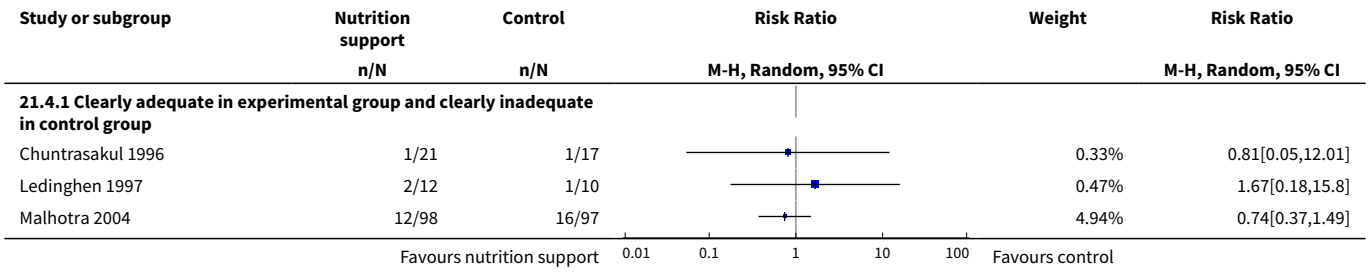


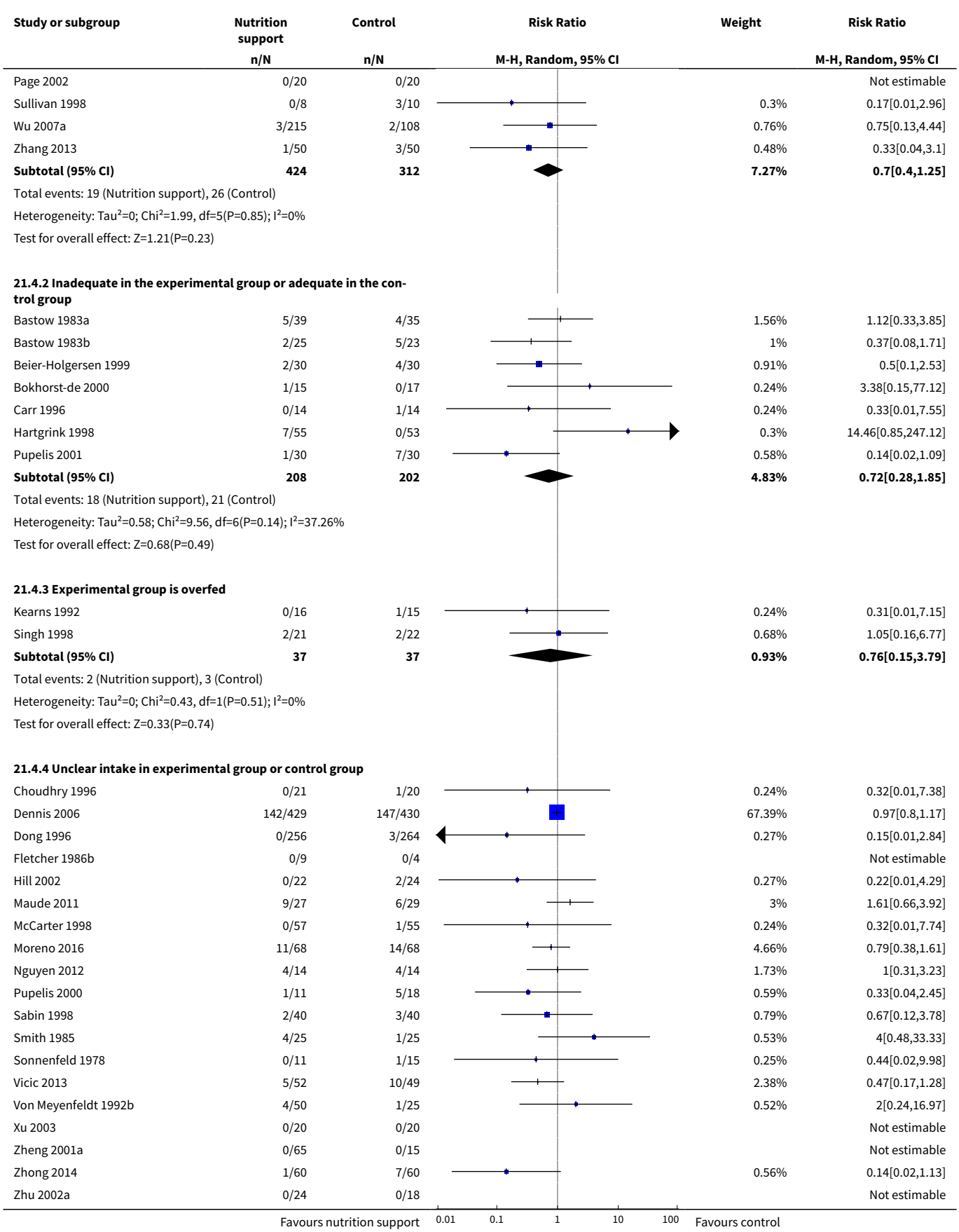
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Singh 1998	2/21	2/22		0.68%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.53%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.25%	0.44[0.02,9.98]
Von Meyenfeldt 1992b	4/50	1/25		0.52%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.76%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**620**	**443**		**9.74%**	**0.72[0.44,1.18]**
Total events: 29 (Nutrition support), 39 (Control)					
Heterogeneity: Tau^2=0; Chi^2=6.88, df=8(P=0.55); I^2=0%					
Test for overall effect: Z=1.29(P=0.2)					
21.3.11 Trauma surgery					
Chuntrasakul 1996	1/21	1/17		0.33%	0.81[0.05,12.01]
Vicic 2013	5/52	10/49		2.38%	0.47[0.17,1.28]
Subtotal (95% CI)	**73**	**66**		**2.71%**	**0.5[0.2,1.28]**
Total events: 6 (Nutrition support), 11 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.14, df=1(P=0.71); I^2=0%					
Test for overall effect: Z=1.44(P=0.15)					
21.3.12 Orthopaedics					
Bastow 1983a	5/39	4/35		1.56%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1%	0.37[0.08,1.71]
Hartgrink 1998	7/55	0/53		0.3%	14.46[0.85,247.12]
Sullivan 1998	0/8	3/10		0.3%	0.17[0.01,2.96]
Subtotal (95% CI)	**127**	**121**		**3.16%**	**0.89[0.21,3.81]**
Total events: 14 (Nutrition support), 12 (Control)					
Heterogeneity: Tau^2=1.16; Chi^2=6.77, df=3(P=0.08); I^2=55.68%					
Test for overall effect: Z=0.15(P=0.88)					
21.3.13 Plastic, reconstructive and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.14 Vascular surgery					
Fletcher 1986b	0/9	0/4			Not estimable
Subtotal (95% CI)	**9**	**4**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.15 Transplant surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
21.3.16 Urology					



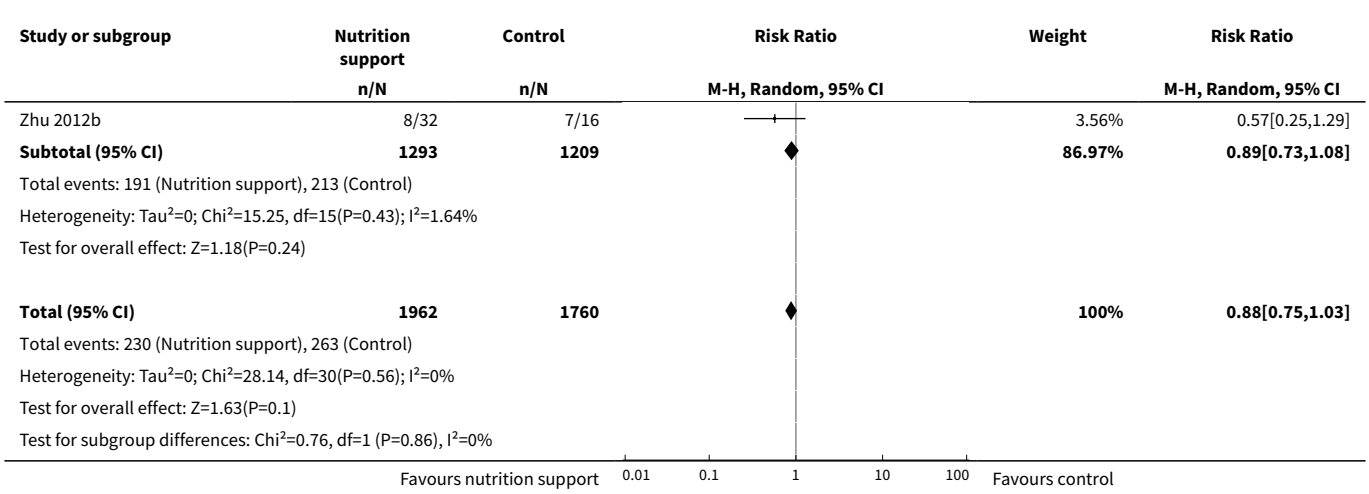


Analysis 21.4. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 4 All-cause mortality - based on adequacy of the amount of calories.

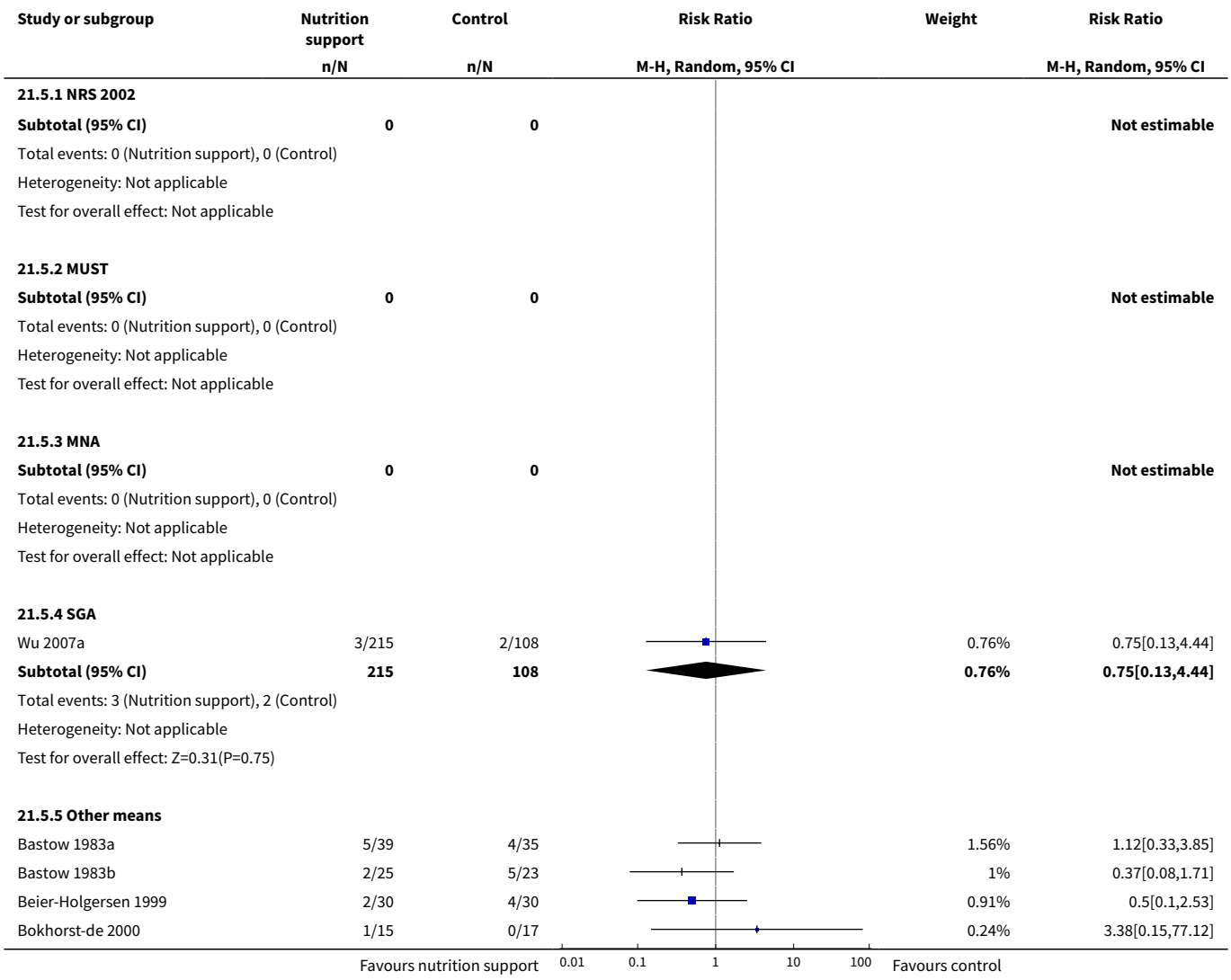


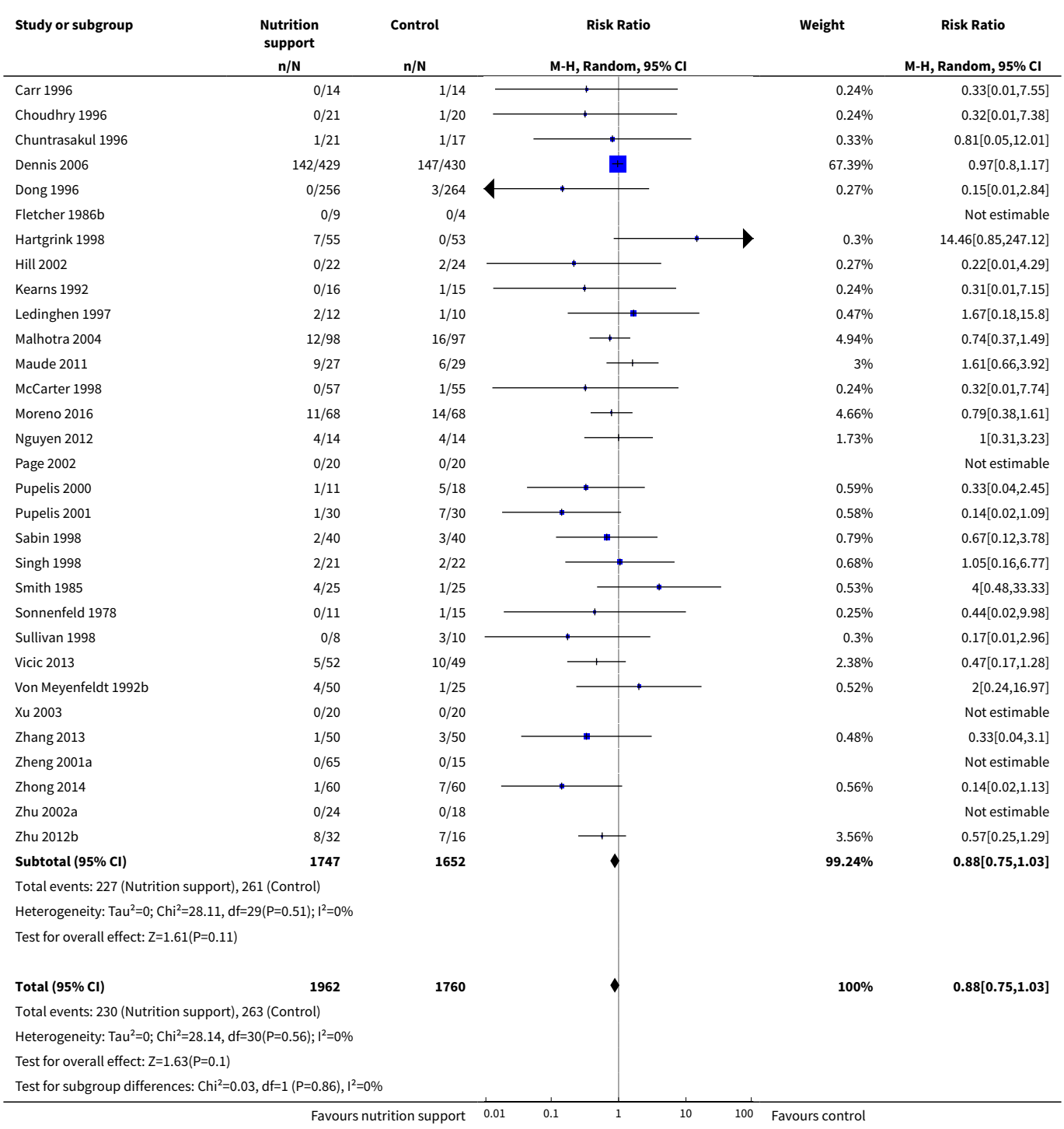


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Page 2002	0/20	0/20			Not estimable
Sullivan 1998	0/8	3/10		0.3%	0.17[0.01,2.96]
Wu 2007a	3/215	2/108		0.76%	0.75[0.13,4.44]
Zhang 2013	1/50	3/50		0.48%	0.33[0.04,3.1]
Subtotal (95% CI)	**424**	**312**		**7.27%**	**0.7[0.4,1.25]**
Total events: 19 (Nutrition support), 26 (Control)					
Heterogeneity: Tau²=0; Chi²=1.99, df=5(P=0.85); I²=0%					
Test for overall effect: Z=1.21(P=0.23)					
21.4.2 Inadequate in the experimental group or adequate in the control group					
Bastow 1983a	5/39	4/35		1.56%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.91%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.24%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.24%	0.33[0.01,7.55]
Hartgrink 1998	7/55	0/53		0.3%	14.46[0.85,247.12]
Pupelis 2001	1/30	7/30		0.58%	0.14[0.02,1.09]
Subtotal (95% CI)	**208**	**202**		**4.83%**	**0.72[0.28,1.85]**
Total events: 18 (Nutrition support), 21 (Control)					
Heterogeneity: Tau²=0.58; Chi²=9.56, df=6(P=0.14); I²=37.26%					
Test for overall effect: Z=0.68(P=0.49)					
21.4.3 Experimental group is overfed					
Kearns 1992	0/16	1/15		0.24%	0.31[0.01,7.15]
Singh 1998	2/21	2/22		0.68%	1.05[0.16,6.77]
Subtotal (95% CI)	**37**	**37**		**0.93%**	**0.76[0.15,3.79]**
Total events: 2 (Nutrition support), 3 (Control)					
Heterogeneity: Tau²=0; Chi²=0.43, df=1(P=0.51); I²=0%					
Test for overall effect: Z=0.33(P=0.74)					
21.4.4 Unclear intake in experimental group or control group					
Choudhry 1996	0/21	1/20		0.24%	0.32[0.01,7.38]
Dennis 2006	142/429	147/430		67.39%	0.97[0.8,1.17]
Dong 1996	0/256	3/264		0.27%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hill 2002	0/22	2/24		0.27%	0.22[0.01,4.29]
Maude 2011	9/27	6/29		3%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.24%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		4.66%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.73%	1[0.31,3.23]
Pupelis 2000	1/11	5/18		0.59%	0.33[0.04,2.45]
Sabin 1998	2/40	3/40		0.79%	0.67[0.12,3.78]
Smith 1985	4/25	1/25		0.53%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.25%	0.44[0.02,9.98]
Vicic 2013	5/52	10/49		2.38%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.52%	2[0.24,16.97]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	1/60	7/60		0.56%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable



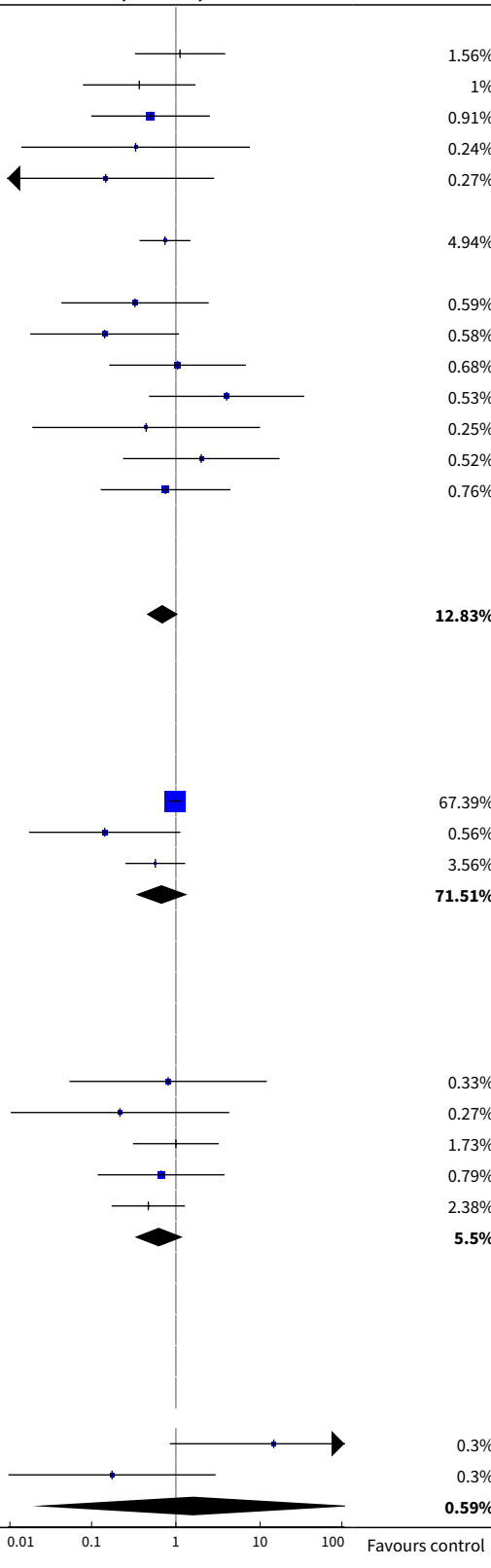
Analysis 21.5. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 5 All-cause mortality - different screening tools.

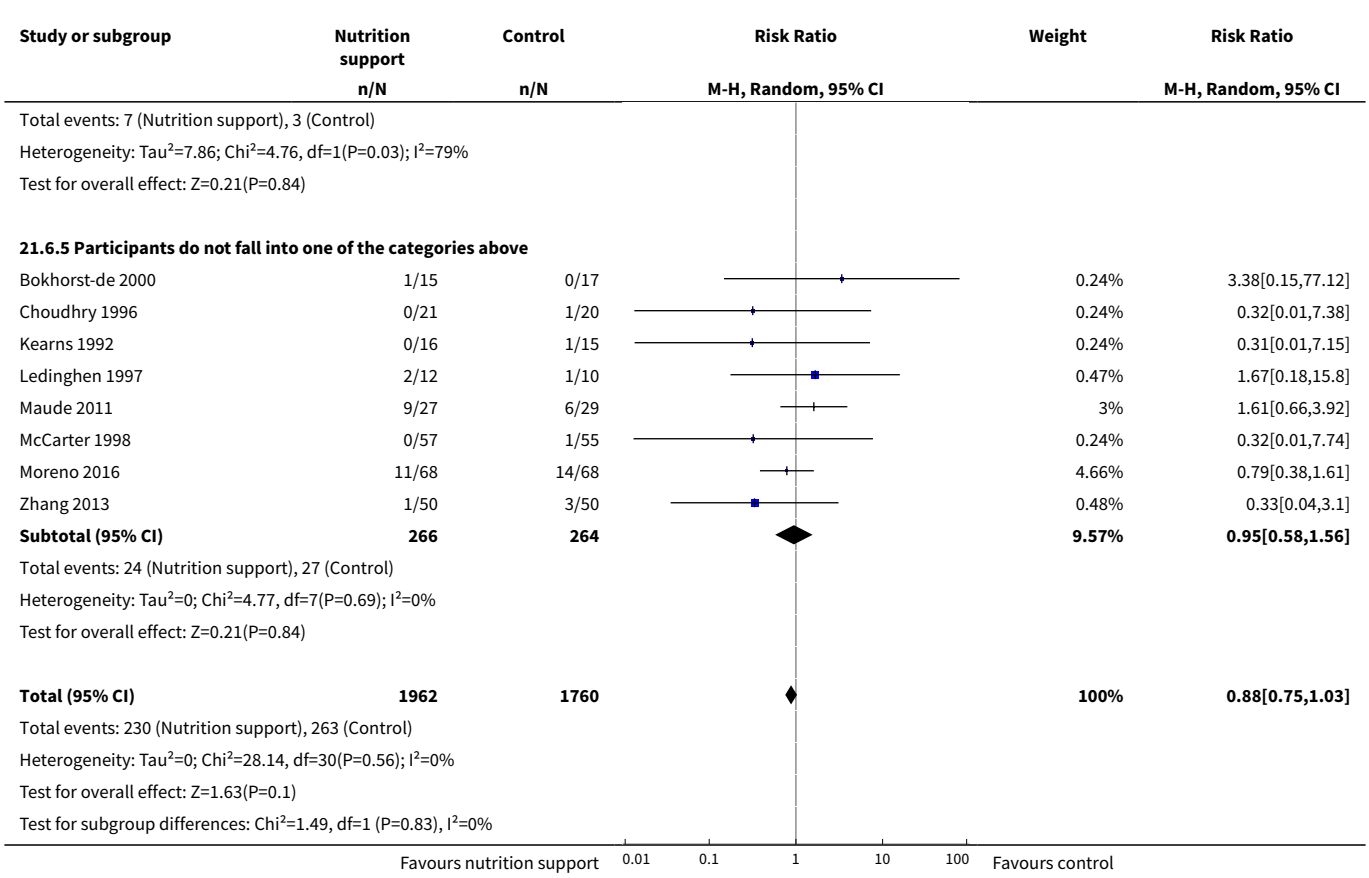




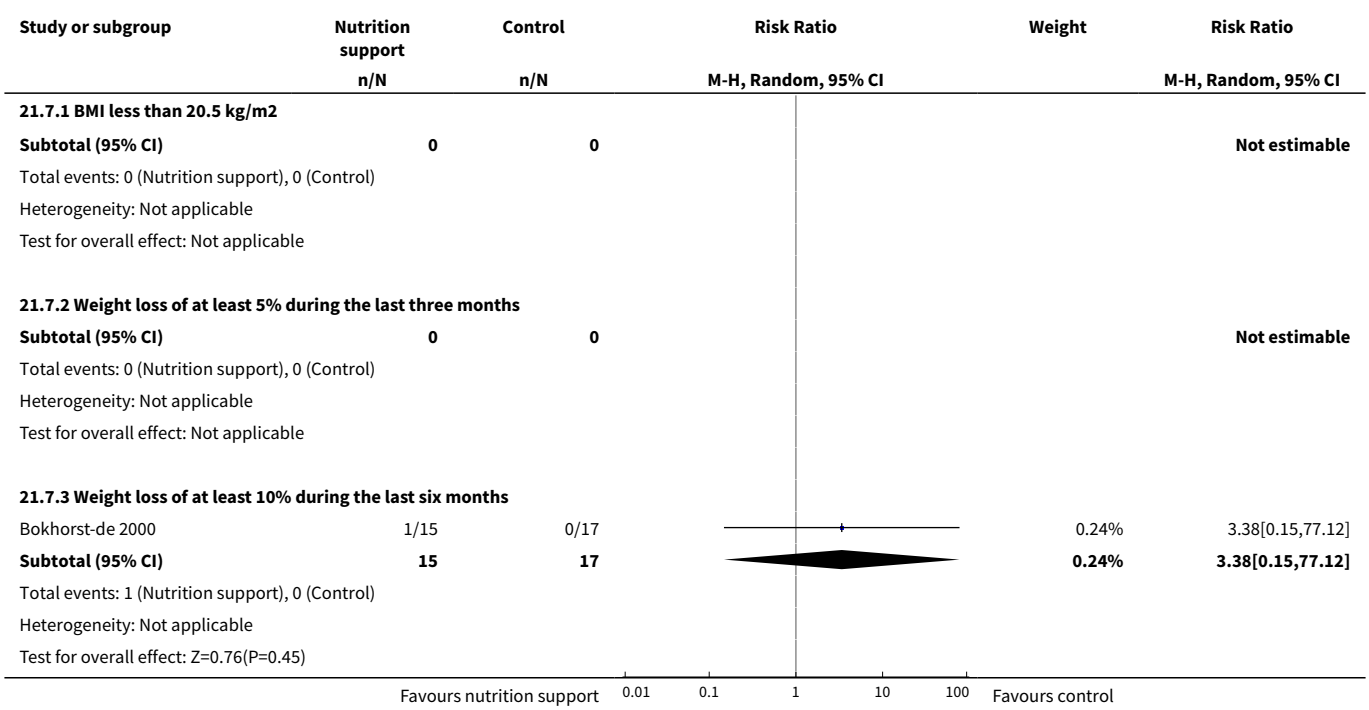
Analysis 21.6. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions.

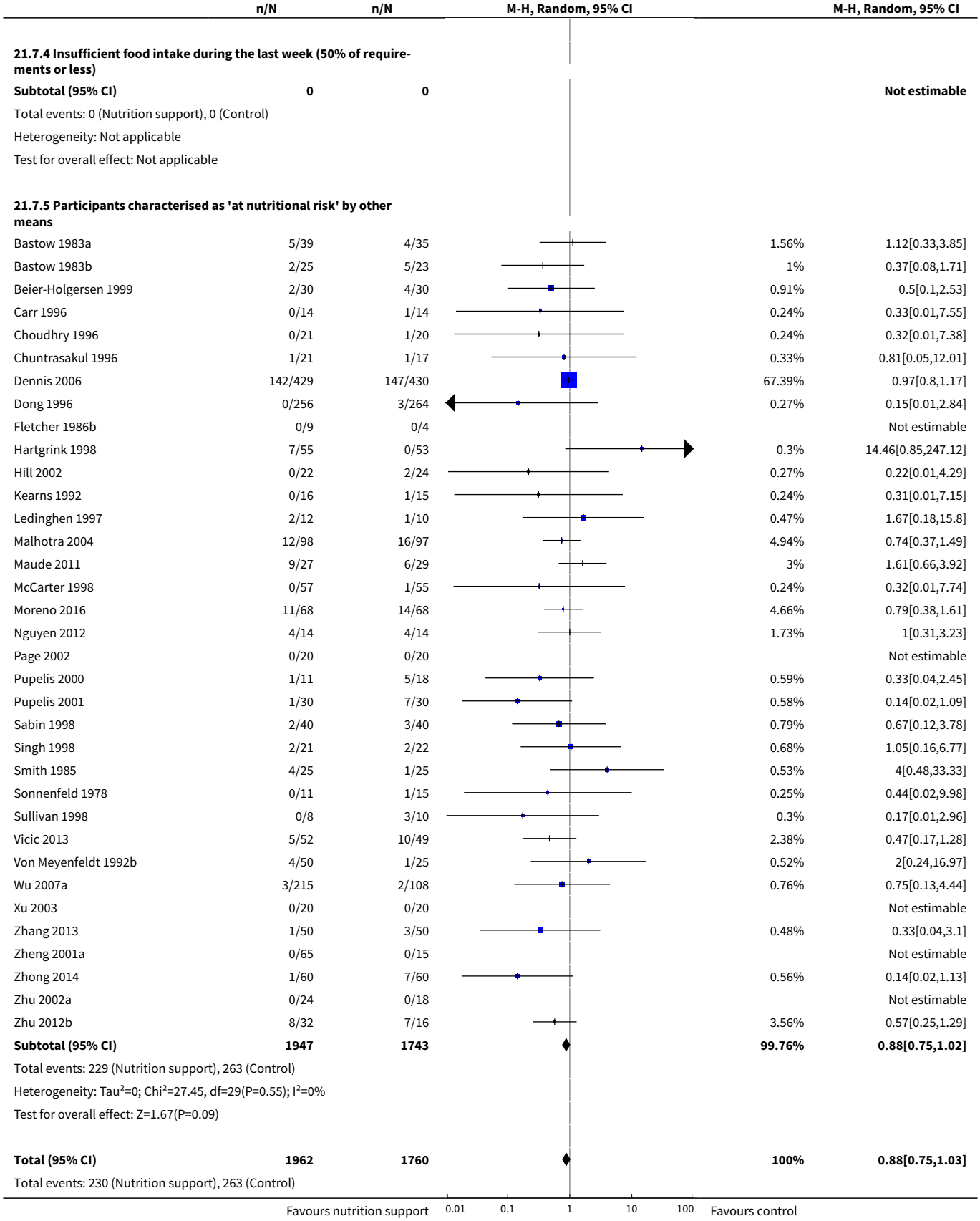
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
21.6.1 Major surgery					
Bastow 1983a	5/39	4/35		1.56%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.91%	0.5[0.1,2.53]
Carr 1996	0/14	1/14		0.24%	0.33[0.01,7.55]
Dong 1996	0/256	3/264		0.27%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Malhotra 2004	12/98	16/97		4.94%	0.74[0.37,1.49]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.59%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.58%	0.14[0.02,1.09]
Singh 1998	2/21	2/22		0.68%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.53%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.25%	0.44[0.02,9.98]
Von Meyenfeldt 1992b	4/50	1/25		0.52%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.76%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**963**	**783**		**12.83%**	**0.69[0.45,1.06]**
Total events: 36 (Nutrition support), 52 (Control)					
Heterogeneity: Tau^2=0; Chi^2=9.44, df=12(P=0.67); I^2=0%					
Test for overall effect: Z=1.69(P=0.09)					
21.6.2 Stroke					
Dennis 2006	142/429	147/430		67.39%	0.97[0.8,1.17]
Zhong 2014	1/60	7/60		0.56%	0.14[0.02,1.13]
Zhu 2012b	8/32	7/16		3.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**521**	**506**		**71.51%**	**0.67[0.33,1.37]**
Total events: 151 (Nutrition support), 161 (Control)					
Heterogeneity: Tau^2=0.22; Chi^2=4.75, df=2(P=0.09); I^2=57.91%					
Test for overall effect: Z=1.09(P=0.27)					
21.6.3 ICU participants including trauma					
Chuntrasakul 1996	1/21	1/17		0.33%	0.81[0.05,12.01]
Hill 2002	0/22	2/24		0.27%	0.22[0.01,4.29]
Nguyen 2012	4/14	4/14		1.73%	1[0.31,3.23]
Sabin 1998	2/40	3/40		0.79%	0.67[0.12,3.78]
Vicic 2013	5/52	10/49		2.38%	0.47[0.17,1.28]
Subtotal (95% CI)	**149**	**144**		**5.5%**	**0.62[0.32,1.21]**
Total events: 12 (Nutrition support), 20 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.48, df=4(P=0.83); I^2=0%					
Test for overall effect: Z=1.4(P=0.16)					
21.6.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Hartgrink 1998	7/55	0/53		0.3%	14.46[0.85,247.12]
Sullivan 1998	0/8	3/10		0.3%	0.17[0.01,2.96]
Subtotal (95% CI)	**63**	**63**		**0.59%**	**1.59[0.02,125.73]**





Analysis 21.7. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria.

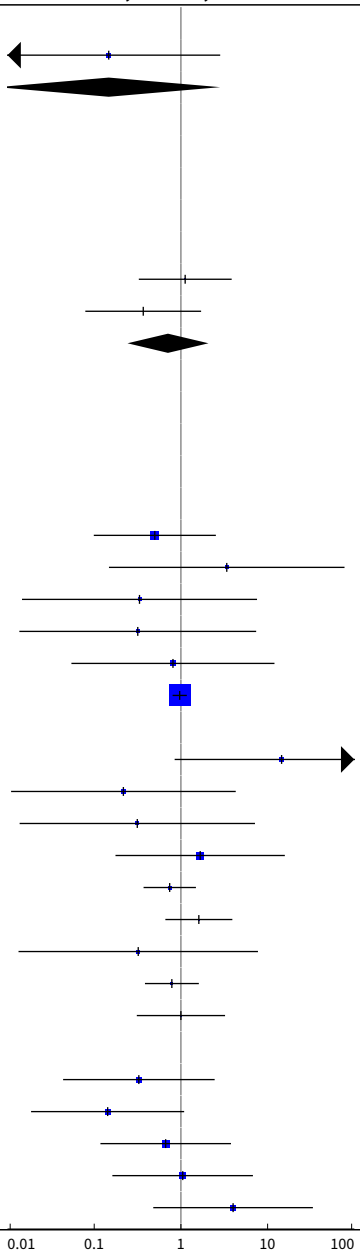


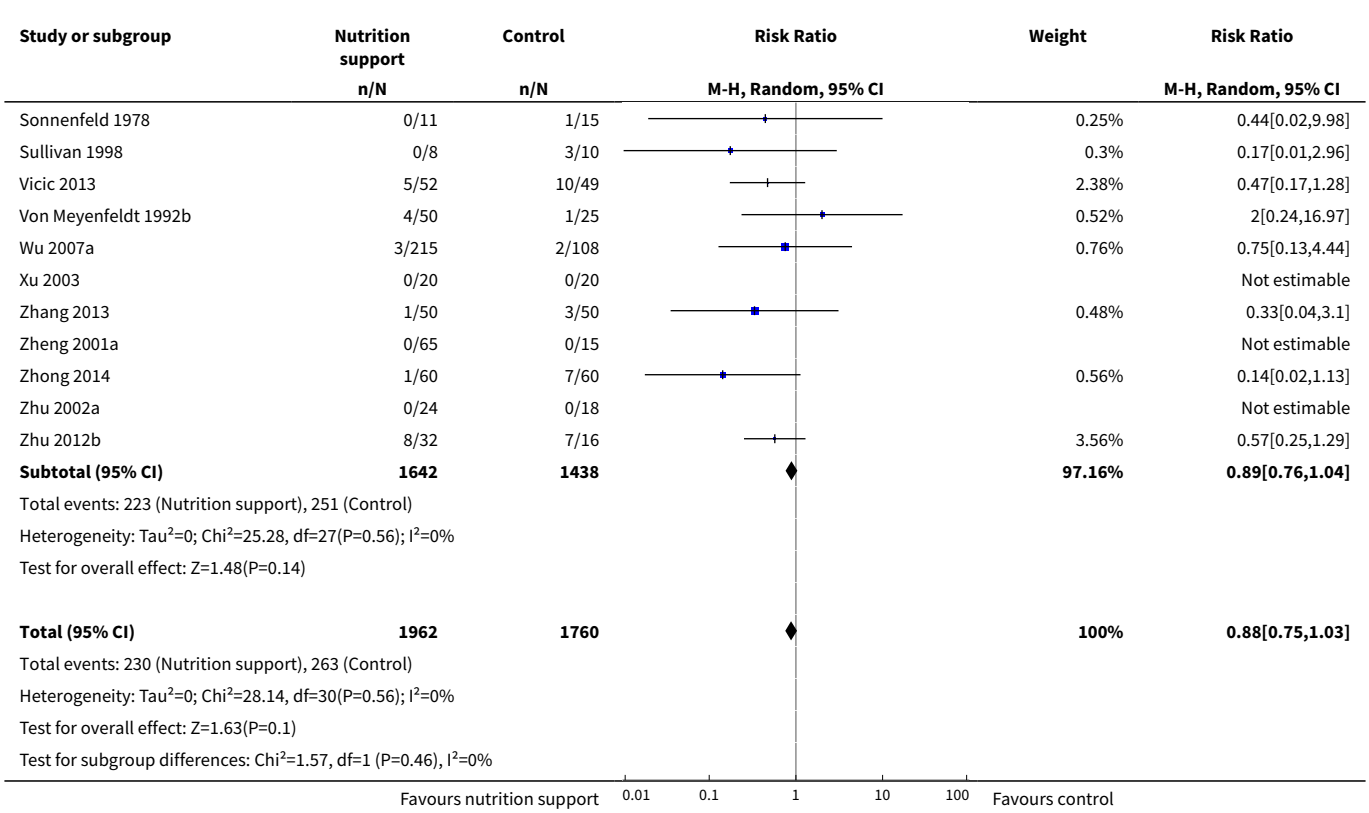


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Tau²=0; Chi²=28.14, df=30(P=0.56); I²=0%					
Test for overall effect: Z=1.63(P=0.1)					
Test for subgroup differences: Chi²=0.71, df=1 (P=0.4), I²=0%					

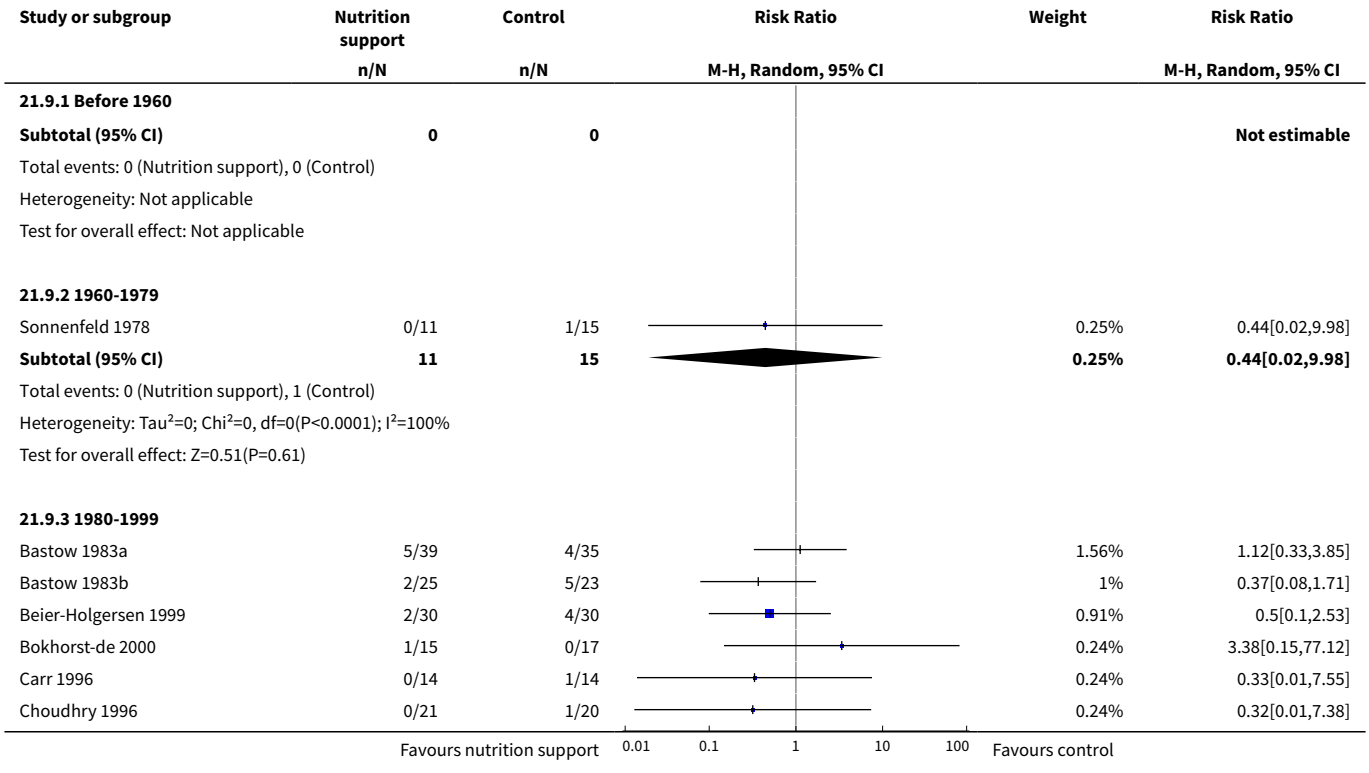
Analysis 21.8. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

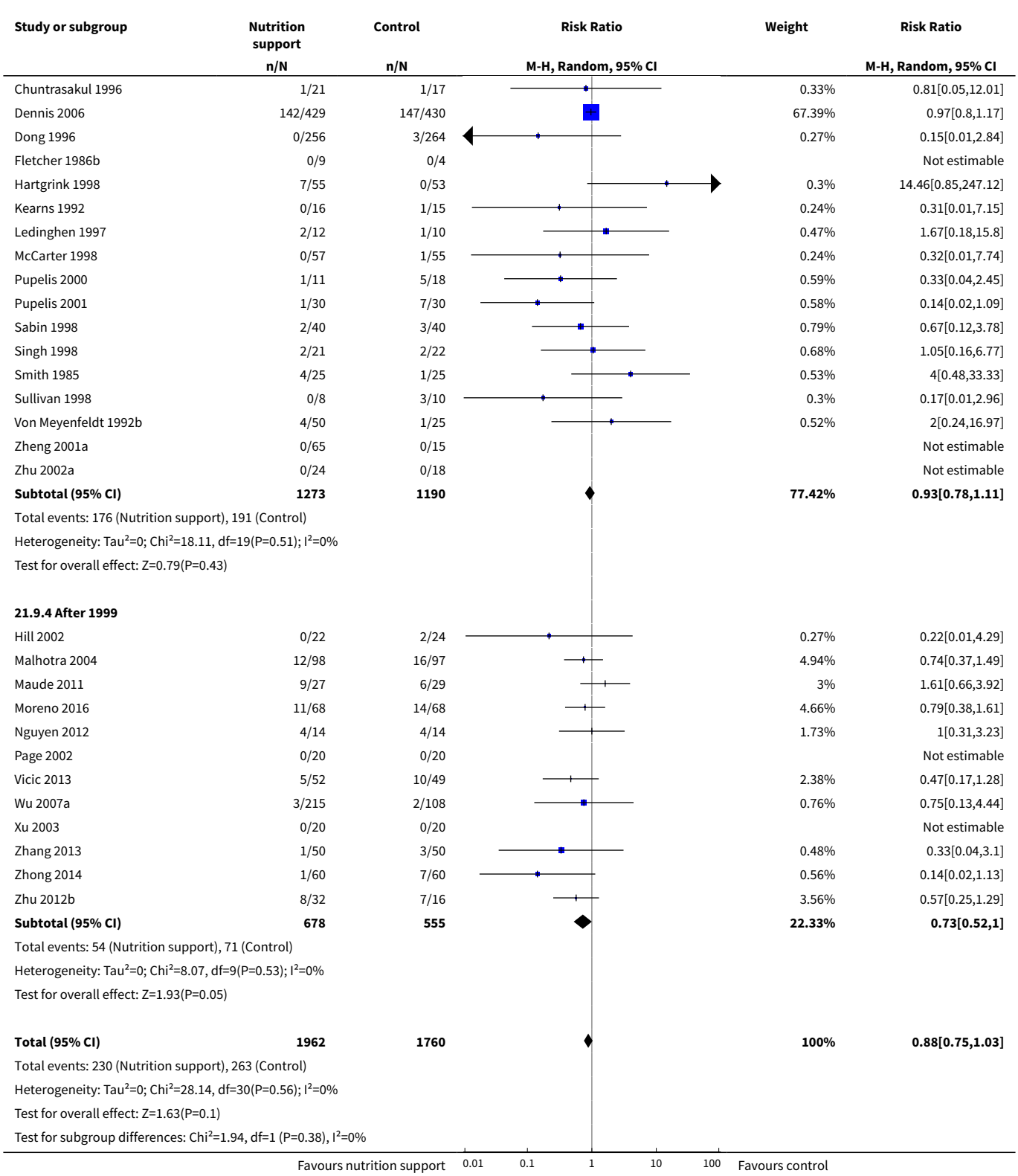
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
21.8.1 Biomarkers					
Dong 1996	0/256	3/264		0.27%	0.15[0.01,2.84]
Subtotal (95% CI)	**256**	**264**		**0.27%**	**0.15[0.01,2.84]**
Total events: 0 (Nutrition support), 3 (Control)					
Heterogeneity: Tau²=0; Chi²=0, df=0(P<0.0001); I²=100%					
Test for overall effect: Z=1.27(P=0.2)					
21.8.2 Anthropometric measures					
Bastow 1983a	5/39	4/35		1.56%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1%	0.37[0.08,1.71]
Subtotal (95% CI)	**64**	**58**		**2.57%**	**0.71[0.24,2.08]**
Total events: 7 (Nutrition support), 9 (Control)					
Heterogeneity: Tau²=0.12; Chi²=1.23, df=1(P=0.27); I²=18.74%					
Test for overall effect: Z=0.63(P=0.53)					
21.8.3 Characterised by other means					
Beier-Holgersen 1999	2/30	4/30		0.91%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.24%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.24%	0.33[0.01,7.55]
Choudhry 1996	0/21	1/20		0.24%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.33%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		67.39%	0.97[0.8,1.17]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.3%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.27%	0.22[0.01,4.29]
Kearns 1992	0/16	1/15		0.24%	0.31[0.01,7.15]
Ledinghen 1997	2/12	1/10		0.47%	1.67[0.18,15.8]
Malhotra 2004	12/98	16/97		4.94%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		3%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.24%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		4.66%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.73%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.59%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.58%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.79%	0.67[0.12,3.78]
Singh 1998	2/21	2/22		0.68%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.53%	4[0.48,33.33]





Analysis 21.9. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 9 All-cause mortality - randomisation year.

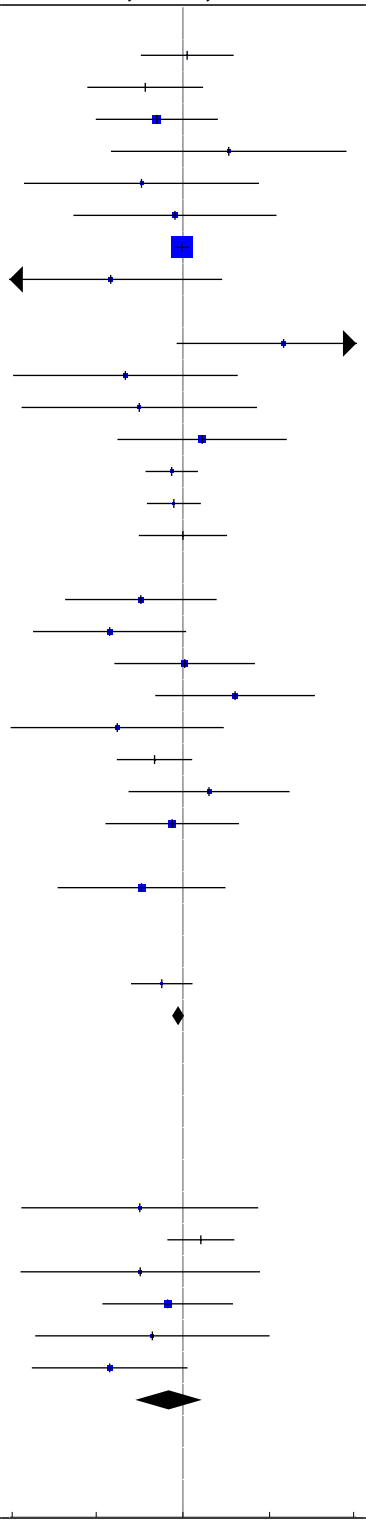




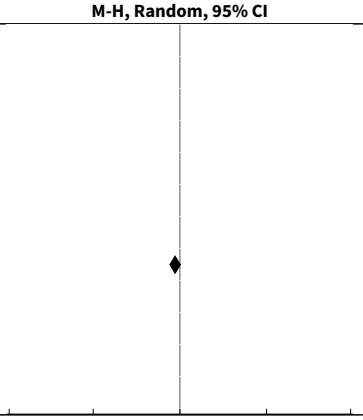
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chuntrasakul 1996	1/21	1/17		0.33%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		67.39%	0.97[0.8,1.17]
Dong 1996	0/256	3/264		0.27%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.3%	14.46[0.85,247.12]
Kearns 1992	0/16	1/15		0.24%	0.31[0.01,7.15]
Ledinghen 1997	2/12	1/10		0.47%	1.67[0.18,15.8]
McCarter 1998	0/57	1/55		0.24%	0.32[0.01,7.74]
Pupelis 2000	1/11	5/18		0.59%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.58%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.79%	0.67[0.12,3.78]
Singh 1998	2/21	2/22		0.68%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.53%	4[0.48,33.33]
Sullivan 1998	0/8	3/10		0.3%	0.17[0.01,2.96]
Von Meyenfeldt 1992b	4/50	1/25		0.52%	2[0.24,16.97]
Zheng 2001a	0/65	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**1273**	**1190**		**77.42%**	**0.93[0.78,1.11]**
Total events: 176 (Nutrition support), 191 (Control)					
Heterogeneity: Tau^2=0; Chi^2=18.11, df=19(P=0.51); I^2=0%					
Test for overall effect: Z=0.79(P=0.43)					
21.9.4 After 1999					
Hill 2002	0/22	2/24		0.27%	0.22[0.01,4.29]
Malhotra 2004	12/98	16/97		4.94%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		3%	1.61[0.66,3.92]
Moreno 2016	11/68	14/68		4.66%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.73%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Vicic 2013	5/52	10/49		2.38%	0.47[0.17,1.28]
Wu 2007a	3/215	2/108		0.76%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.48%	0.33[0.04,3.1]
Zhong 2014	1/60	7/60		0.56%	0.14[0.02,1.13]
Zhu 2012b	8/32	7/16		3.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**678**	**555**		**22.33%**	**0.73[0.52,1]**
Total events: 54 (Nutrition support), 71 (Control)					
Heterogeneity: Tau^2=0; Chi^2=8.07, df=9(P=0.53); I^2=0%					
Test for overall effect: Z=1.93(P=0.05)					
Total (95% CI)	**1962**	**1760**		**100%**	**0.88[0.75,1.03]**
Total events: 230 (Nutrition support), 263 (Control)					
Heterogeneity: Tau^2=0; Chi^2=28.14, df=30(P=0.56); I^2=0%					
Test for overall effect: Z=1.63(P=0.1)					
Test for subgroup differences: Chi^2=1.94, df=1 (P=0.38), I^2=0%					

Analysis 21.10. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
21.10.1 Three days or more					
Bastow 1983a	5/39	4/35		1.56%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.91%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.24%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.24%	0.33[0.01,7.55]
Chuntrasakul 1996	1/21	1/17		0.33%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		67.39%	0.97[0.8,1.17]
Dong 1996	0/256	3/264		0.27%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.3%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.27%	0.22[0.01,4.29]
Kearns 1992	0/16	1/15		0.24%	0.31[0.01,7.15]
Ledinghen 1997	2/12	1/10		0.47%	1.67[0.18,15.8]
Malhotra 2004	12/98	16/97		4.94%	0.74[0.37,1.49]
Moreno 2016	11/68	14/68		4.66%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.73%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.59%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.58%	0.14[0.02,1.09]
Singh 1998	2/21	2/22		0.68%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.53%	4[0.48,33.33]
Sullivan 1998	0/8	3/10		0.3%	0.17[0.01,2.96]
Vicic 2013	5/52	10/49		2.38%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.52%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.76%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.48%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		3.56%	0.57[0.25,1.29]
Subtotal (95% CI)	**1746**	**1541**		**94.93%**	**0.88[0.75,1.03]**
Total events: 218 (Nutrition support), 244 (Control)					
Heterogeneity: Tau^2=0; Chi^2=22.2, df=24(P=0.57); I^2=0%					
Test for overall effect: Z=1.58(P=0.11)					
21.10.2 Less than three days					
Choudhry 1996	0/21	1/20		0.24%	0.32[0.01,7.38]
Maude 2011	9/27	6/29		3%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.24%	0.32[0.01,7.74]
Sabin 1998	2/40	3/40		0.79%	0.67[0.12,3.78]
Sonnenfeld 1978	0/11	1/15		0.25%	0.44[0.02,9.98]
Zhong 2014	1/60	7/60		0.56%	0.14[0.02,1.13]
Subtotal (95% CI)	**216**	**219**		**5.07%**	**0.68[0.28,1.65]**
Total events: 12 (Nutrition support), 19 (Control)					
Heterogeneity: Tau^2=0.25; Chi^2=6.26, df=5(P=0.28); I^2=20.11%					
Test for overall effect: Z=0.84(P=0.4)					

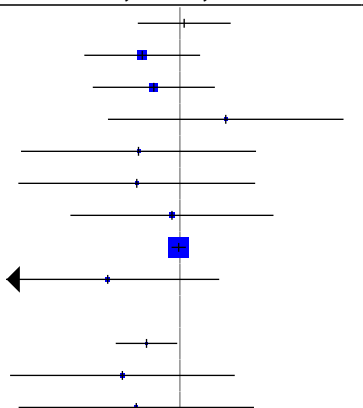


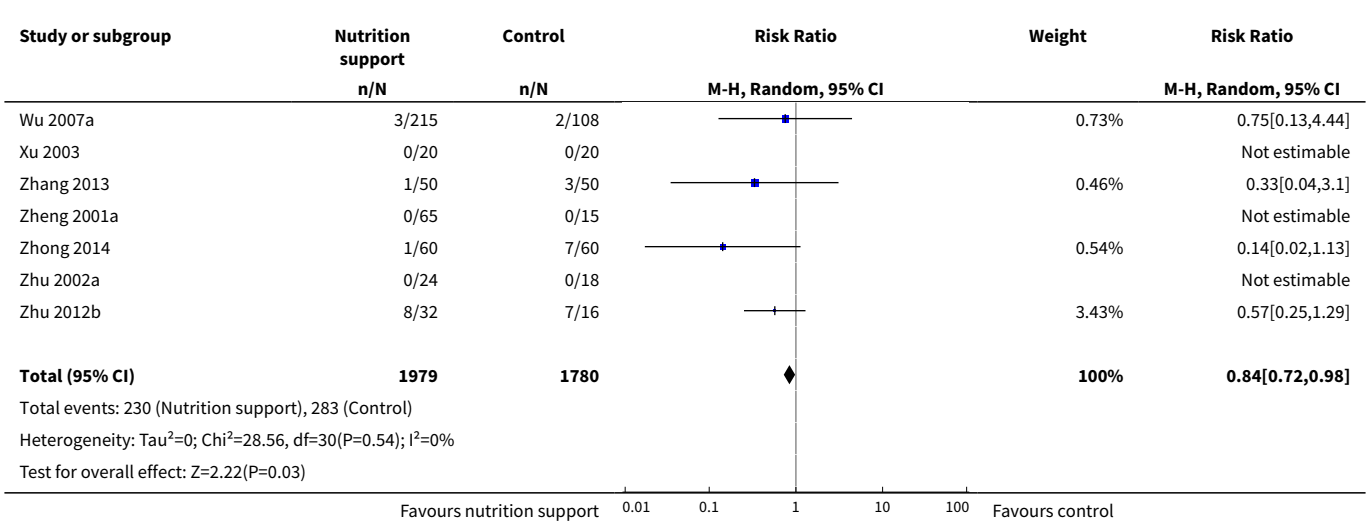
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
21.10.3 Unknown					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**1962**	**1760**		**100%**	**0.88[0.75,1.03]**
Total events: 230 (Nutrition support), 263 (Control)					
Heterogeneity: Tau²=0; Chi²=28.14, df=30(P=0.56); I²=0%					
Test for overall effect: Z=1.63(P=0.1)					
Test for subgroup differences: Chi²=0.3, df=1 (P=0.58), I²=0%					



Analysis 21.11. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 11 All-cause mortality - 'best-worst case' scenario.

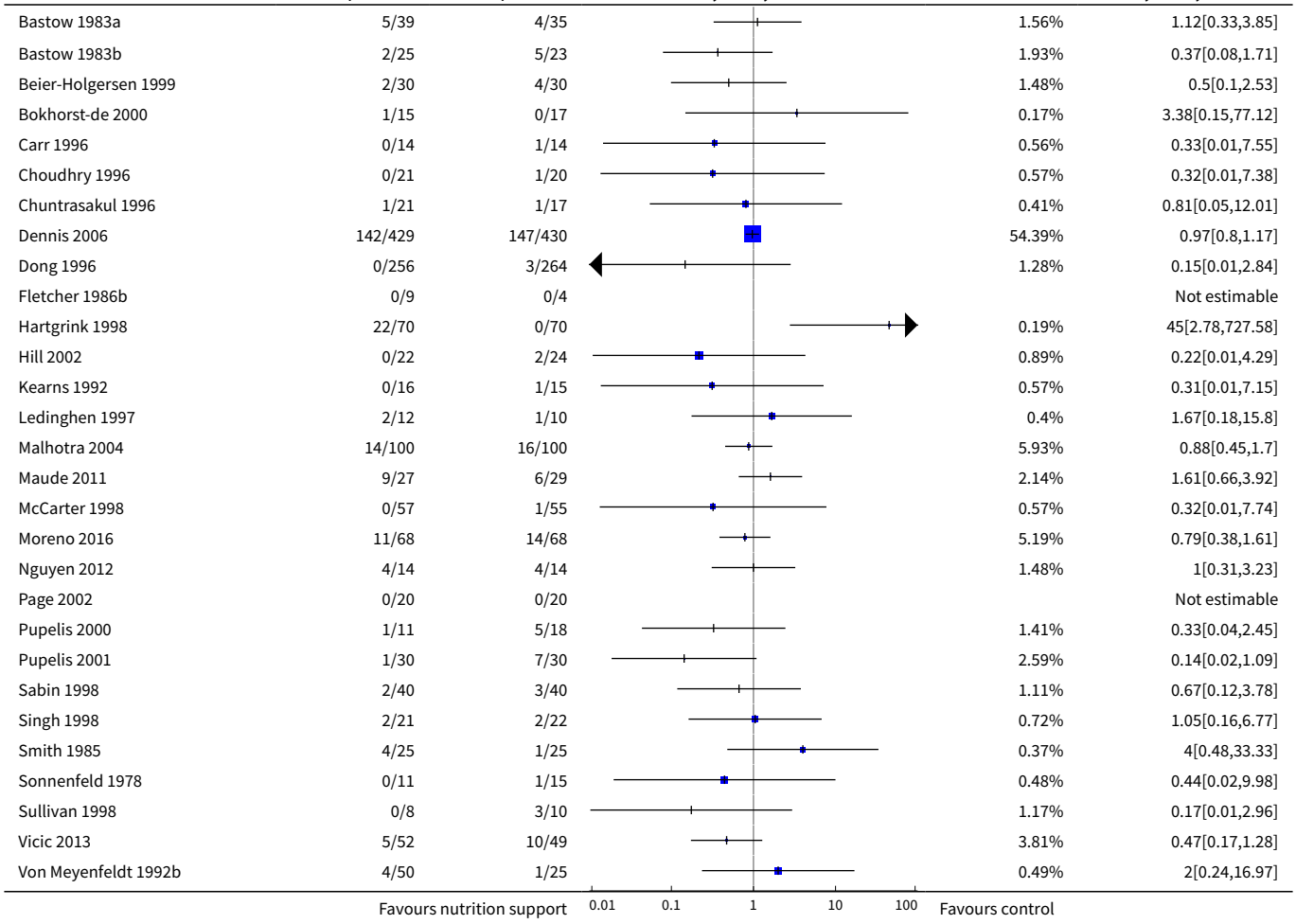
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983a	5/39	4/35		1.51%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.97%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.87%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.23%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.24%	0.33[0.01,7.55]
Choudhry 1996	0/21	1/20		0.23%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.32%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		65%	0.97[0.8,1.17]
Dong 1996	0/256	3/264		0.26%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/70	17/70		3.45%	0.41[0.18,0.93]
Hill 2002	0/22	2/24		0.26%	0.22[0.01,4.29]
Kearns 1992	0/16	1/15		0.23%	0.31[0.01,7.15]
Ledinghen 1997	2/12	1/10		0.45%	1.67[0.18,15.8]
Malhotra 2004	12/100	19/100		5.15%	0.63[0.32,1.23]
Maude 2011	9/27	6/29		2.9%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.23%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		4.49%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.67%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.57%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.55%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.76%	0.67[0.12,3.78]
Singh 1998	2/21	2/22		0.66%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.51%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.24%	0.44[0.02,9.98]
Sullivan 1998	0/8	3/10		0.29%	0.17[0.01,2.96]
Vicic 2013	5/52	10/49		2.29%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.5%	2[0.24,16.97]



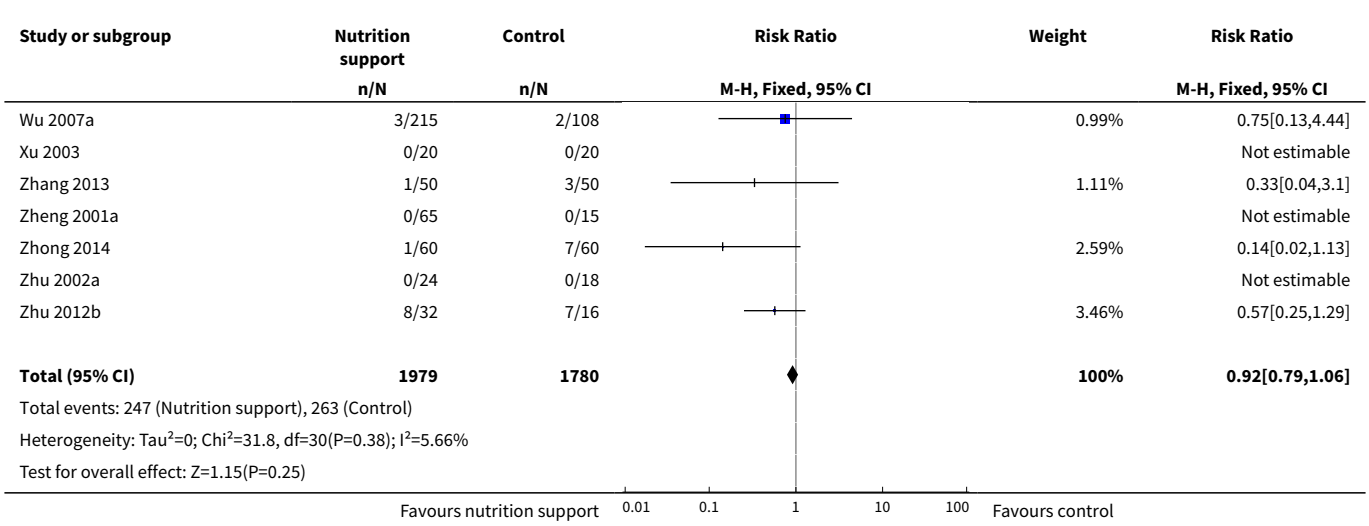


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Wu 2007a	3/215	2/108		0.73%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.46%	0.33[0.04,3.1]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	1/60	7/60		0.54%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		3.43%	0.57[0.25,1.29]
Total (95% CI)	**1979**	**1780**		**100%**	**0.84[0.72,0.98]**
Total events: 230 (Nutrition support), 283 (Control)					
Heterogeneity: Tau^2=0; Chi^2=28.56, df=30(P=0.54); I^2=0%					
Test for overall effect: Z=2.22(P=0.03)					

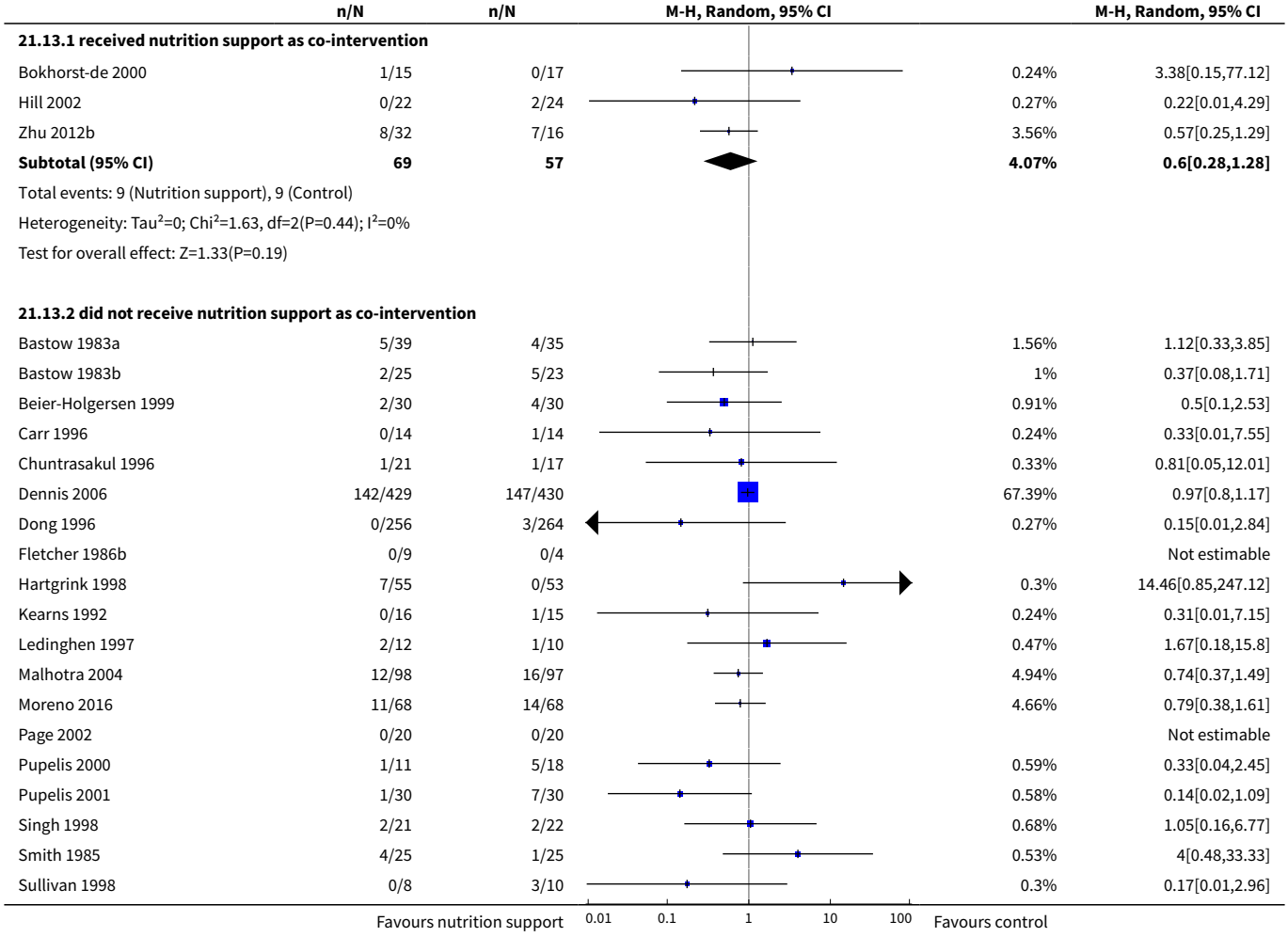
Analysis 21.12. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 12 All-cause mortality - 'worst-best case' scenario.

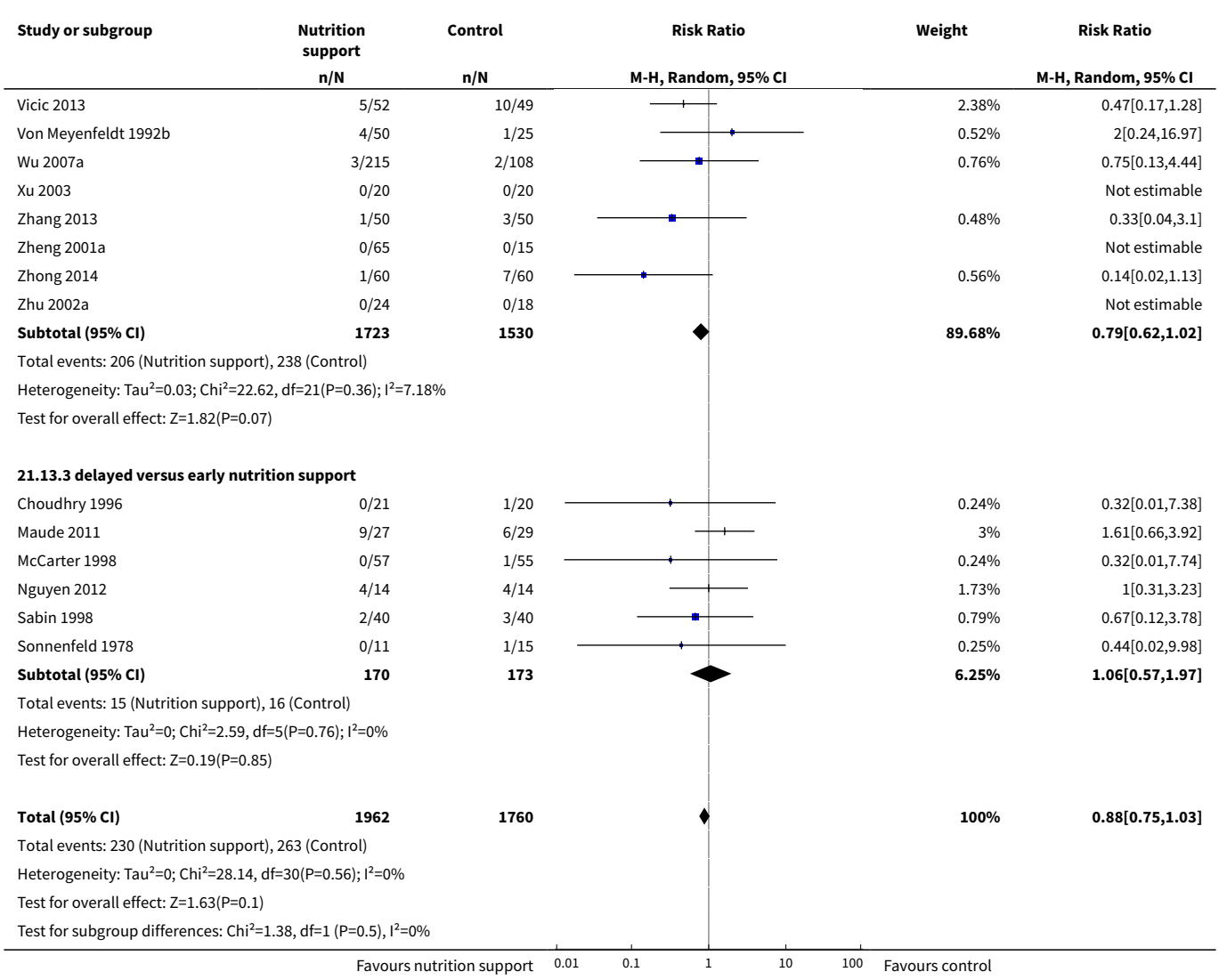


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
Bastow 1983a	5/39	4/35		1.56%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.93%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		1.48%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.17%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.56%	0.33[0.01,7.55]
Choudhry 1996	0/21	1/20		0.57%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.41%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		54.39%	0.97[0.8,1.17]
Dong 1996	0/256	3/264		1.28%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	22/70	0/70		0.19%	45[2.78,727.58]
Hill 2002	0/22	2/24		0.89%	0.22[0.01,4.29]
Kearns 1992	0/16	1/15		0.57%	0.31[0.01,7.15]
Ledinghen 1997	2/12	1/10		0.4%	1.67[0.18,15.8]
Malhotra 2004	14/100	16/100		5.93%	0.88[0.45,1.7]
Maude 2011	9/27	6/29		2.14%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.57%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		5.19%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.48%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		1.41%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		2.59%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		1.11%	0.67[0.12,3.78]
Singh 1998	2/21	2/22		0.72%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.37%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.48%	0.44[0.02,9.98]
Sullivan 1998	0/8	3/10		1.17%	0.17[0.01,2.96]
Vicic 2013	5/52	10/49		3.81%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.49%	2[0.24,16.97]



Analysis 21.13. Comparison 21 Enteral - All cause mortality - end of intervention, Outcome 13 All-cause mortality co-interventions.





Comparison 22. Enteral - All cause mortality - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All-cause mortality - overall	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
2 All-cause mortality - bias	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
2.1 High risk of bias	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3 All-cause mortality - medical speciality	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	4	289	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.63, 1.21]
3.3 Geriatrics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.4 Pulmonary disease	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	1	56	Risk Ratio (M-H, Random, 95% CI)	1.61 [0.66, 3.92]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	15	1284	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.48, 1.16]
3.11 Trauma surgery	4	204	Risk Ratio (M-H, Random, 95% CI)	0.58 [0.30, 1.11]
3.12 Ortopaedics	4	248	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.18, 3.75]
3.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	1	13	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Transplant surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	2	548	Risk Ratio (M-H, Random, 95% CI)	0.22 [0.03, 1.86]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	1	32	Risk Ratio (M-H, Random, 95% CI)	3.38 [0.15, 77.12]
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	4	213	Risk Ratio (M-H, Random, 95% CI)	1.07 [0.61, 1.89]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	4	1172	Risk Ratio (M-H, Random, 95% CI)	0.57 [0.31, 1.05]
3.24 Oncology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	2	153	Risk Ratio (M-H, Random, 95% CI)	0.63 [0.18, 2.21]
4 All-cause mortality - based on adequacy of the amount of calories	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
4.1 Clearly adequate in intervention and clearly inadequate in control	10	954	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.46, 1.23]
4.2 Inadequate in the experimental or adequate in the control	7	410	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.28, 1.85]
4.3 Experimental group is overfed	3	174	Risk Ratio (M-H, Random, 95% CI)	1.01 [0.49, 2.08]
4.4 Unclear intake in control or experimental	22	2674	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.67, 0.99]
5 All-cause mortality - different screening tools	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
5.1 NRS 2002	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

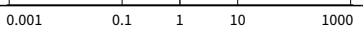
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5.3 MNA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 SGA	1	323	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.13, 4.44]
5.5 Other means	41	3889	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
6.1 Major surgery	20	1967	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.48, 1.06]
6.2 Stroke	4	1172	Risk Ratio (M-H, Random, 95% CI)	0.57 [0.31, 1.05]
6.3 ICU participants including trauma	8	417	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.54, 1.26]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	2	126	Risk Ratio (M-H, Random, 95% CI)	1.25 [0.01, 150.42]
6.5 Participants do not fall into one of the categories above	8	530	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.69, 1.25]
7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
7.1 BMI less than 20.5 kg/m2	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	1	32	Risk Ratio (M-H, Random, 95% CI)	3.38 [0.15, 77.12]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	41	4180	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
8.1 Biomarkers	1	520	Risk Ratio (M-H, Random, 95% CI)	0.15 [0.01, 2.84]
8.2 Anthropometric measures	2	122	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.24, 2.08]
8.3 Both anthropometrics and biomarkers	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.4 Characterised by other means	39	3570	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.75, 0.96]
9 All-cause mortality - randomisation year	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	1	26	Risk Ratio (M-H, Random, 95% CI)	0.44 [0.02, 9.98]
9.3 1980 to 1999	24	2500	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.69, 1.08]
9.4 After 1999	17	1686	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.60, 0.96]
10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	42	4212	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.75, 0.95]
10.1 Three days or more	34	3680	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.71, 0.94]
10.2 Less than three days	8	532	Risk Ratio (M-H, Random, 95% CI)	1.03 [0.66, 1.63]
10.3 Unknown	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
11 All-cause mortality - 'best-worst case' scenario	42	4269	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.63, 0.89]
12 All-cause mortality - 'worst-best case' scenario	42	4269	Risk Ratio (M-H, Random, 95% CI)	0.84 [0.68, 1.03]
13 All-cause mortality co-interventions	42	4212	Risk Ratio (M-H, Fixed, 95% CI)	0.82 [0.73, 0.92]
13.1 received nutrition support as co-intervention	5	262	Risk Ratio (M-H, Fixed, 95% CI)	1.03 [0.66, 1.60]

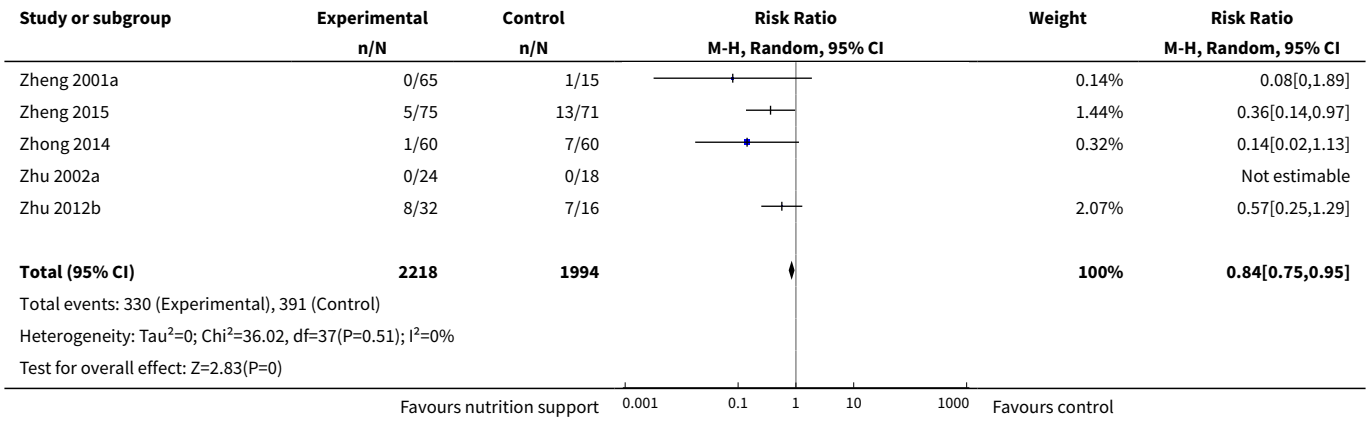
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
13.2 did not receive nutrition support as co-intervention	35	3797	Risk Ratio (M-H, Fixed, 95% CI)	0.81 [0.71, 0.91]
13.3 delayed versus early nutrition support	2	153	Risk Ratio (M-H, Fixed, 95% CI)	0.61 [0.17, 2.12]

Analysis 22.1. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 1 All-cause mortality - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	3/64	0/57		0.16%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.91%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.53%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.14%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.14%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		0.74%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.47%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.29%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		63.52%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.16%	0.15[0.01,2.84]
Eyer 1993	2/19	2/19		0.4%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.17%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Kaur 2005	3/50	4/50		0.66%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		1.12%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		0.55%	1.25[0.26,6.07]
Malhotra 2004	12/98	16/97		2.87%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		1.74%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.14%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		11.07%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1.01%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		1.19%	0.74[0.25,2.18]
Pupelis 2000	1/11	5/18		0.34%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.33%	0.14[0.02,1.09]
Sabin 1998	12/40	10/40		2.7%	1.2[0.59,2.45]
Singh 1998	4/21	4/22		0.88%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.14%	0.44[0.02,9.98]
Sullivan 1998	0/8	5/10		0.18%	0.11[0.01,1.75]
Vicic 2013	5/52	10/49		1.38%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.44%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.28%	0.33[0.04,3.1]

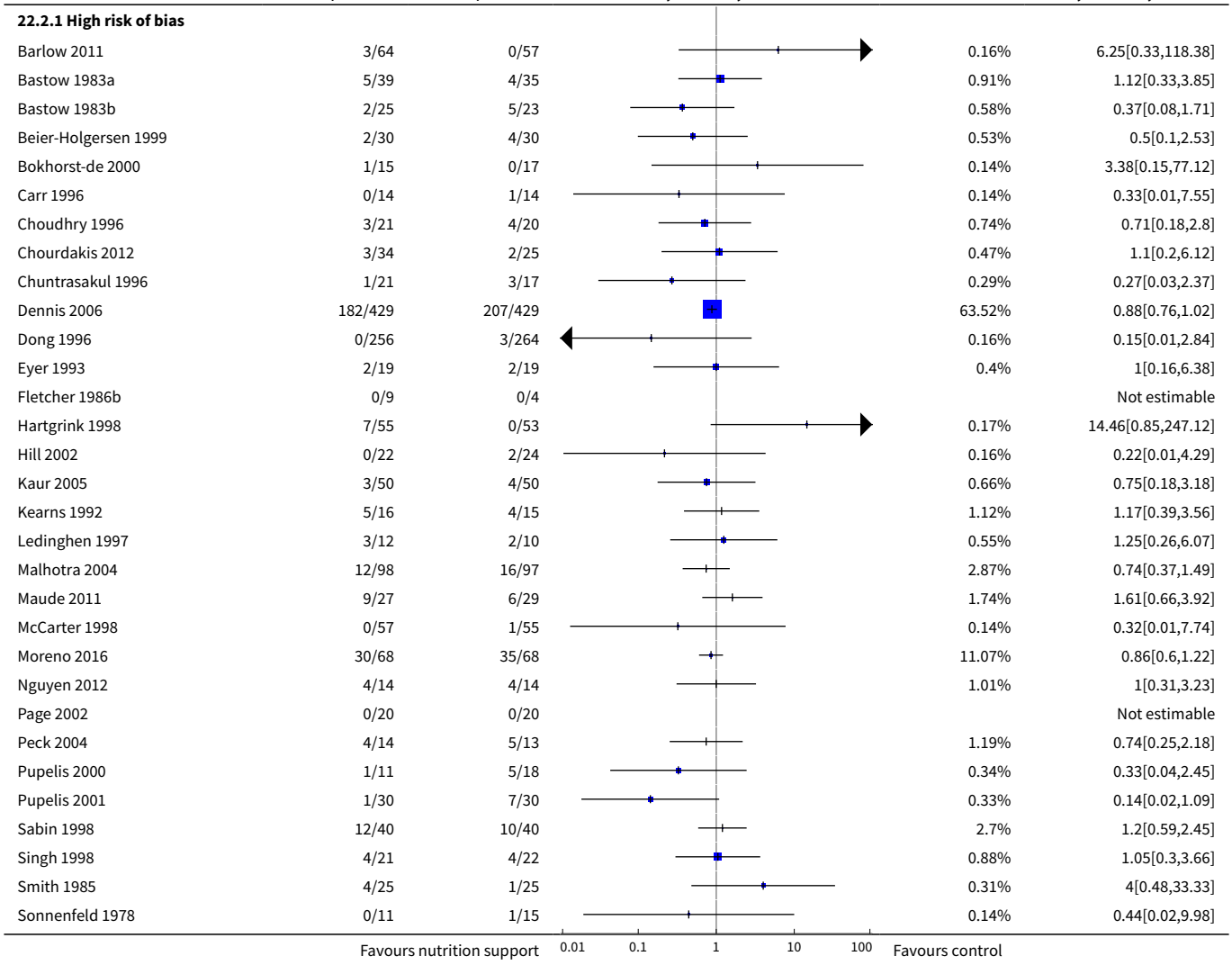


Favours nutrition support | Favours control



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Zheng 2001a	0/65	1/15		0.14%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.44%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.32%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.07%	0.57[0.25,1.29]
Total (95% CI)	**2218**	**1994**		**100%**	**0.84[0.75,0.95]**
Total events: 330 (Experimental), 391 (Control)					
Heterogeneity: Tau^2=0; Chi^2=36.02, df=37(P=0.51); I^2=0%					
Test for overall effect: Z=2.83(P=0)					

Analysis 22.2. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 2 All-cause mortality - bias.



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
22.2.1 High risk of bias					
Barlow 2011	3/64	0/57		0.16%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.91%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.53%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.14%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.14%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		0.74%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.47%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.29%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		63.52%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.16%	0.15[0.01,2.84]
Eyer 1993	2/19	2/19		0.4%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.17%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Kaur 2005	3/50	4/50		0.66%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		1.12%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		0.55%	1.25[0.26,6.07]
Malhotra 2004	12/98	16/97		2.87%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		1.74%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.14%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		11.07%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1.01%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		1.19%	0.74[0.25,2.18]
Pupelis 2000	1/11	5/18		0.34%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.33%	0.14[0.02,1.09]
Sabin 1998	12/40	10/40		2.7%	1.2[0.59,2.45]
Singh 1998	4/21	4/22		0.88%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.14%	0.44[0.02,9.98]

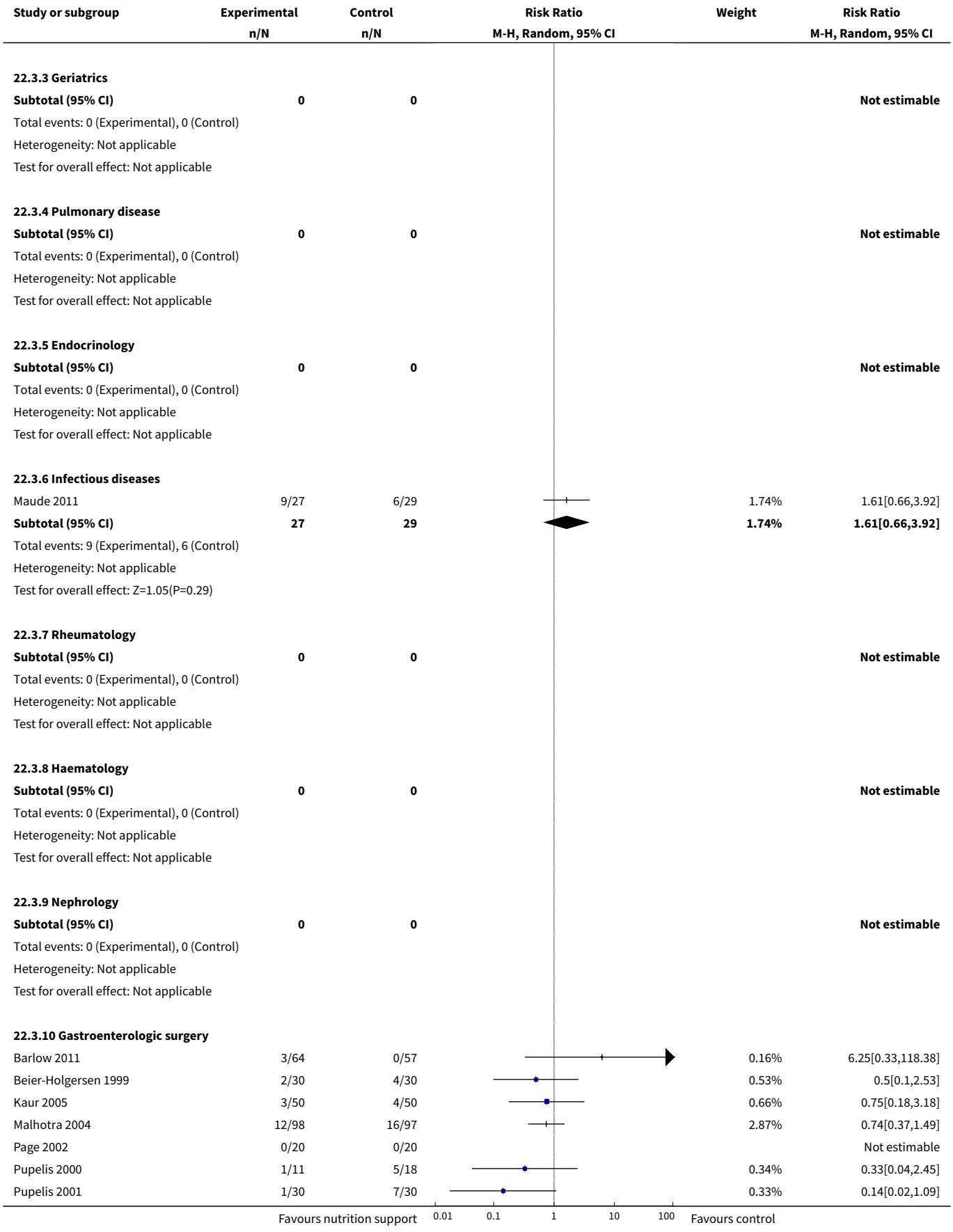
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sullivan 1998	0/8	5/10		0.18%	0.11[0.01,1.75]
Vicic 2013	5/52	10/49		1.38%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.44%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.28%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.14%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.44%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.32%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.07%	0.57[0.25,1.29]
Subtotal (95% CI)	**2218**	**1994**		**100%**	**0.84[0.75,0.95]**
Total events: 330 (Experimental), 391 (Control)					
Heterogeneity: Tau²=0; Chi²=36.02, df=37(P=0.51); I²=0%					
Test for overall effect: Z=2.83(P=0)					
22.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**2218**	**1994**		**100%**	**0.84[0.75,0.95]**
Total events: 330 (Experimental), 391 (Control)					
Heterogeneity: Tau²=0; Chi²=36.02, df=37(P=0.51); I²=0%					
Test for overall effect: Z=2.83(P=0)					
Test for subgroup differences: Not applicable					

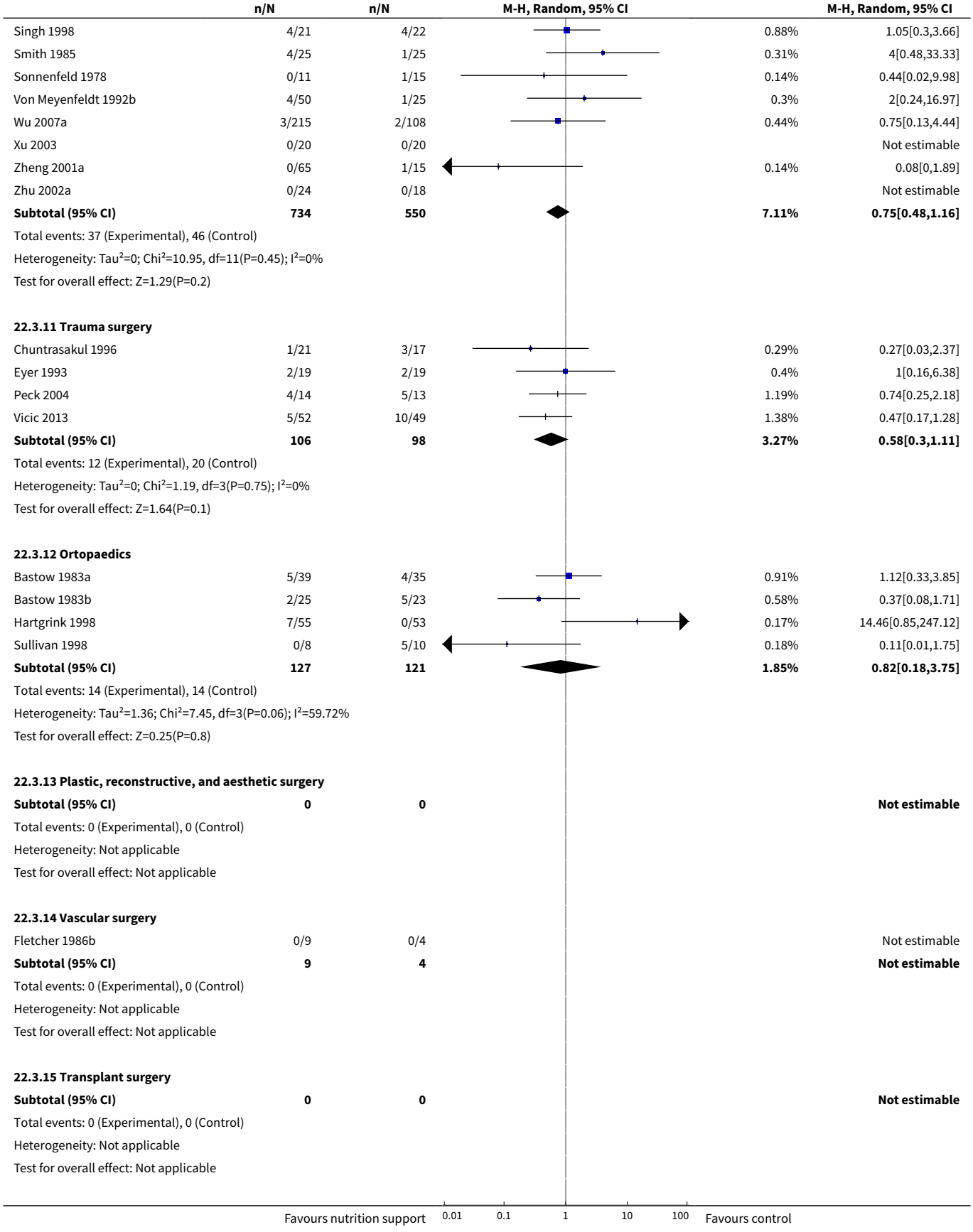
Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 22.3. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 3 All-cause mortality - medical speciality.

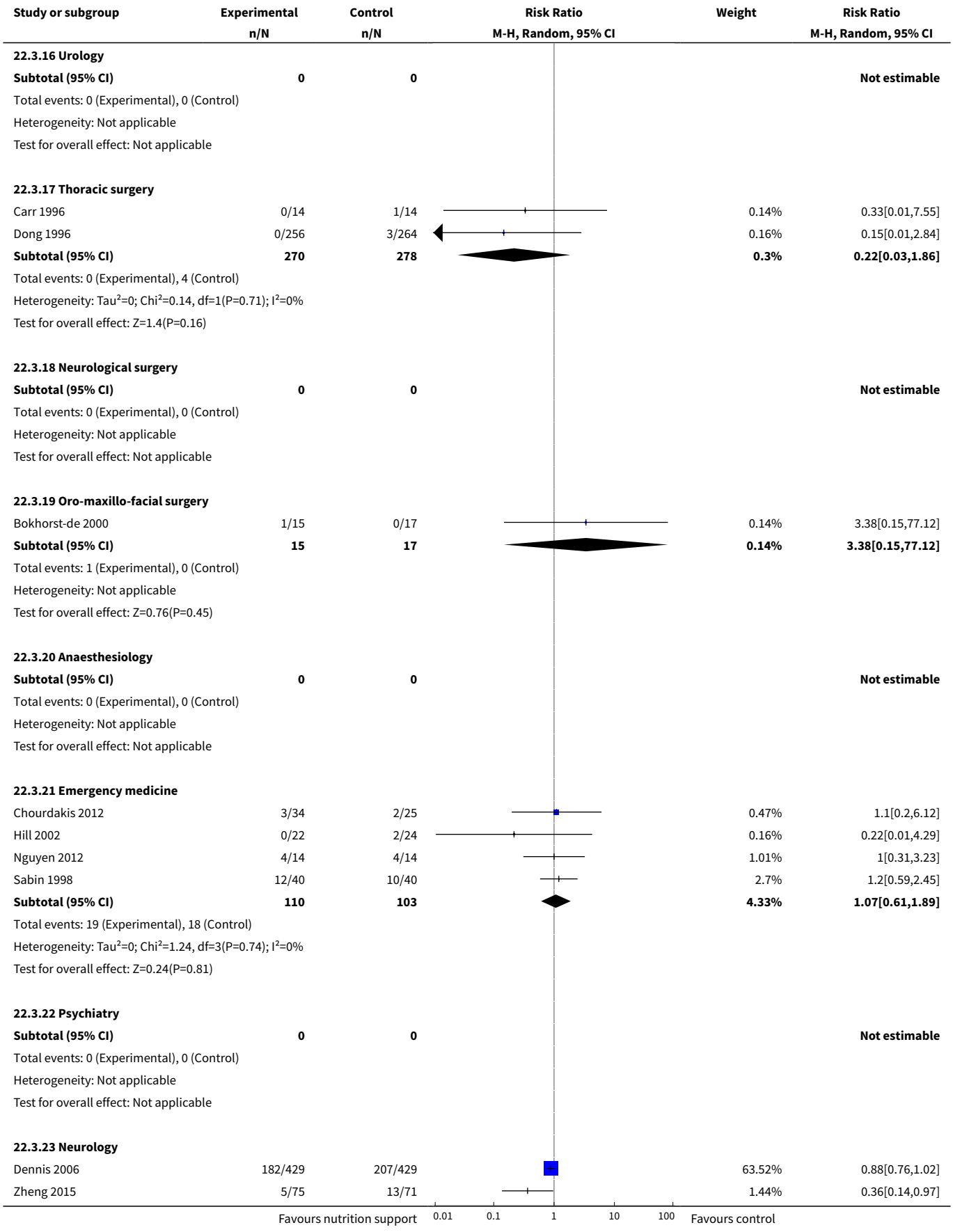
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
22.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
22.3.2 Medical gastroenterology and hepatology					
Kearns 1992	5/16	4/15		1.12%	1.17[0.39,3.56]
Lediginhen 1997	3/12	2/10		0.55%	1.25[0.26,6.07]
Moreno 2016	30/68	35/68		11.07%	0.86[0.6,1.22]
Zhang 2013	1/50	3/50		0.28%	0.33[0.04,3.1]
Subtotal (95% CI)	**146**	**143**		**13.02%**	**0.88[0.63,1.21]**
Total events: 39 (Experimental), 44 (Control)					
Heterogeneity: Tau²=0; Chi²=1.2, df=3(P=0.75); I²=0%					
Test for overall effect: Z=0.79(P=0.43)					

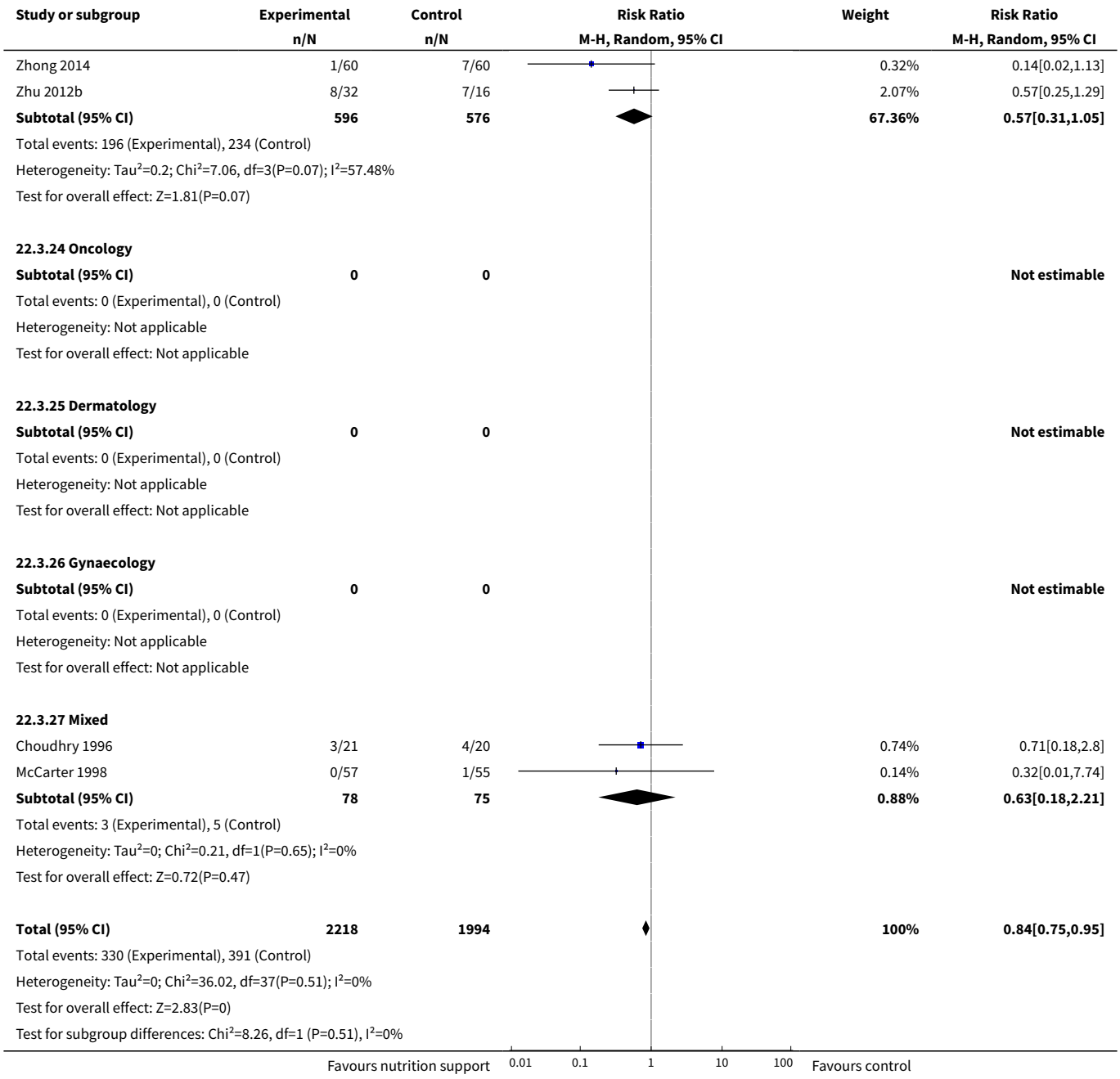
Favours nutrition support 0.01 0.1 1 10 100 Favours control



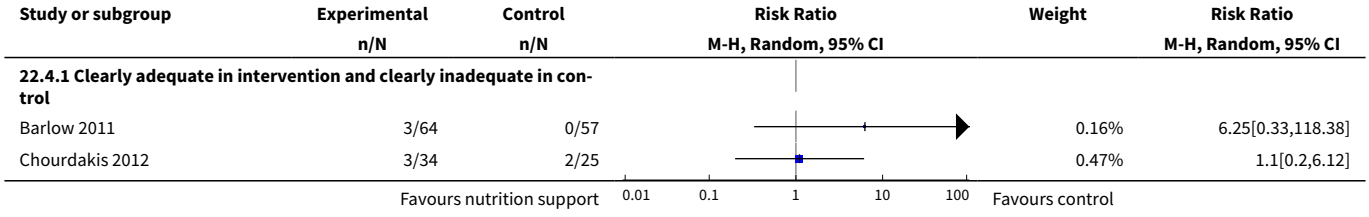


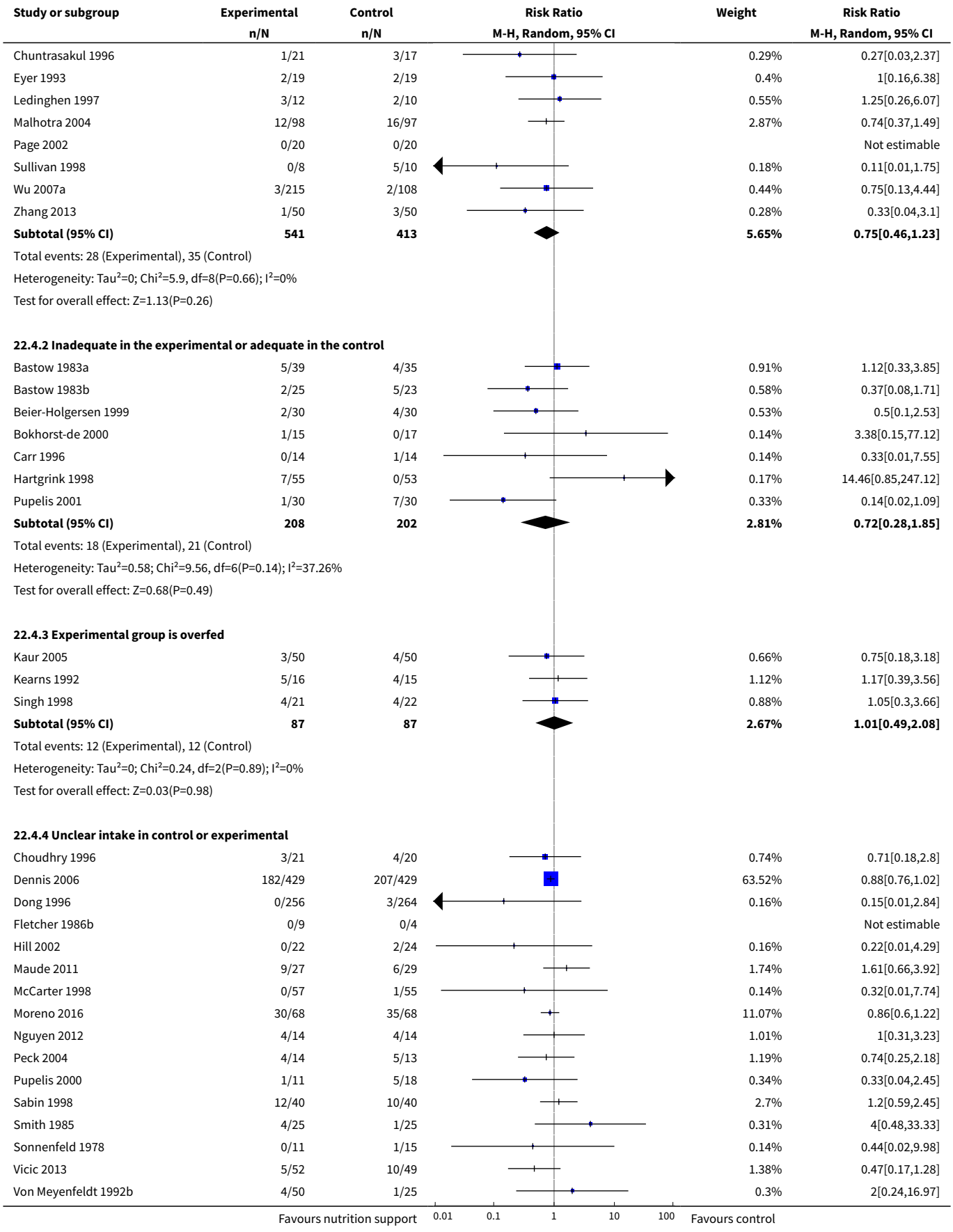
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Singh 1998	4/21	4/22		0.88%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.14%	0.44[0.02,9.98]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.44%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	1/15		0.14%	0.08[0,1.89]
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**734**	**550**		**7.11%**	**0.75[0.48,1.16]**
Total events: 37 (Experimental), 46 (Control)					
Heterogeneity: Tau^2=0; Chi^2=10.95, df=11(P=0.45); I^2=0%					
Test for overall effect: Z=1.29(P=0.2)					
22.3.11 Trauma surgery					
Chuntrasakul 1996	1/21	3/17		0.29%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.4%	1[0.16,6.38]
Peck 2004	4/14	5/13		1.19%	0.74[0.25,2.18]
Vicic 2013	5/52	10/49		1.38%	0.47[0.17,1.28]
Subtotal (95% CI)	**106**	**98**		**3.27%**	**0.58[0.3,1.11]**
Total events: 12 (Experimental), 20 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.19, df=3(P=0.75); I^2=0%					
Test for overall effect: Z=1.64(P=0.1)					
22.3.12 Ortopaedics					
Bastow 1983a	5/39	4/35		0.91%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Hartgrink 1998	7/55	0/53		0.17%	14.46[0.85,247.12]
Sullivan 1998	0/8	5/10		0.18%	0.11[0.01,1.75]
Subtotal (95% CI)	**127**	**121**		**1.85%**	**0.82[0.18,3.75]**
Total events: 14 (Experimental), 14 (Control)					
Heterogeneity: Tau^2=1.36; Chi^2=7.45, df=3(P=0.06); I^2=59.72%					
Test for overall effect: Z=0.25(P=0.8)					
22.3.13 Plastic, reconstructive, and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
22.3.14 Vascular surgery					
Fletcher 1986b	0/9	0/4			Not estimable
Subtotal (95% CI)	**9**	**4**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
22.3.15 Transplant surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					



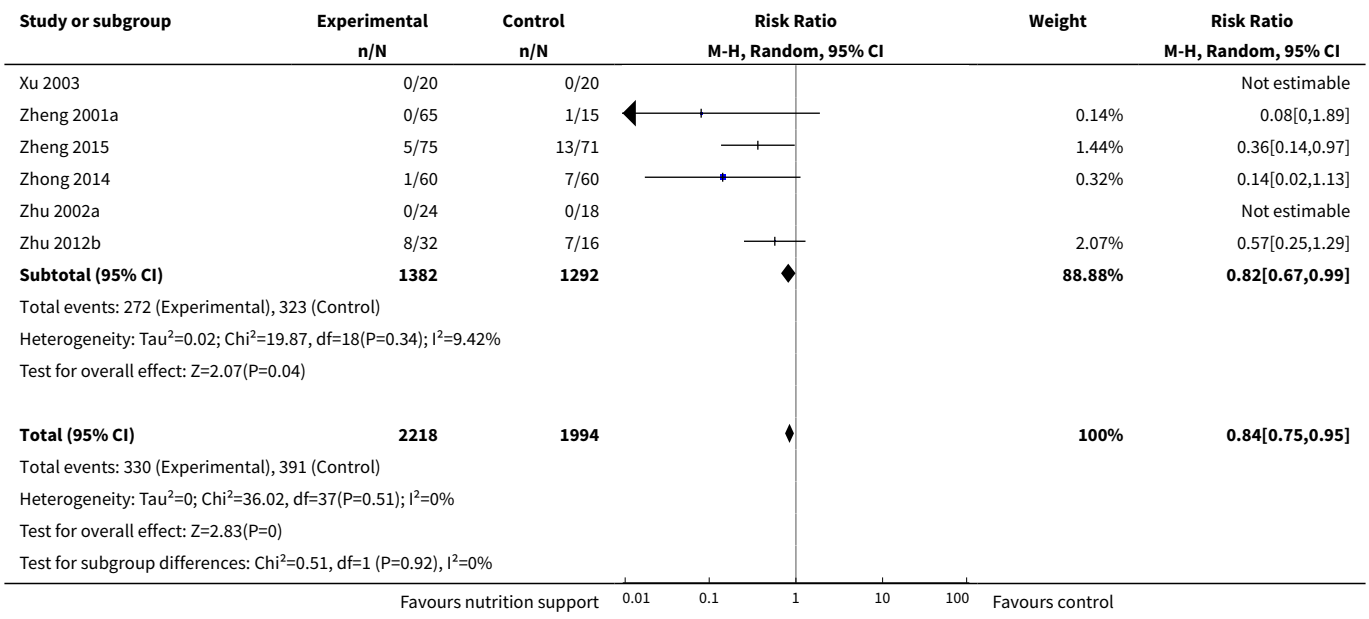


Analysis 22.4. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 4 All-cause mortality - based on adequacy of the amount of calories.



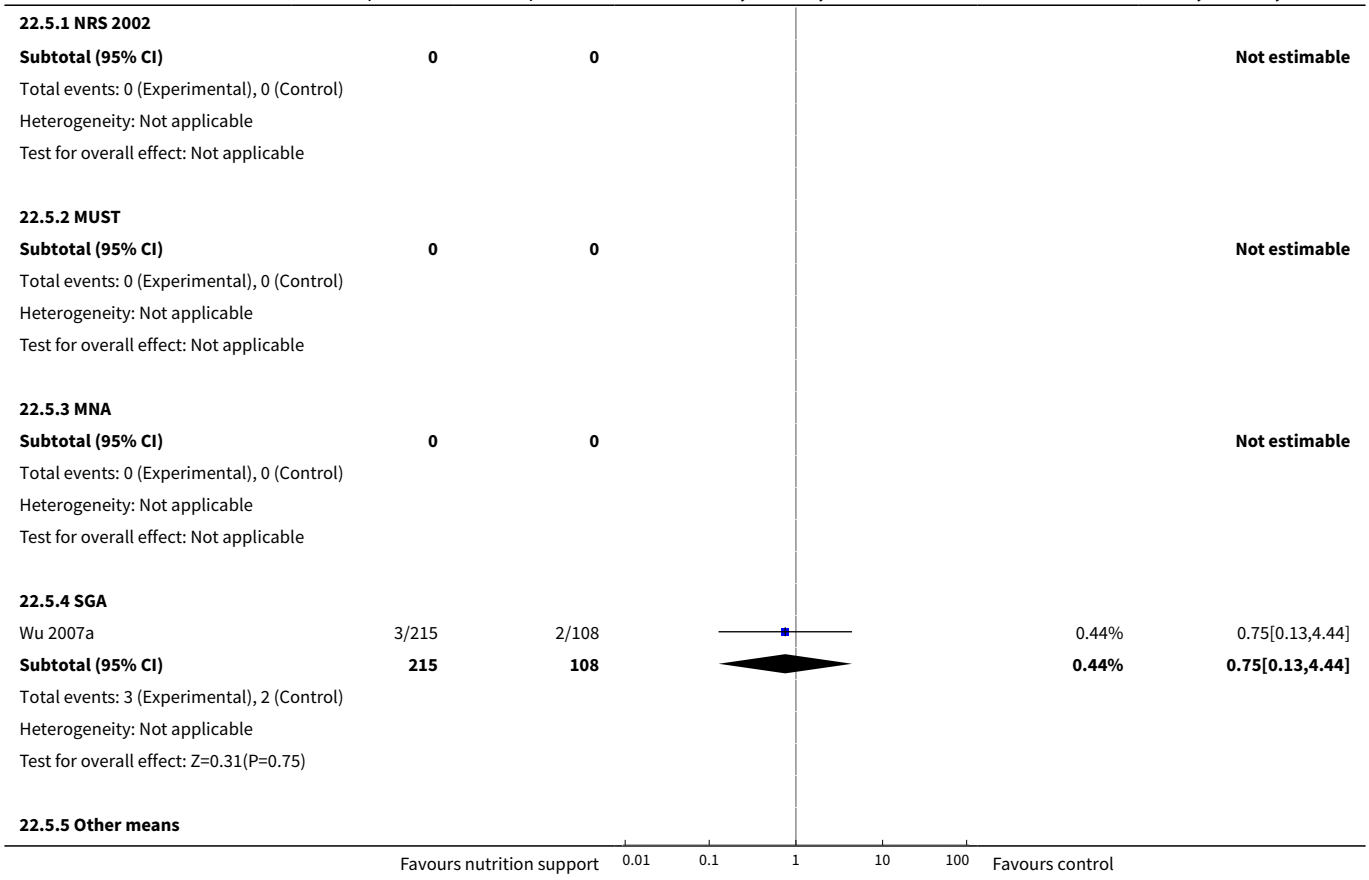


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chuntrasakul 1996	1/21	3/17		0.29%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.4%	1[0.16,6.38]
Lediughen 1997	3/12	2/10		0.55%	1.25[0.26,6.07]
Malhotra 2004	12/98	16/97		2.87%	0.74[0.37,1.49]
Page 2002	0/20	0/20			Not estimable
Sullivan 1998	0/8	5/10		0.18%	0.11[0.01,1.75]
Wu 2007a	3/215	2/108		0.44%	0.75[0.13,4.44]
Zhang 2013	1/50	3/50		0.28%	0.33[0.04,3.1]
Subtotal (95% CI)	**541**	**413**		**5.65%**	**0.75[0.46,1.23]**
Total events: 28 (Experimental), 35 (Control)					
Heterogeneity: Tau²=0; Chi²=5.9, df=8(P=0.66); I²=0%					
Test for overall effect: Z=1.13(P=0.26)					
22.4.2 Inadequate in the experimental or adequate in the control					
Bastow 1983a	5/39	4/35		0.91%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.53%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.14%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.14%	0.33[0.01,7.55]
Hartgrink 1998	7/55	0/53		0.17%	14.46[0.85,247.12]
Pupelis 2001	1/30	7/30		0.33%	0.14[0.02,1.09]
Subtotal (95% CI)	**208**	**202**		**2.81%**	**0.72[0.28,1.85]**
Total events: 18 (Experimental), 21 (Control)					
Heterogeneity: Tau²=0.58; Chi²=9.56, df=6(P=0.14); I²=37.26%					
Test for overall effect: Z=0.68(P=0.49)					
22.4.3 Experimental group is overfed					
Kaur 2005	3/50	4/50		0.66%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		1.12%	1.17[0.39,3.56]
Singh 1998	4/21	4/22		0.88%	1.05[0.3,3.66]
Subtotal (95% CI)	**87**	**87**		**2.67%**	**1.01[0.49,2.08]**
Total events: 12 (Experimental), 12 (Control)					
Heterogeneity: Tau²=0; Chi²=0.24, df=2(P=0.89); I²=0%					
Test for overall effect: Z=0.03(P=0.98)					
22.4.4 Unclear intake in control or experimental					
Choudhry 1996	3/21	4/20		0.74%	0.71[0.18,2.8]
Dennis 2006	182/429	207/429		63.52%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.16%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Maude 2011	9/27	6/29		1.74%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.14%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		11.07%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1.01%	1[0.31,3.23]
Peck 2004	4/14	5/13		1.19%	0.74[0.25,2.18]
Pupelis 2000	1/11	5/18		0.34%	0.33[0.04,2.45]
Sabin 1998	12/40	10/40		2.7%	1.2[0.59,2.45]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.14%	0.44[0.02,9.98]
Vicic 2013	5/52	10/49		1.38%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]

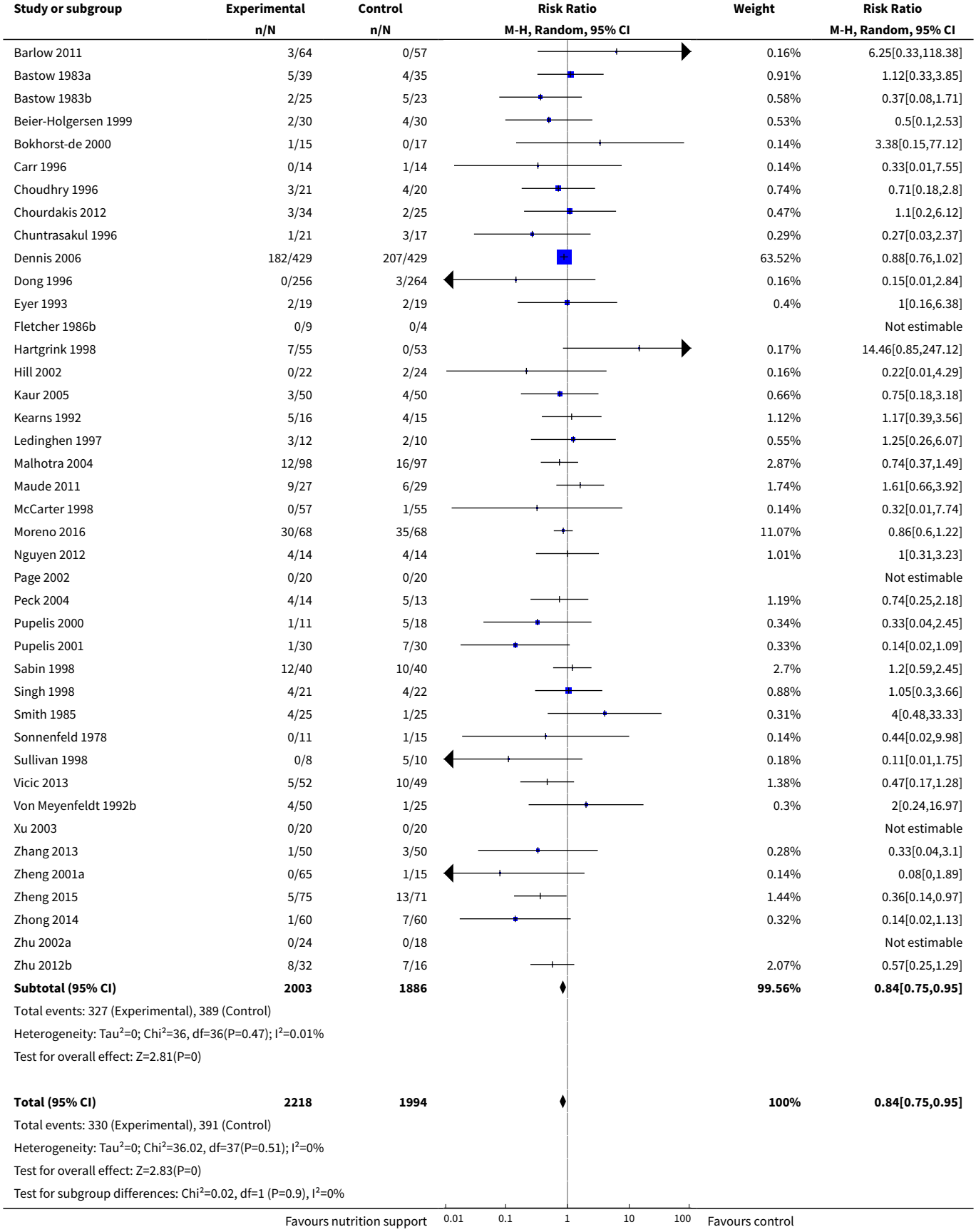


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	1/15		0.14%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.44%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.32%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.07%	0.57[0.25,1.29]
Subtotal (95% CI)	**1382**	**1292**		**88.88%**	**0.82[0.67,0.99]**
Total events: 272 (Experimental), 323 (Control)					
Heterogeneity: Tau^2=0.02; Chi^2=19.87, df=18(P=0.34); I^2=9.42%					
Test for overall effect: Z=2.07(P=0.04)					
Total (95% CI)	**2218**	**1994**		**100%**	**0.84[0.75,0.95]**
Total events: 330 (Experimental), 391 (Control)					
Heterogeneity: Tau^2=0; Chi^2=36.02, df=37(P=0.51); I^2=0%					
Test for overall effect: Z=2.83(P=0)					
Test for subgroup differences: Chi^2=0.51, df=1 (P=0.92), I^2=0%					

Analysis 22.5. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 5 All-cause mortality - different screening tools.



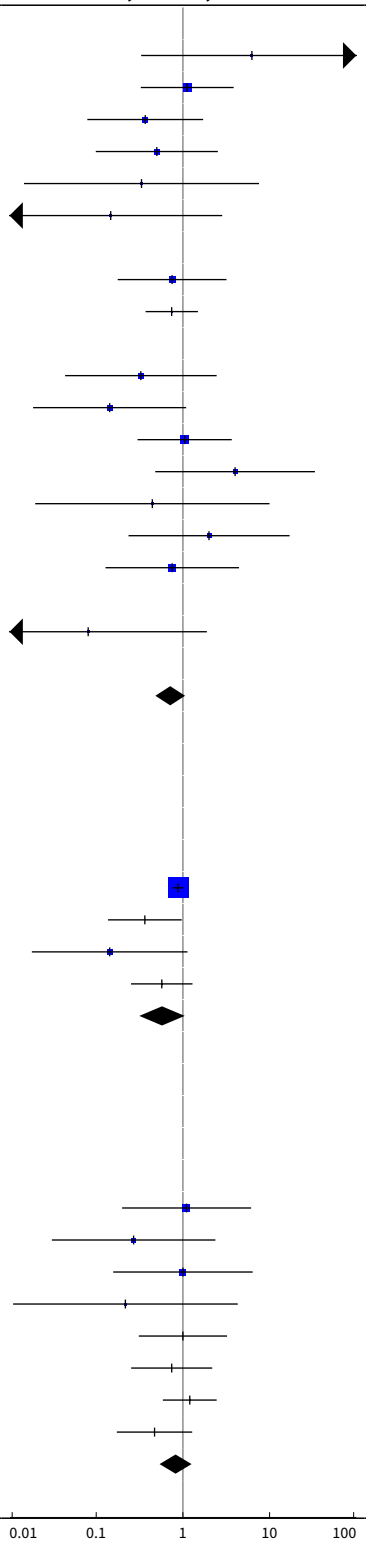
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
22.5.1 NRS 2002					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
22.5.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
22.5.3 MNA					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
22.5.4 SGA					
Wu 2007a	3/215	2/108		0.44%	0.75[0.13,4.44]
Subtotal (95% CI)	**215**	**108**		**0.44%**	**0.75[0.13,4.44]**
Total events: 3 (Experimental), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.31(P=0.75)					
22.5.5 Other means					



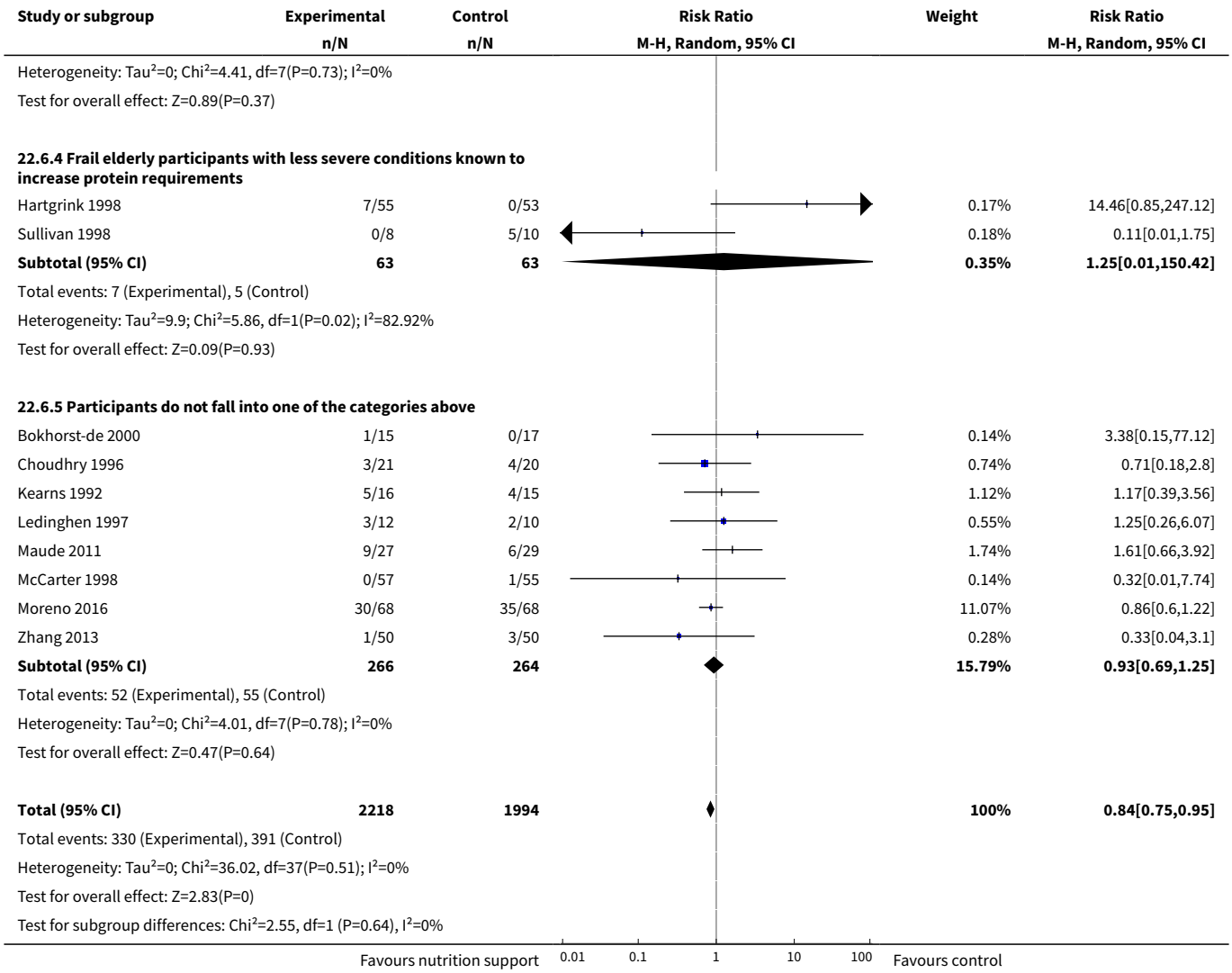
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	3/64	0/57		0.16%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.91%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.53%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.14%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.14%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		0.74%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.47%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.29%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		63.52%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.16%	0.15[0.01,2.84]
Eyer 1993	2/19	2/19		0.4%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.17%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Kaur 2005	3/50	4/50		0.66%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		1.12%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		0.55%	1.25[0.26,6.07]
Malhotra 2004	12/98	16/97		2.87%	0.74[0.37,1.49]
Maude 2011	9/27	6/29		1.74%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.14%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		11.07%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1.01%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		1.19%	0.74[0.25,2.18]
Pupelis 2000	1/11	5/18		0.34%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.33%	0.14[0.02,1.09]
Sabin 1998	12/40	10/40		2.7%	1.2[0.59,2.45]
Singh 1998	4/21	4/22		0.88%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.14%	0.44[0.02,9.98]
Sullivan 1998	0/8	5/10		0.18%	0.11[0.01,1.75]
Vicic 2013	5/52	10/49		1.38%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.28%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.14%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.44%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.32%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.07%	0.57[0.25,1.29]
Subtotal (95% CI)	**2003**	**1886**		**99.56%**	**0.84[0.75,0.95]**
Total events: 327 (Experimental), 389 (Control)					
Heterogeneity: Tau^2=0; Chi^2=36, df=36(P=0.47); I^2=0.01%					
Test for overall effect: Z=2.81(P=0)					
Total (95% CI)	**2218**	**1994**		**100%**	**0.84[0.75,0.95]**
Total events: 330 (Experimental), 391 (Control)					
Heterogeneity: Tau^2=0; Chi^2=36.02, df=37(P=0.51); I^2=0%					
Test for overall effect: Z=2.83(P=0)					
Test for subgroup differences: Chi^2=0.02, df=1 (P=0.9), I^2=0%					

Analysis 22.6. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions.

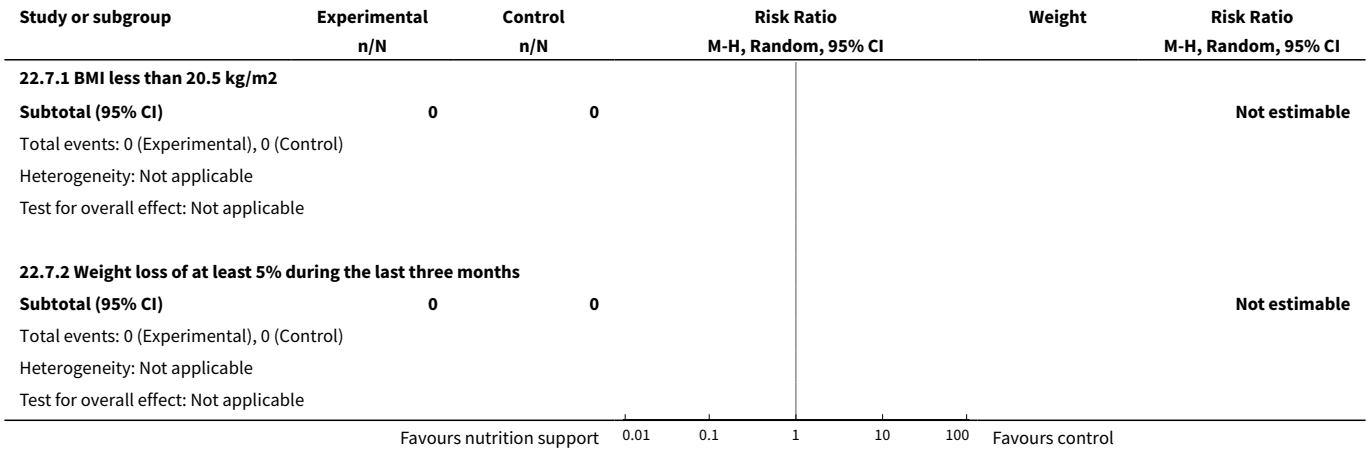
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
22.6.1 Major surgery					
Barlow 2011	3/64	0/57		0.16%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.91%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.53%	0.5[0.1,2.53]
Carr 1996	0/14	1/14		0.14%	0.33[0.01,7.55]
Dong 1996	0/256	3/264		0.16%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Kaur 2005	3/50	4/50		0.66%	0.75[0.18,3.18]
Malhotra 2004	12/98	16/97		2.87%	0.74[0.37,1.49]
Page 2002	0/20	0/20			Not estimable
Pupelis 2000	1/11	5/18		0.34%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.33%	0.14[0.02,1.09]
Singh 1998	4/21	4/22		0.88%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.14%	0.44[0.02,9.98]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.44%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	1/15		0.14%	0.08[0,1.89]
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**1077**	**890**		**8.9%**	**0.71[0.48,1.06]**
Total events: 44 (Experimental), 59 (Control)					
Heterogeneity: Tau^2=0; Chi^2=13.55, df=15(P=0.56); I^2=0%					
Test for overall effect: Z=1.68(P=0.09)					
22.6.2 Stroke					
Dennis 2006	182/429	207/429		63.52%	0.88[0.76,1.02]
Zheng 2015	5/75	13/71		1.44%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.32%	0.14[0.02,1.13]
Zhu 2012b	8/32	7/16		2.07%	0.57[0.25,1.29]
Subtotal (95% CI)	**596**	**576**		**67.36%**	**0.57[0.31,1.05]**
Total events: 196 (Experimental), 234 (Control)					
Heterogeneity: Tau^2=0.2; Chi^2=7.06, df=3(P=0.07); I^2=57.48%					
Test for overall effect: Z=1.81(P=0.07)					
22.6.3 ICU participants including trauma					
Chourdakis 2012	3/34	2/25		0.47%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.29%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.4%	1[0.16,6.38]
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Nguyen 2012	4/14	4/14		1.01%	1[0.31,3.23]
Peck 2004	4/14	5/13		1.19%	0.74[0.25,2.18]
Sabin 1998	12/40	10/40		2.7%	1.2[0.59,2.45]
Vicic 2013	5/52	10/49		1.38%	0.47[0.17,1.28]
Subtotal (95% CI)	**216**	**201**		**7.6%**	**0.82[0.54,1.26]**
Total events: 31 (Experimental), 38 (Control)					

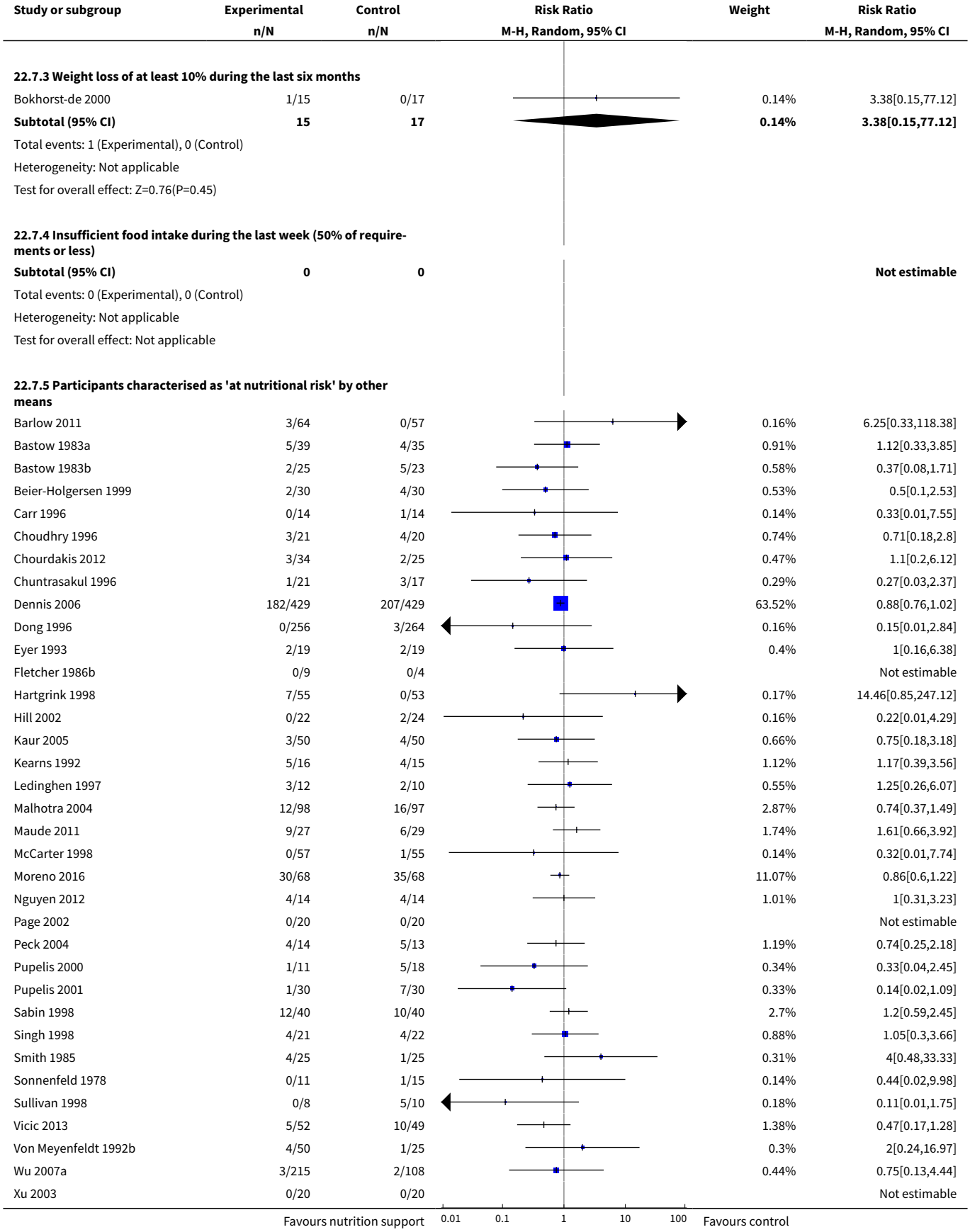


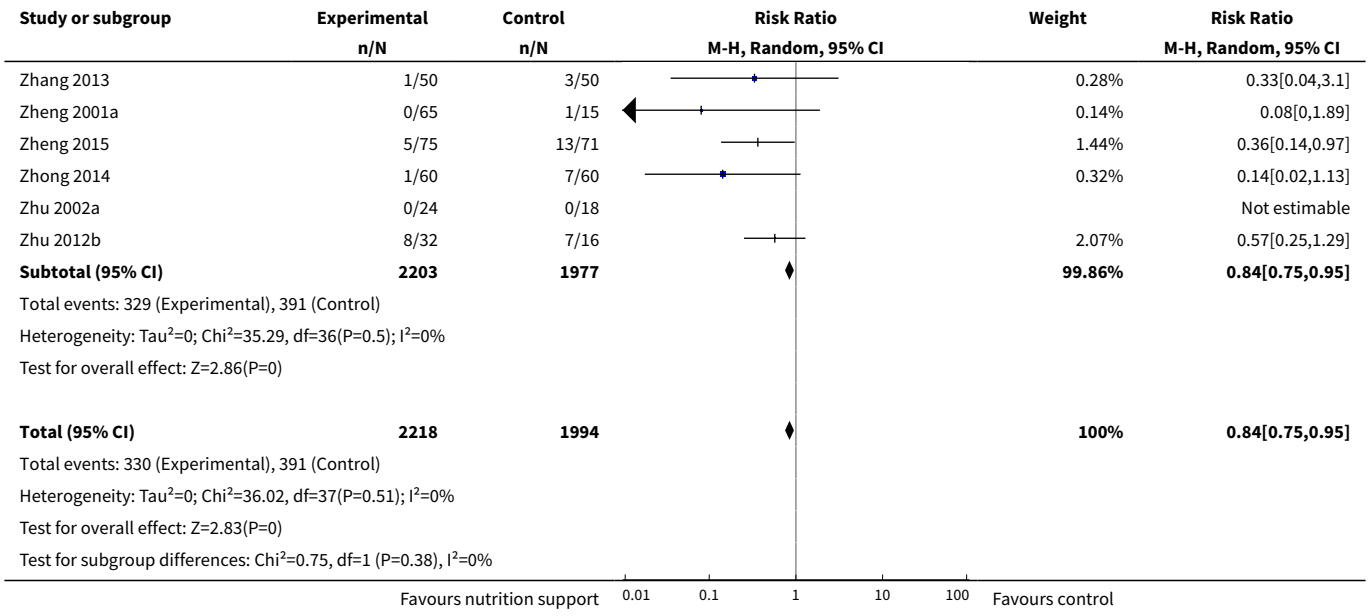
Favours nutrition support — Favours control



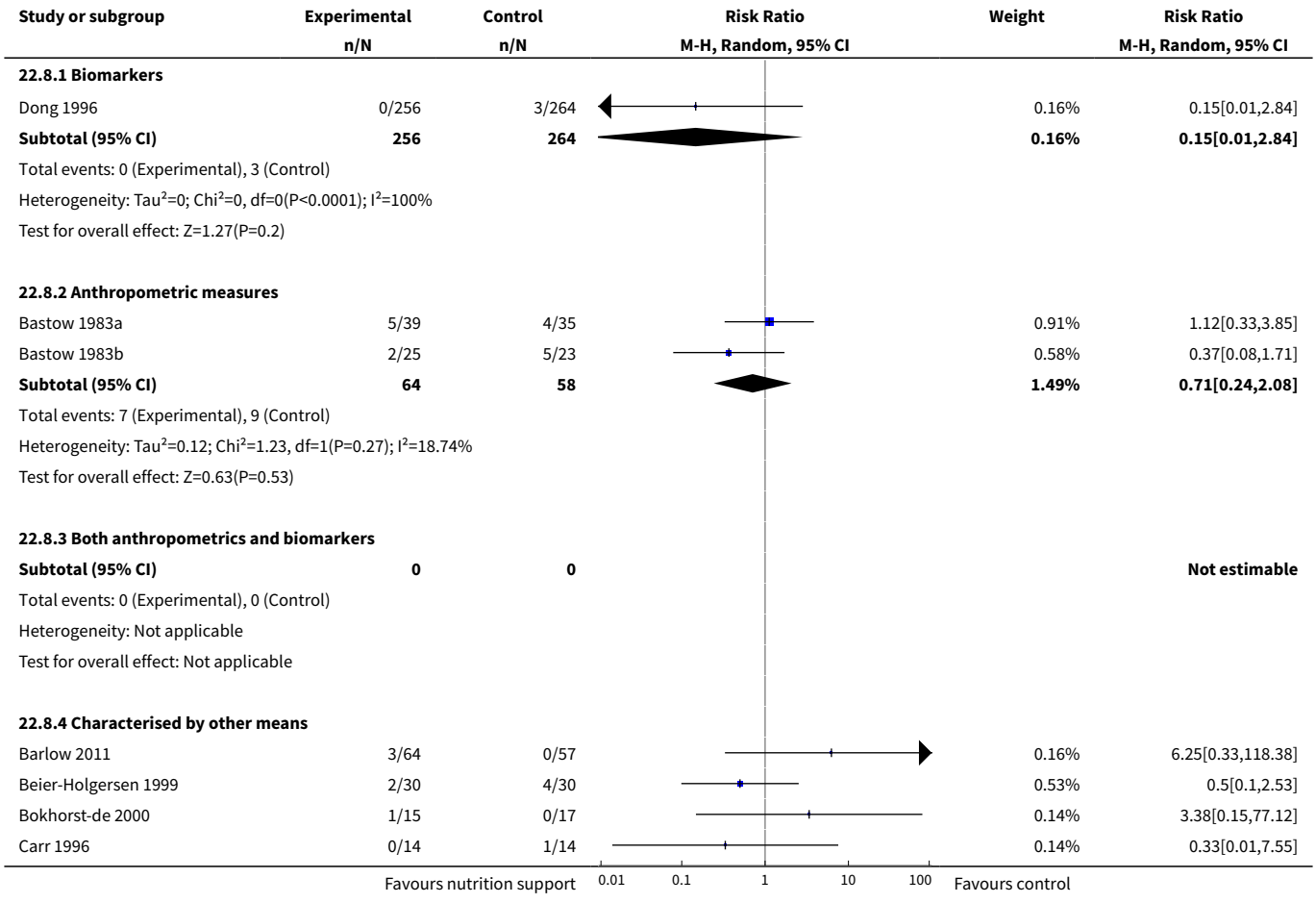
Analysis 22.7. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria.

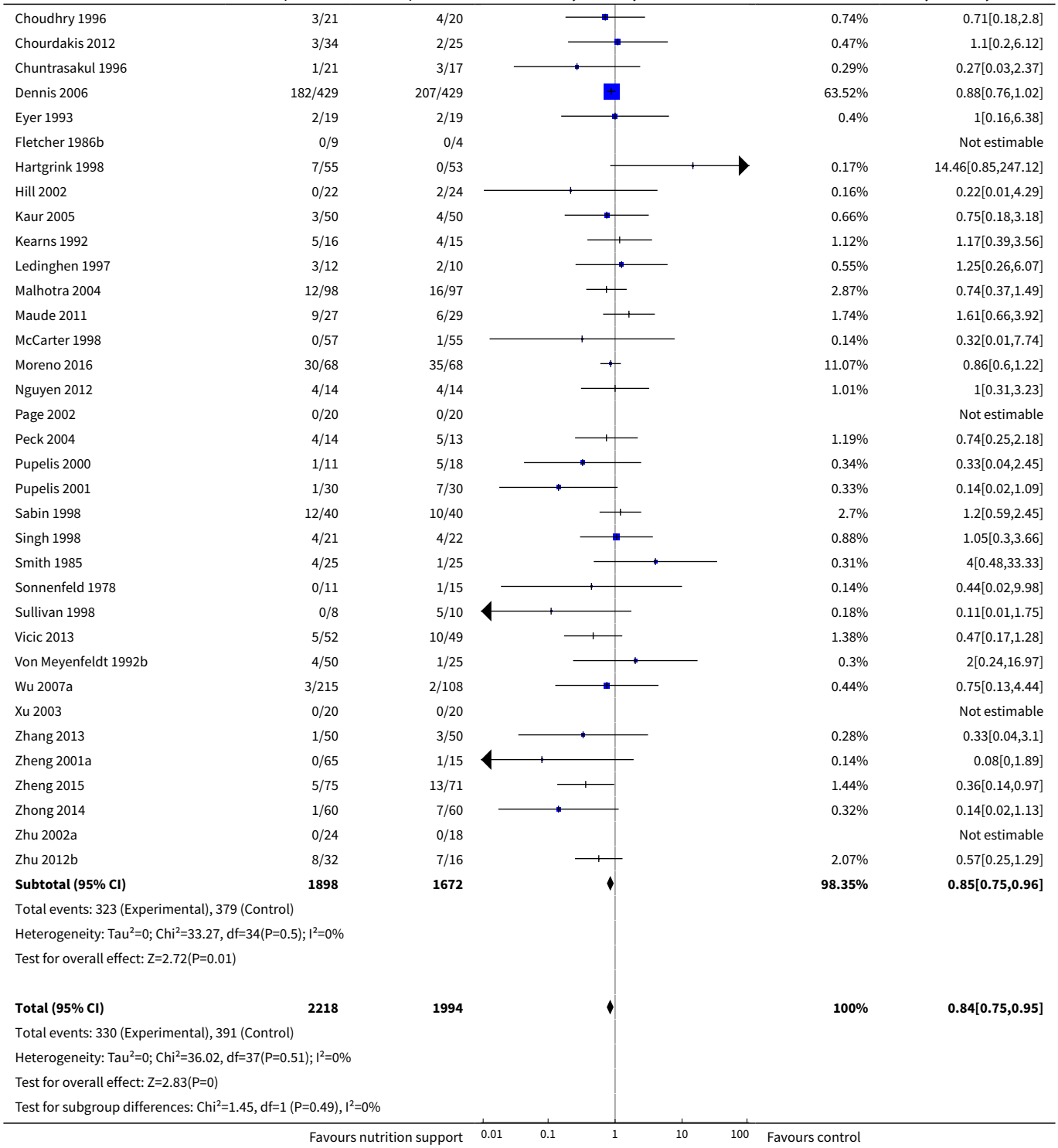






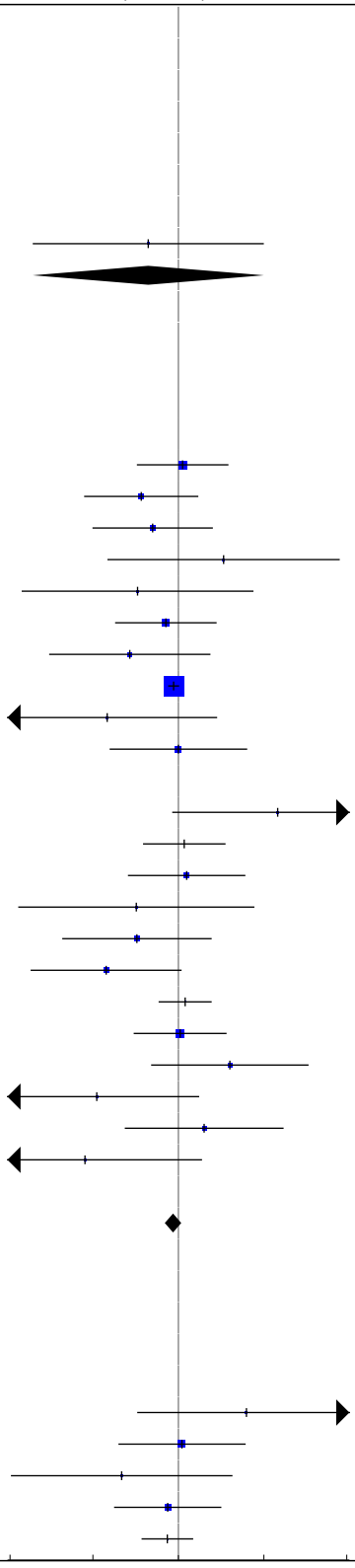
Analysis 22.8. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

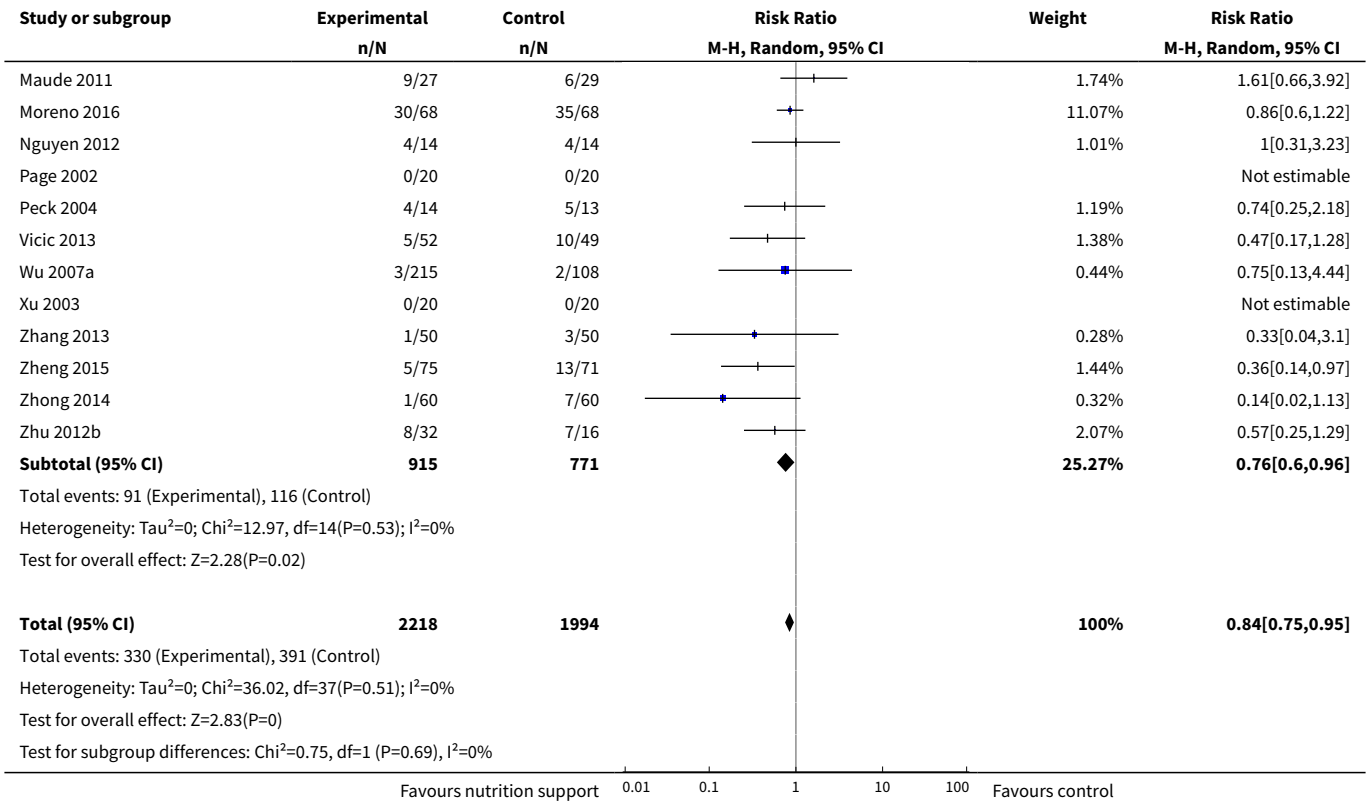




Analysis 22.9. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 9 All-cause mortality - randomisation year.

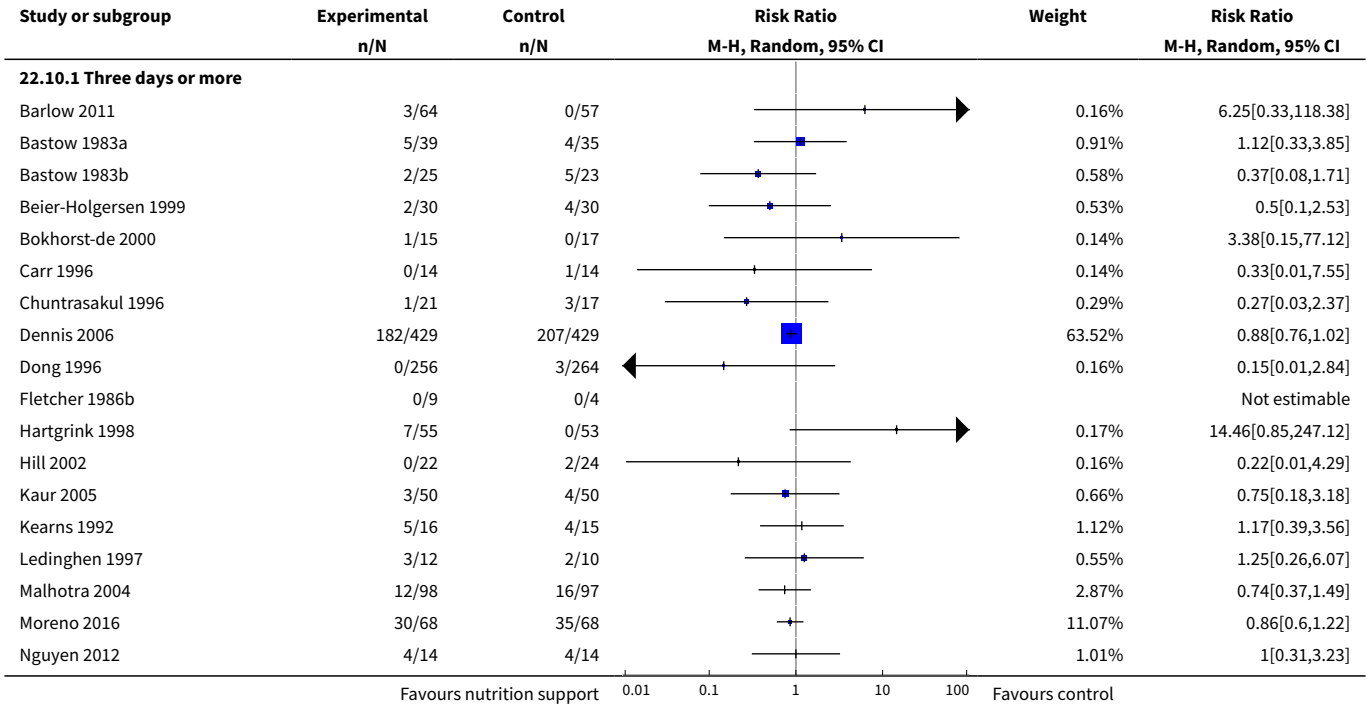
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
22.9.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
22.9.2 1960 to 1979					
Sonnenfeld 1978	0/11	1/15		0.14%	0.44[0.02,9.98]
Subtotal (95% CI)	**11**	**15**		**0.14%**	**0.44[0.02,9.98]**
Total events: 0 (Experimental), 1 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0, df=0(P<0.0001); I^2=100%					
Test for overall effect: Z=0.51(P=0.61)					
22.9.3 1980 to 1999					
Bastow 1983a	5/39	4/35		0.91%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.53%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.14%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.14%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		0.74%	0.71[0.18,2.8]
Chuntrasakul 1996	1/21	3/17		0.29%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		63.52%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.16%	0.15[0.01,2.84]
Eyer 1993	2/19	2/19		0.4%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.17%	14.46[0.85,247.12]
Kearns 1992	5/16	4/15		1.12%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		0.55%	1.25[0.26,6.07]
McCarter 1998	0/57	1/55		0.14%	0.32[0.01,7.74]
Pupelis 2000	1/11	5/18		0.34%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.33%	0.14[0.02,1.09]
Sabin 1998	12/40	10/40		2.7%	1.2[0.59,2.45]
Singh 1998	4/21	4/22		0.88%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Sullivan 1998	0/8	5/10		0.18%	0.11[0.01,1.75]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]
Zheng 2001a	0/65	1/15		0.14%	0.08[0,1.89]
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**1292**	**1208**		**74.59%**	**0.87[0.69,1.08]**
Total events: 239 (Experimental), 274 (Control)					
Heterogeneity: Tau^2=0.02; Chi^2=21.86, df=21(P=0.41); I^2=3.94%					
Test for overall effect: Z=1.27(P=0.21)					
22.9.4 After 1999					
Barlow 2011	3/64	0/57		0.16%	6.25[0.33,118.38]
Chourdakis 2012	3/34	2/25		0.47%	1.1[0.2,6.12]
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Kaur 2005	3/50	4/50		0.66%	0.75[0.18,3.18]
Malhotra 2004	12/98	16/97		2.87%	0.74[0.37,1.49]



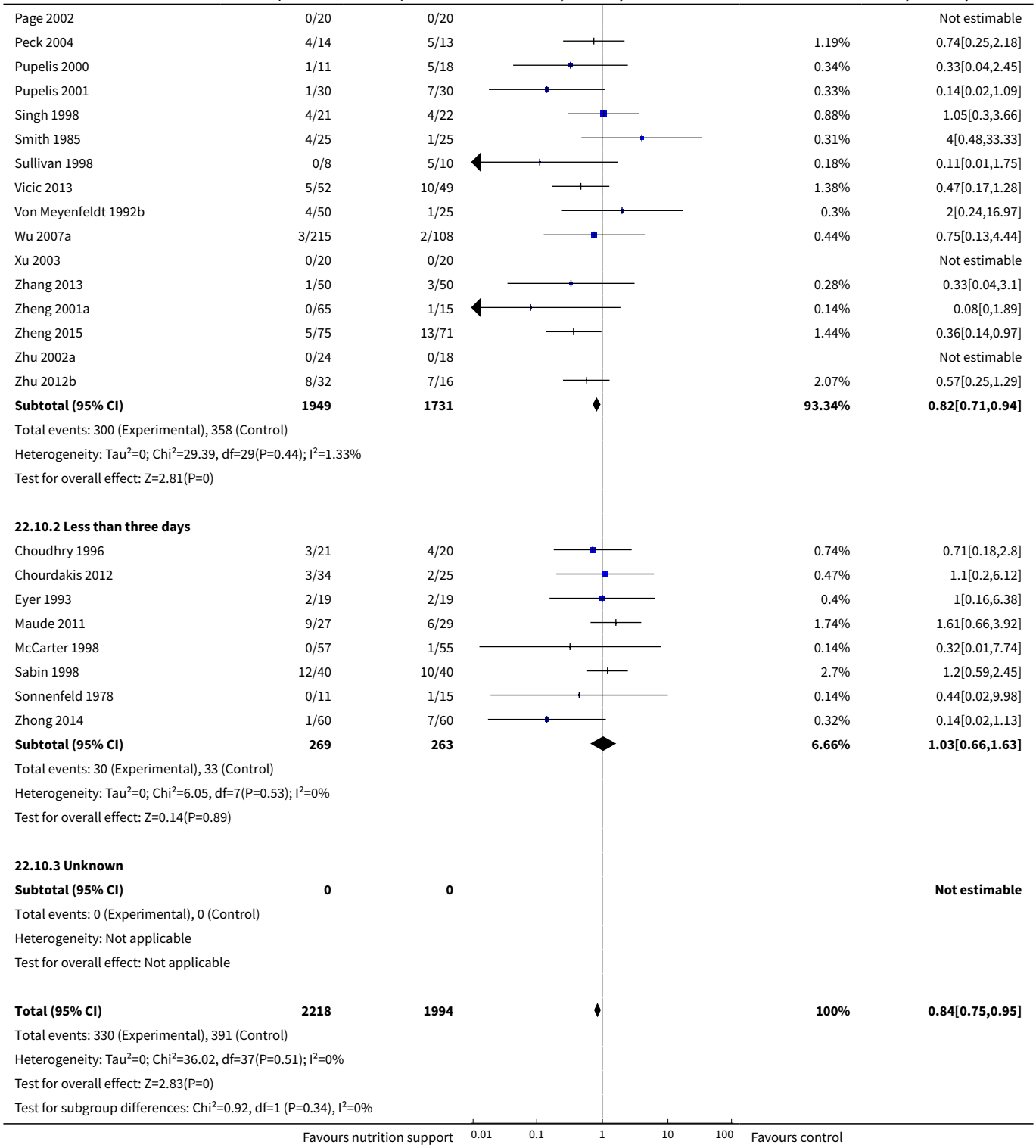


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Maude 2011	9/27	6/29		1.74%	1.61[0.66,3.92]
Moreno 2016	30/68	35/68		11.07%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1.01%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		1.19%	0.74[0.25,2.18]
Vicic 2013	5/52	10/49		1.38%	0.47[0.17,1.28]
Wu 2007a	3/215	2/108		0.44%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.28%	0.33[0.04,3.1]
Zheng 2015	5/75	13/71		1.44%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.32%	0.14[0.02,1.13]
Zhu 2012b	8/32	7/16		2.07%	0.57[0.25,1.29]
Subtotal (95% CI)	**915**	**771**		**25.27%**	**0.76[0.6,0.96]**
Total events: 91 (Experimental), 116 (Control)					
Heterogeneity: Tau^2=0; Chi^2=12.97, df=14(P=0.53); I^2=0%					
Test for overall effect: Z=2.28(P=0.02)					
Total (95% CI)	**2218**	**1994**		**100%**	**0.84[0.75,0.95]**
Total events: 330 (Experimental), 391 (Control)					
Heterogeneity: Tau^2=0; Chi^2=36.02, df=37(P=0.51); I^2=0%					
Test for overall effect: Z=2.83(P=0)					
Test for subgroup differences: Chi^2=0.75, df=1 (P=0.69), I^2=0%					

Analysis 22.10. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.



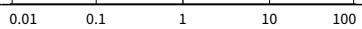
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
22.10.1 Three days or more					
Barlow 2011	3/64	0/57		0.16%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		0.91%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.58%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		0.53%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.14%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.14%	0.33[0.01,7.55]
Chuntrasakul 1996	1/21	3/17		0.29%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		63.52%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.16%	0.15[0.01,2.84]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.17%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.16%	0.22[0.01,4.29]
Kaur 2005	3/50	4/50		0.66%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		1.12%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		0.55%	1.25[0.26,6.07]
Malhotra 2004	12/98	16/97		2.87%	0.74[0.37,1.49]
Moreno 2016	30/68	35/68		11.07%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1.01%	1[0.31,3.23]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		1.19%	0.74[0.25,2.18]
Pupelis 2000	1/11	5/18		0.34%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.33%	0.14[0.02,1.09]
Singh 1998	4/21	4/22		0.88%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Sullivan 1998	0/8	5/10		0.18%	0.11[0.01,1.75]
Vicic 2013	5/52	10/49		1.38%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.3%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.44%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.28%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.14%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.44%	0.36[0.14,0.97]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.07%	0.57[0.25,1.29]
Subtotal (95% CI)	**1949**	**1731**		**93.34%**	**0.82[0.71,0.94]**
Total events: 300 (Experimental), 358 (Control)					
Heterogeneity: Tau^2=0; Chi^2=29.39, df=29(P=0.44); I^2=1.33%					
Test for overall effect: Z=2.81(P=0)					
22.10.2 Less than three days					
Choudhry 1996	3/21	4/20		0.74%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.47%	1.1[0.2,6.12]
Eyer 1993	2/19	2/19		0.4%	1[0.16,6.38]
Maude 2011	9/27	6/29		1.74%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.14%	0.32[0.01,7.74]
Sabin 1998	12/40	10/40		2.7%	1.2[0.59,2.45]
Sonnenfeld 1978	0/11	1/15		0.14%	0.44[0.02,9.98]
Zhong 2014	1/60	7/60		0.32%	0.14[0.02,1.13]
Subtotal (95% CI)	**269**	**263**		**6.66%**	**1.03[0.66,1.63]**
Total events: 30 (Experimental), 33 (Control)					
Heterogeneity: Tau^2=0; Chi^2=6.05, df=7(P=0.53); I^2=0%					
Test for overall effect: Z=0.14(P=0.89)					
22.10.3 Unknown					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**2218**	**1994**		**100%**	**0.84[0.75,0.95]**
Total events: 330 (Experimental), 391 (Control)					
Heterogeneity: Tau^2=0; Chi^2=36.02, df=37(P=0.51); I^2=0%					
Test for overall effect: Z=2.83(P=0)					
Test for subgroup differences: Chi^2=0.92, df=1 (P=0.34), I^2=0%					

Analysis 22.11. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 11 All-cause mortality - 'best-worst case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	3/64	0/57		0.34%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		1.83%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.2%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		1.08%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.3%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.3%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		1.51%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		0.97%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.61%	0.27[0.03,2.37]
Dennis 2006	182/429	208/430		30.28%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.33%	0.15[0.01,2.84]
Eyer 1993	2/26	9/26		1.38%	0.22[0.05,0.93]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/70	17/70		3.96%	0.41[0.18,0.93]
Hill 2002	0/22	2/24		0.33%	0.22[0.01,4.29]
Kaur 2005	3/50	4/50		1.35%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		2.24%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		1.14%	1.25[0.26,6.07]
Malhotra 2004	12/100	19/100		5.62%	0.63[0.32,1.23]
Maude 2011	9/27	6/29		3.37%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.29%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		14.65%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		2.02%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/16	8/16		2.83%	0.5[0.19,1.33]
Pupelis 2000	1/11	5/18		0.71%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.7%	0.14[0.02,1.09]
Sabin 1998	12/40	10/40		4.99%	1.2[0.59,2.45]
Singh 1998	4/21	4/22		1.79%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.64%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.3%	0.44[0.02,9.98]
Sullivan 1998	0/8	5/10		0.38%	0.11[0.01,1.75]
Vicic 2013	5/52	10/49		2.72%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.63%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.91%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.58%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.29%	0.08[0,1.89]
Zheng 2015	5/75	13/71		2.83%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.67%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		3.94%	0.57[0.25,1.29]
Total (95% CI)	**2244**	**2025**		**100%**	**0.75[0.63,0.89]**
Total events: 330 (Experimental), 422 (Control)					
Heterogeneity: Tau^2=0.02; Chi^2=40.35, df=37(P=0.32); I^2=8.31%					
Test for overall effect: Z=3.35(P=0)					



Favours nutrition support — Favours control

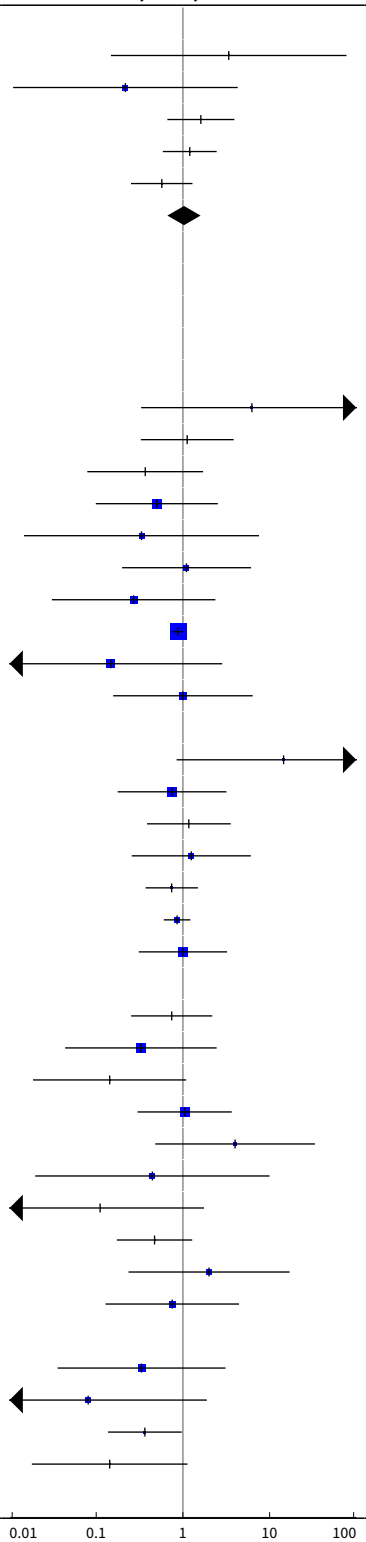
Analysis 22.12. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 12 All-cause mortality - 'worst-best case' scenario.

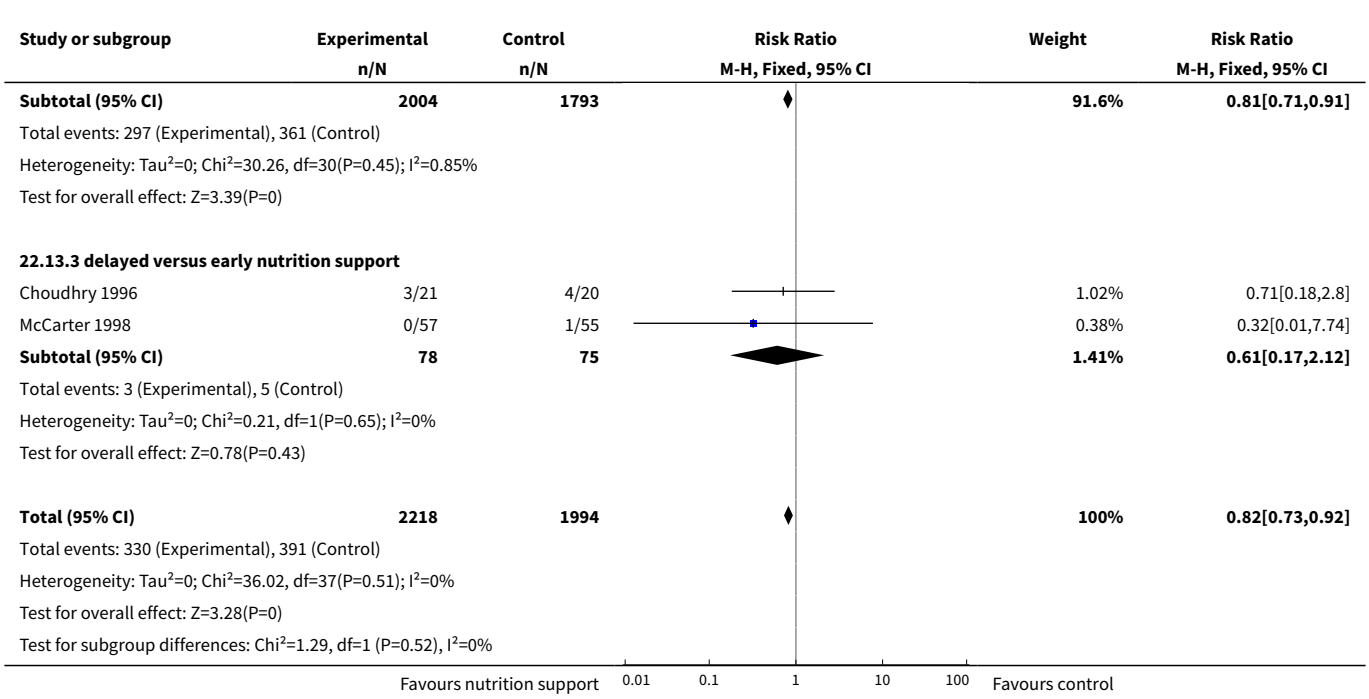
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	3/64	0/57		0.48%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		2.46%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.65%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		1.5%	0.5[0.1,2.53]
Bokhorst-de 2000	1/15	0/17		0.42%	3.38[0.15,77.12]
Carr 1996	0/14	1/14		0.43%	0.33[0.01,7.55]
Choudhry 1996	3/21	4/20		2.05%	0.71[0.18,2.8]
Chourdakis 2012	3/34	2/25		1.35%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.86%	0.27[0.03,2.37]
Dennis 2006	182/429	207/430		19.47%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.47%	0.15[0.01,2.84]
Eyer 1993	9/26	2/26		1.88%	4.5[1.07,18.85]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	22/70	0/70		0.53%	45[2.78,727.58]
Hill 2002	0/22	2/24		0.46%	0.22[0.01,4.29]
Kaur 2005	3/50	4/50		1.85%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		2.96%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		1.57%	1.25[0.26,6.07]
Malhotra 2004	14/100	16/100		6.67%	0.88[0.45,1.7]
Maude 2011	9/27	6/29		4.28%	1.61[0.66,3.92]
McCarter 1998	0/57	1/55		0.41%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		13.2%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		2.69%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	6/16	5/16		3.76%	1.2[0.46,3.15]
Pupelis 2000	1/11	5/18		1%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		0.97%	0.14[0.02,1.09]
Sabin 1998	12/40	10/40		5.97%	1.2[0.59,2.45]
Singh 1998	4/21	4/22		2.4%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.9%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.43%	0.44[0.02,9.98]
Sullivan 1998	0/8	5/10		0.54%	0.11[0.01,1.75]
Vicic 2013	5/52	10/49		3.53%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.89%	2[0.24,16.97]
Wu 2007a	3/215	2/108		1.26%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.82%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.42%	0.08[0,1.89]
Zheng 2015	5/75	13/71		3.66%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		0.95%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		4.89%	0.57[0.25,1.29]
Total (95% CI)	**2244**	**2025**		**100%**	**0.84[0.68,1.03]**
Total events: 356 (Experimental), 391 (Control)					
Heterogeneity: Tau^2=0.05; Chi^2=45.36, df=37(P=0.16); I^2=18.43%					
Test for overall effect: Z=1.67(P=0.1)					

Favours nutrition support — Favours control

Analysis 22.13. Comparison 22 Enteral - All cause mortality - maximum follow-up, Outcome 13 All-cause mortality co-interventions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
22.13.1 received nutrition support as co-intervention					
Bokhorst-de 2000	1/15	0/17		0.12%	3.38[0.15,77.12]
Hill 2002	0/22	2/24		0.6%	0.22[0.01,4.29]
Maude 2011	9/27	6/29		1.45%	1.61[0.66,3.92]
Sabin 1998	12/40	10/40		2.5%	1.2[0.59,2.45]
Zhu 2012b	8/32	7/16		2.33%	0.57[0.25,1.29]
Subtotal (95% CI)	**136**	**126**		**6.99%**	**1.03[0.66,1.6]**
Total events: 30 (Experimental), 25 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.74, df=4(P=0.32); I^2=15.53%					
Test for overall effect: Z=0.12(P=0.9)					
22.13.2 did not receive nutrition support as co-intervention					
Barlow 2011	3/64	0/57		0.13%	6.25[0.33,118.38]
Bastow 1983a	5/39	4/35		1.05%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.3%	0.37[0.08,1.71]
Beier-Holgersen 1999	2/30	4/30		1%	0.5[0.1,2.53]
Carr 1996	0/14	1/14		0.37%	0.33[0.01,7.55]
Chourdakis 2012	3/34	2/25		0.58%	1.1[0.2,6.12]
Chuntrasakul 1996	1/21	3/17		0.83%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		51.72%	0.88[0.76,1.02]
Dong 1996	0/256	3/264		0.86%	0.15[0.01,2.84]
Eyer 1993	2/19	2/19		0.5%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.13%	14.46[0.85,247.12]
Kaur 2005	3/50	4/50		1%	0.75[0.18,3.18]
Kearns 1992	5/16	4/15		1.03%	1.17[0.39,3.56]
Ledinghen 1997	3/12	2/10		0.55%	1.25[0.26,6.07]
Malhotra 2004	12/98	16/97		4.02%	0.74[0.37,1.49]
Moreno 2016	30/68	35/68		8.75%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1%	1[0.31,3.23]
Page 2002	0/20	0/20			Not estimable
Peck 2004	4/14	5/13		1.3%	0.74[0.25,2.18]
Pupelis 2000	1/11	5/18		0.95%	0.33[0.04,2.45]
Pupelis 2001	1/30	7/30		1.75%	0.14[0.02,1.09]
Singh 1998	4/21	4/22		0.98%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.25%	4[0.48,33.33]
Sonnenfeld 1978	0/11	1/15		0.32%	0.44[0.02,9.98]
Sullivan 1998	0/8	5/10		1.24%	0.11[0.01,1.75]
Vicic 2013	5/52	10/49		2.57%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.33%	2[0.24,16.97]
Wu 2007a	3/215	2/108		0.67%	0.75[0.13,4.44]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	1/50	3/50		0.75%	0.33[0.04,3.1]
Zheng 2001a	0/65	1/15		0.6%	0.08[0,1.89]
Zheng 2015	5/75	13/71		3.34%	0.36[0.14,0.97]
Zhong 2014	1/60	7/60		1.75%	0.14[0.02,1.13]
Zhu 2002a	0/24	0/18			Not estimable





Comparison 23. Enteral - Serious adverse event end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Serious adverse events - overall	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
2 Serious adverse events - bias	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
2.1 High risk of bias	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Serious adverse events - by medical specialty	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	4	289	Risk Ratio (M-H, Random, 95% CI)	0.79 [0.32, 1.96]
3.3 High risk	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.4 Geriatrics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.5 Pulmonary disease	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Infectious diseases	1	56	Risk Ratio (M-H, Random, 95% CI)	1.23 [0.52, 2.93]
3.8 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.11 Gastroenterologic surgery	19	1235	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.54, 1.03]
3.12 Trauma surgery	3	180	Risk Ratio (M-H, Random, 95% CI)	0.50 [0.20, 1.28]
3.13 Ortopaedics	4	248	Risk Ratio (M-H, Random, 95% CI)	1.05 [0.34, 3.26]
3.14 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Vascular surgery	1	13	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.16 Transplant surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.18 Thoracic surgery	2	548	Risk Ratio (M-H, Random, 95% CI)	0.15 [0.02, 1.27]
3.19 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.20 Oro-maxillo-facial surgery	1	32	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.44, 1.78]
3.21 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.22 Emergency medicine	3	154	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.31, 1.94]

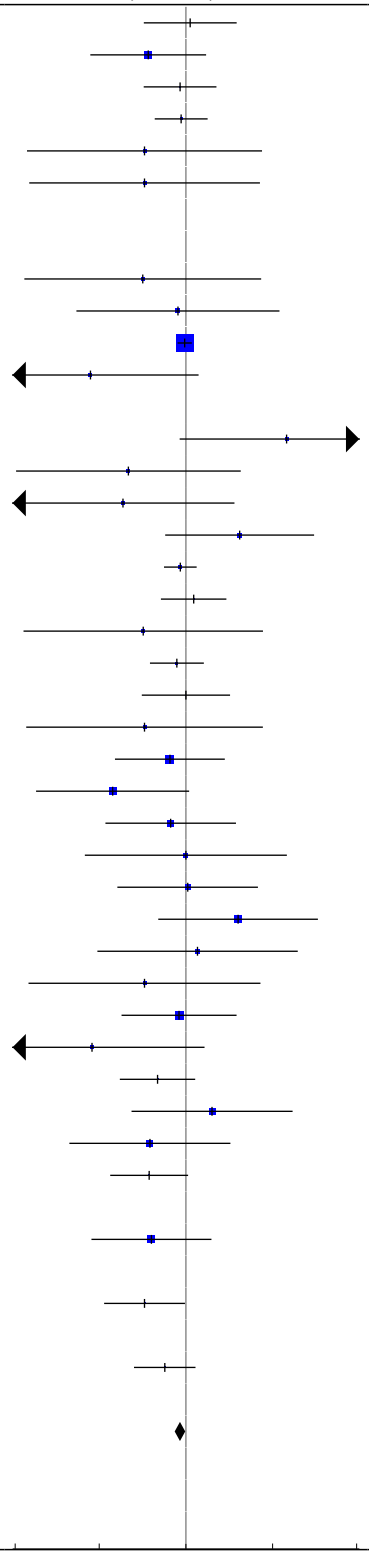
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.23 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.24 Neurology	3	1027	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.37, 1.24]
3.25 Oncology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.28 Mixed	2	153	Risk Ratio (M-H, Random, 95% CI)	0.32 [0.03, 2.99]
4 Serious adverse events - based on adequacy of the amount of calories	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
4.1 Clearly adequate in intervention and clearly inadequate in control	9	769	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.54, 1.10]
4.2 Inadequate in the experimental or adequate in the control	8	411	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.55, 1.35]
4.3 Experimental group is overfed	3	115	Risk Ratio (M-H, Random, 95% CI)	0.64 [0.13, 3.12]
4.4 Unclear intake in control or experimental	23	2640	Risk Ratio (M-H, Random, 95% CI)	0.73 [0.55, 0.98]
5 Serious adverse events - different screening tools	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
5.1 NRS 2002	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 SGA	1	323	Risk Ratio (M-H, Random, 95% CI)	0.38 [0.13, 1.06]
5.5 Other means	42	3612	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.75, 1.00]
6 Serious adverse events - participants characterised as 'at nutri-	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
tional risk' due to one of the following conditions				
6.1 Major surgery	24	1918	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.53, 0.97]
6.2 Stroke	3	1027	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.37, 1.24]
6.3 ICU participants including trauma	6	334	Risk Ratio (M-H, Random, 95% CI)	0.62 [0.32, 1.21]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	2	126	Risk Ratio (M-H, Random, 95% CI)	2.84 [0.12, 66.14]
6.5 Participants do not fall into one of the categories above	8	530	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.58, 1.30]
7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
7.1 BMI less than 20.5 kg/m2	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	1	32	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.44, 1.78]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	42	3903	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
8.1 Biomarkers	3	551	Risk Ratio (M-H, Random, 95% CI)	0.16 [0.02, 1.26]
8.2 Anthropometric measures	2	122	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.24, 2.08]
8.3 Mixed	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.4 Characterised by other means	38	3262	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.75, 1.00]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
9 Serious adverse events - randomisation year	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	1	26	Risk Ratio (M-H, Random, 95% CI)	1.36 [0.10, 19.50]
9.3 1980 to 1999	28	2749	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.79, 1.08]
9.4 After 1999	14	1160	Risk Ratio (M-H, Random, 95% CI)	0.60 [0.43, 0.83]
10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	43	3935	Risk Ratio (M-H, Random, 95% CI)	0.85 [0.74, 0.98]
10.1 Three days or more	37	3500	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.75, 1.00]
10.2 Less than three days	6	435	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.39, 1.27]
10.3 Unknown	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
11 Serious adverse events - 'best-worst case' scenario	43	3977	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.72, 0.94]
12 Serious adverse events - 'worst-best case' scenario	43	3977	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.70, 0.99]
13 Serious adverse events co-interventions	43	3935	Risk Ratio (M-H, Fixed, 95% CI)	0.83 [0.72, 0.95]
13.1 received nutrition support as co-intervention	3	126	Risk Ratio (M-H, Fixed, 95% CI)	0.66 [0.39, 1.12]
13.2 did not receive nutrition support as co-intervention	34	3466	Risk Ratio (M-H, Fixed, 95% CI)	0.83 [0.72, 0.96]
13.3 delayed versus early nutrition support	6	343	Risk Ratio (M-H, Fixed, 95% CI)	0.93 [0.51, 1.69]

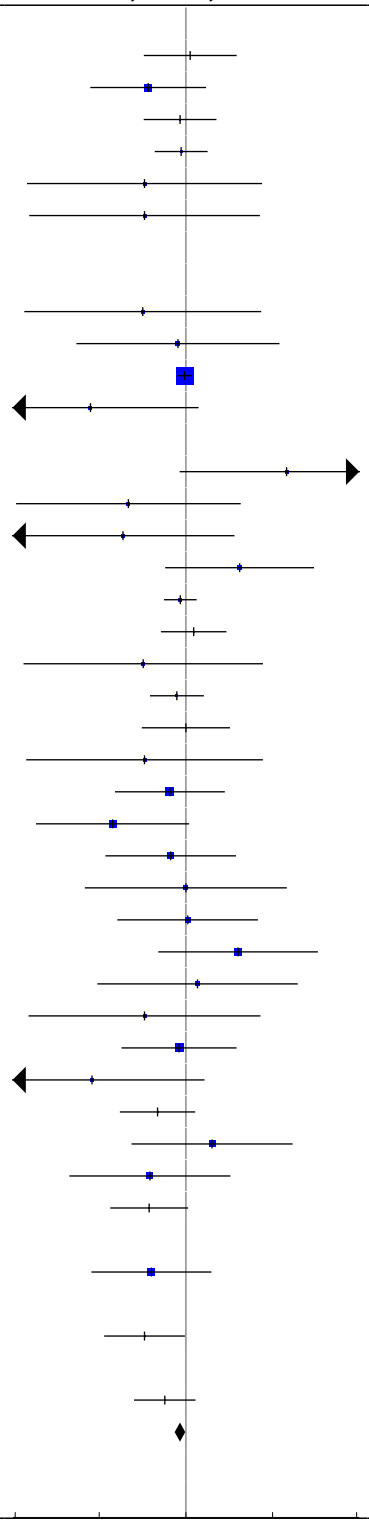
Analysis 23.1. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 1 Serious adverse events - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.83%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.11%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		3.98%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.2%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.21%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.2%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.27%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		55.72%	0.97[0.8,1.17]
Dong 1996	0/256	6/264		0.24%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.24%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.22%	0.22[0.01,4.29]
Kearns 1992	0/16	2/15		0.22%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.5%	4.17[0.58,30.06]
Malhotra 2004	27/98	31/97		10.5%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		2.61%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.19%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		3.85%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.43%	1[0.31,3.23]
Page 2002	0/20	1/20		0.2%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.92%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.65%	0.67[0.12,3.78]
Schroeder 1991	1/16	1/16		0.27%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.56%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.44%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.28%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.21%	0.33[0.02,7.24]
Sullivan 1998	2/8	3/10		0.84%	0.83[0.18,3.84]
Tong 2006a	0/45	2/18		0.22%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.97%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.43%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.43%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.84%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.78%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	4/60	12/60		1.71%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.94%	0.57[0.25,1.29]
Total (95% CI)	**2084**	**1851**		**100%**	**0.85[0.74,0.98]**
Total events: 270 (Experimental), 317 (Control)					
Heterogeneity: Tau^2=0; Chi^2=34.37, df=36(P=0.55); I^2=0%					
Test for overall effect: Z=2.21(P=0.03)					



Analysis 23.2. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 2 Serious adverse events - bias.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
23.2.1 High risk of bias					
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.83%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.11%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		3.98%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.2%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.21%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.2%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.27%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		55.72%	0.97[0.8,1.17]
Dong 1996	0/256	6/264		0.24%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.24%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.22%	0.22[0.01,4.29]
Kearns 1992	0/16	2/15		0.22%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.5%	4.17[0.58,30.06]
Malhotra 2004	27/98	31/97		10.5%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		2.61%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.19%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		3.85%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.43%	1[0.31,3.23]
Page 2002	0/20	1/20		0.2%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.92%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.65%	0.67[0.12,3.78]
Schroeder 1991	1/16	1/16		0.27%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.56%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.44%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.28%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.21%	0.33[0.02,7.24]
Sullivan 1998	2/8	3/10		0.84%	0.83[0.18,3.84]
Tong 2006a	0/45	2/18		0.22%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.97%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.43%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.43%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.84%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.78%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	4/60	12/60		1.71%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.94%	0.57[0.25,1.29]
Subtotal (95% CI)	**2084**	**1851**		**100%**	**0.85[0.74,0.98]**
Total events: 270 (Experimental), 317 (Control)					
Heterogeneity: Tau^2=0; Chi^2=34.37, df=36(P=0.55); I^2=0%					



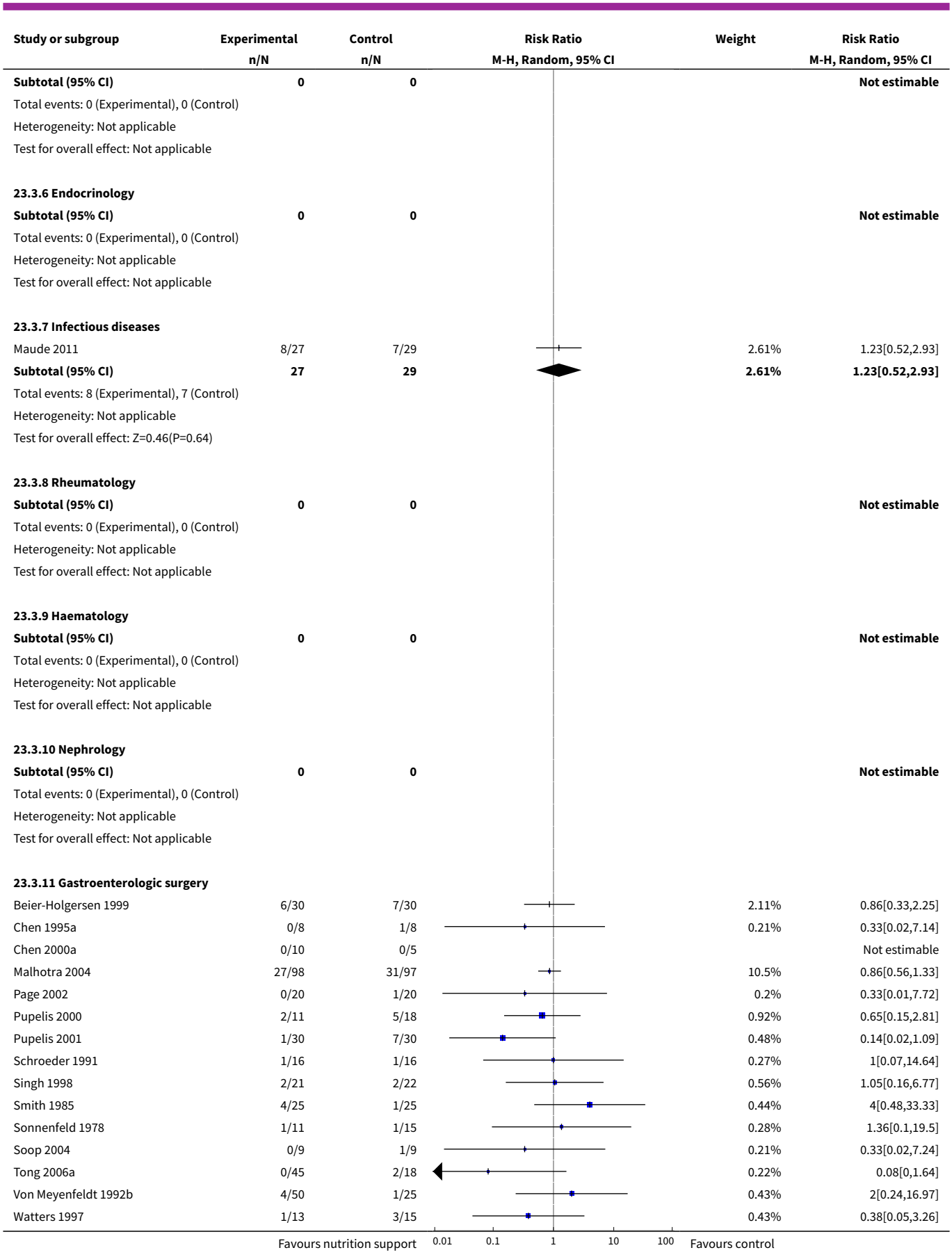
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=2.21(P=0.03)					
23.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**2084**	**1851**		**100%**	**0.85[0.74,0.98]**
Total events: 270 (Experimental), 317 (Control)					
Heterogeneity: Tau^2=0; Chi^2=34.37, df=36(P=0.55); I^2=0%					
Test for overall effect: Z=2.21(P=0.03)					
Test for subgroup differences: Not applicable					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

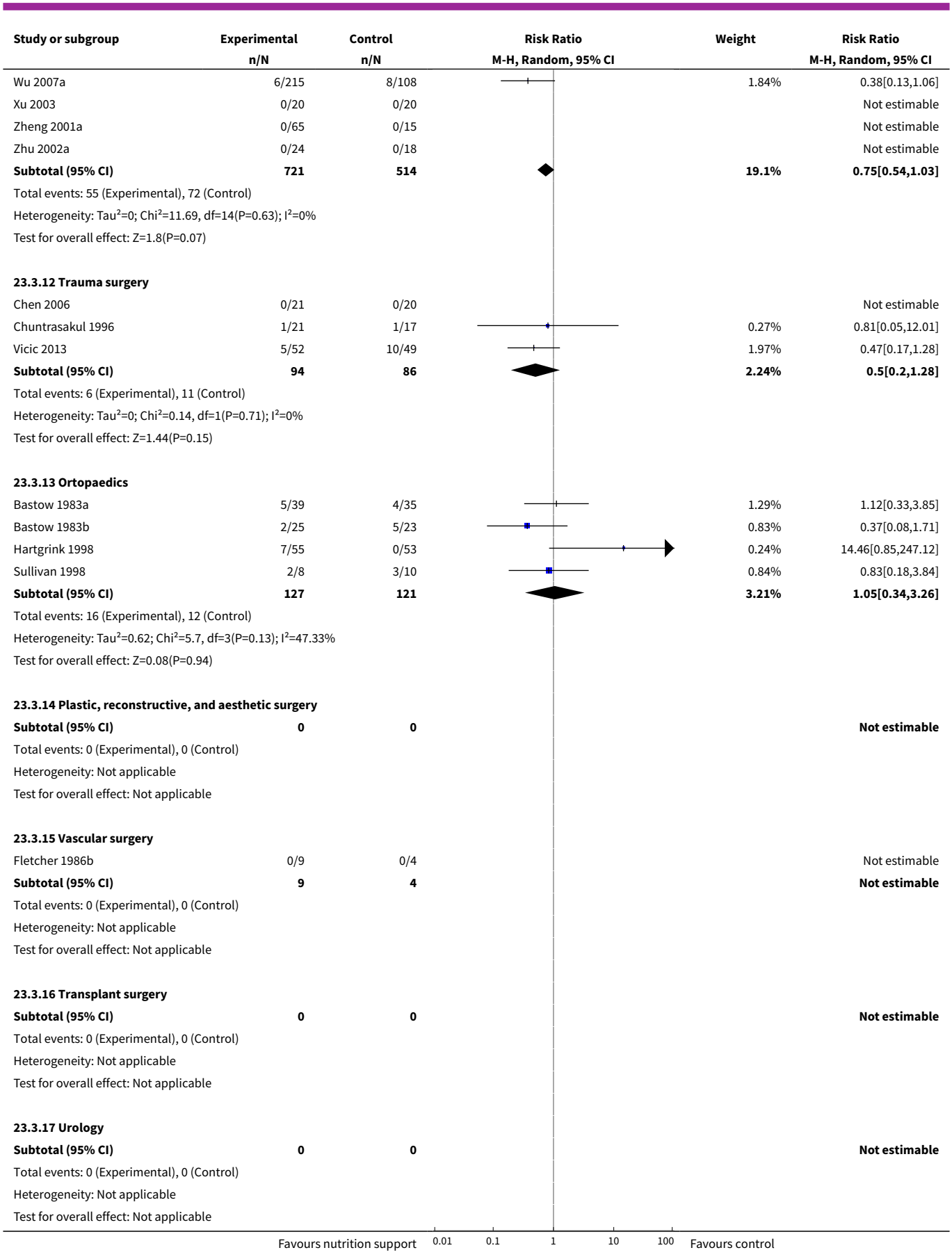
Analysis 23.3. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 3 Serious adverse events - by medical specialty.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
23.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.2 Medical gastroenterology and hepatology					
Kearns 1992	0/16	2/15		0.22%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.5%	4.17[0.58,30.06]
Moreno 2016	11/68	14/68		3.85%	0.79[0.38,1.61]
Zhang 2013	2/50	5/50		0.78%	0.4[0.08,1.97]
Subtotal (95% CI)	**146**	**143**		**5.36%**	**0.79[0.32,1.96]**
Total events: 18 (Experimental), 22 (Control)					
Heterogeneity: Tau^2=0.28; Chi^2=4.33, df=3(P=0.23); I^2=30.65%					
Test for overall effect: Z=0.51(P=0.61)					
23.3.3 High risk					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.4 Geriatrics					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.5 Pulmonary disease					

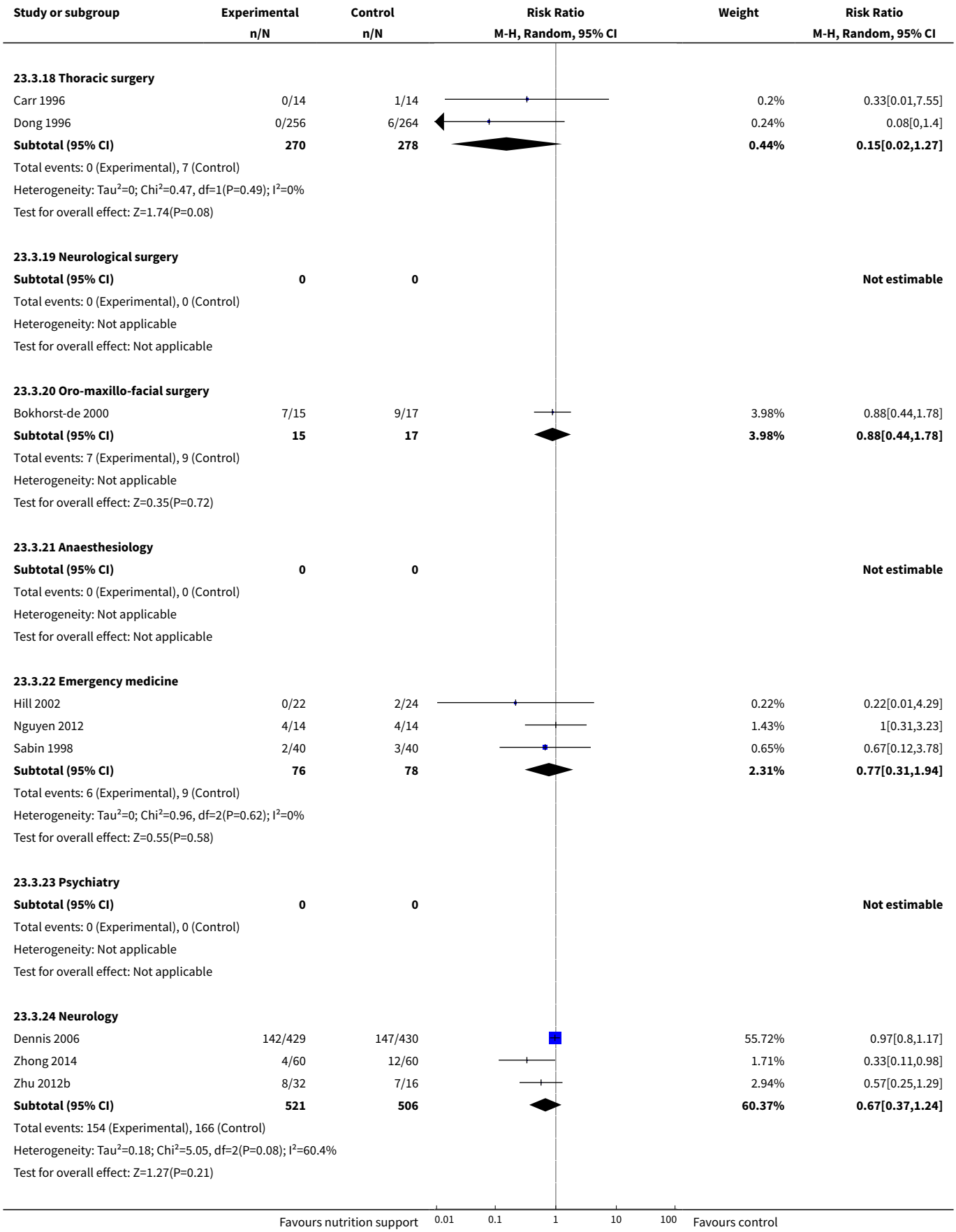
Favours nutrition support 0.01 0.1 1 10 100 Favours control

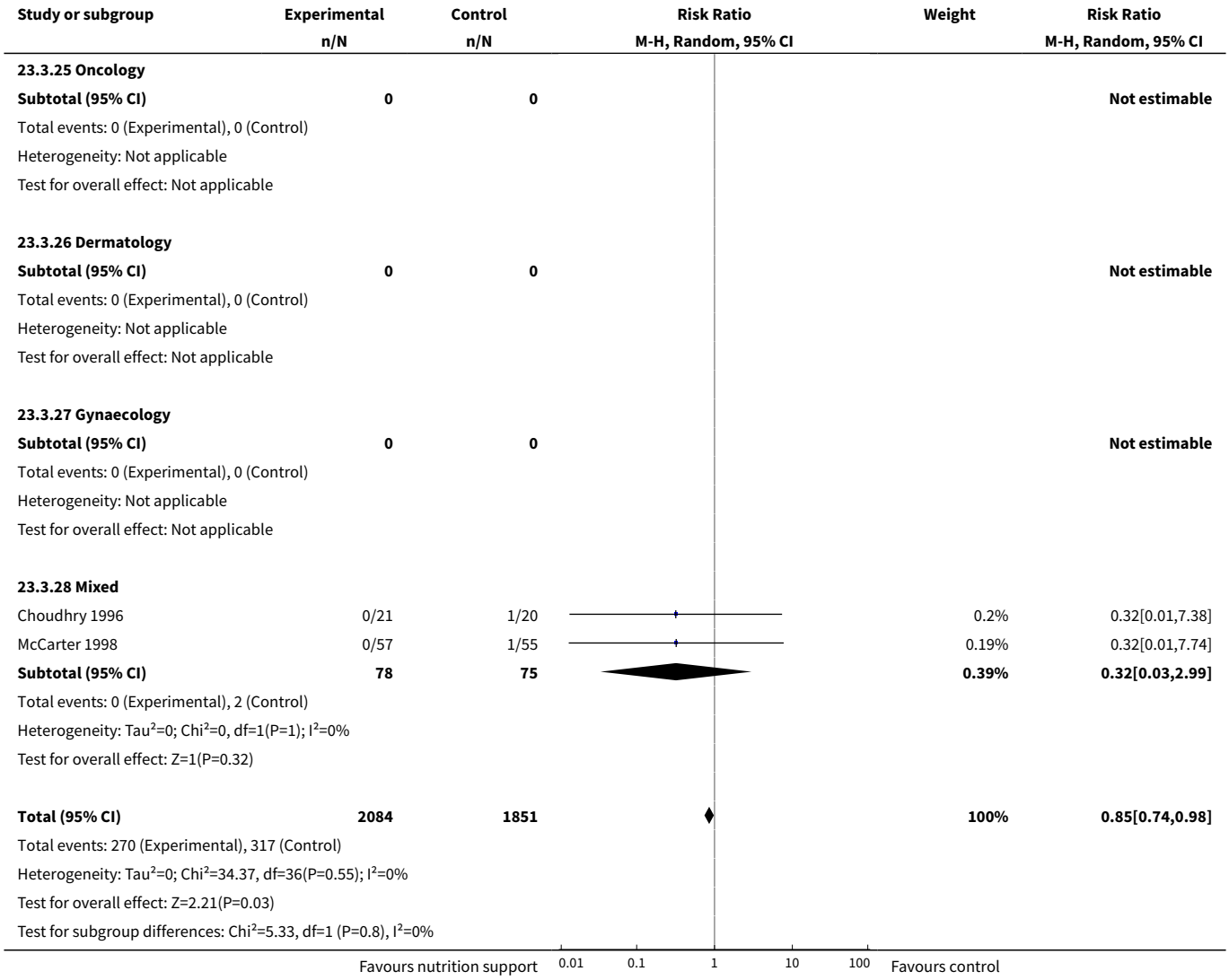


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.6 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.7 Infectious diseases					
Maude 2011	8/27	7/29		2.61%	1.23[0.52,2.93]
Subtotal (95% CI)	**27**	**29**		**2.61%**	**1.23[0.52,2.93]**
Total events: 8 (Experimental), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.46(P=0.64)					
23.3.8 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.9 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.10 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.11 Gastroenterologic surgery					
Beier-Holgersen 1999	6/30	7/30		2.11%	0.86[0.33,2.25]
Chen 1995a	0/8	1/8		0.21%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Malhotra 2004	27/98	31/97		10.5%	0.86[0.56,1.33]
Page 2002	0/20	1/20		0.2%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.92%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Schroeder 1991	1/16	1/16		0.27%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.56%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.44%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.28%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.21%	0.33[0.02,7.24]
Tong 2006a	0/45	2/18		0.22%	0.08[0,1.64]
Von Meyenfeldt 1992b	4/50	1/25		0.43%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.43%	0.38[0.05,3.26]

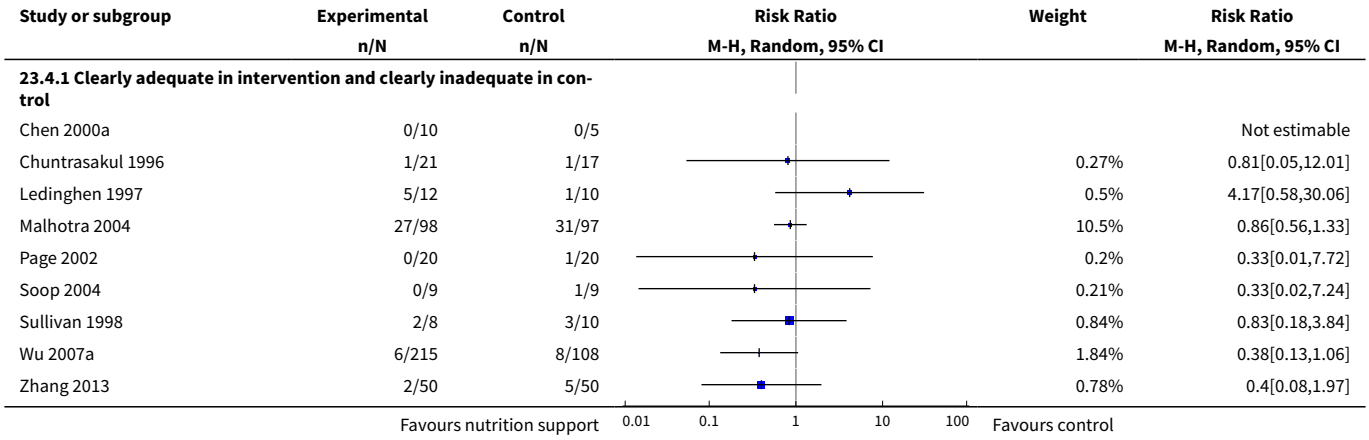


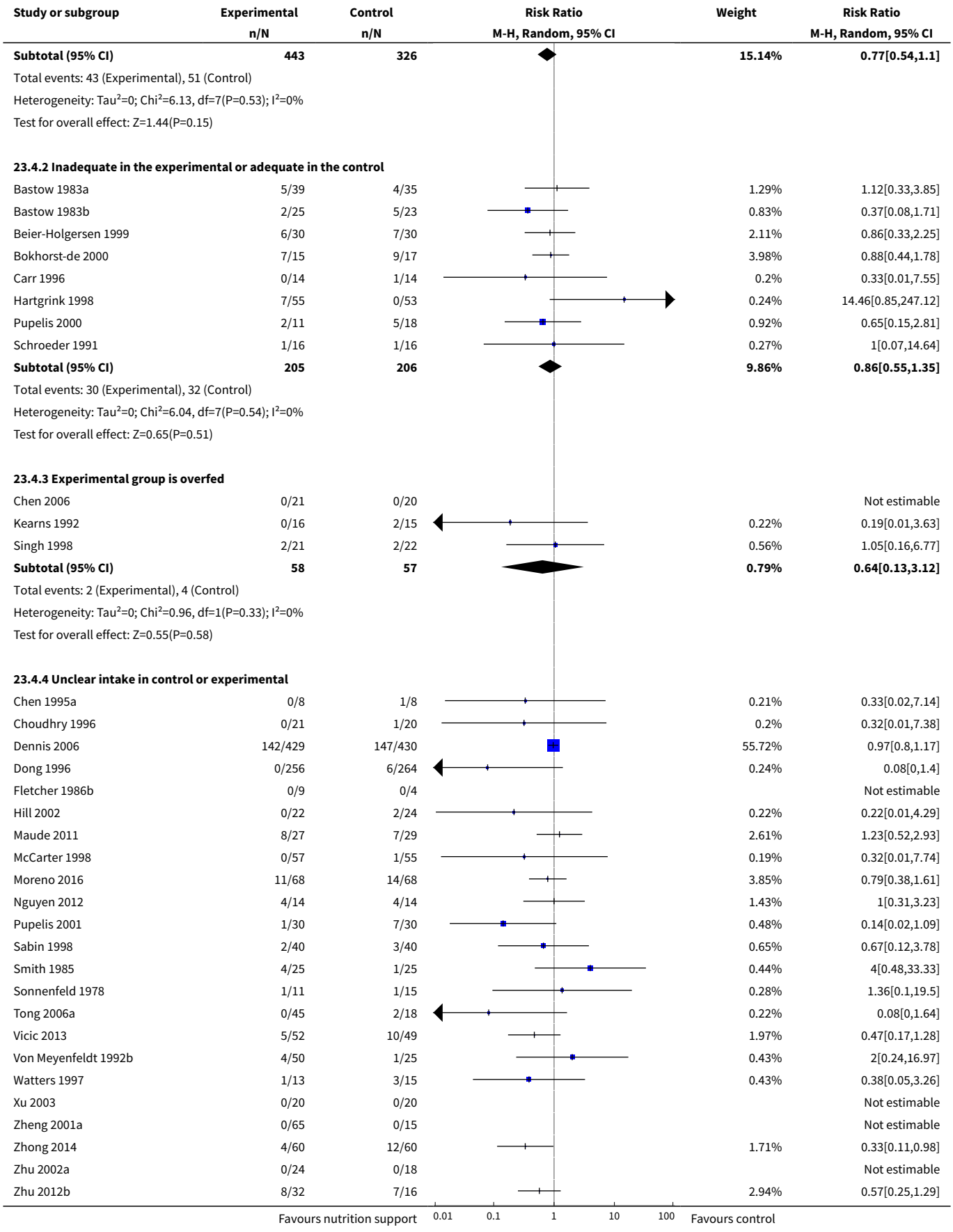
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Wu 2007a	6/215	8/108		1.84%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**721**	**514**		**19.1%**	**0.75[0.54,1.03]**
Total events: 55 (Experimental), 72 (Control)					
Heterogeneity: Tau²=0; Chi²=11.69, df=14(P=0.63); I²=0%					
Test for overall effect: Z=1.8(P=0.07)					
23.3.12 Trauma surgery					
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	1/17		0.27%	0.81[0.05,12.01]
Vicic 2013	5/52	10/49		1.97%	0.47[0.17,1.28]
Subtotal (95% CI)	**94**	**86**		**2.24%**	**0.5[0.2,1.28]**
Total events: 6 (Experimental), 11 (Control)					
Heterogeneity: Tau²=0; Chi²=0.14, df=1(P=0.71); I²=0%					
Test for overall effect: Z=1.44(P=0.15)					
23.3.13 Ortopaedics					
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.83%	0.37[0.08,1.71]
Hartgrink 1998	7/55	0/53		0.24%	14.46[0.85,247.12]
Sullivan 1998	2/8	3/10		0.84%	0.83[0.18,3.84]
Subtotal (95% CI)	**127**	**121**		**3.21%**	**1.05[0.34,3.26]**
Total events: 16 (Experimental), 12 (Control)					
Heterogeneity: Tau²=0.62; Chi²=5.7, df=3(P=0.13); I²=47.33%					
Test for overall effect: Z=0.08(P=0.94)					
23.3.14 Plastic, reconstructive, and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.15 Vascular surgery					
Fletcher 1986b	0/9	0/4			Not estimable
Subtotal (95% CI)	**9**	**4**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.16 Transplant surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.3.17 Urology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					





Analysis 23.4. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 4 Serious adverse events - based on adequacy of the amount of calories.





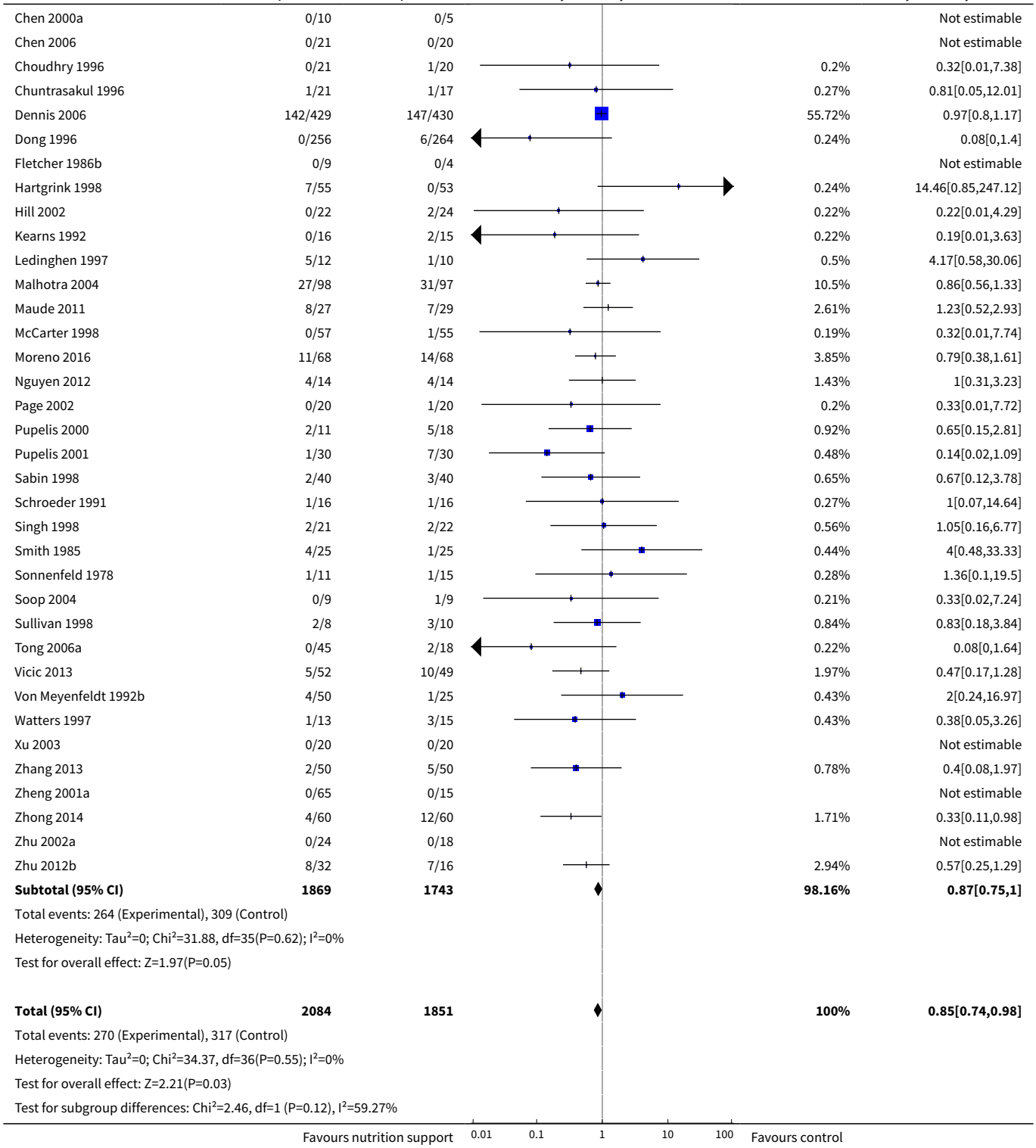
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Subtotal (95% CI)	**1378**	**1262**		**74.21%**	**0.73[0.55,0.98]**
Total events: 195 (Experimental), 230 (Control)					
Heterogeneity: Tau^2=0.06; Chi^2=21.43, df=18(P=0.26); I^2=15.99%					
Test for overall effect: Z=2.11(P=0.04)					
Total (95% CI)	**2084**	**1851**		**100%**	**0.85[0.74,0.98]**
Total events: 270 (Experimental), 317 (Control)					
Heterogeneity: Tau^2=0; Chi^2=34.37, df=36(P=0.55); I^2=0%					
Test for overall effect: Z=2.21(P=0.03)					
Test for subgroup differences: Chi^2=0.41, df=1 (P=0.94), I^2=0%					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 23.5. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 5 Serious adverse events - different screening tools.

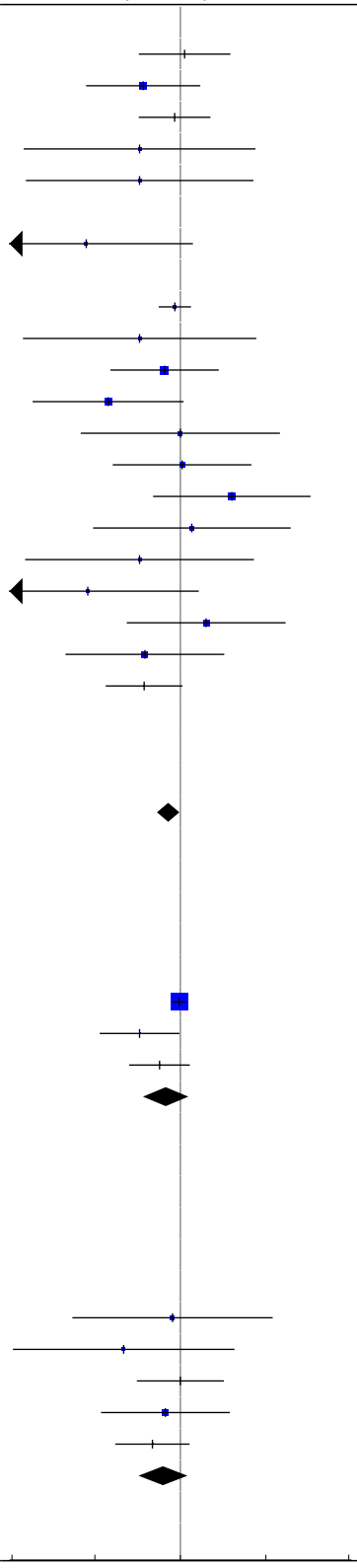
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
23.5.1 NRS 2002					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.5.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.5.3 MNA					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.5.4 SGA					
Wu 2007a	6/215	8/108		1.84%	0.38[0.13,1.06]
Subtotal (95% CI)	**215**	**108**		**1.84%**	**0.38[0.13,1.06]**
Total events: 6 (Experimental), 8 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.85(P=0.06)					
23.5.5 Other means					
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.83%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.11%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		3.98%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.2%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.21%	0.33[0.02,7.14]

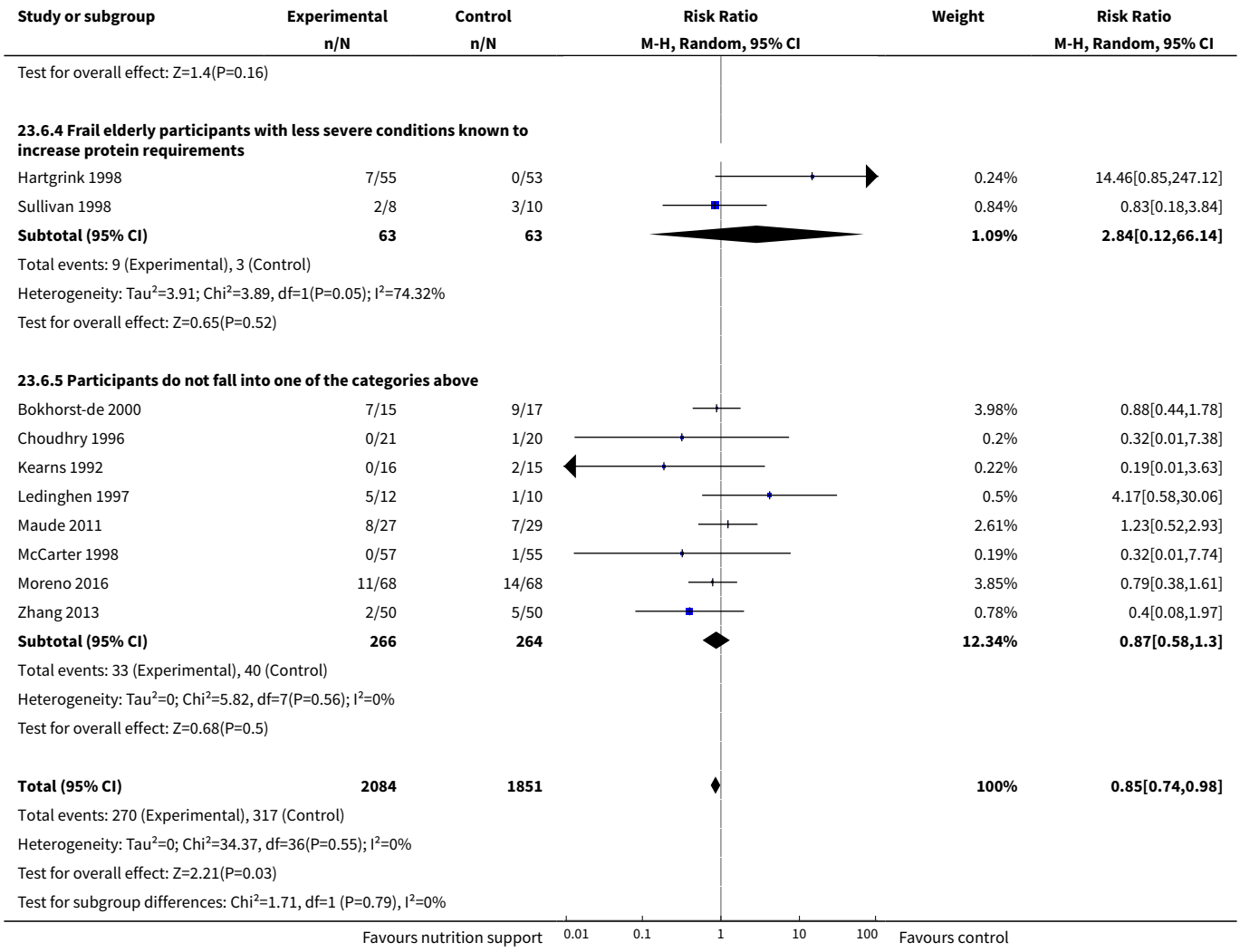
Favours nutrition support 0.01 0.1 1 10 100 Favours control



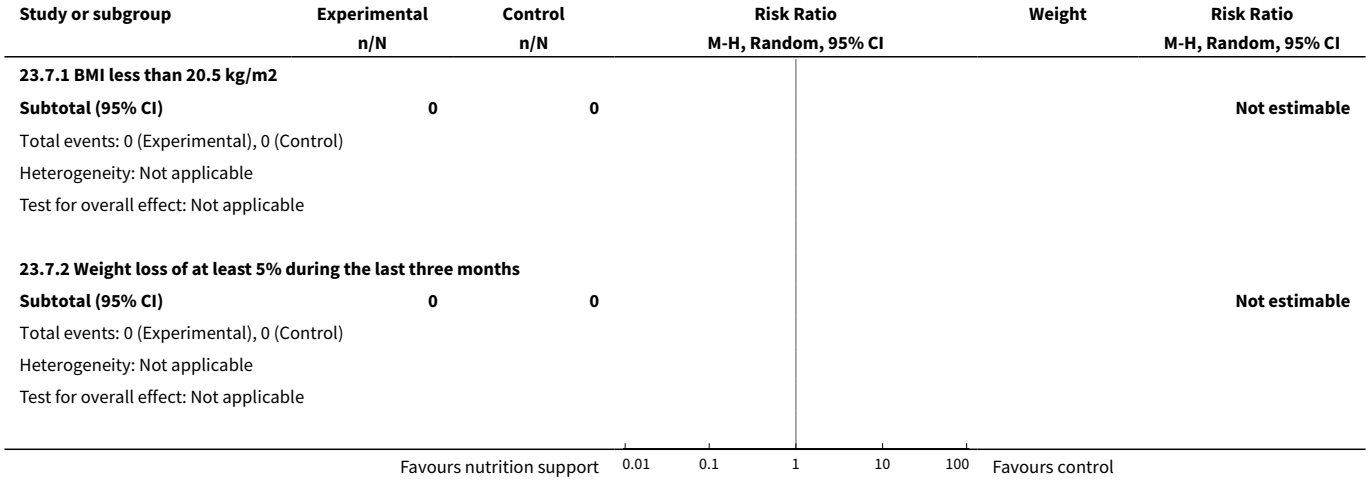
Analysis 23.6. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions.

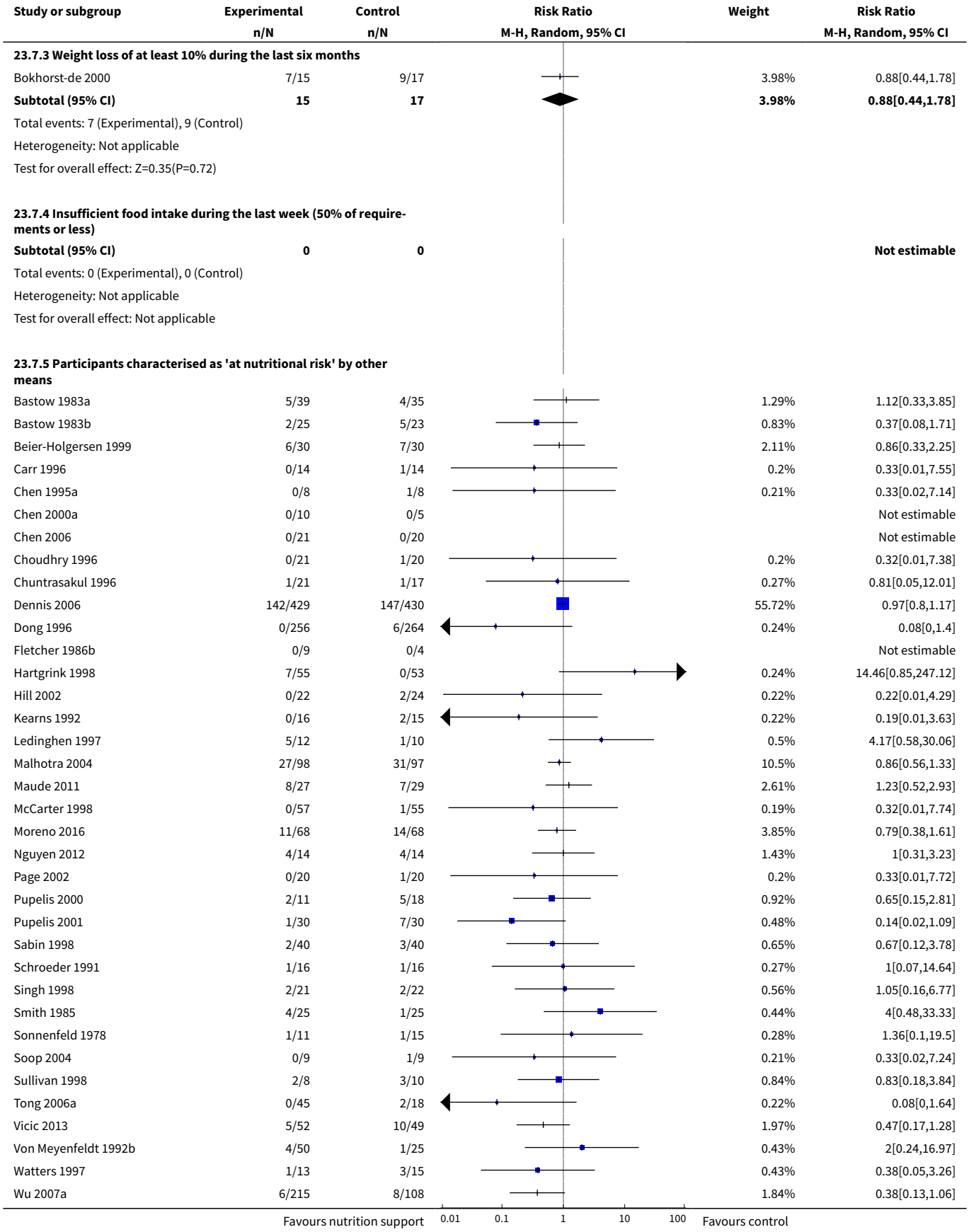
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
23.6.1 Major surgery					
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.83%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.11%	0.86[0.33,2.25]
Carr 1996	0/14	1/14		0.2%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.21%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Dong 1996	0/256	6/264		0.24%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Malhotra 2004	27/98	31/97		10.5%	0.86[0.56,1.33]
Page 2002	0/20	1/20		0.2%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.92%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Schroeder 1991	1/16	1/16		0.27%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.56%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.44%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.28%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.21%	0.33[0.02,7.24]
Tong 2006a	0/45	2/18		0.22%	0.08[0,1.64]
Von Meyenfeldt 1992b	4/50	1/25		0.43%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.43%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.84%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**1064**	**854**		**21.66%**	**0.72[0.53,0.97]**
Total events: 62 (Experimental), 88 (Control)					
Heterogeneity: Tau^2=0; Chi^2=15.7, df=18(P=0.61); I^2=0%					
Test for overall effect: Z=2.14(P=0.03)					
23.6.2 Stroke					
Dennis 2006	142/429	147/430		55.72%	0.97[0.8,1.17]
Zhong 2014	4/60	12/60		1.71%	0.33[0.11,0.98]
Zhu 2012b	8/32	7/16		2.94%	0.57[0.25,1.29]
Subtotal (95% CI)	**521**	**506**		**60.37%**	**0.67[0.37,1.24]**
Total events: 154 (Experimental), 166 (Control)					
Heterogeneity: Tau^2=0.18; Chi^2=5.05, df=2(P=0.08); I^2=60.4%					
Test for overall effect: Z=1.27(P=0.21)					
23.6.3 ICU participants including trauma					
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	1/17		0.27%	0.81[0.05,12.01]
Hill 2002	0/22	2/24		0.22%	0.22[0.01,4.29]
Nguyen 2012	4/14	4/14		1.43%	1[0.31,3.23]
Sabin 1998	2/40	3/40		0.65%	0.67[0.12,3.78]
Vicic 2013	5/52	10/49		1.97%	0.47[0.17,1.28]
Subtotal (95% CI)	**170**	**164**		**4.54%**	**0.62[0.32,1.21]**
Total events: 12 (Experimental), 20 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.48, df=4(P=0.83); I^2=0%					



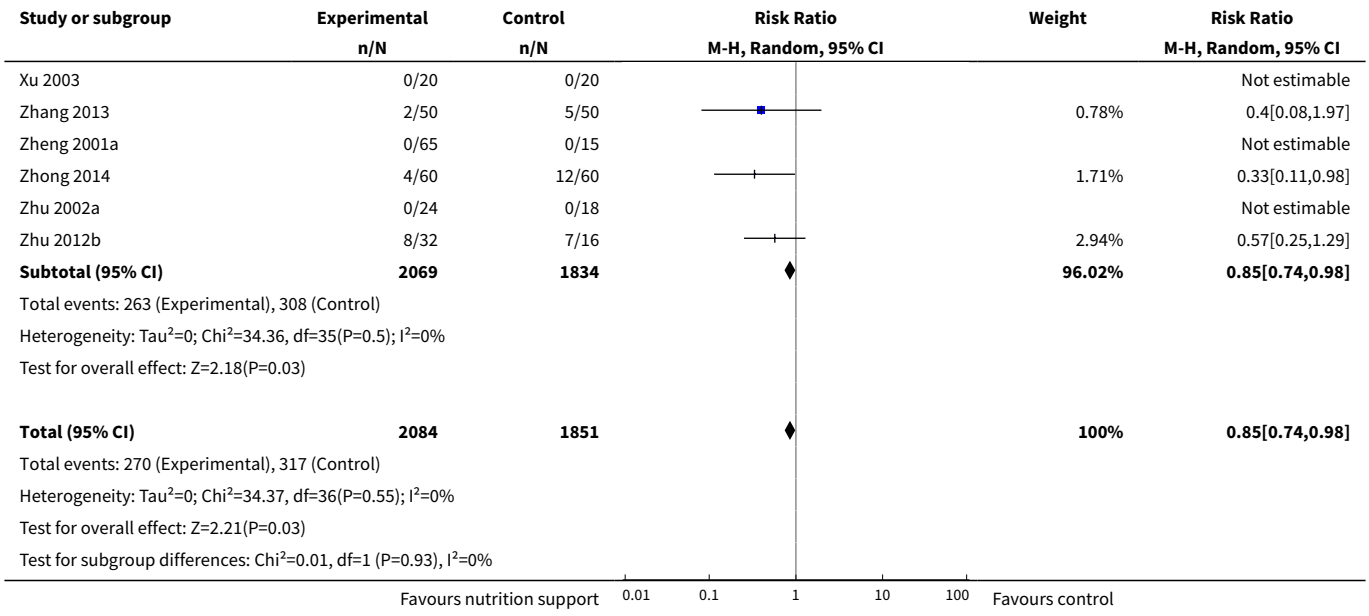


Analysis 23.7. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria.



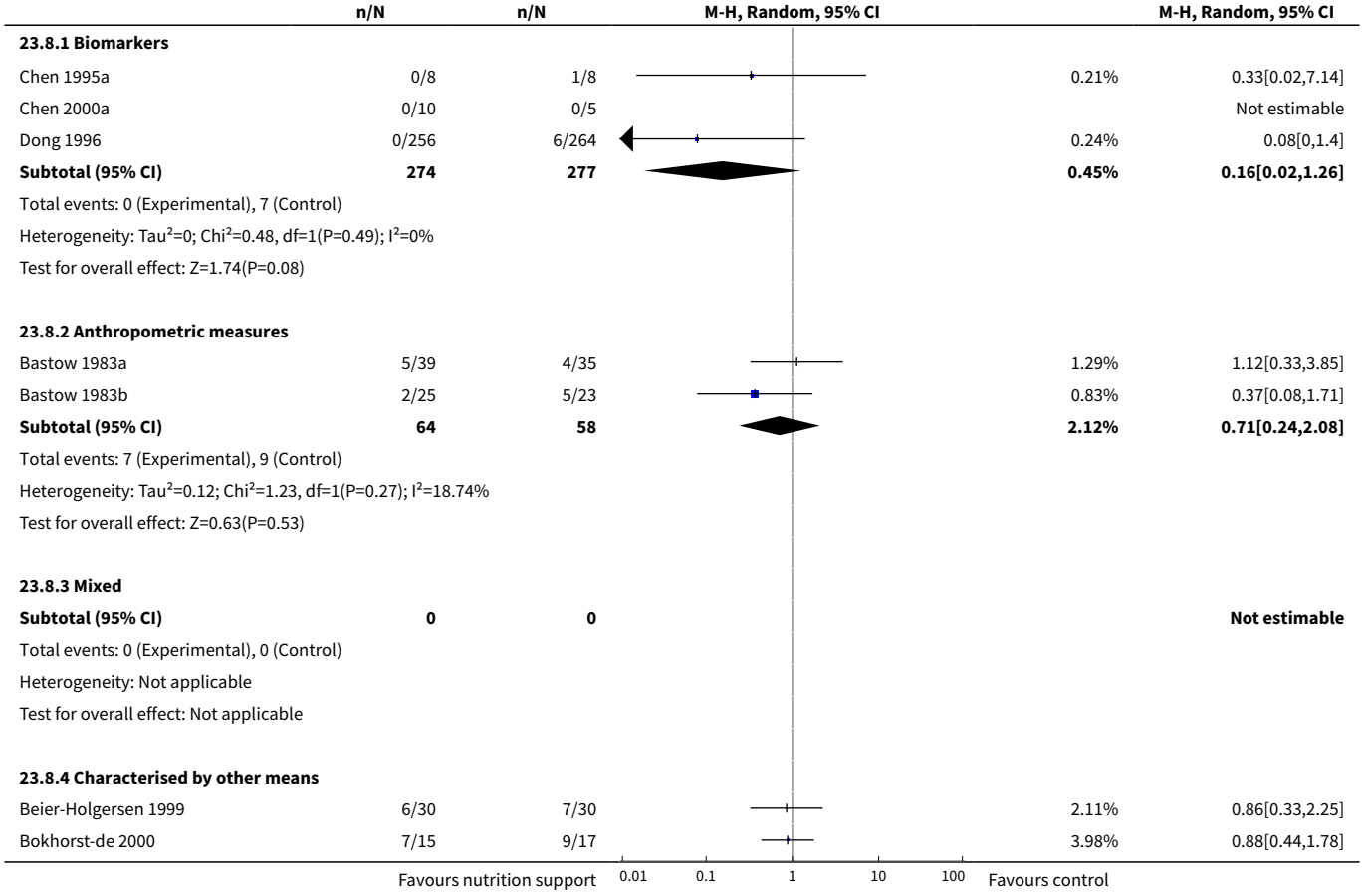


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
23.7.3 Weight loss of at least 10% during the last six months					
Bokhorst-de 2000	7/15	9/17		3.98%	0.88[0.44,1.78]
Subtotal (95% CI)	**15**	**17**		**3.98%**	**0.88[0.44,1.78]**
Total events: 7 (Experimental), 9 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.35(P=0.72)					
23.7.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.7.5 Participants characterised as 'at nutritional risk' by other means					
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.83%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.11%	0.86[0.33,2.25]
Carr 1996	0/14	1/14		0.2%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.21%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.2%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.27%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		55.72%	0.97[0.8,1.17]
Dong 1996	0/256	6/264		0.24%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.24%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.22%	0.22[0.01,4.29]
Kearns 1992	0/16	2/15		0.22%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.5%	4.17[0.58,30.06]
Malhotra 2004	27/98	31/97		10.5%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		2.61%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.19%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		3.85%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.43%	1[0.31,3.23]
Page 2002	0/20	1/20		0.2%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.92%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.65%	0.67[0.12,3.78]
Schroeder 1991	1/16	1/16		0.27%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.56%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.44%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.28%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.21%	0.33[0.02,7.24]
Sullivan 1998	2/8	3/10		0.84%	0.83[0.18,3.84]
Tong 2006a	0/45	2/18		0.22%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.97%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.43%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.43%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.84%	0.38[0.13,1.06]

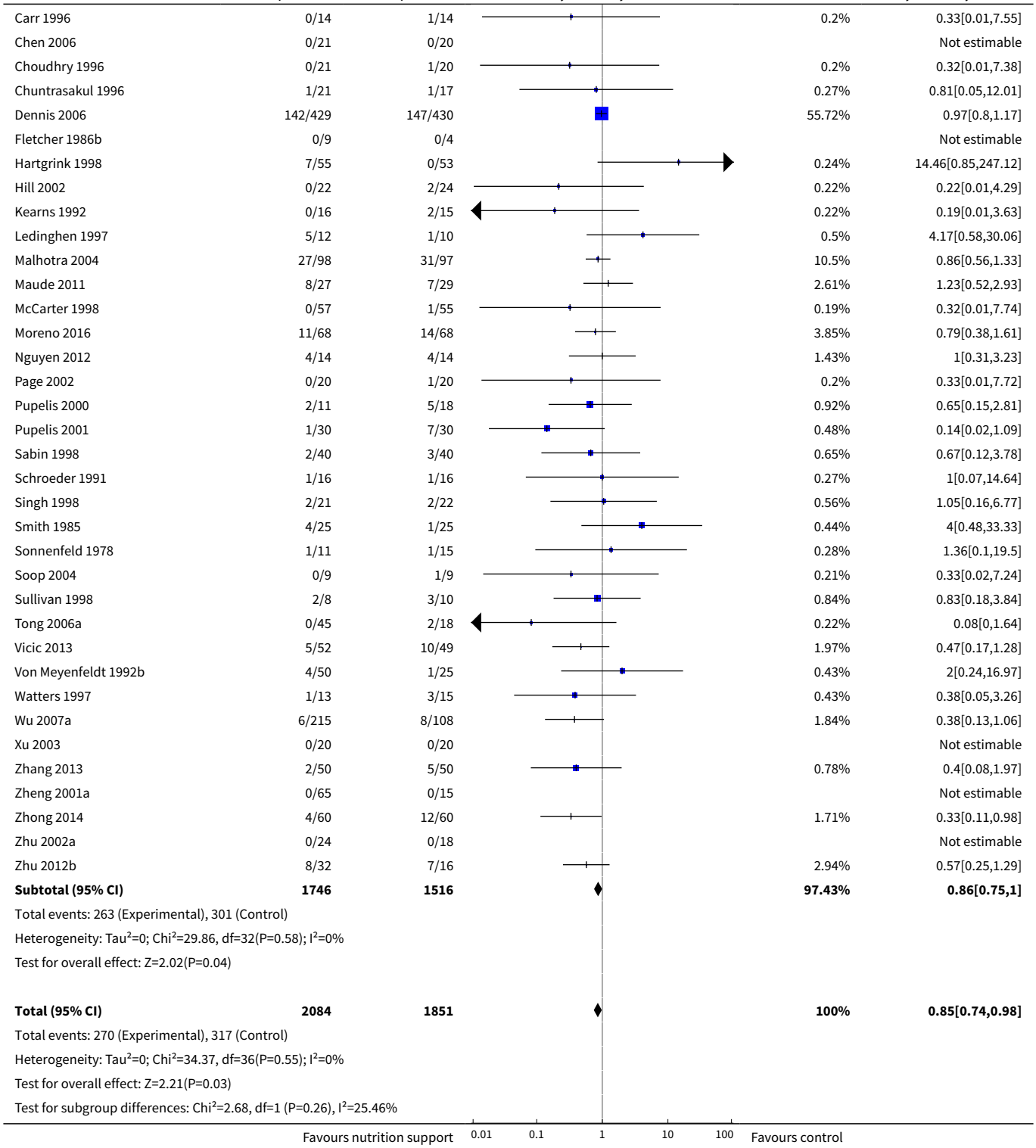


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.78%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	4/60	12/60		1.71%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.94%	0.57[0.25,1.29]
Subtotal (95% CI)	**2069**	**1834**		**96.02%**	**0.85[0.74,0.98]**
Total events: 263 (Experimental), 308 (Control)					
Heterogeneity: Tau²=0; Chi²=34.36, df=35(P=0.5); I²=0%					
Test for overall effect: Z=2.18(P=0.03)					
Total (95% CI)	**2084**	**1851**		**100%**	**0.85[0.74,0.98]**
Total events: 270 (Experimental), 317 (Control)					
Heterogeneity: Tau²=0; Chi²=34.37, df=36(P=0.55); I²=0%					
Test for overall effect: Z=2.21(P=0.03)					
Test for subgroup differences: Chi²=0.01, df=1 (P=0.93), I²=0%					

Analysis 23.8. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.



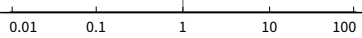
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
23.8.1 Biomarkers					
Chen 1995a	0/8	1/8		0.21%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Dong 1996	0/256	6/264		0.24%	0.08[0,1.4]
Subtotal (95% CI)	**274**	**277**		**0.45%**	**0.16[0.02,1.26]**
Total events: 0 (Experimental), 7 (Control)					
Heterogeneity: Tau²=0; Chi²=0.48, df=1(P=0.49); I²=0%					
Test for overall effect: Z=1.74(P=0.08)					
23.8.2 Anthropometric measures					
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.83%	0.37[0.08,1.71]
Subtotal (95% CI)	**64**	**58**		**2.12%**	**0.71[0.24,2.08]**
Total events: 7 (Experimental), 9 (Control)					
Heterogeneity: Tau²=0.12; Chi²=1.23, df=1(P=0.27); I²=18.74%					
Test for overall effect: Z=0.63(P=0.53)					
23.8.3 Mixed					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.8.4 Characterised by other means					
Beier-Holgersen 1999	6/30	7/30		2.11%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		3.98%	0.88[0.44,1.78]

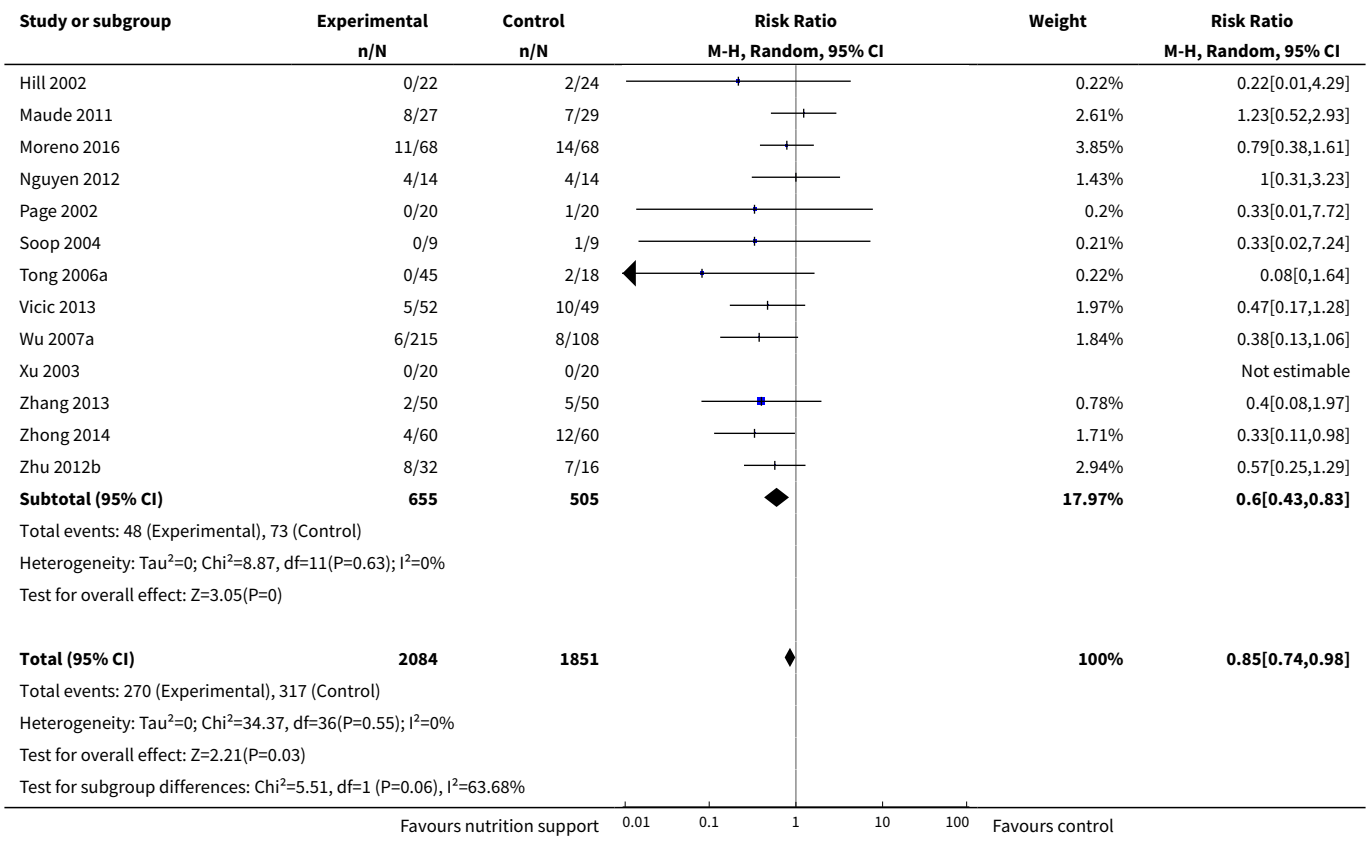


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Carr 1996	0/14	1/14		0.2%	0.33[0.01,7.55]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.2%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.27%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		55.72%	0.97[0.8,1.17]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.24%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.22%	0.22[0.01,4.29]
Kearns 1992	0/16	2/15		0.22%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.5%	4.17[0.58,30.06]
Malhotra 2004	27/98	31/97		10.5%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		2.61%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.19%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		3.85%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.43%	1[0.31,3.23]
Page 2002	0/20	1/20		0.2%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		0.92%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.65%	0.67[0.12,3.78]
Schroeder 1991	1/16	1/16		0.27%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.56%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.44%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.28%	1.36[0.1,19.5]
Soop 2004	0/9	1/9		0.21%	0.33[0.02,7.24]
Sullivan 1998	2/8	3/10		0.84%	0.83[0.18,3.84]
Tong 2006a	0/45	2/18		0.22%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.97%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.43%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.43%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.84%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.78%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	4/60	12/60		1.71%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.94%	0.57[0.25,1.29]
Subtotal (95% CI)	**1746**	**1516**		**97.43%**	**0.86[0.75,1]**
Total events: 263 (Experimental), 301 (Control)					
Heterogeneity: Tau^2=0; Chi^2=29.86, df=32(P=0.58); I^2=0%					
Test for overall effect: Z=2.02(P=0.04)					
Total (95% CI)	**2084**	**1851**		**100%**	**0.85[0.74,0.98]**
Total events: 270 (Experimental), 317 (Control)					
Heterogeneity: Tau^2=0; Chi^2=34.37, df=36(P=0.55); I^2=0%					
Test for overall effect: Z=2.21(P=0.03)					
Test for subgroup differences: Chi^2=2.68, df=1 (P=0.26), I^2=25.46%					

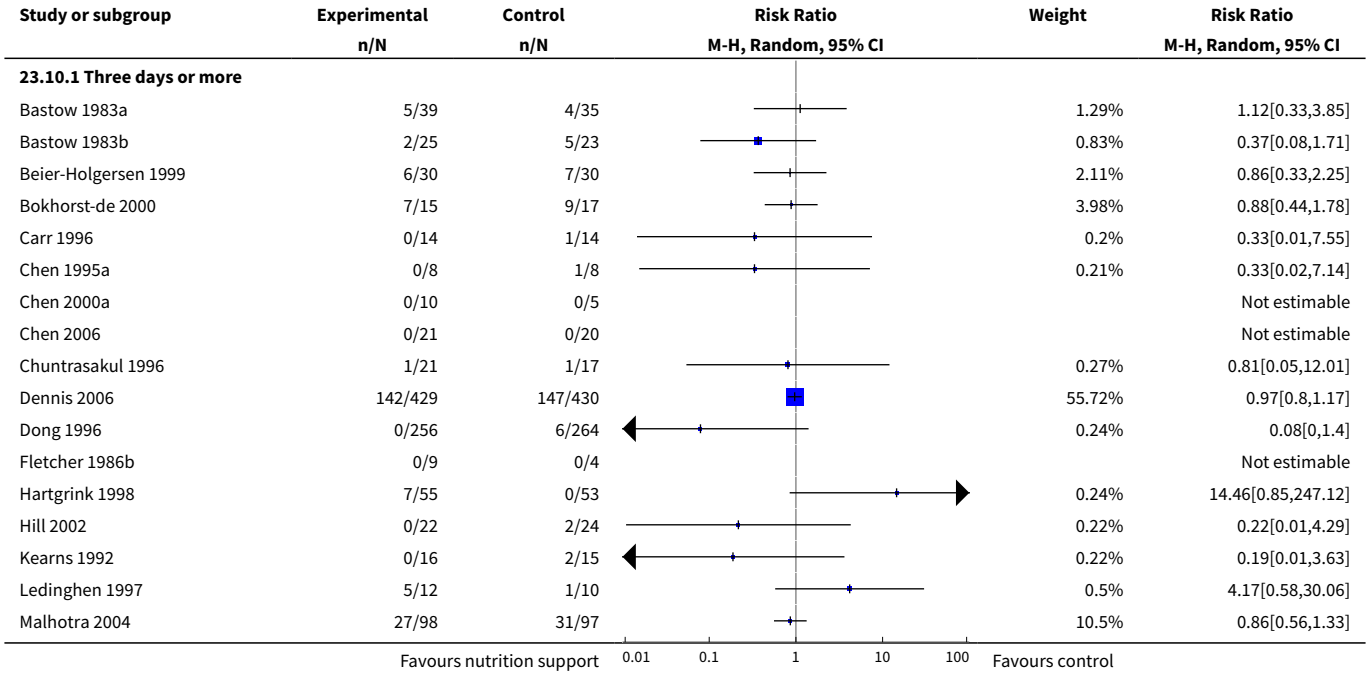
Analysis 23.9. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 9 Serious adverse events - randomisation year.

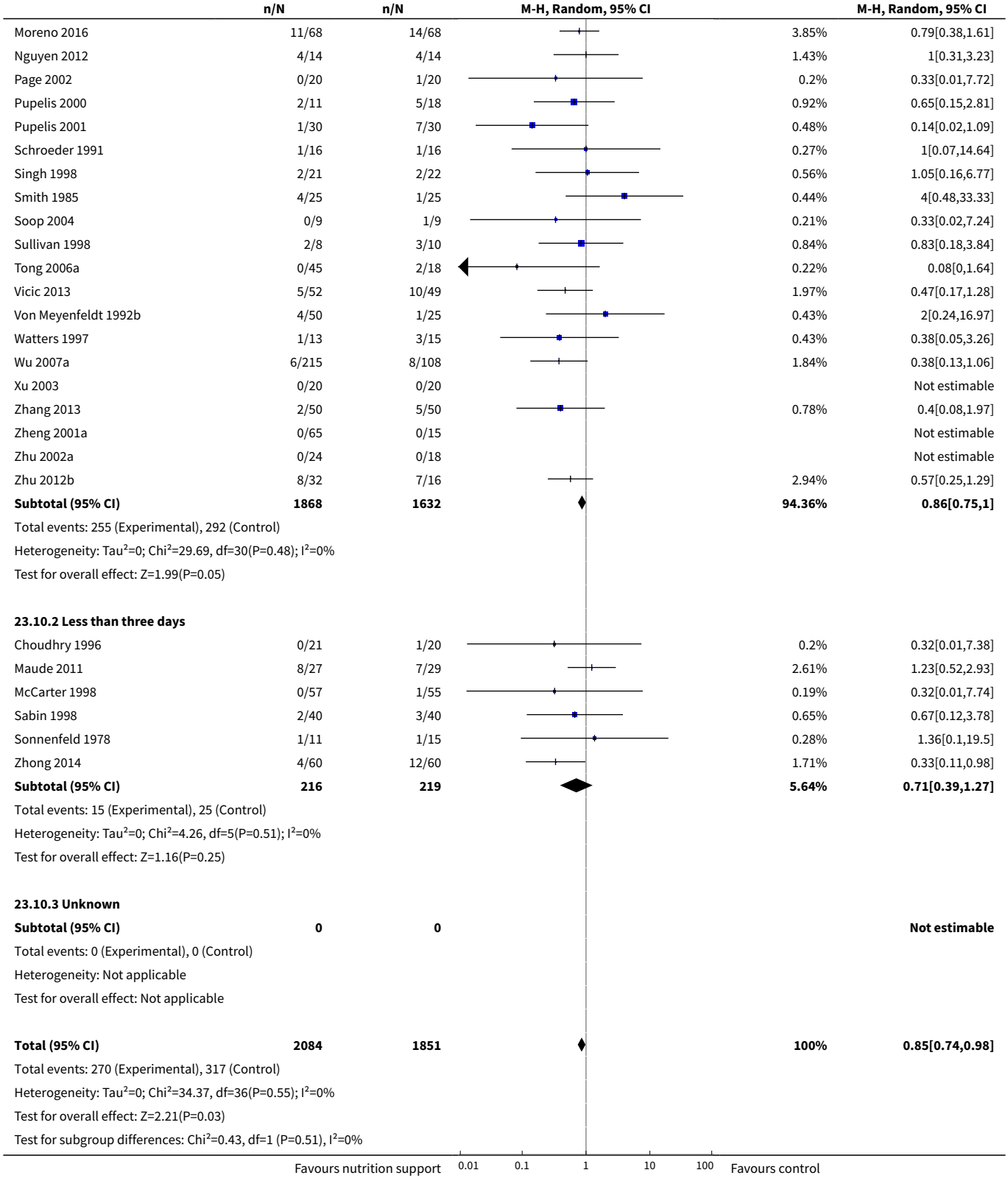
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
23.9.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
23.9.2 1960 to 1979					
Sonnenfeld 1978	1/11	1/15		0.28%	1.36[0.1,19.5]
Subtotal (95% CI)	**11**	**15**		**0.28%**	**1.36[0.1,19.5]**
Total events: 1 (Experimental), 1 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.23(P=0.82)					
23.9.3 1980 to 1999					
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.83%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.11%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		3.98%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.2%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.21%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Choudhry 1996	0/21	1/20		0.2%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.27%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		55.72%	0.97[0.8,1.17]
Dong 1996	0/256	6/264		0.24%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.24%	14.46[0.85,247.12]
Kearns 1992	0/16	2/15		0.22%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.5%	4.17[0.58,30.06]
Malhotra 2004	27/98	31/97		10.5%	0.86[0.56,1.33]
McCarter 1998	0/57	1/55		0.19%	0.32[0.01,7.74]
Pupelis 2000	2/11	5/18		0.92%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.48%	0.14[0.02,1.09]
Sabin 1998	2/40	3/40		0.65%	0.67[0.12,3.78]
Schroeder 1991	1/16	1/16		0.27%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.56%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.44%	4[0.48,33.33]
Sullivan 1998	2/8	3/10		0.84%	0.83[0.18,3.84]
Von Meyenfeldt 1992b	4/50	1/25		0.43%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.43%	0.38[0.05,3.26]
Zheng 2001a	0/65	0/15			Not estimable
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**1418**	**1331**		**81.75%**	**0.92[0.79,1.08]**
Total events: 221 (Experimental), 243 (Control)					
Heterogeneity: Tau^2=0; Chi^2=19.95, df=23(P=0.65); I^2=0%					
Test for overall effect: Z=1.03(P=0.3)					
23.9.4 After 1999					
Chen 2006	0/21	0/20			Not estimable





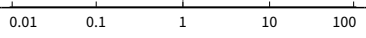
Analysis 23.10. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.





Analysis 23.11. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 11 Serious adverse events - 'best-worst case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983a	5/39	4/35		1.25%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.8%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.04%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		3.86%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.2%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.2%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.19%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.26%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		53.94%	0.97[0.8,1.17]
Dong 1996	0/256	6/264		0.23%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/70	17/70		2.86%	0.41[0.18,0.93]
Hill 2002	0/22	2/24		0.21%	0.22[0.01,4.29]
Kearns 1992	0/16	2/15		0.22%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.49%	4.17[0.58,30.06]
Malhotra 2004	27/100	34/100		10.67%	0.79[0.52,1.21]
Maude 2011	8/27	7/29		2.52%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.19%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		3.73%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		1.39%	1[0.31,3.23]
Page 2002	0/20	1/20		0.19%	0.33[0.01,7.72]
Pupelis 2000	1/30	7/30		0.46%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.9%	0.65[0.15,2.81]
Sabin 1998	2/40	3/40		0.63%	0.67[0.12,3.78]
Schroeder 1991	1/16	1/16		0.26%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.55%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.42%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.27%	1.36[0.1,19.5]
Soop 2004	0/10	2/10		0.22%	0.2[0.01,3.7]
Sullivan 1998	2/8	3/10		0.81%	0.83[0.18,3.84]
Tong 2006a	0/45	2/18		0.21%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.9%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.42%	2[0.24,16.97]
Watters 1997	1/15	4/16		0.44%	0.27[0.03,2.12]
Wu 2007a	6/215	8/108		1.78%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.75%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	4/60	12/60		1.65%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		2.85%	0.57[0.25,1.29]
Total (95% CI)	**2104**	**1873**		**100%**	**0.82[0.72,0.94]**
Total events: 270 (Experimental), 339 (Control)					
Heterogeneity: Tau^2=0; Chi^2=35.16, df=36(P=0.51); I^2=0%					
Test for overall effect: Z=2.8(P=0.01)					



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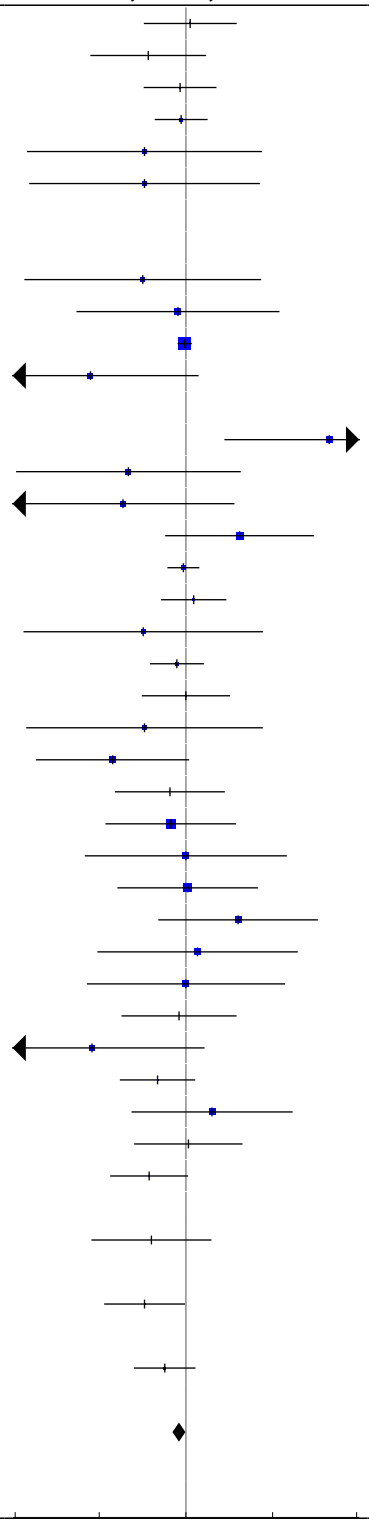
Analysis 23.12. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 12 Serious adverse events - 'worst-best case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bastow 1983a	5/39	4/35		1.88%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.22%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		3.02%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		5.48%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.3%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.31%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	0/21	1/20		0.3%	0.32[0.01,7.38]
Chuntrasakul 1996	1/21	1/17		0.4%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		37.5%	0.97[0.8,1.17]
Dong 1996	0/256	6/264		0.36%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	22/70	0/70		0.38%	45[2.78,727.58]
Hill 2002	0/22	2/24		0.33%	0.22[0.01,4.29]
Kearns 1992	0/16	2/15		0.33%	0.19[0.01,3.63]
Ledinghen 1997	5/12	1/10		0.75%	4.17[0.58,30.06]
Malhotra 2004	29/100	31/100		13.21%	0.94[0.61,1.43]
Maude 2011	8/27	7/29		3.69%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.29%	0.32[0.01,7.74]
Moreno 2016	11/68	14/68		5.31%	0.79[0.38,1.61]
Nguyen 2012	4/14	4/14		2.08%	1[0.31,3.23]
Page 2002	0/20	1/20		0.3%	0.33[0.01,7.72]
Pupelis 2000	1/30	7/30		0.7%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		1.36%	0.65[0.15,2.81]
Sabin 1998	2/40	3/40		0.96%	0.67[0.12,3.78]
Schroeder 1991	1/16	1/16		0.41%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.83%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.65%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.41%	1.36[0.1,19.5]
Soop 2004	1/10	1/10		0.42%	1[0.07,13.87]
Sullivan 1998	2/8	3/10		1.24%	0.83[0.18,3.84]
Tong 2006a	0/45	2/18		0.33%	0.08[0,1.64]
Vicic 2013	5/52	10/49		2.82%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.64%	2[0.24,16.97]
Watters 1997	3/15	3/16		1.4%	1.07[0.25,4.49]
Wu 2007a	6/215	8/108		2.65%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		1.14%	0.4[0.08,1.97]
Zheng 2001a	0/65	0/15			Not estimable
Zhong 2014	4/60	12/60		2.46%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		4.13%	0.57[0.25,1.29]
Total (95% CI)	**2104**	**1873**		**100%**	**0.83[0.7,0.99]**
Total events: 290 (Experimental), 317 (Control)					
Heterogeneity: Tau²=0.01; Chi²=37.5, df=36(P=0.4); I²=4.01%					



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=2.12(P=0.03)					

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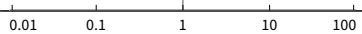
Analysis 23.13. Comparison 23 Enteral - Serious adverse event end of intervention, Outcome 13 Serious adverse events co-interventions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
23.13.1 received nutrition support as co-intervention					
Bokhorst-de 2000	7/15	9/17		2.58%	0.88[0.44,1.78]
Hill 2002	0/22	2/24		0.73%	0.22[0.01,4.29]
Zhu 2012b	8/32	7/16		2.85%	0.57[0.25,1.29]
Subtotal (95% CI)	**69**	**57**		**6.17%**	**0.66[0.39,1.12]**
Total events: 15 (Experimental), 18 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.31, df=2(P=0.52); I^2=0%					
Test for overall effect: Z=1.54(P=0.12)					
23.13.2 did not receive nutrition support as co-intervention					
Bastow 1983a	5/39	4/35		1.29%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.59%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.14%	0.86[0.33,2.25]
Carr 1996	0/14	1/14		0.46%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.46%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	1/17		0.34%	0.81[0.05,12.01]
Dennis 2006	142/429	147/430		44.91%	0.97[0.8,1.17]
Dong 1996	0/256	6/264		1.96%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.16%	14.46[0.85,247.12]
Kearns 1992	0/16	2/15		0.79%	0.19[0.01,3.63]
Lediنghen 1997	5/12	1/10		0.33%	4.17[0.58,30.06]
Malhotra 2004	27/98	31/97		9.53%	0.86[0.56,1.33]
Moreno 2016	11/68	14/68		4.28%	0.79[0.38,1.61]
Page 2002	0/20	1/20		0.46%	0.33[0.01,7.72]
Pupelis 2000	2/11	5/18		1.16%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		2.14%	0.14[0.02,1.09]
Schroeder 1991	1/16	1/16		0.31%	1[0.07,14.64]
Singh 1998	2/21	2/22		0.6%	1.05[0.16,6.77]
Smith 1985	4/25	1/25		0.31%	4[0.48,33.33]
Soop 2004	0/9	1/9		0.46%	0.33[0.02,7.24]
Sullivan 1998	2/8	3/10		0.82%	0.83[0.18,3.84]
Tong 2006a	0/45	2/18		1.08%	0.08[0,1.64]
Vicic 2013	5/52	10/49		3.15%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.41%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.85%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		3.26%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		1.53%	0.4[0.08,1.97]



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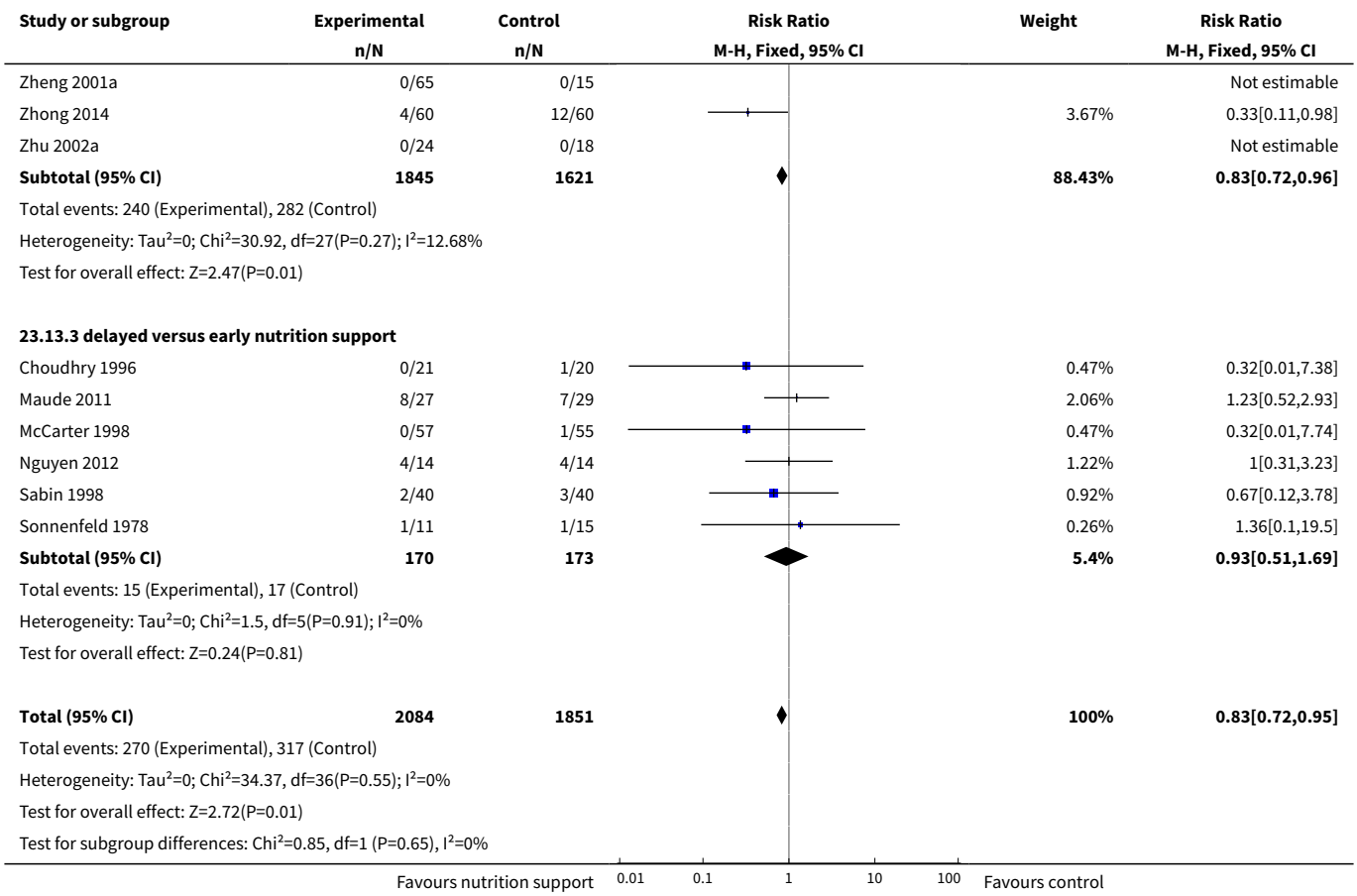


Comparison 24. Enteral - Serious adverse event maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Serious adverse events - overall	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
2 Serious adverse events - bias	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
2.1 High risk of bias	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Serious adverse events - by medical speciality	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.2 Medical gastroenterology and hepatology	4	289	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.65, 1.23]
3.3 Geriatrics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.4 Pulmonary disease	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	1	56	Risk Ratio (M-H, Random, 95% CI)	1.23 [0.52, 2.93]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	21	1456	Risk Ratio (M-H, Random, 95% CI)	0.68 [0.51, 0.91]
3.11 Trauma surgery	5	245	Risk Ratio (M-H, Random, 95% CI)	0.58 [0.30, 1.11]
3.12 Ortopaedics	4	248	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.28, 2.96]
3.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	1	13	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Transplant surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	2	548	Risk Ratio (M-H, Random, 95% CI)	0.15 [0.02, 1.27]
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	1	32	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.44, 1.78]

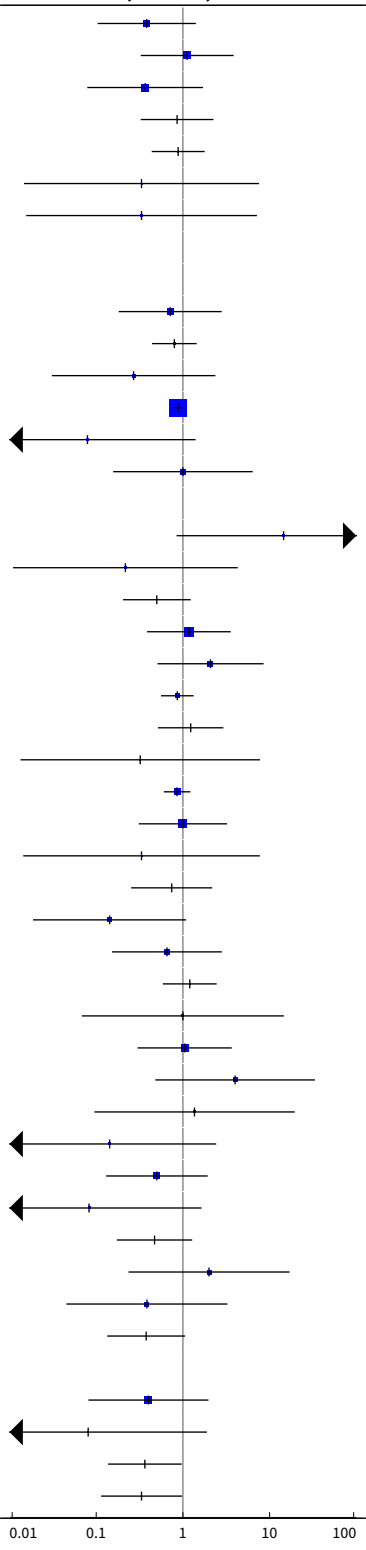
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	4	213	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.60, 1.40]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	4	1172	Risk Ratio (M-H, Random, 95% CI)	0.58 [0.34, 1.00]
3.24 Oncology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	2	153	Risk Ratio (M-H, Random, 95% CI)	0.63 [0.18, 2.21]
4 Serious adverse events - based on adequacy of the amount of calories	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
4.1 Clearly adequate in intervention and clearly inadequate in control	12	987	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.54, 0.96]
4.2 Inadequate in the experimental or adequate in the control	8	411	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.55, 1.35]
4.3 Experimental group is overfed	4	215	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.42, 1.42]
4.4 Unclear intake in control or experimental	25	2812	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.60, 0.94]
5 Serious adverse events - different screening tools	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
5.1 NRS 2002	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 SGA	1	323	Risk Ratio (M-H, Random, 95% CI)	0.38 [0.13, 1.06]

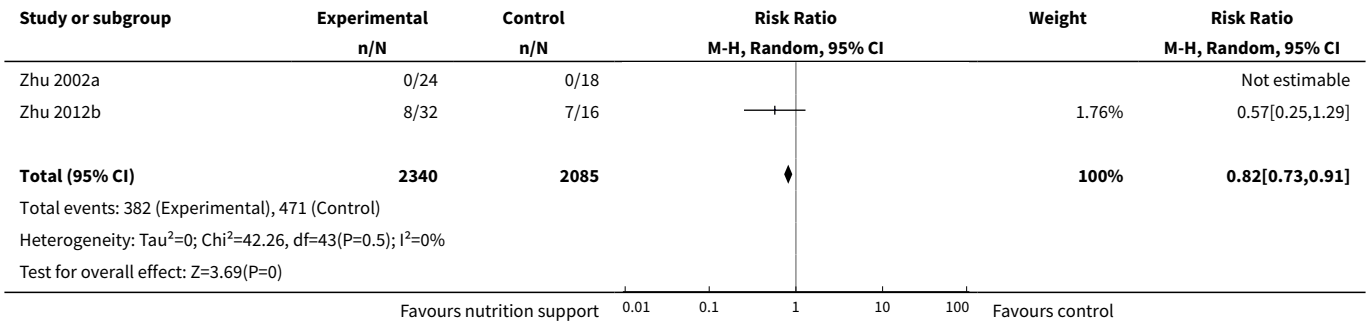
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5.5 Other means	48	4102	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.74, 0.92]
6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
6.1 Major surgery	26	2139	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.51, 0.88]
6.2 Stroke	4	1172	Risk Ratio (M-H, Random, 95% CI)	0.58 [0.34, 1.00]
6.3 ICU participants including trauma	9	458	Risk Ratio (M-H, Random, 95% CI)	0.80 [0.56, 1.14]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	2	126	Risk Ratio (M-H, Random, 95% CI)	2.24 [0.05, 95.92]
6.5 Participants do not fall into one of the categories above	8	530	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.69, 1.19]
7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
7.1 BMI less than 20.5 kg/m2	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	1	32	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.44, 1.78]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	48	4393	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.72, 0.91]
8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
8.1 Biomarkers	3	551	Risk Ratio (M-H, Random, 95% CI)	0.16 [0.02, 1.26]
8.2 Anthropometric measures	2	122	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.24, 2.08]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
8.3 Both	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
8.4 Characterised by other means	44	3752	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.74, 0.92]
9 Serious adverse events - randomisation year	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	1	26	Risk Ratio (M-H, Random, 95% CI)	1.36 [0.10, 19.50]
9.3 1980 to 1999	28	2591	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.77, 1.00]
9.4 After 1999	20	1808	Risk Ratio (M-H, Random, 95% CI)	0.70 [0.58, 0.85]
10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	49	4425	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.73, 0.91]
10.1 Three days or more	41	3893	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.66, 0.89]
10.2 Less than three days	8	532	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.60, 1.22]
10.3 Unknown	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
11 Serious adverse events co-interventions	49	4425	Risk Ratio (M-H, Fixed, 95% CI)	0.78 [0.70, 0.87]
11.1 Received nutrition support as co-intervention	3	126	Risk Ratio (M-H, Fixed, 95% CI)	0.66 [0.39, 1.12]
11.2 did not receive nutrition support as co-intervention	39	3918	Risk Ratio (M-H, Fixed, 95% CI)	0.77 [0.68, 0.86]
11.3 delayed versus early nutrition support	7	381	Risk Ratio (M-H, Fixed, 95% CI)	1.06 [0.68, 1.64]
12 Serious adverse events - 'best-worse case' scenario (enteral nutrition)	48	4489	Risk Ratio (M-H, Random, 95% CI)	0.62 [0.51, 0.75]
13 Serious adverse events - 'worst-best case' scenario (enteral nutrition)	48	4489	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.69, 0.95]

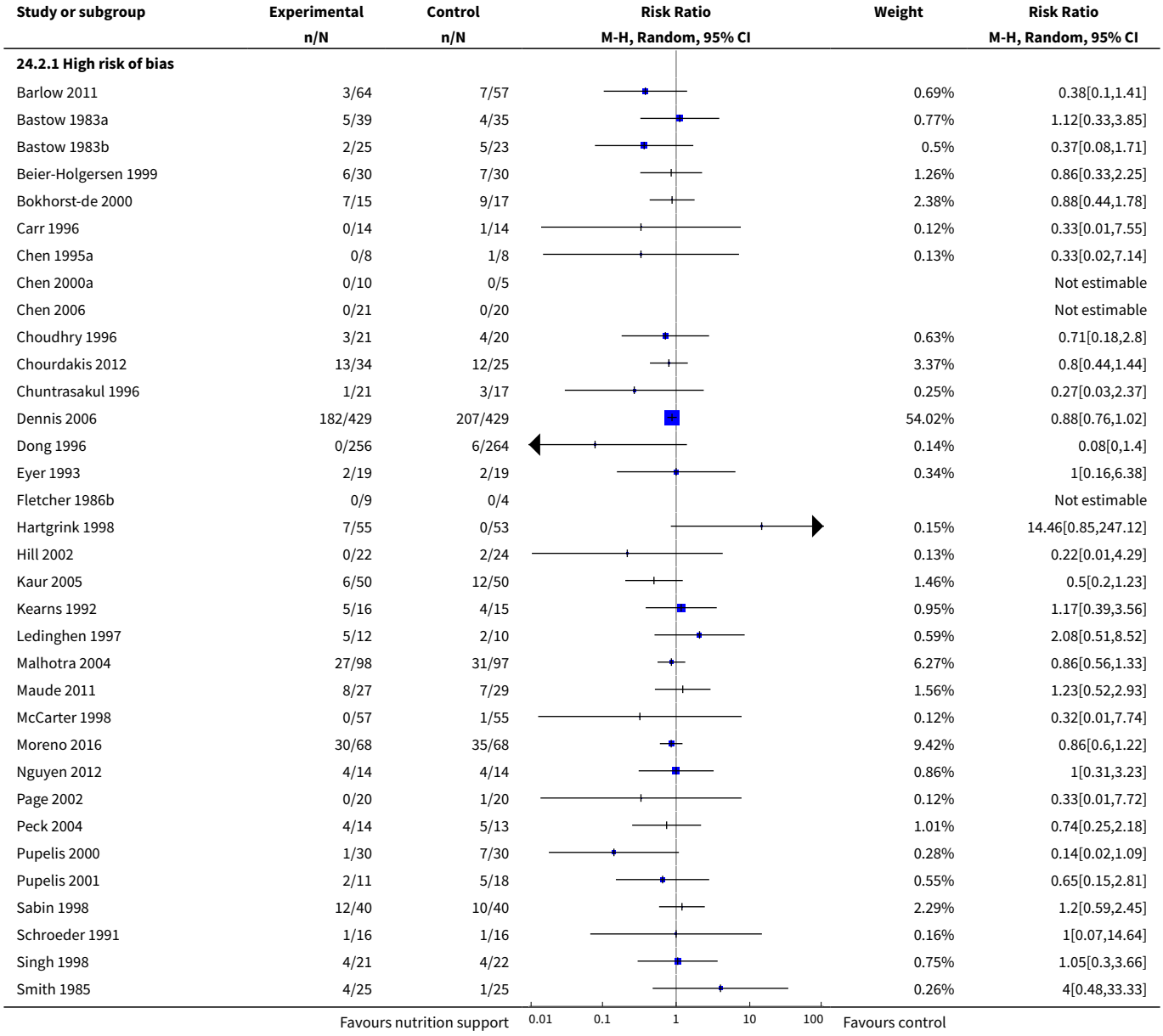
Analysis 24.1. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 1 Serious adverse events - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Barlow 2011	3/64	7/57		0.69%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.77%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.5%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		1.26%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		2.38%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.12%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.13%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.63%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		3.37%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.25%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		54.02%	0.88[0.76,1.02]
Dong 1996	0/256	6/264		0.14%	0.08[0,1.4]
Eyer 1993	2/19	2/19		0.34%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.15%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.13%	0.22[0.01,4.29]
Kaur 2005	6/50	12/50		1.46%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.95%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		0.59%	2.08[0.51,8.52]
Malhotra 2004	27/98	31/97		6.27%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		1.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.12%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		9.42%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		0.86%	1[0.31,3.23]
Page 2002	0/20	1/20		0.12%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		1.01%	0.74[0.25,2.18]
Pupelis 2000	1/30	7/30		0.28%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.55%	0.65[0.15,2.81]
Sabin 1998	12/40	10/40		2.29%	1.2[0.59,2.45]
Schroeder 1991	1/16	1/16		0.16%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.75%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.26%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.17%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.13%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.18%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.26%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.12%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.23%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		1.02%	0.33[0.11,0.98]

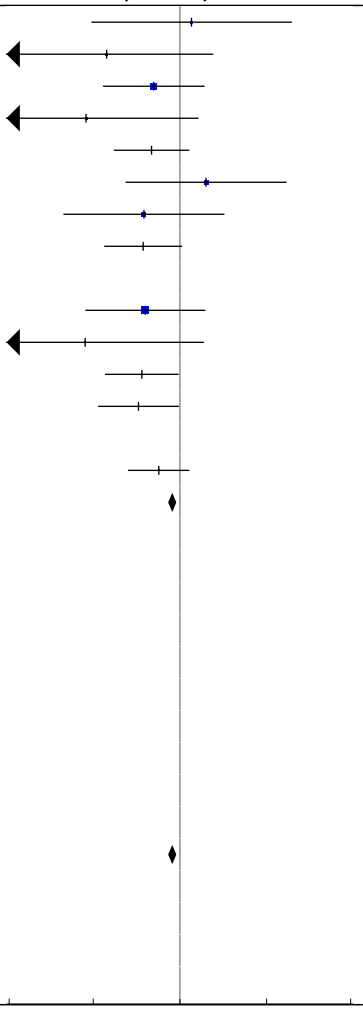




Analysis 24.2. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 2 Serious adverse events - bias.

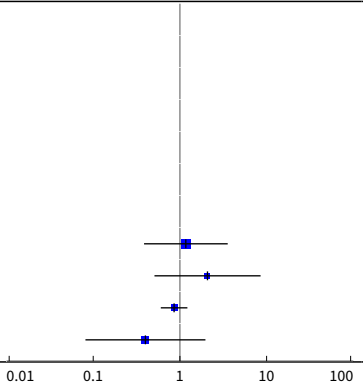


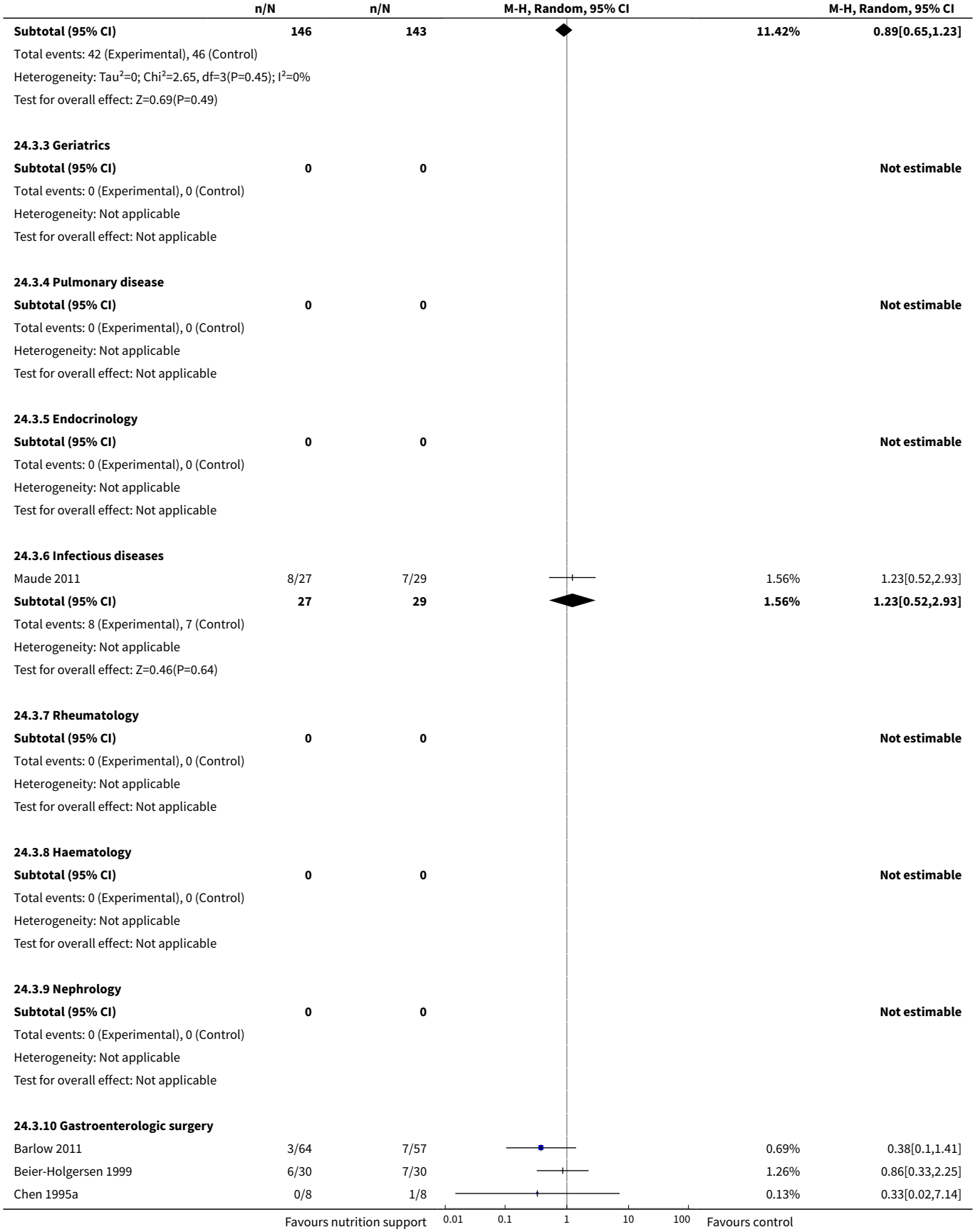
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sonnenfeld 1978	1/11	1/15		0.17%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.13%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.18%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.26%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.12%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.23%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		1.02%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		1.76%	0.57[0.25,1.29]
Subtotal (95% CI)	**2340**	**2085**		**100%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.26, df=43(P=0.5); I^2=0%					
Test for overall effect: Z=3.69(P=0)					
24.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**2340**	**2085**		**100%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.26, df=43(P=0.5); I^2=0%					
Test for overall effect: Z=3.69(P=0)					
Test for subgroup differences: Not applicable					

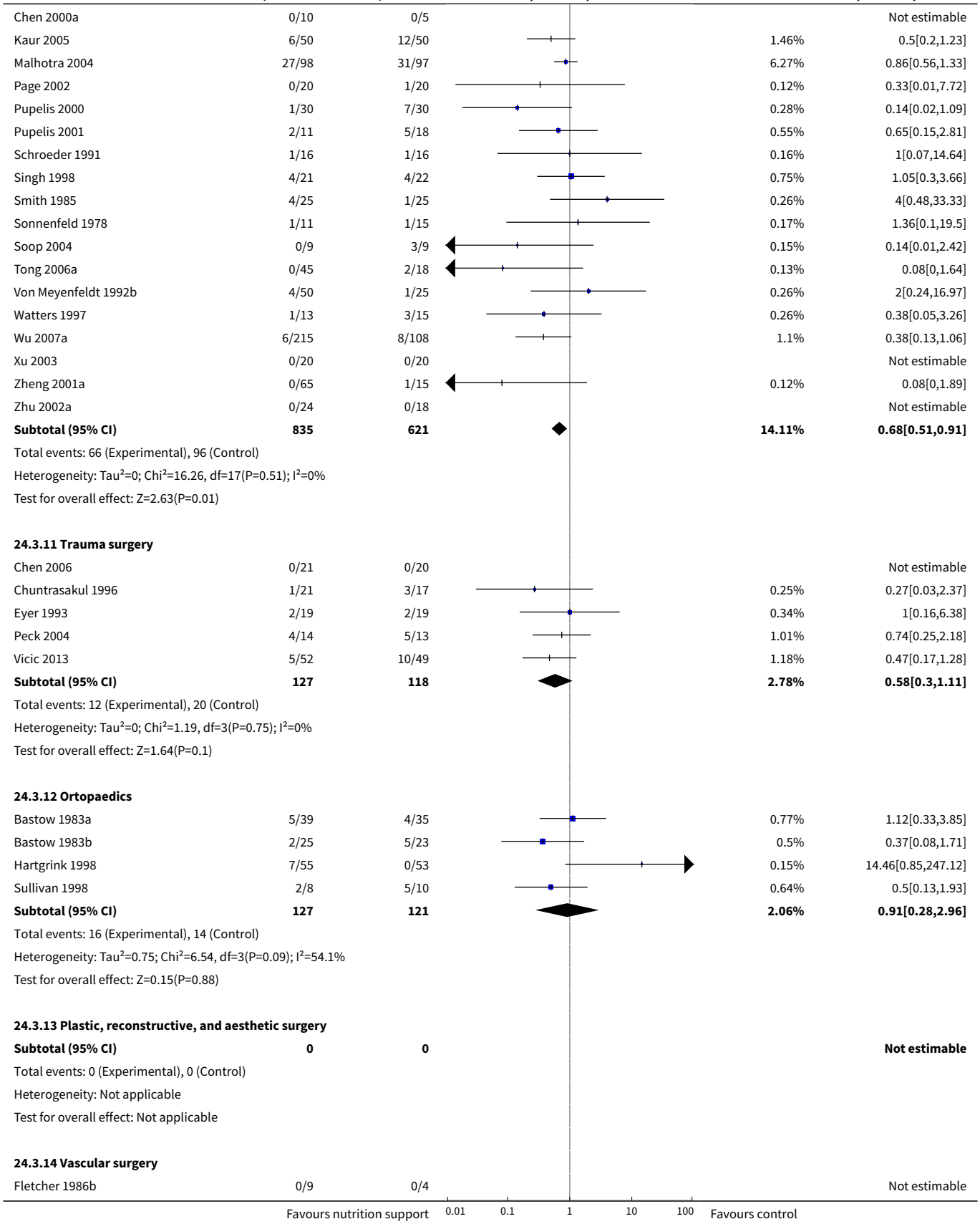


Analysis 24.3. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 3 Serious adverse events - by medical speciality.

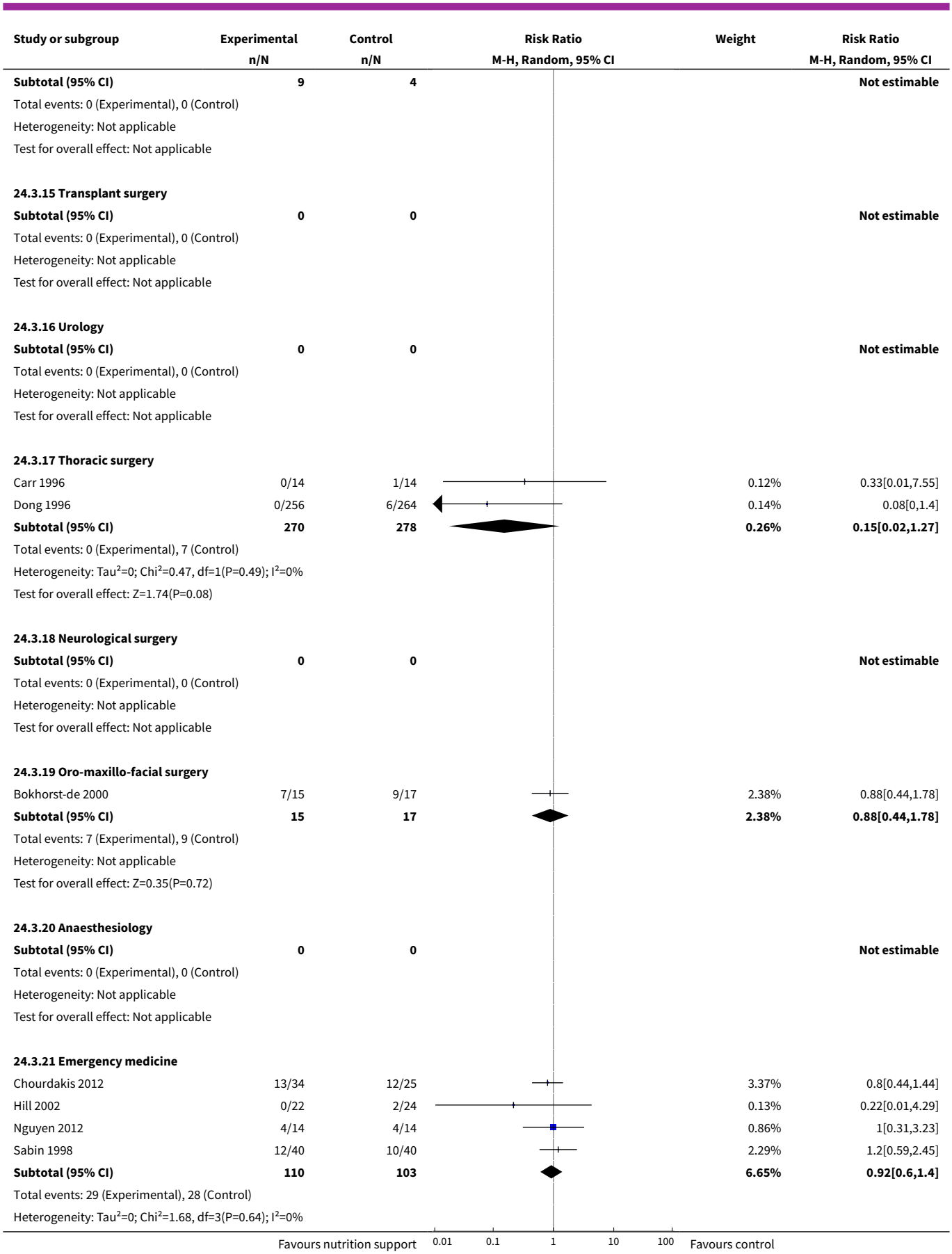
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
24.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.3.2 Medical gastroenterology and hepatology					
Kearns 1992	5/16	4/15		0.95%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		0.59%	2.08[0.51,8.52]
Moreno 2016	30/68	35/68		9.42%	0.86[0.6,1.22]
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]



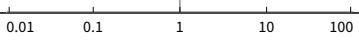




Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chen 2000a	0/10	0/5			Not estimable
Kaur 2005	6/50	12/50		1.46%	0.5[0.2,1.23]
Malhotra 2004	27/98	31/97		6.27%	0.86[0.56,1.33]
Page 2002	0/20	1/20		0.12%	0.33[0.01,7.72]
Pupelis 2000	1/30	7/30		0.28%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.55%	0.65[0.15,2.81]
Schroeder 1991	1/16	1/16		0.16%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.75%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.26%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.17%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Tong 2006a	0/45	2/18		0.13%	0.08[0,1.64]
Von Meyenfeldt 1992b	4/50	1/25		0.26%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	1/15		0.12%	0.08[0,1.89]
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**835**	**621**		**14.11%**	**0.68[0.51,0.91]**
Total events: 66 (Experimental), 96 (Control)					
Heterogeneity: Tau^2=0; Chi^2=16.26, df=17(P=0.51); I^2=0%					
Test for overall effect: Z=2.63(P=0.01)					
24.3.11 Trauma surgery					
Chen 2006	0/21	0/20			Not estimable
Chuntrasakul 1996	1/21	3/17		0.25%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.34%	1[0.16,6.38]
Peck 2004	4/14	5/13		1.01%	0.74[0.25,2.18]
Vicic 2013	5/52	10/49		1.18%	0.47[0.17,1.28]
Subtotal (95% CI)	**127**	**118**		**2.78%**	**0.58[0.3,1.11]**
Total events: 12 (Experimental), 20 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.19, df=3(P=0.75); I^2=0%					
Test for overall effect: Z=1.64(P=0.1)					
24.3.12 Ortopaedics					
Bastow 1983a	5/39	4/35		0.77%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.5%	0.37[0.08,1.71]
Hartgrink 1998	7/55	0/53		0.15%	14.46[0.85,247.12]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Subtotal (95% CI)	**127**	**121**		**2.06%**	**0.91[0.28,2.96]**
Total events: 16 (Experimental), 14 (Control)					
Heterogeneity: Tau^2=0.75; Chi^2=6.54, df=3(P=0.09); I^2=54.1%					
Test for overall effect: Z=0.15(P=0.88)					
24.3.13 Plastic, reconstructive, and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.3.14 Vascular surgery					
Fletcher 1986b	0/9	0/4			Not estimable



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.38(P=0.7)					
24.3.22 Psychiatry					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.3.23 Neurology					
Dennis 2006	182/429	207/429		54.02%	0.88[0.76,1.02]
Zheng 2015	5/75	13/71		1.23%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		1.02%	0.33[0.11,0.98]
Zhu 2012b	8/32	7/16		1.76%	0.57[0.25,1.29]
Subtotal (95% CI)	**596**	**576**		**58.02%**	**0.58[0.34,1]**
Total events: 199 (Experimental), 239 (Control)					
Heterogeneity: Tau^2=0.16; Chi^2=7.05, df=3(P=0.07); I^2=57.45%					
Test for overall effect: Z=1.97(P=0.05)					
24.3.24 Oncology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.3.25 Dermatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.3.26 Gynaecology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.3.27 Mixed					
Choudhry 1996	3/21	4/20		0.63%	0.71[0.18,2.8]
McCarter 1998	0/57	1/55		0.12%	0.32[0.01,7.74]
Subtotal (95% CI)	**78**	**75**		**0.75%**	**0.63[0.18,2.21]**
Total events: 3 (Experimental), 5 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.21, df=1(P=0.65); I^2=0%					
Test for overall effect: Z=0.72(P=0.47)					
Total (95% CI)	**2340**	**2085**		**100%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.26, df=43(P=0.5); I^2=0%					
Test for overall effect: Z=3.69(P=0)					
Test for subgroup differences: Chi^2=7.66, df=1 (P=0.57), I^2=0%					

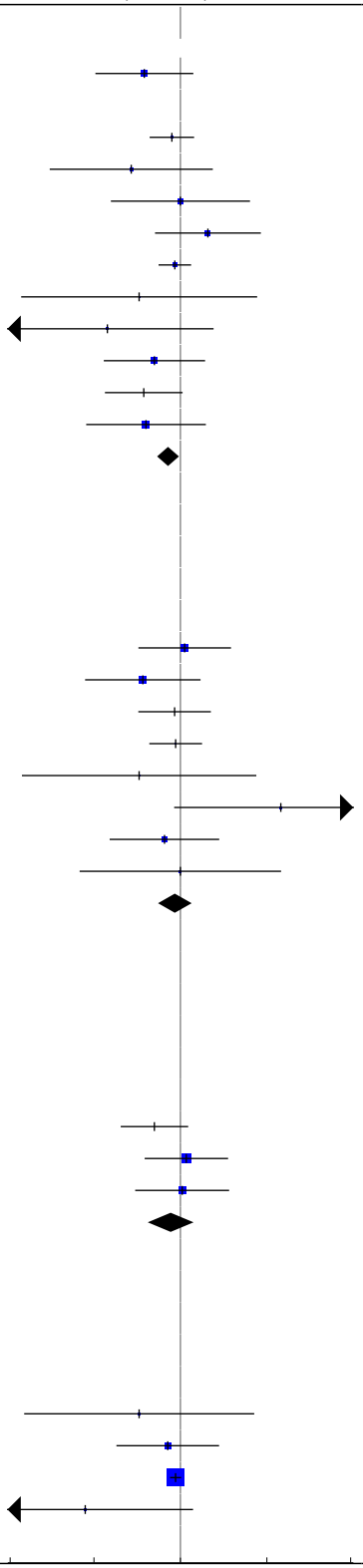


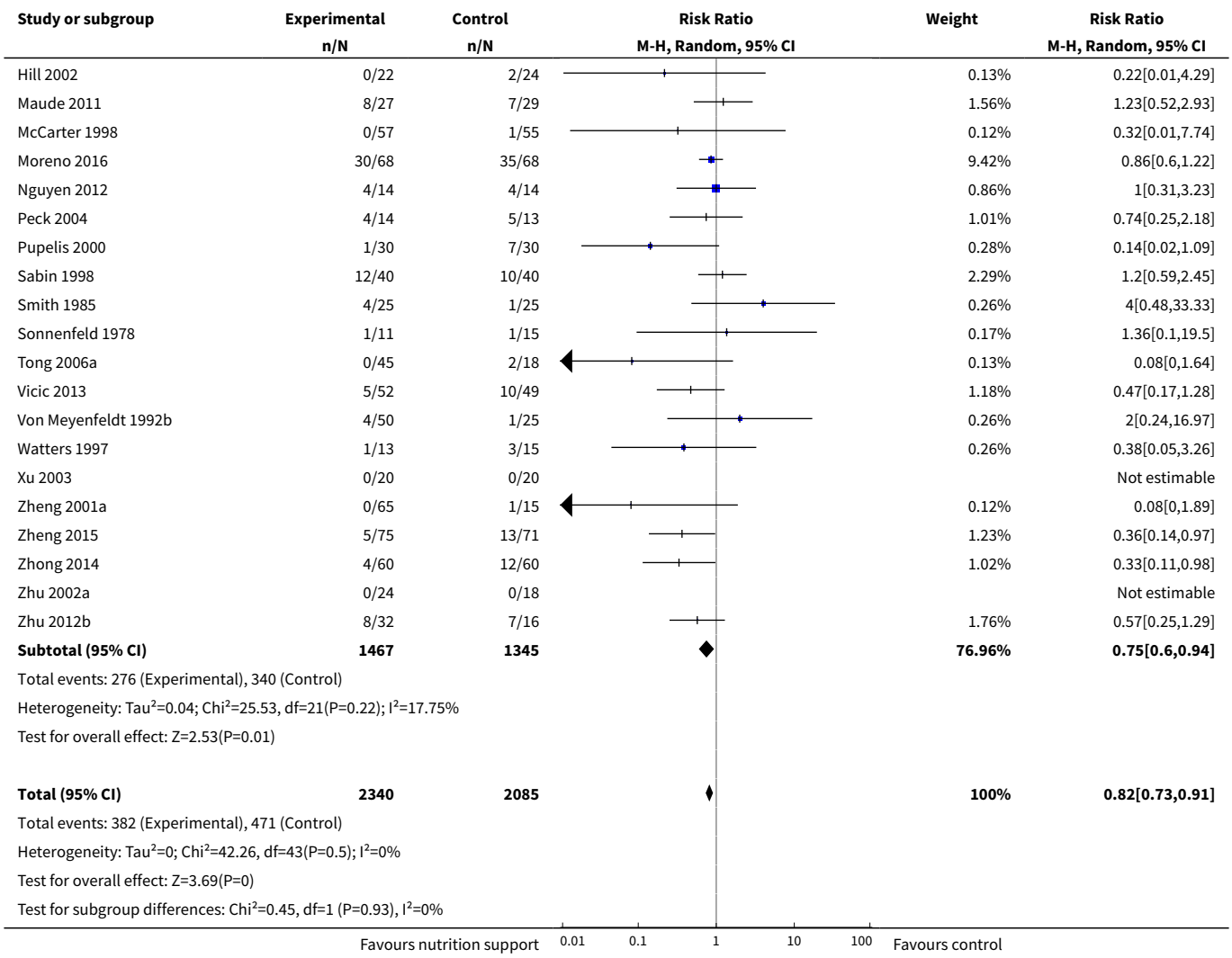
Favours nutrition support

Favours control

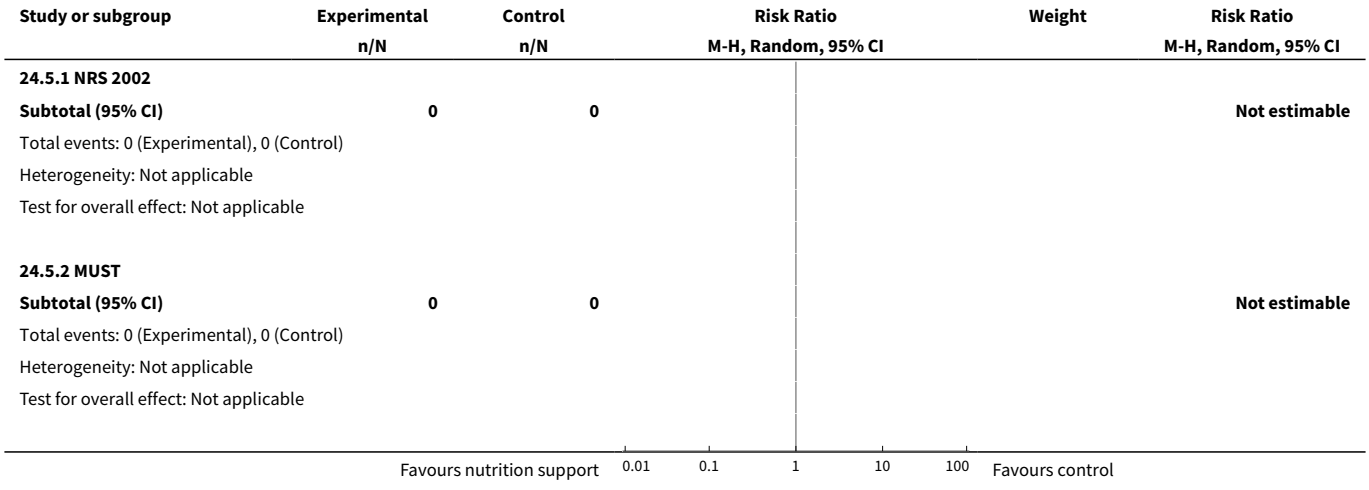
Analysis 24.4. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 4 Serious adverse events - based on adequacy of the amount of calories.

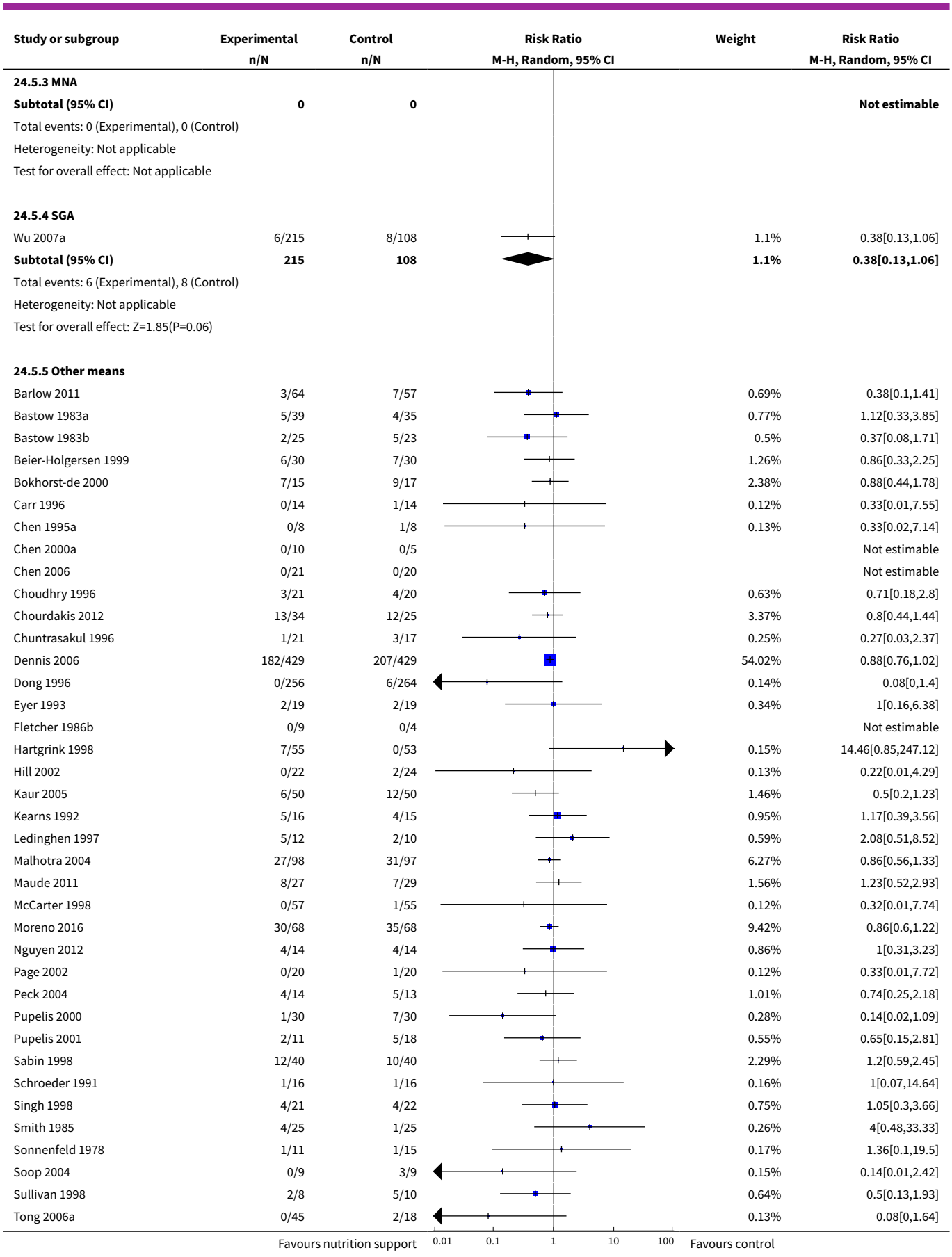
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
24.4.1 Clearly adequate in intervention and clearly inadequate in control					
Barlow 2011	3/64	7/57		0.69%	0.38[0.1,1.41]
Chen 2000a	0/10	0/5			Not estimable
Chourdakis 2012	13/34	12/25		3.37%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.25%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.34%	1[0.16,6.38]
Lediنghen 1997	5/12	2/10		0.59%	2.08[0.51,8.52]
Malhotra 2004	27/98	31/97		6.27%	0.86[0.56,1.33]
Page 2002	0/20	1/20		0.12%	0.33[0.01,7.72]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Subtotal (95% CI)	**560**	**427**		**13.99%**	**0.72[0.54,0.96]**
Total events: 61 (Experimental), 79 (Control)					
Heterogeneity: Tau^2=0; Chi^2=8.76, df=10(P=0.56); I^2=0%					
Test for overall effect: Z=2.23(P=0.03)					
24.4.2 Inadequate in the experimental or adequate in the control					
Bastow 1983a	5/39	4/35		0.77%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.5%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		1.26%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		2.38%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.12%	0.33[0.01,7.55]
Hartgrink 1998	7/55	0/53		0.15%	14.46[0.85,247.12]
Pupelis 2001	2/11	5/18		0.55%	0.65[0.15,2.81]
Schroeder 1991	1/16	1/16		0.16%	1[0.07,14.64]
Subtotal (95% CI)	**205**	**206**		**5.89%**	**0.86[0.55,1.35]**
Total events: 30 (Experimental), 32 (Control)					
Heterogeneity: Tau^2=0; Chi^2=6.04, df=7(P=0.54); I^2=0%					
Test for overall effect: Z=0.65(P=0.51)					
24.4.3 Experimental group is overfed					
Chen 2006	0/21	0/20			Not estimable
Kaur 2005	6/50	12/50		1.46%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.95%	1.17[0.39,3.56]
Singh 1998	4/21	4/22		0.75%	1.05[0.3,3.66]
Subtotal (95% CI)	**108**	**107**		**3.16%**	**0.77[0.42,1.42]**
Total events: 15 (Experimental), 20 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.68, df=2(P=0.43); I^2=0%					
Test for overall effect: Z=0.84(P=0.4)					
24.4.4 Unclear intake in control or experimental					
Chen 1995a	0/8	1/8		0.13%	0.33[0.02,7.14]
Choudhry 1996	3/21	4/20		0.63%	0.71[0.18,2.8]
Dennis 2006	182/429	207/429		54.02%	0.88[0.76,1.02]
Dong 1996	0/256	6/264		0.14%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable





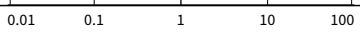
Analysis 24.5. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 5 Serious adverse events - different screening tools.





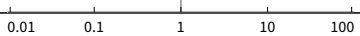
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
24.5.3 MNA					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.5.4 SGA					
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Subtotal (95% CI)	**215**	**108**		**1.1%**	**0.38[0.13,1.06]**
Total events: 6 (Experimental), 8 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.85(P=0.06)					
24.5.5 Other means					
Barlow 2011	3/64	7/57		0.69%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.77%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.5%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		1.26%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		2.38%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.12%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.13%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.63%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		3.37%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.25%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		54.02%	0.88[0.76,1.02]
Dong 1996	0/256	6/264		0.14%	0.08[0,1.4]
Eyer 1993	2/19	2/19		0.34%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.15%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.13%	0.22[0.01,4.29]
Kaur 2005	6/50	12/50		1.46%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.95%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		0.59%	2.08[0.51,8.52]
Malhotra 2004	27/98	31/97		6.27%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		1.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.12%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		9.42%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		0.86%	1[0.31,3.23]
Page 2002	0/20	1/20		0.12%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		1.01%	0.74[0.25,2.18]
Pupelis 2000	1/30	7/30		0.28%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.55%	0.65[0.15,2.81]
Sabin 1998	12/40	10/40		2.29%	1.2[0.59,2.45]
Schroeder 1991	1/16	1/16		0.16%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.75%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.26%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.17%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.13%	0.08[0,1.64]

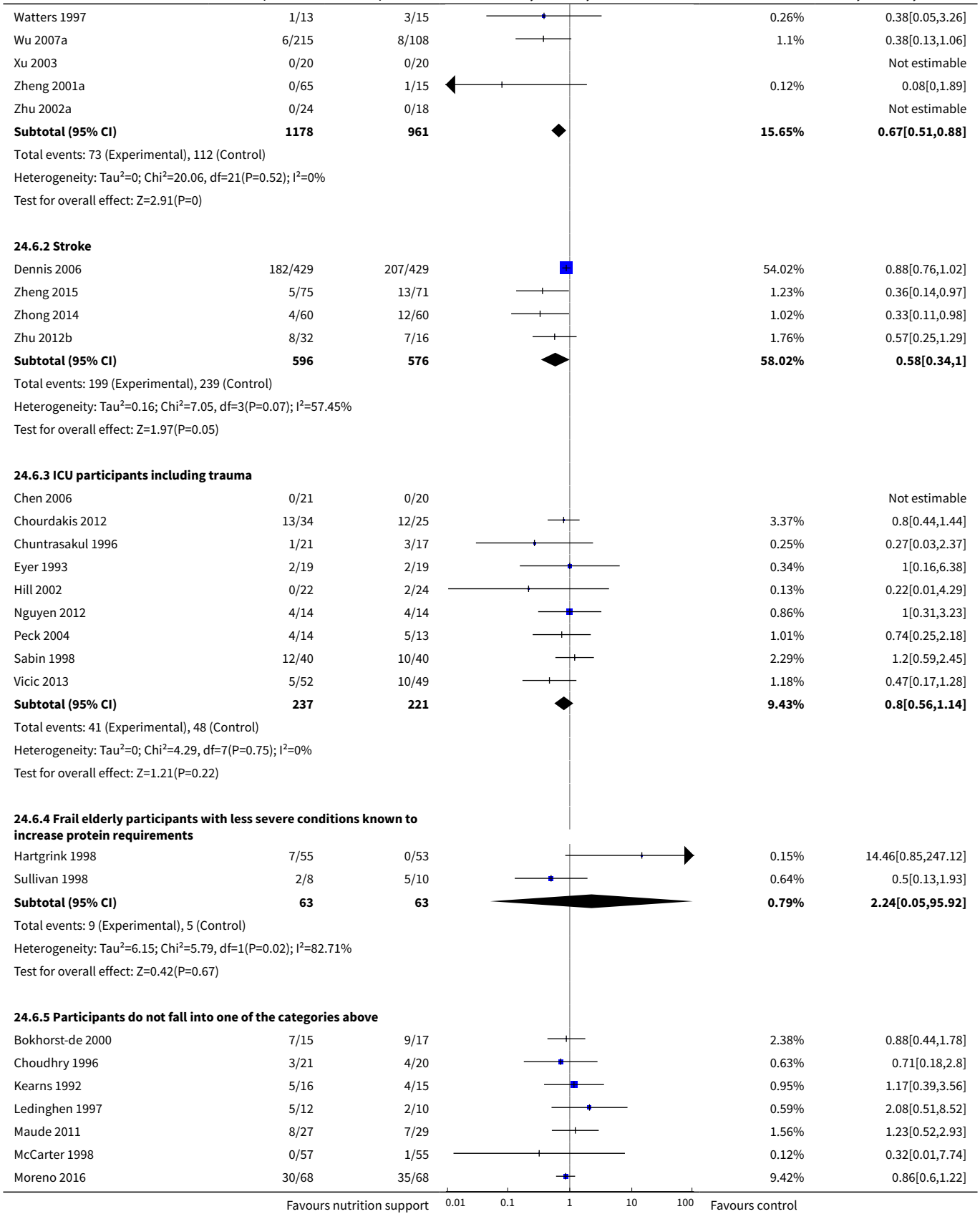
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Vicic 2013	5/52	10/49		1.18%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.26%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.12%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.23%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		1.02%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		1.76%	0.57[0.25,1.29]
Subtotal (95% CI)	**2125**	**1977**		**98.9%**	**0.82[0.74,0.92]**
Total events: 376 (Experimental), 463 (Control)					
Heterogeneity: Tau^2=0; Chi^2=40, df=42(P=0.56); I^2=0%					
Test for overall effect: Z=3.51(P=0)					
Total (95% CI)	**2340**	**2085**		**100%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.26, df=43(P=0.5); I^2=0%					
Test for overall effect: Z=3.69(P=0)					
Test for subgroup differences: Chi^2=2.17, df=1 (P=0.14), I^2=53.94%					



Analysis 24.6. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions.

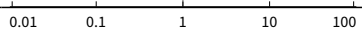
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
24.6.1 Major surgery					
Barlow 2011	3/64	7/57		0.69%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.77%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.5%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		1.26%	0.86[0.33,2.25]
Carr 1996	0/14	1/14		0.12%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.13%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Dong 1996	0/256	6/264		0.14%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Kaur 2005	6/50	12/50		1.46%	0.5[0.2,1.23]
Malhotra 2004	27/98	31/97		6.27%	0.86[0.56,1.33]
Page 2002	0/20	1/20		0.12%	0.33[0.01,7.72]
Pupelis 2000	1/30	7/30		0.28%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.55%	0.65[0.15,2.81]
Schroeder 1991	1/16	1/16		0.16%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.75%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.26%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.17%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Tong 2006a	0/45	2/18		0.13%	0.08[0,1.64]
Von Meyenfeldt 1992b	4/50	1/25		0.26%	2[0.24,16.97]





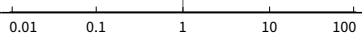
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zheng 2001a	0/65	1/15		0.12%	0.08[0,1.89]
Zhu 2002a	0/24	0/18			Not estimable
Subtotal (95% CI)	**1178**	**961**		**15.65%**	**0.67[0.51,0.88]**
Total events: 73 (Experimental), 112 (Control)					
Heterogeneity: Tau²=0; Chi²=20.06, df=21(P=0.52); I²=0%					
Test for overall effect: Z=2.91(P=0)					
24.6.2 Stroke					
Dennis 2006	182/429	207/429		54.02%	0.88[0.76,1.02]
Zheng 2015	5/75	13/71		1.23%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		1.02%	0.33[0.11,0.98]
Zhu 2012b	8/32	7/16		1.76%	0.57[0.25,1.29]
Subtotal (95% CI)	**596**	**576**		**58.02%**	**0.58[0.34,1]**
Total events: 199 (Experimental), 239 (Control)					
Heterogeneity: Tau²=0.16; Chi²=7.05, df=3(P=0.07); I²=57.45%					
Test for overall effect: Z=1.97(P=0.05)					
24.6.3 ICU participants including trauma					
Chen 2006	0/21	0/20			Not estimable
Chourdakis 2012	13/34	12/25		3.37%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.25%	0.27[0.03,2.37]
Eyer 1993	2/19	2/19		0.34%	1[0.16,6.38]
Hill 2002	0/22	2/24		0.13%	0.22[0.01,4.29]
Nguyen 2012	4/14	4/14		0.86%	1[0.31,3.23]
Peck 2004	4/14	5/13		1.01%	0.74[0.25,2.18]
Sabin 1998	12/40	10/40		2.29%	1.2[0.59,2.45]
Vicic 2013	5/52	10/49		1.18%	0.47[0.17,1.28]
Subtotal (95% CI)	**237**	**221**		**9.43%**	**0.8[0.56,1.14]**
Total events: 41 (Experimental), 48 (Control)					
Heterogeneity: Tau²=0; Chi²=4.29, df=7(P=0.75); I²=0%					
Test for overall effect: Z=1.21(P=0.22)					
24.6.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Hartgrink 1998	7/55	0/53		0.15%	14.46[0.85,247.12]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Subtotal (95% CI)	**63**	**63**		**0.79%**	**2.24[0.05,95.92]**
Total events: 9 (Experimental), 5 (Control)					
Heterogeneity: Tau²=6.15; Chi²=5.79, df=1(P=0.02); I²=82.71%					
Test for overall effect: Z=0.42(P=0.67)					
24.6.5 Participants do not fall into one of the categories above					
Bokhorst-de 2000	7/15	9/17		2.38%	0.88[0.44,1.78]
Choudhry 1996	3/21	4/20		0.63%	0.71[0.18,2.8]
Kearns 1992	5/16	4/15		0.95%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		0.59%	2.08[0.51,8.52]
Maude 2011	8/27	7/29		1.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.12%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		9.42%	0.86[0.6,1.22]

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Subtotal (95% CI)	**266**	**264**		**16.11%**	**0.9[0.69,1.19]**
Total events: 60 (Experimental), 67 (Control)					
Heterogeneity: Tau^2=0; Chi^2=3.66, df=7(P=0.82); I^2=0%					
Test for overall effect: Z=0.73(P=0.47)					
Total (95% CI)	**2340**	**2085**		**100%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.26, df=43(P=0.5); I^2=0%					
Test for overall effect: Z=3.69(P=0)					
Test for subgroup differences: Chi^2=3.83, df=1 (P=0.43), I^2=0%					

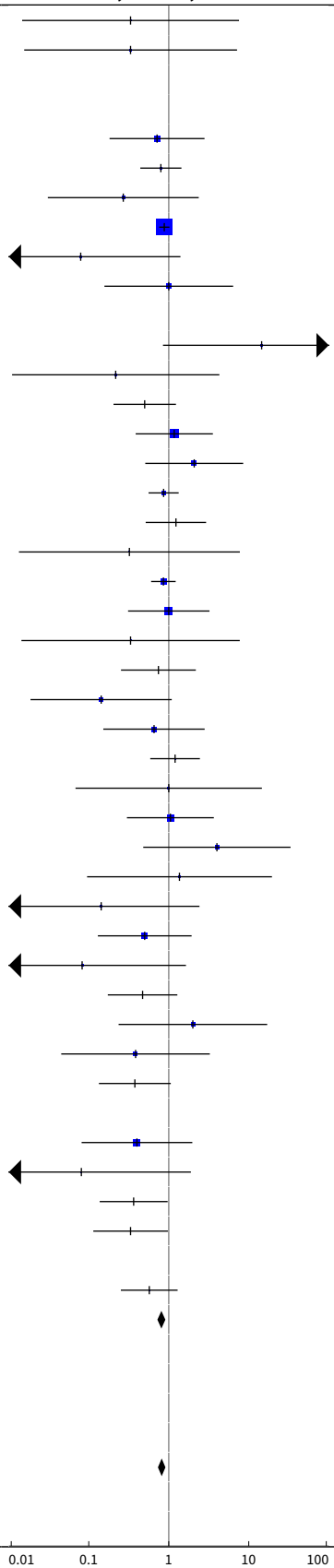


Analysis 24.7. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria.

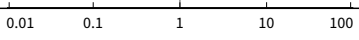
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
24.7.1 BMI less than 20.5 kg/m2					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.7.2 Weight loss of at least 5% during the last three months					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.7.3 Weight loss of at least 10% during the last six months					
Bokhorst-de 2000	7/15	9/17		2.38%	0.88[0.44,1.78]
Subtotal (95% CI)	**15**	**17**		**2.38%**	**0.88[0.44,1.78]**
Total events: 7 (Experimental), 9 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.35(P=0.72)					
24.7.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.7.5 Participants characterised as 'at nutritional risk' by other means					
Barlow 2011	3/64	7/57		0.69%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.77%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.5%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		1.26%	0.86[0.33,2.25]



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Carr 1996	0/14	1/14		0.12%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.13%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.63%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		3.37%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.25%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		54.02%	0.88[0.76,1.02]
Dong 1996	0/256	6/264		0.14%	0.08[0,1.4]
Eyer 1993	2/19	2/19		0.34%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.15%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.13%	0.22[0.01,4.29]
Kaur 2005	6/50	12/50		1.46%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.95%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		0.59%	2.08[0.51,8.52]
Malhotra 2004	27/98	31/97		6.27%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		1.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.12%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		9.42%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		0.86%	1[0.31,3.23]
Page 2002	0/20	1/20		0.12%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		1.01%	0.74[0.25,2.18]
Pupelis 2000	1/30	7/30		0.28%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.55%	0.65[0.15,2.81]
Sabin 1998	12/40	10/40		2.29%	1.2[0.59,2.45]
Schroeder 1991	1/16	1/16		0.16%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.75%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.26%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.17%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.13%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.18%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.26%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.12%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.23%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		1.02%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		1.76%	0.57[0.25,1.29]
Subtotal (95% CI)	**2325**	**2068**		**97.62%**	**0.81[0.72,0.91]**
Total events: 375 (Experimental), 462 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.2, df=42(P=0.46); I^2=0.48%					
Test for overall effect: Z=3.63(P=0)					
Total (95% CI)	**2340**	**2085**		**100%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.26, df=43(P=0.5); I^2=0%					

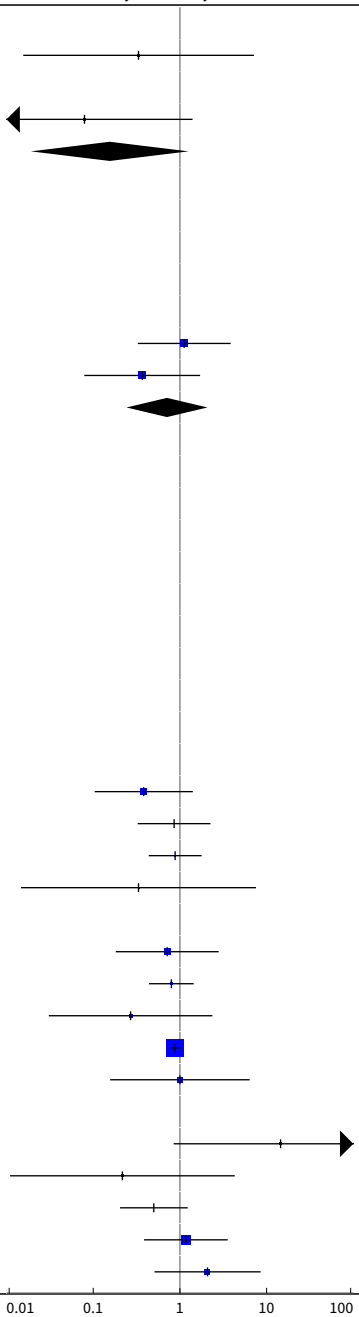


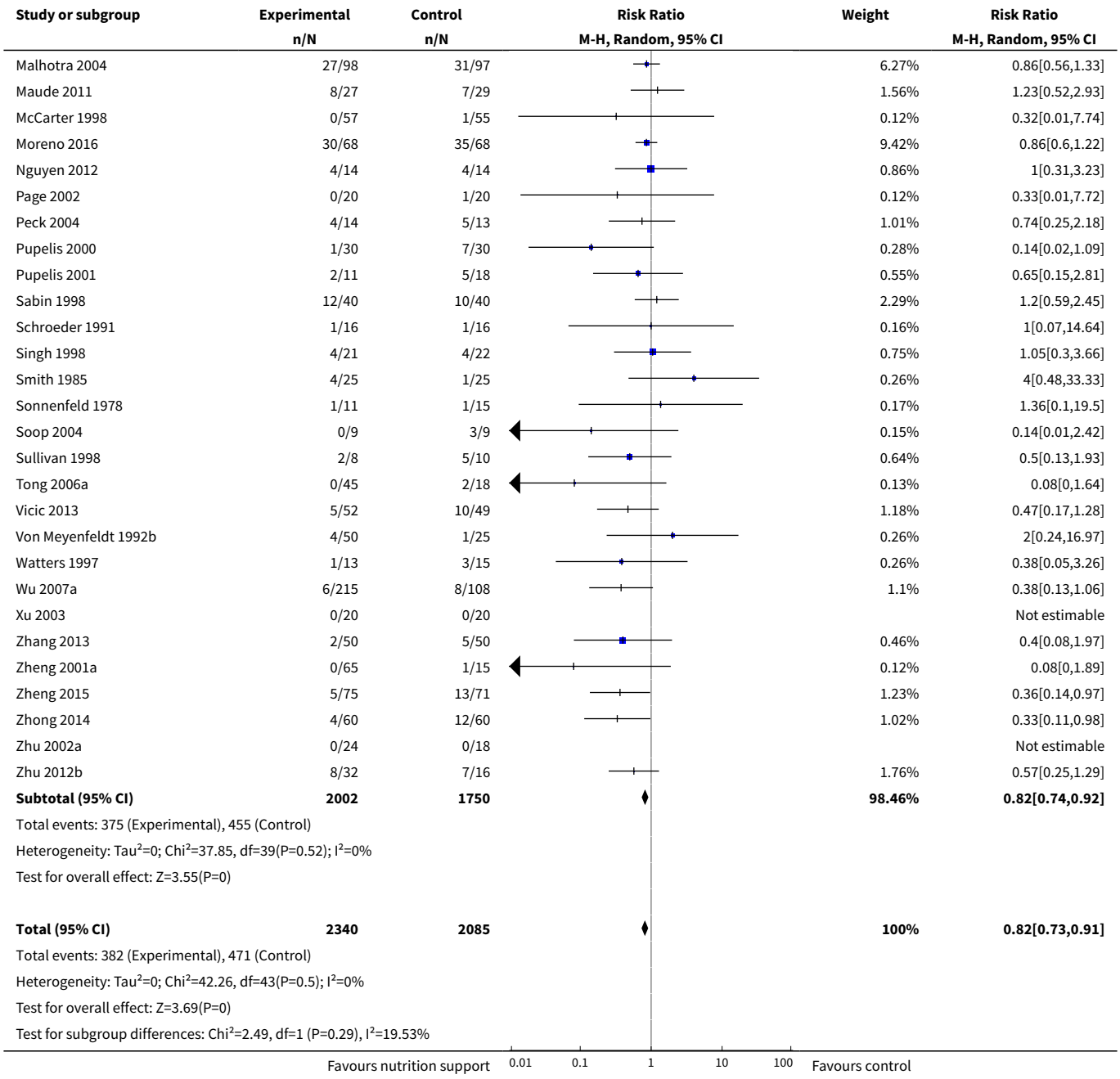
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=3.69(P=0)					
Test for subgroup differences: Chi²=0.06, df=1 (P=0.81), I²=0%					



Analysis 24.8. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

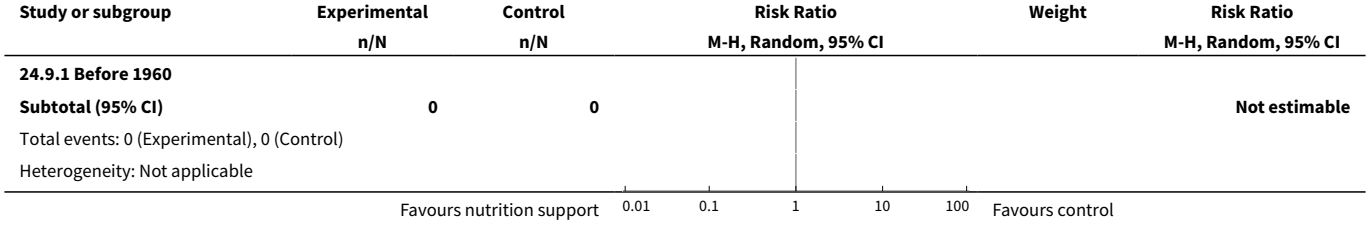
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
24.8.1 Biomarkers					
Chen 1995a	0/8	1/8		0.13%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Dong 1996	0/256	6/264		0.14%	0.08[0,1.4]
Subtotal (95% CI)	**274**	**277**		**0.27%**	**0.16[0.02,1.26]**
Total events: 0 (Experimental), 7 (Control)					
Heterogeneity: Tau²=0; Chi²=0.48, df=1(P=0.49); I²=0%					
Test for overall effect: Z=1.74(P=0.08)					
24.8.2 Anthropometric measures					
Bastow 1983a	5/39	4/35		0.77%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		0.5%	0.37[0.08,1.71]
Subtotal (95% CI)	**64**	**58**		**1.27%**	**0.71[0.24,2.08]**
Total events: 7 (Experimental), 9 (Control)					
Heterogeneity: Tau²=0.12; Chi²=1.23, df=1(P=0.27); I²=18.74%					
Test for overall effect: Z=0.63(P=0.53)					
24.8.3 Both					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
24.8.4 Characterised by other means					
Barlow 2011	3/64	7/57		0.69%	0.38[0.1,1.41]
Beier-Holgersen 1999	6/30	7/30		1.26%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		2.38%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.12%	0.33[0.01,7.55]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		0.63%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		3.37%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.25%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		54.02%	0.88[0.76,1.02]
Eyer 1993	2/19	2/19		0.34%	1[0.16,6.38]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.15%	14.46[0.85,247.12]
Hill 2002	0/22	2/24		0.13%	0.22[0.01,4.29]
Kaur 2005	6/50	12/50		1.46%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.95%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		0.59%	2.08[0.51,8.52]



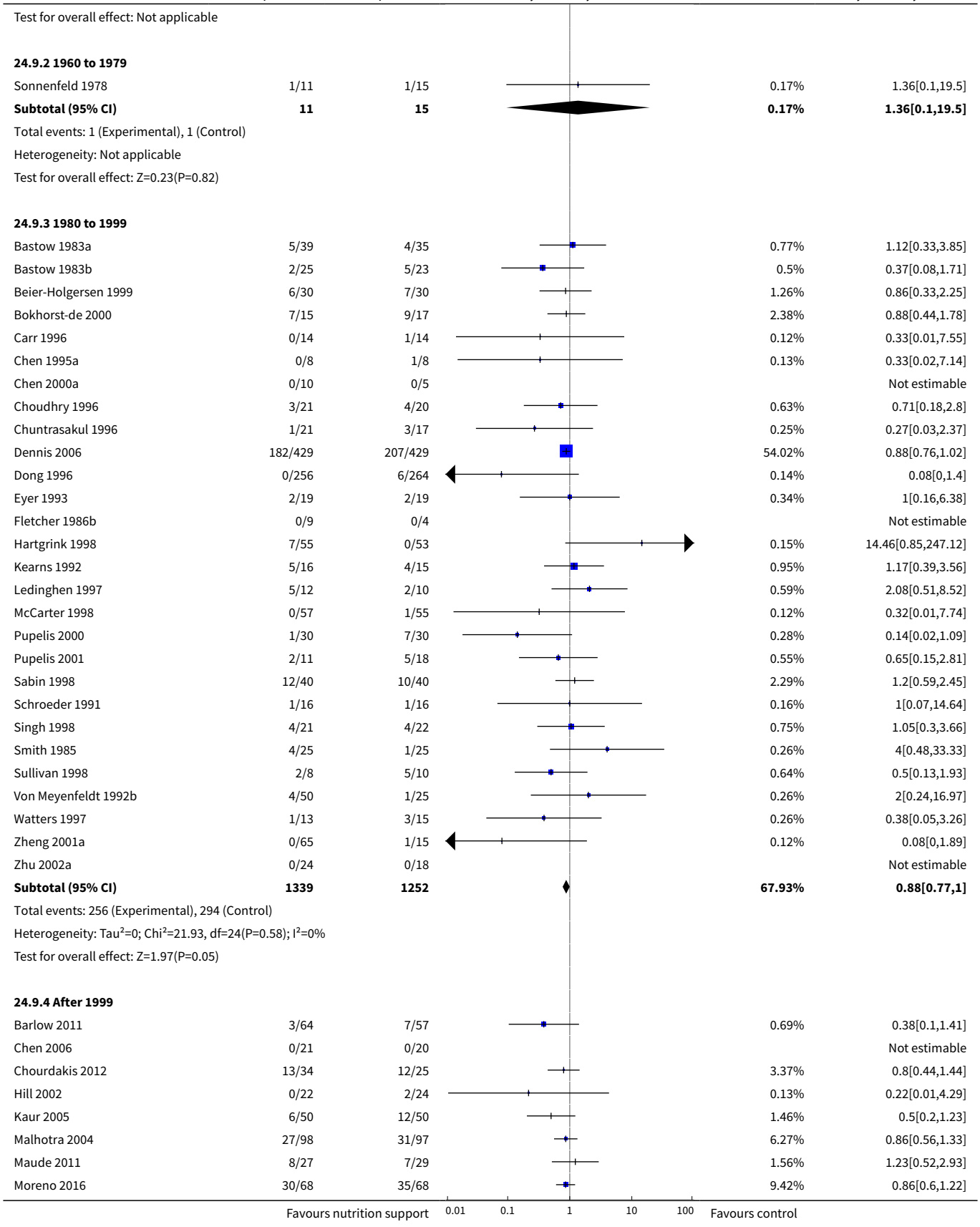


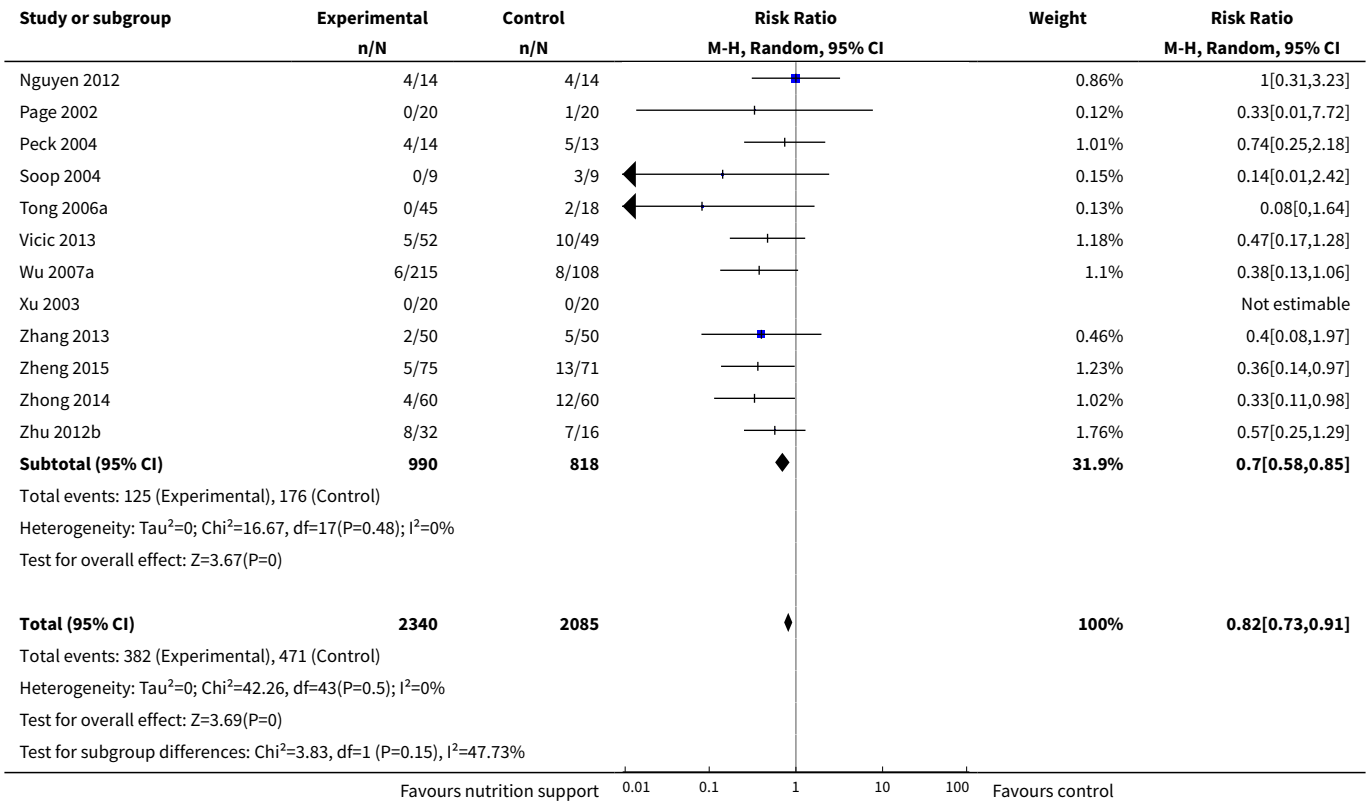
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Malhotra 2004	27/98	31/97		6.27%	0.86[0.56,1.33]
Maude 2011	8/27	7/29		1.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.12%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		9.42%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		0.86%	1[0.31,3.23]
Page 2002	0/20	1/20		0.12%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		1.01%	0.74[0.25,2.18]
Pupelis 2000	1/30	7/30		0.28%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.55%	0.65[0.15,2.81]
Sabin 1998	12/40	10/40		2.29%	1.2[0.59,2.45]
Schroeder 1991	1/16	1/16		0.16%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.75%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.26%	4[0.48,33.33]
Sonnenfeld 1978	1/11	1/15		0.17%	1.36[0.1,19.5]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.13%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.18%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.26%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.12%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.23%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		1.02%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		1.76%	0.57[0.25,1.29]
Subtotal (95% CI)	**2002**	**1750**		**98.46%**	**0.82[0.74,0.92]**
Total events: 375 (Experimental), 455 (Control)					
Heterogeneity: Tau^2=0; Chi^2=37.85, df=39(P=0.52); I^2=0%					
Test for overall effect: Z=3.55(P=0)					
Total (95% CI)	**2340**	**2085**		**100%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.26, df=43(P=0.5); I^2=0%					
Test for overall effect: Z=3.69(P=0)					
Test for subgroup differences: Chi^2=2.49, df=1 (P=0.29), I^2=19.53%					

Analysis 24.9. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 9 Serious adverse events - randomisation year.

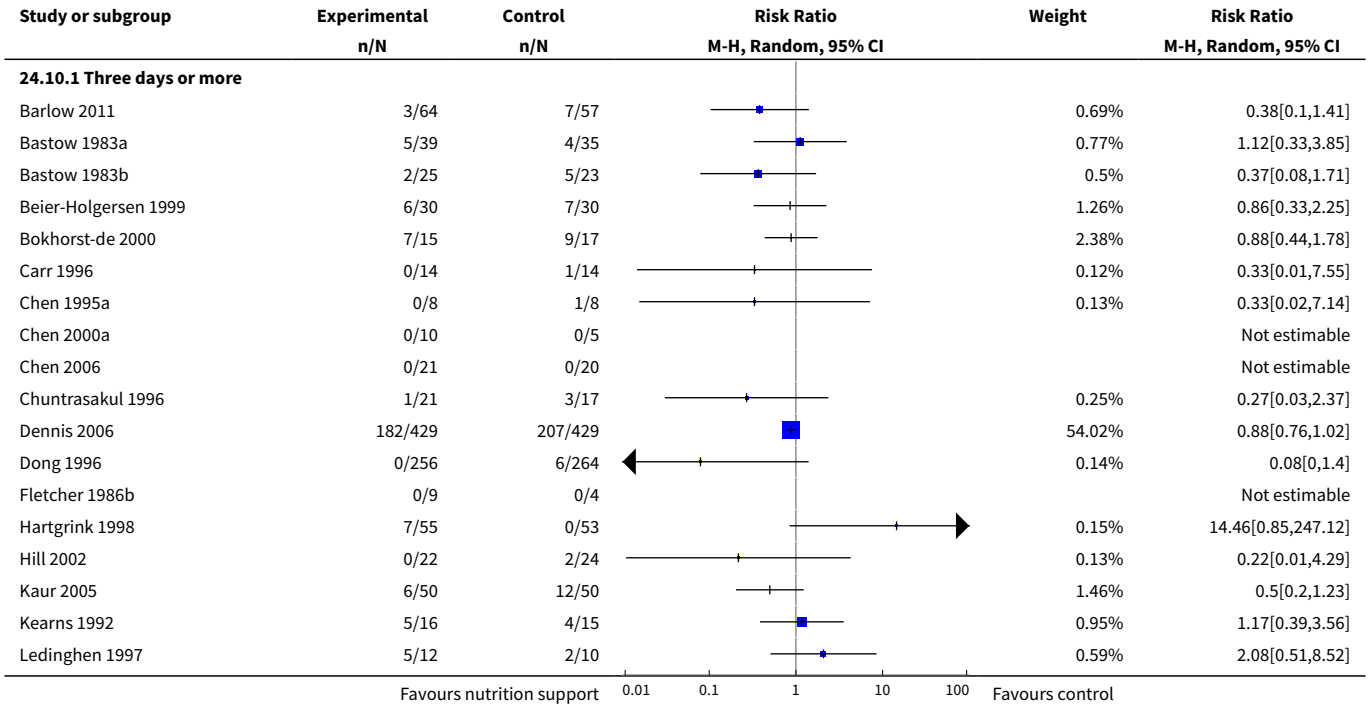


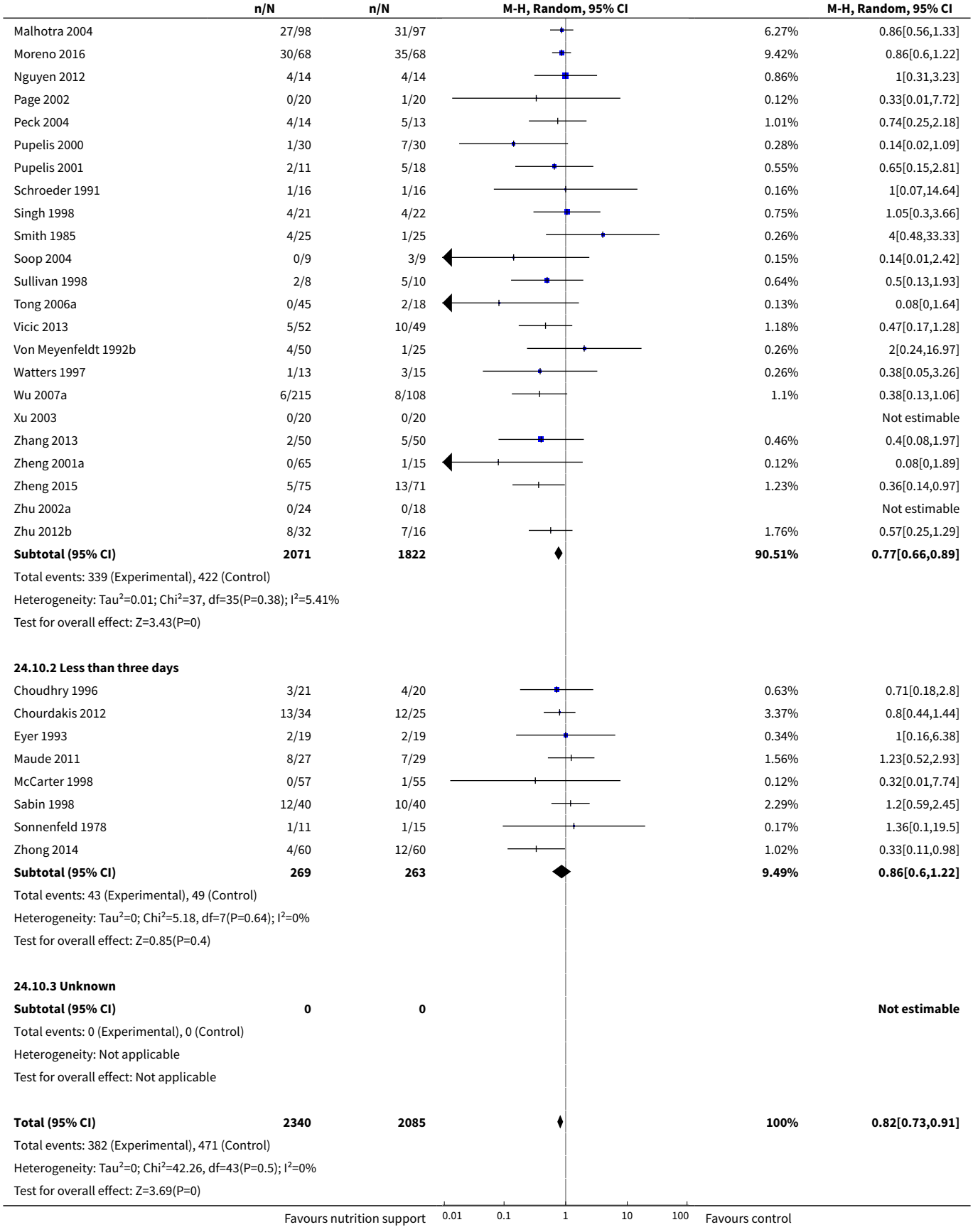
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
24.9.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					





Analysis 24.10. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Malhotra 2004	27/98	31/97		6.27%	0.86[0.56,1.33]
Moreno 2016	30/68	35/68		9.42%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		0.86%	1[0.31,3.23]
Page 2002	0/20	1/20		0.12%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		1.01%	0.74[0.25,2.18]
Pupelis 2000	1/30	7/30		0.28%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.55%	0.65[0.15,2.81]
Schroeder 1991	1/16	1/16		0.16%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.75%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.26%	4[0.48,33.33]
Soop 2004	0/9	3/9		0.15%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.64%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.13%	0.08[0,1.64]
Vicic 2013	5/52	10/49		1.18%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.26%	2[0.24,16.97]
Watters 1997	1/13	3/15		0.26%	0.38[0.05,3.26]
Wu 2007a	6/215	8/108		1.1%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.46%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.12%	0.08[0,1.89]
Zheng 2015	5/75	13/71		1.23%	0.36[0.14,0.97]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/16		1.76%	0.57[0.25,1.29]
Subtotal (95% CI)	**2071**	**1822**		**90.51%**	**0.77[0.66,0.89]**
Total events: 339 (Experimental), 422 (Control)					
Heterogeneity: Tau^2=0.01; Chi^2=37, df=35(P=0.38); I^2=5.41%					
Test for overall effect: Z=3.43(P=0)					
24.10.2 Less than three days					
Choudhry 1996	3/21	4/20		0.63%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		3.37%	0.8[0.44,1.44]
Eyer 1993	2/19	2/19		0.34%	1[0.16,6.38]
Maude 2011	8/27	7/29		1.56%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.12%	0.32[0.01,7.74]
Sabin 1998	12/40	10/40		2.29%	1.2[0.59,2.45]
Sonnenfeld 1978	1/11	1/15		0.17%	1.36[0.1,19.5]
Zhong 2014	4/60	12/60		1.02%	0.33[0.11,0.98]
Subtotal (95% CI)	**269**	**263**		**9.49%**	**0.86[0.6,1.22]**
Total events: 43 (Experimental), 49 (Control)					
Heterogeneity: Tau^2=0; Chi^2=5.18, df=7(P=0.64); I^2=0%					
Test for overall effect: Z=0.85(P=0.4)					
24.10.3 Unknown					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**2340**	**2085**		**100%**	**0.82[0.73,0.91]**
Total events: 382 (Experimental), 471 (Control)					
Heterogeneity: Tau^2=0; Chi^2=42.26, df=43(P=0.5); I^2=0%					
Test for overall effect: Z=3.69(P=0)					

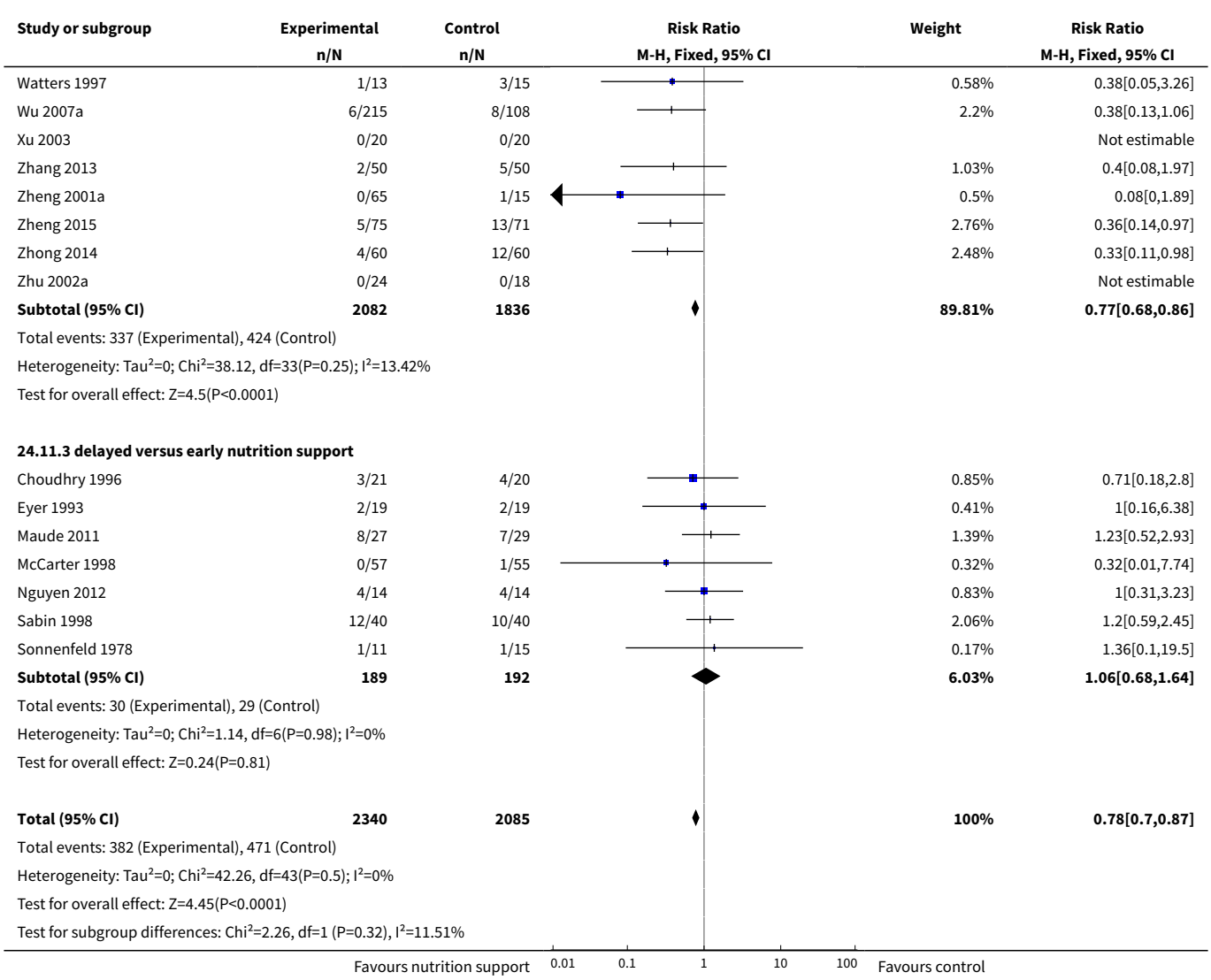
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for subgroup differences: Chi²=0.34, df=1 (P=0.56), I²=0%					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

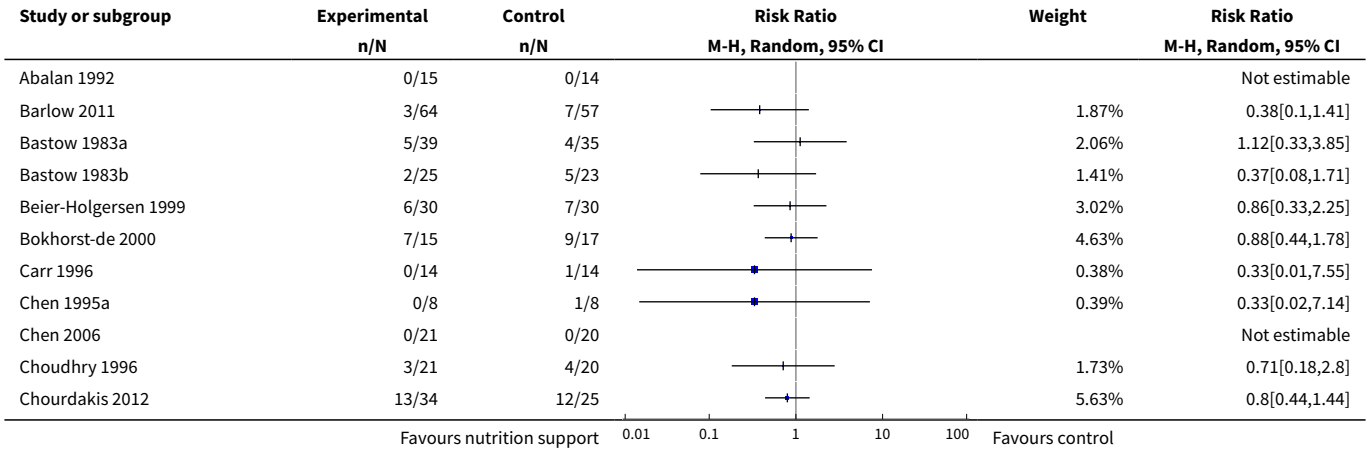
Analysis 24.11. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 11 Serious adverse events co-interventions.

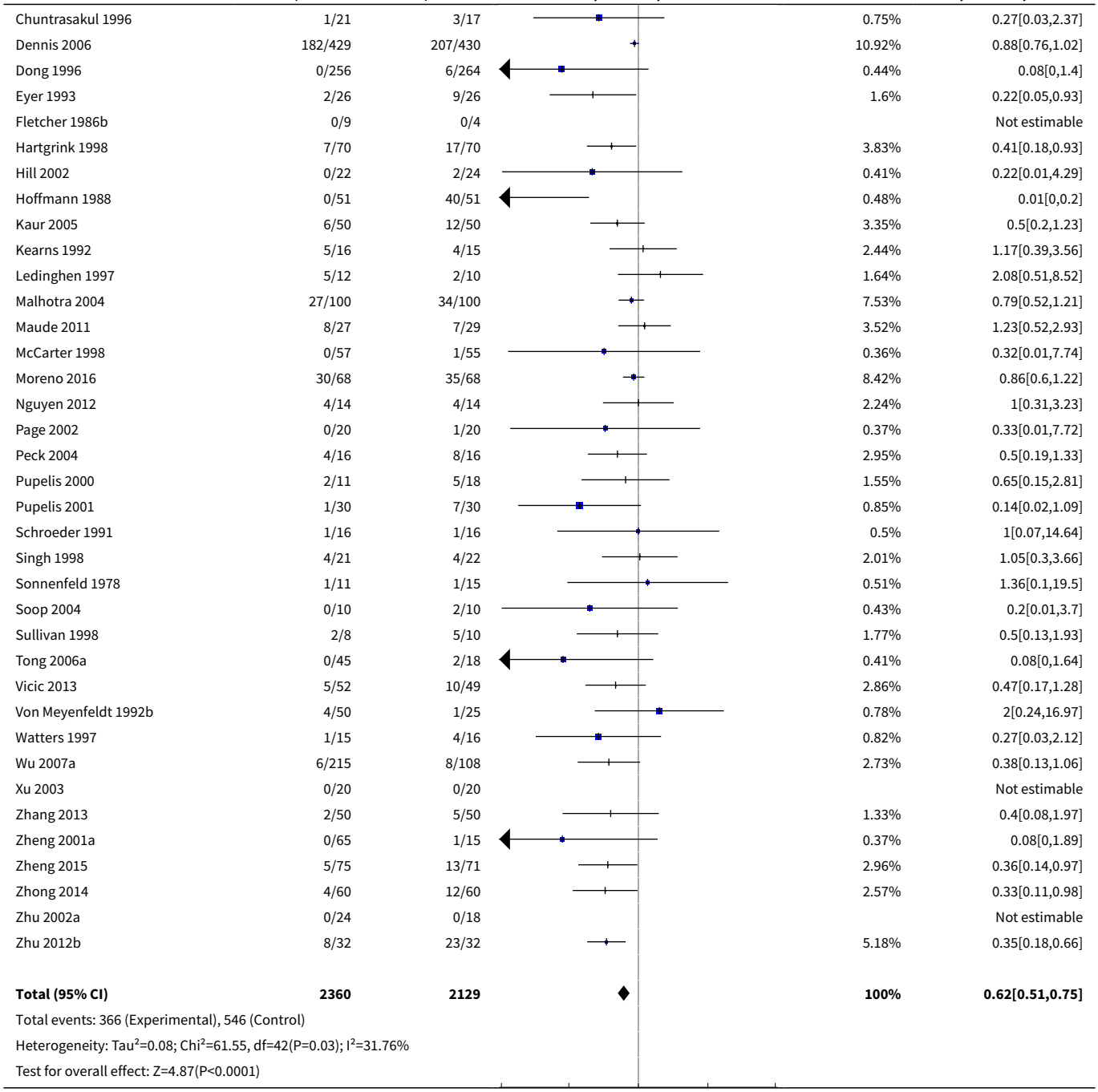
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
24.11.1 Received nutrition support as co-intervention					
Bokhorst-de 2000	7/15	9/17		1.74%	0.88[0.44,1.78]
Hill 2002	0/22	2/24		0.49%	0.22[0.01,4.29]
Zhu 2012b	8/32	7/16		1.93%	0.57[0.25,1.29]
Subtotal (95% CI)	**69**	**57**		**4.16%**	**0.66[0.39,1.12]**
Total events: 15 (Experimental), 18 (Control)					
Heterogeneity: Tau²=0; Chi²=1.31, df=2(P=0.52); I²=0%					
Test for overall effect: Z=1.54(P=0.12)					
24.11.2 did not receive nutrition support as co-intervention					
Barlow 2011	3/64	7/57		1.53%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		0.87%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.08%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		1.44%	0.86[0.33,2.25]
Carr 1996	0/14	1/14		0.31%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.31%	0.33[0.02,7.14]
Chen 2000a	0/10	0/5			Not estimable
Chen 2006	0/21	0/20			Not estimable
Chourdakis 2012	13/34	12/25		2.85%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.68%	0.27[0.03,2.37]
Dennis 2006	182/429	207/429		42.73%	0.88[0.76,1.02]
Dong 1996	0/256	6/264		1.32%	0.08[0,1.4]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	7/55	0/53		0.11%	14.46[0.85,247.12]
Kaur 2005	6/50	12/50		2.48%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		0.85%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		0.45%	2.08[0.51,8.52]
Malhotra 2004	27/98	31/97		6.43%	0.86[0.56,1.33]
Moreno 2016	30/68	35/68		7.22%	0.86[0.6,1.22]
Page 2002	0/20	1/20		0.31%	0.33[0.01,7.72]
Peck 2004	4/14	5/13		1.07%	0.74[0.25,2.18]
Pupelis 2000	1/30	7/30		1.44%	0.14[0.02,1.09]
Pupelis 2001	2/11	5/18		0.78%	0.65[0.15,2.81]
Schroeder 1991	1/16	1/16		0.21%	1[0.07,14.64]
Singh 1998	4/21	4/22		0.81%	1.05[0.3,3.66]
Smith 1985	4/25	1/25		0.21%	4[0.48,33.33]
Soop 2004	0/9	3/9		0.72%	0.14[0.01,2.42]
Sullivan 1998	2/8	5/10		0.92%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.73%	0.08[0,1.64]
Vicic 2013	5/52	10/49		2.13%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.28%	2[0.24,16.97]

Favours nutrition support 0.01 0.1 1 10 100 Favours control



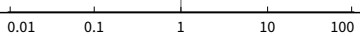
Analysis 24.12. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 12 Serious adverse events - 'best-worse case' scenario (enteral nutrition).





Analysis 24.13. Comparison 24 Enteral - Serious adverse event maximum follow-up, Outcome 13 Serious adverse events - 'worst-best case' scenario (enteral nutrition).

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abalan 1992	0/15	0/14			Not estimable
Barlow 2011	3/64	7/57		1.45%	0.38[0.1,1.41]
Bastow 1983a	5/39	4/35		1.61%	1.12[0.33,3.85]
Bastow 1983b	2/25	5/23		1.06%	0.37[0.08,1.71]
Beier-Holgersen 1999	6/30	7/30		2.52%	0.86[0.33,2.25]
Bokhorst-de 2000	7/15	9/17		4.37%	0.88[0.44,1.78]
Carr 1996	0/14	1/14		0.27%	0.33[0.01,7.55]
Chen 1995a	0/8	1/8		0.28%	0.33[0.02,7.14]
Chen 2006	0/21	0/20			Not estimable
Choudhry 1996	3/21	4/20		1.33%	0.71[0.18,2.8]
Chourdakis 2012	13/34	12/25		5.77%	0.8[0.44,1.44]
Chuntrasakul 1996	1/21	3/17		0.54%	0.27[0.03,2.37]
Dennis 2006	182/429	207/430		20.77%	0.88[0.76,1.02]
Dong 1996	0/256	6/264		0.31%	0.08[0,1.4]
Eyer 1993	9/26	2/26		1.21%	4.5[1.07,18.85]
Fletcher 1986b	0/9	0/4			Not estimable
Hartgrink 1998	22/70	0/70		0.33%	45[2.78,727.58]
Hill 2002	0/22	2/24		0.29%	0.22[0.01,4.29]
Hoffmann 1988	8/51	5/51		2.17%	1.6[0.56,4.56]
Kaur 2005	6/50	12/50		2.87%	0.5[0.2,1.23]
Kearns 1992	5/16	4/15		1.95%	1.17[0.39,3.56]
Ledinghen 1997	5/12	2/10		1.25%	2.08[0.51,8.52]
Malhotra 2004	29/100	31/100		9.21%	0.94[0.61,1.43]
Maude 2011	8/27	7/29		3.04%	1.23[0.52,2.93]
McCarter 1998	0/57	1/55		0.26%	0.32[0.01,7.74]
Moreno 2016	30/68	35/68		11.42%	0.86[0.6,1.22]
Nguyen 2012	4/14	4/14		1.77%	1[0.31,3.23]
Page 2002	0/20	1/20		0.26%	0.33[0.01,7.72]
Peck 2004	6/16	5/16		2.53%	1.2[0.46,3.15]
Pupelis 2000	2/11	5/18		1.17%	0.65[0.15,2.81]
Pupelis 2001	1/30	7/30		0.62%	0.14[0.02,1.09]
Schroeder 1991	1/16	1/16		0.36%	1[0.07,14.64]
Singh 1998	4/21	4/22		1.57%	1.05[0.3,3.66]
Sonnenfeld 1978	1/11	1/15		0.36%	1.36[0.1,19.5]
Soop 2004	1/10	1/10		0.37%	1[0.07,13.87]
Sullivan 1998	2/8	5/10		1.35%	0.5[0.13,1.93]
Tong 2006a	0/45	2/18		0.29%	0.08[0,1.64]
Vicic 2013	5/52	10/49		2.37%	0.47[0.17,1.28]
Von Meyenfeldt 1992b	4/50	1/25		0.56%	2[0.24,16.97]
Watters 1997	3/15	3/16		1.2%	1.07[0.25,4.49]
Wu 2007a	6/215	8/108		2.23%	0.38[0.13,1.06]
Xu 2003	0/20	0/20			Not estimable
Zhang 2013	2/50	5/50		0.99%	0.4[0.08,1.97]
Zheng 2001a	0/65	1/15		0.26%	0.08[0,1.89]
Zheng 2015	5/75	13/71		2.46%	0.36[0.14,0.97]
Zhong 2014	4/60	12/60		2.08%	0.33[0.11,0.98]
Zhu 2002a	0/24	0/18			Not estimable
Zhu 2012b	8/32	7/32		2.93%	1.14[0.47,2.78]



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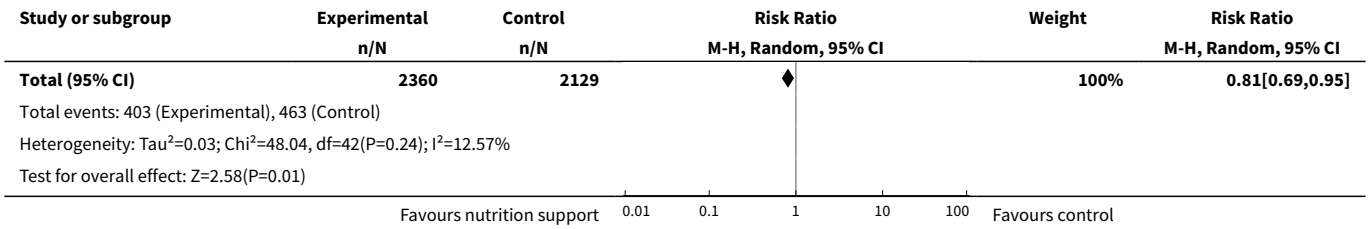


Comparison 25. Parenteral - All cause mortality - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All-cause mortality - overall	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
2 All-cause mortality - bias	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
2.1 High risk of bias	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 All-cause mortality - medical speciality	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	7	259	Risk Ratio (M-H, Random, 95% CI)	1.17 [0.58, 2.37]
3.3 Geriatrics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.4 Pulmonary disease	1	25	Risk Ratio (M-H, Random, 95% CI)	0.22 [0.01, 4.08]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.10 Gastroenterologic surgery	21	1553	Risk Ratio (M-H, Random, 95% CI)	0.79 [0.52, 1.20]
3.11 Trauma surgery	2	45	Risk Ratio (M-H, Random, 95% CI)	1.22 [0.66, 2.25]
3.12 Orthopaedics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.13 Plastic, reconstructive and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	1	15	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Transplant surgery	2	47	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.23, 1.65]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	1	44	Risk Ratio (M-H, Random, 95% CI)	1.6 [0.40, 6.32]
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	4	5044	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.81, 1.24]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.24 Oncology	4	281	Risk Ratio (M-H, Random, 95% CI)	1.19 [0.44, 3.21]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4 All-cause mortality - based on adequacy of the amount of calories	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
4.1 Clearly adequate in experimental group and clearly inadequate in control group	7	5641	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.80, 1.20]
4.2 Inadequate in the experimental group or adequate in the control group	1	53	Risk Ratio (M-H, Random, 95% CI)	1.16 [0.40, 3.33]
4.3 Experimental group is overfed	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.4 Unclear intake in experimental group or control group	35	1619	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.68, 1.32]
5 All-cause mortality - different screening tools	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
5.1 NRS 2002	1	4640	Risk Ratio (M-H, Random, 95% CI)	1.04 [0.83, 1.30]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 SGA	1	323	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.13, 4.44]
5.5 Other means	41	2350	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.69, 1.17]
6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
6.1 Major surgery	26	1822	Risk Ratio (M-H, Random, 95% CI)	0.80 [0.56, 1.15]
6.2 Stroke	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.3 ICU participants including trauma	6	5089	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.84, 1.25]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	1	34	Risk Ratio (M-H, Random, 95% CI)	3.35 [0.15, 76.93]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
6.5 Participants do not fall into one of the categories above	10	368	Risk Ratio (M-H, Random, 95% CI)	1.12 [0.60, 2.10]
7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
7.1 BMI less than 20.5 kg/m2	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
8.1 Biomarkers	2	43	Risk Ratio (M-H, Random, 95% CI)	0.22 [0.01, 4.08]
8.2 Anthropometric measures	3	137	Risk Ratio (M-H, Random, 95% CI)	1.31 [0.38, 4.58]
8.3 Both	3	75	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.14, 3.07]
8.4 Characterised by other means	35	7058	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.17]
9 All-cause mortality - randomisation year	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960-1979	3	95	Risk Ratio (M-H, Random, 95% CI)	1.85 [0.58, 5.88]
9.3 1980-1999	34	1694	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.68, 1.21]
9.4 After 1999	6	5524	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.81, 1.23]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	43	7313	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
10.1 Three days or more	41	7206	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.83, 1.16]
10.2 Less than three days	1	80	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.12, 3.78]
10.3 Unknown	1	27	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
11 All-cause mortality - 'best-worst case' scenario	43	7432	Risk Ratio (M-H, Random, 95% CI)	0.73 [0.56, 0.97]
12 All-cause mortality - 'worst-best case' scenario	43	7432	Risk Ratio (M-H, Random, 95% CI)	1.20 [0.98, 1.47]
13 All-cause mortality co-interventions	43	7313	Risk Ratio (M-H, Fixed, 95% CI)	0.98 [0.82, 1.16]
13.1 received nutrition support as co-intervention	6	5066	Risk Ratio (M-H, Fixed, 95% CI)	1.03 [0.83, 1.26]
13.2 did not receive nutrition support as co-intervention	36	2167	Risk Ratio (M-H, Fixed, 95% CI)	0.88 [0.66, 1.18]
13.3 delayed versus early nutrition support	1	80	Risk Ratio (M-H, Fixed, 95% CI)	0.67 [0.12, 3.78]

Analysis 25.1. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 1 All-cause mortality - overall.

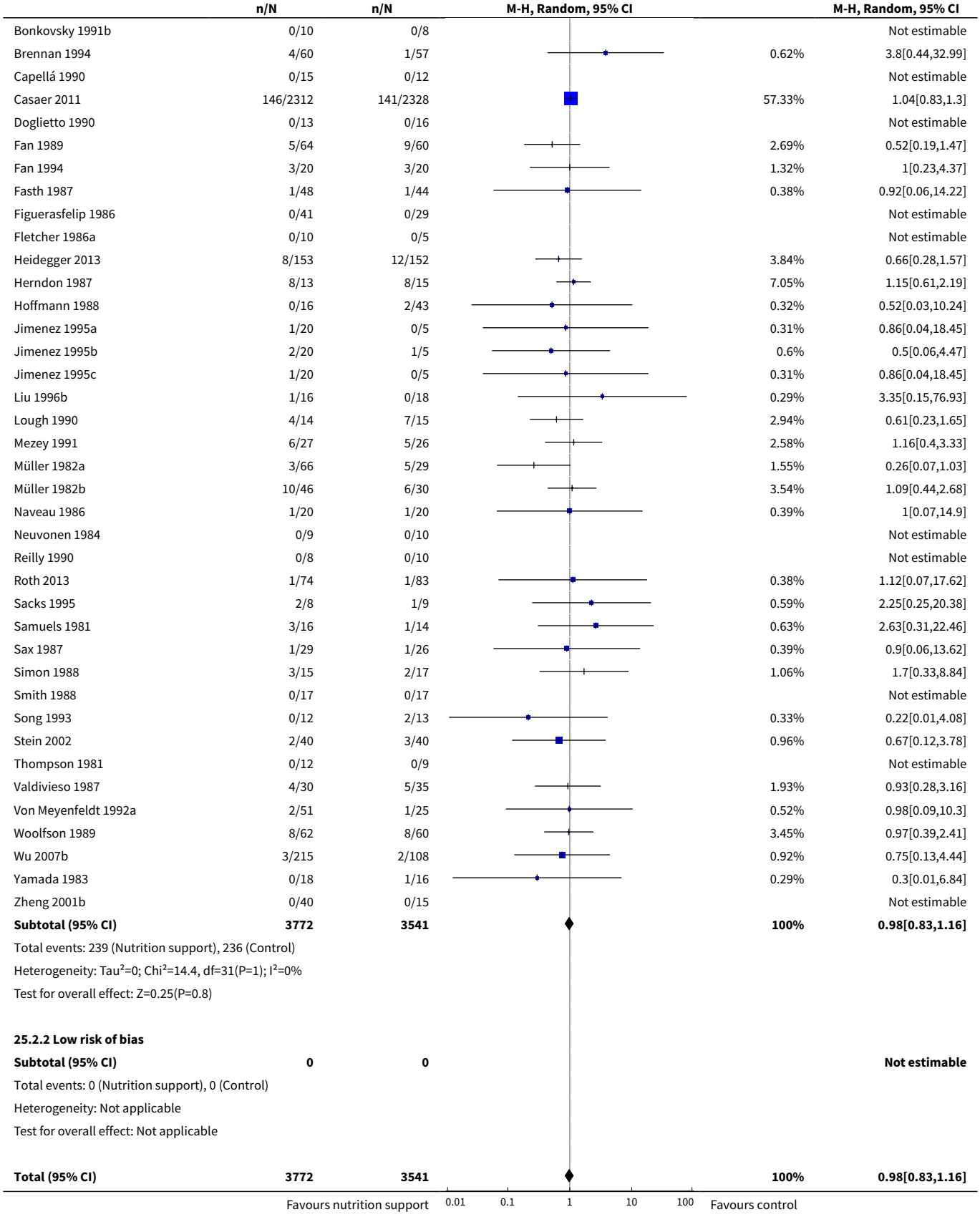
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		1.53%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.58%	0.56[0.06,5.14]
Bellantone 1988	1/54	1/46		0.38%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.62%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		57.33%	1.04[0.83,1.3]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		2.69%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		1.32%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.38%	0.92[0.06,14.22]

Favours nutrition support | Favours control

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3.84%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		7.05%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.29%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		2.94%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.58%	1.16[0.4,3.33]
Müller 1982a	3/66	5/29		1.55%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		3.54%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.39%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Roth 2013	1/74	1/83		0.38%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.59%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.63%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.39%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		1.06%	1.7[0.33,8.84]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.33%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.96%	0.67[0.12,3.78]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		1.93%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.52%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.45%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.92%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.29%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**3772**	**3541**		**100%**	**0.98[0.83,1.16]**
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: Tau²=0; Chi²=14.4, df=31(P=1); I²=0%					
Test for overall effect: Z=0.25(P=0.8)					

Analysis 25.2. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 2 All-cause mortality - bias.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
25.2.1 High risk of bias					
Abel 1976	4/20	3/24		1.53%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.58%	0.56[0.06,5.14]
Bellantone 1988	1/54	1/46		0.38%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable



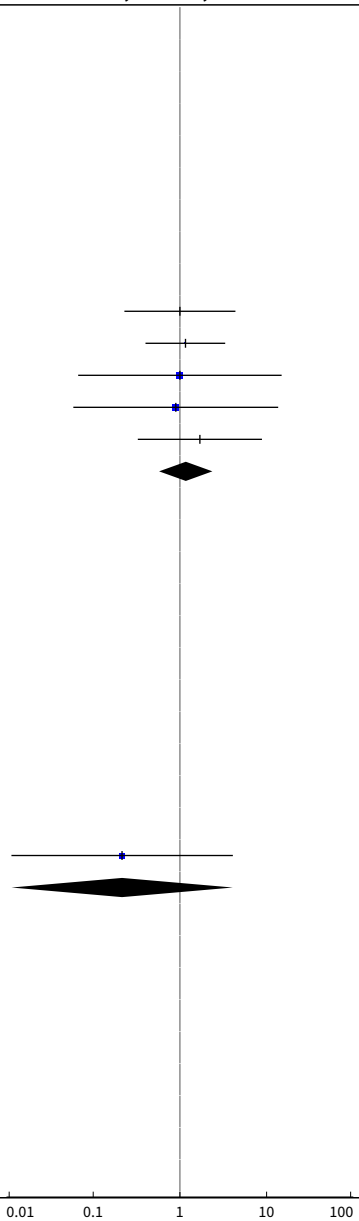
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.62%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		57.33%	1.04[0.83,1.3]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		2.69%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		1.32%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.38%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3.84%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		7.05%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.29%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		2.94%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.58%	1.16[0.4,3.33]
Müller 1982a	3/66	5/29		1.55%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		3.54%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.39%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Roth 2013	1/74	1/83		0.38%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.59%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.63%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.39%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		1.06%	1.7[0.33,8.84]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.33%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.96%	0.67[0.12,3.78]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		1.93%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.52%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.45%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.92%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.29%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3772**	**3541**		**100%**	**0.98[0.83,1.16]**
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: Tau^2=0; Chi^2=14.4, df=31(P=1); I^2=0%					
Test for overall effect: Z=0.25(P=0.8)					
25.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**3772**	**3541**		**100%**	**0.98[0.83,1.16]**

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: Tau²=0; Chi²=14.4, df=31(P=1); I²=0%					
Test for overall effect: Z=0.25(P=0.8)					
Test for subgroup differences: Not applicable					

Favours nutrition support — Favours control

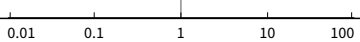
Analysis 25.3. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 3 All-cause mortality - medical speciality.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
25.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.3.2 Medical gastroenterology and hepatology					
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Fan 1994	3/20	3/20		1.32%	1[0.23,4.37]
Mezey 1991	6/27	5/26		2.58%	1.16[0.4,3.33]
Naveau 1986	1/20	1/20		0.39%	1[0.07,14.9]
Sax 1987	1/29	1/26		0.39%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		1.06%	1.7[0.33,8.84]
Subtotal (95% CI)	**130**	**129**		**5.74%**	**1.17[0.58,2.37]**
Total events: 14 (Nutrition support), 12 (Control)					
Heterogeneity: Tau²=0; Chi²=0.29, df=4(P=0.99); I²=0%					
Test for overall effect: Z=0.43(P=0.67)					
25.3.3 Geriatrics					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.3.4 Pulmonary disease					
Song 1993	0/12	2/13		0.33%	0.22[0.01,4.08]
Subtotal (95% CI)	**12**	**13**		**0.33%**	**0.22[0.01,4.08]**
Total events: 0 (Nutrition support), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.02(P=0.31)					
25.3.5 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					



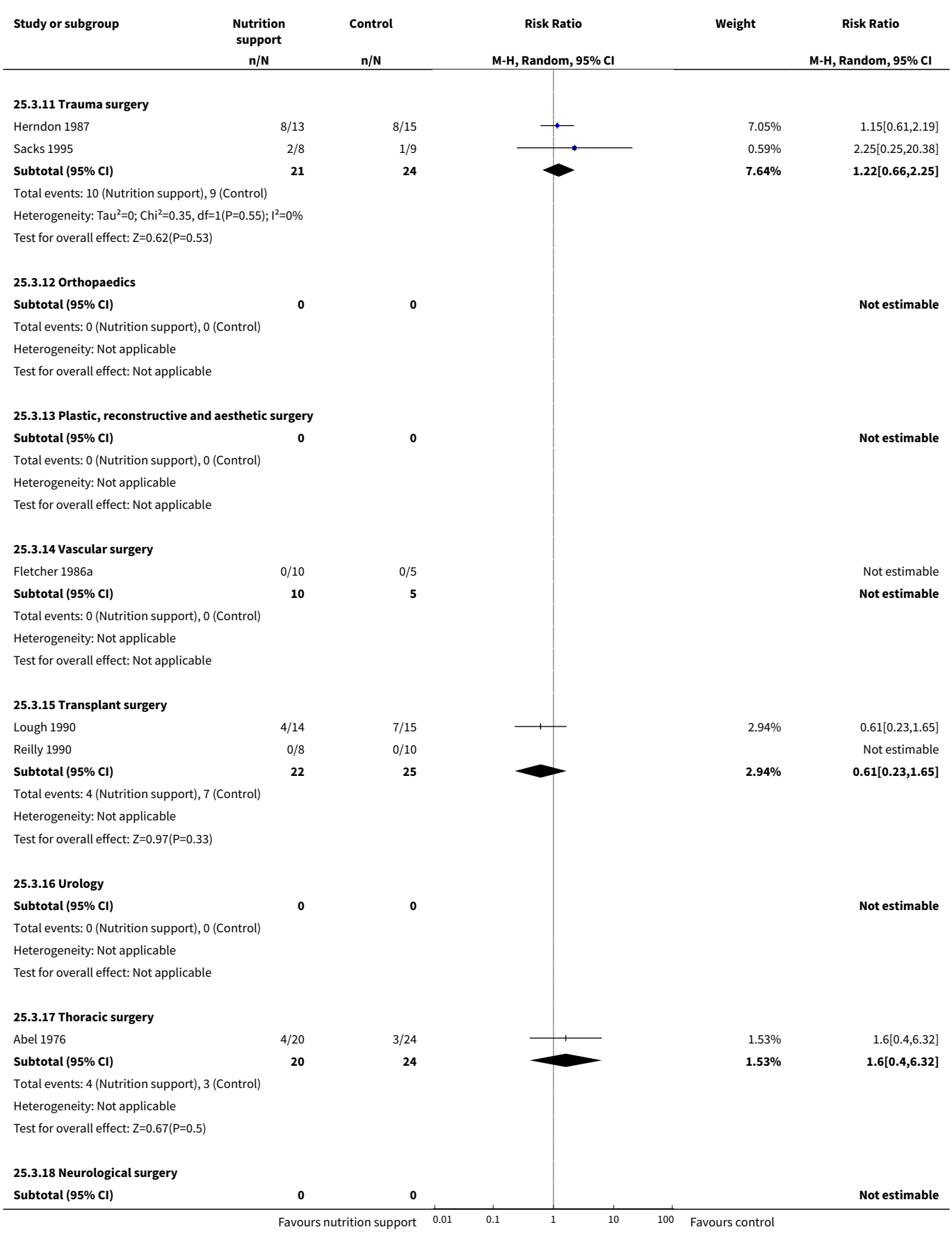
Favours nutrition support — Favours control

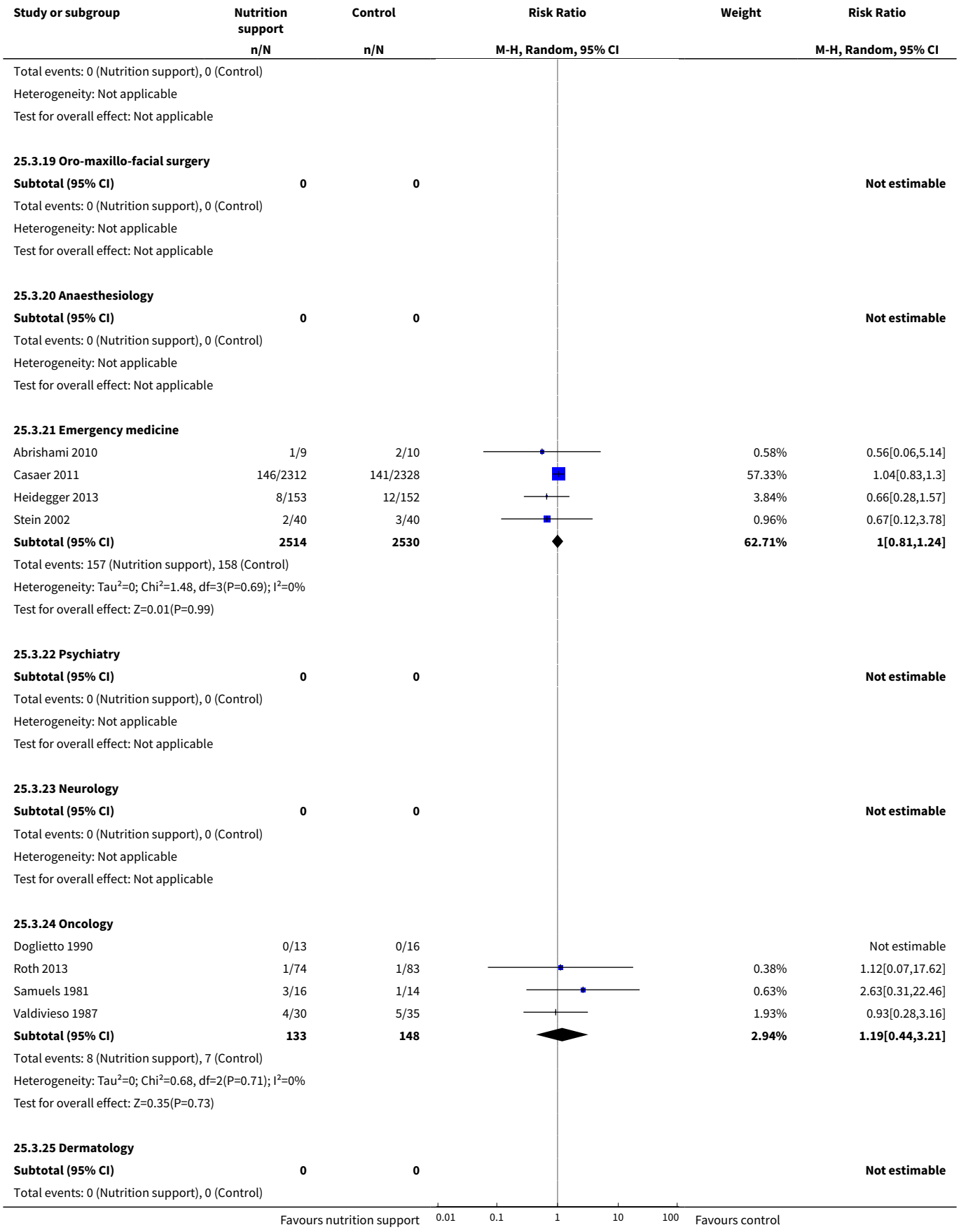
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
25.3.6 Infectious diseases					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.3.7 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.3.8 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.3.9 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.3.10 Gastroenterologic surgery					
Bellantone 1988	1/54	1/46		0.38%	0.85[0.05,13.24]
Brennan 1994	4/60	1/57		0.62%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Fan 1989	5/64	9/60		2.69%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.38%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.29%	3.35[0.15,76.93]
Müller 1982a	3/66	5/29		1.55%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		3.54%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Smith 1988	0/17	0/17			Not estimable
Thompson 1981	0/12	0/9			Not estimable
Von Meyenfeldt 1992a	2/51	1/25		0.52%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.45%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.92%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.29%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**910**	**643**		**16.17%**	**0.79[0.52,1.2]**
Total events: 42 (Nutrition support), 38 (Control)					
Heterogeneity: Tau^2=0; Chi^2=7.31, df=14(P=0.92); I^2=0%					
Test for overall effect: Z=1.12(P=0.26)					



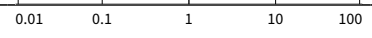
Favours nutrition support

Favours control



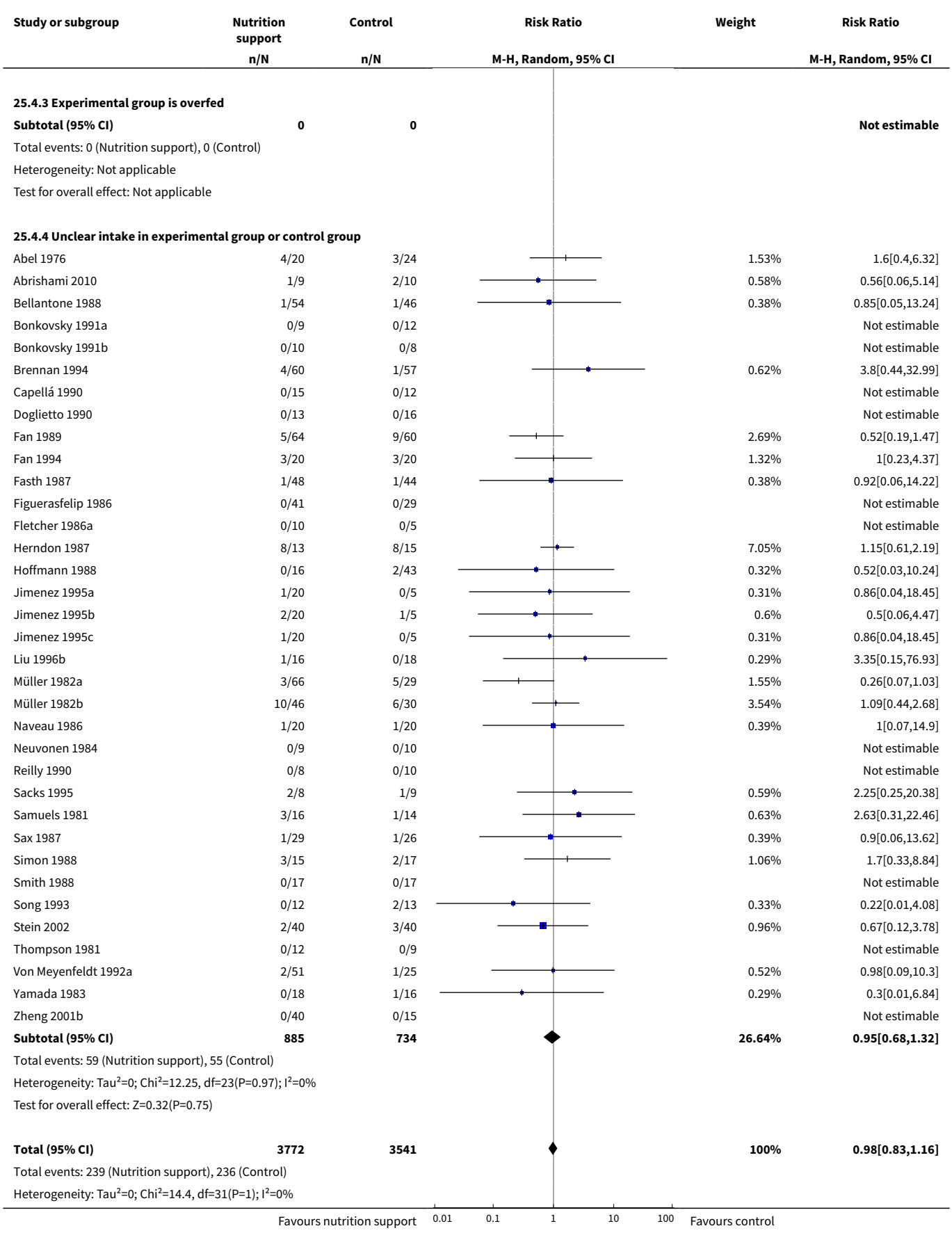


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.3.26 Gynaecology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.3.27 Mixed					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**3772**	**3541**		**100%**	**0.98[0.83,1.16]**
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: Tau^2=0; Chi^2=14.4, df=31(P=1); I^2=0%					
Test for overall effect: Z=0.25(P=0.8)					
Test for subgroup differences: Chi^2=4.33, df=1 (P=0.74), I^2=0%					



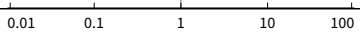
Analysis 25.4. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 4 All-cause mortality - based on adequacy of the amount of calories.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
25.4.1 Clearly adequate in experimental group and clearly inadequate in control group					
Casaer 2011	146/2312	141/2328		57.33%	1.04[0.83,1.3]
Heidegger 2013	8/153	12/152		3.84%	0.66[0.28,1.57]
Lough 1990	4/14	7/15		2.94%	0.61[0.23,1.65]
Roth 2013	1/74	1/83		0.38%	1.12[0.07,17.62]
Valdivieso 1987	4/30	5/35		1.93%	0.93[0.28,3.16]
Woolfson 1989	8/62	8/60		3.45%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.92%	0.75[0.13,4.44]
Subtotal (95% CI)	**2860**	**2781**		**70.79%**	**0.98[0.8,1.2]**
Total events: 174 (Nutrition support), 176 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.05, df=6(P=0.92); I^2=0%					
Test for overall effect: Z=0.15(P=0.88)					
25.4.2 Inadequate in the experimental group or adequate in the control group					
Mezey 1991	6/27	5/26		2.58%	1.16[0.4,3.33]
Subtotal (95% CI)	**27**	**26**		**2.58%**	**1.16[0.4,3.33]**
Total events: 6 (Nutrition support), 5 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.27(P=0.79)					



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
25.4.3 Experimental group is overfed					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.4.4 Unclear intake in experimental group or control group					
Abel 1976	4/20	3/24		1.53%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.58%	0.56[0.06,5.14]
Bellantone 1988	1/54	1/46		0.38%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.62%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		2.69%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		1.32%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.38%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Herndon 1987	8/13	8/15		7.05%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.29%	3.35[0.15,76.93]
Müller 1982a	3/66	5/29		1.55%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		3.54%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.39%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Sacks 1995	2/8	1/9		0.59%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.63%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.39%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		1.06%	1.7[0.33,8.84]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.33%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.96%	0.67[0.12,3.78]
Thompson 1981	0/12	0/9			Not estimable
Von Meyenfeldt 1992a	2/51	1/25		0.52%	0.98[0.09,10.3]
Yamada 1983	0/18	1/16		0.29%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**885**	**734**		**26.64%**	**0.95[0.68,1.32]**
Total events: 59 (Nutrition support), 55 (Control)					
Heterogeneity: $Tau^2=0$; $Chi^2=12.25$, df=23(P=0.97); $I^2=0\%$					
Test for overall effect: Z=0.32(P=0.75)					
Total (95% CI)	**3772**	**3541**		**100%**	**0.98[0.83,1.16]**
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: $Tau^2=0$; $Chi^2=14.4$, df=31(P=1); $I^2=0\%$					

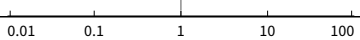
Study or subgroup	Nutrition support	Control	Risk Ratio	Weight	Risk Ratio
	n/N	n/N	M-H, Random, 95% CI		M-H, Random, 95% CI
Test for overall effect: Z=0.25(P=0.8)					
Test for subgroup differences: Chi^2=0.14, df=1 (P=0.93), I^2=0%					



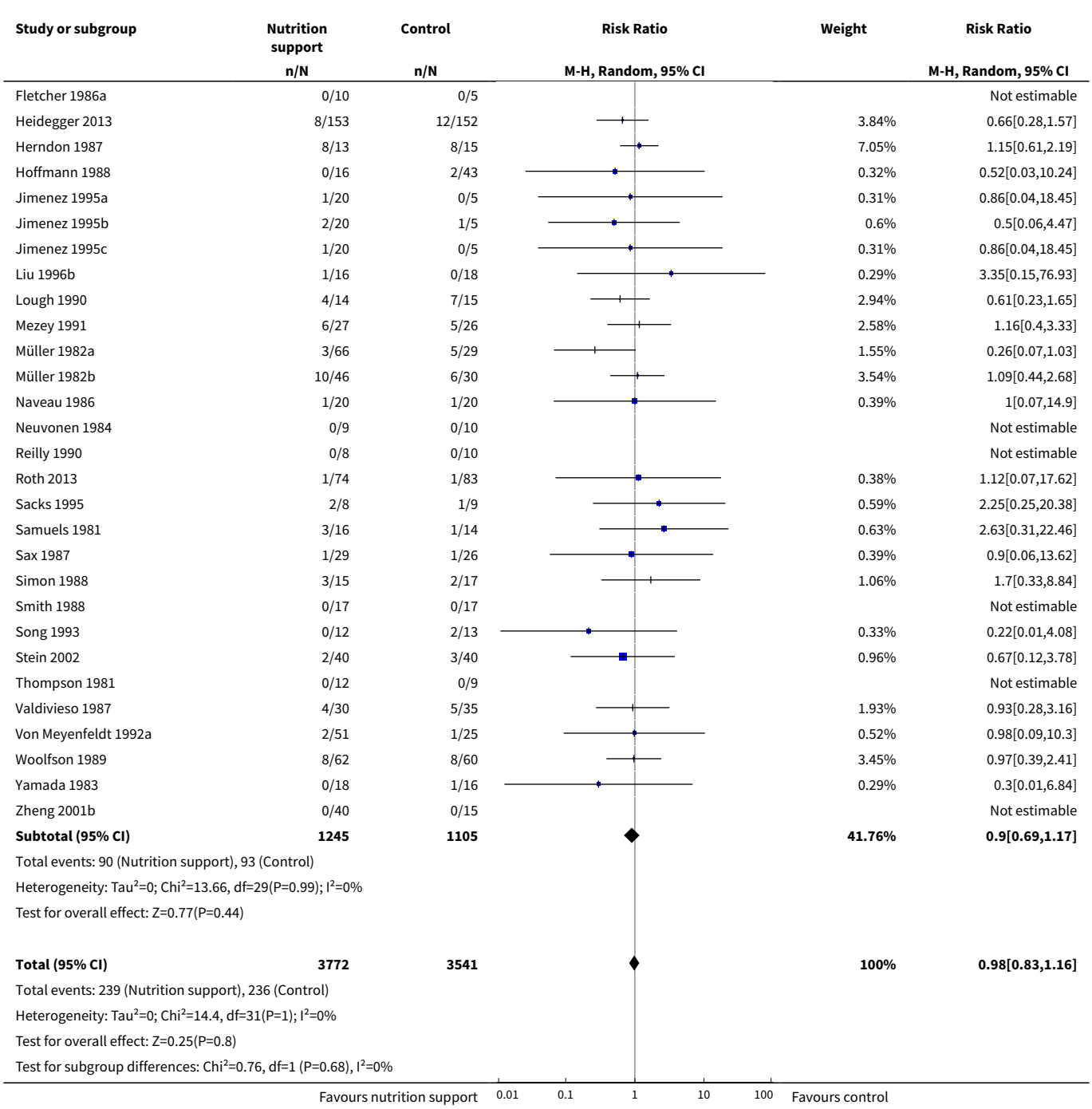
Favours nutrition support | Favours control

Analysis 25.5. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 5 All-cause mortality - different screening tools.

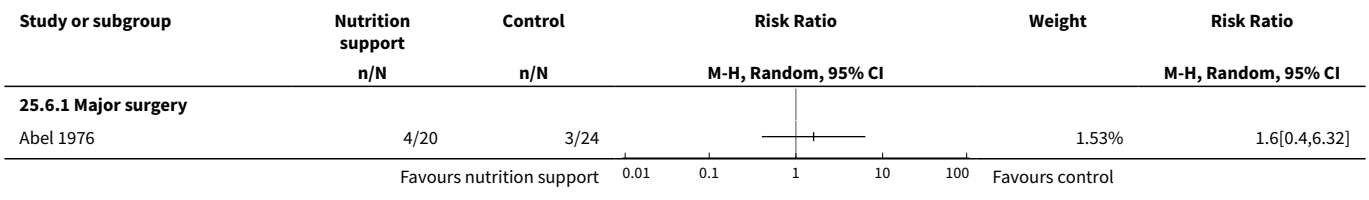
Study or subgroup	Nutrition support	Control	Risk Ratio	Weight	Risk Ratio
	n/N	n/N	M-H, Random, 95% CI		M-H, Random, 95% CI
25.5.1 NRS 2002					
Casaer 2011	146/2312	141/2328		57.33%	1.04[0.83,1.3]
Subtotal (95% CI)	**2312**	**2328**		**57.33%**	**1.04[0.83,1.3]**
Total events: 146 (Nutrition support), 141 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.36(P=0.72)					
25.5.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.5.3 MNA					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.5.4 SGA					
Wu 2007b	3/215	2/108		0.92%	0.75[0.13,4.44]
Subtotal (95% CI)	**215**	**108**		**0.92%**	**0.75[0.13,4.44]**
Total events: 3 (Nutrition support), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.31(P=0.75)					
25.5.5 Other means					
Abel 1976	4/20	3/24		1.53%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.58%	0.56[0.06,5.14]
Bellantone 1988	1/54	1/46		0.38%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.62%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		2.69%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		1.32%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.38%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable



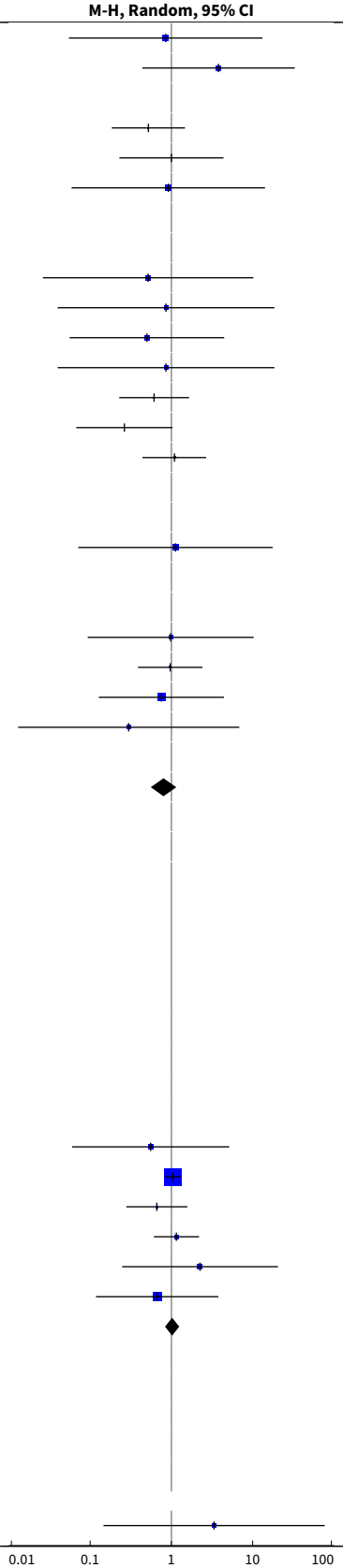
Favours nutrition support | Favours control

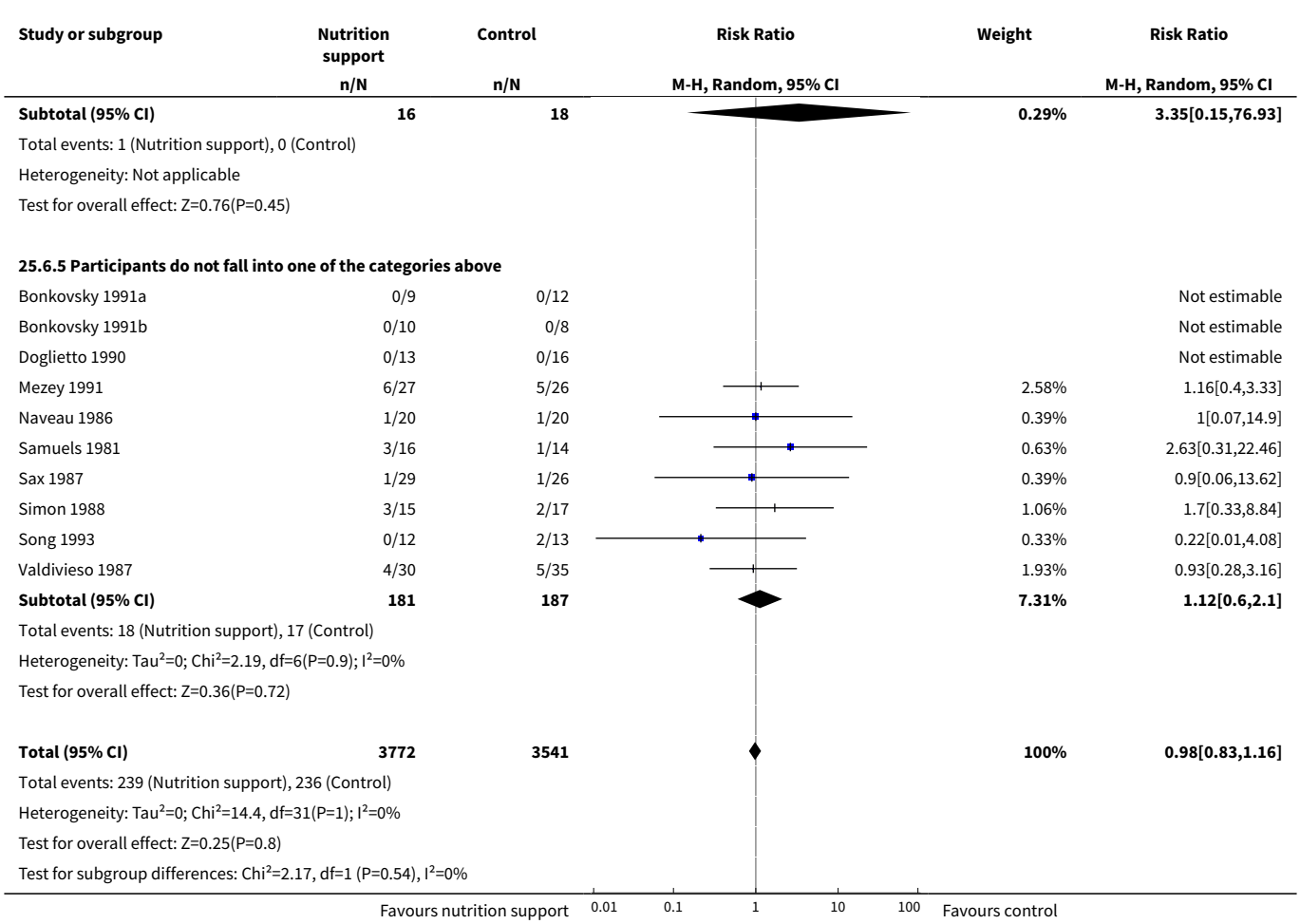


Analysis 25.6. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions.

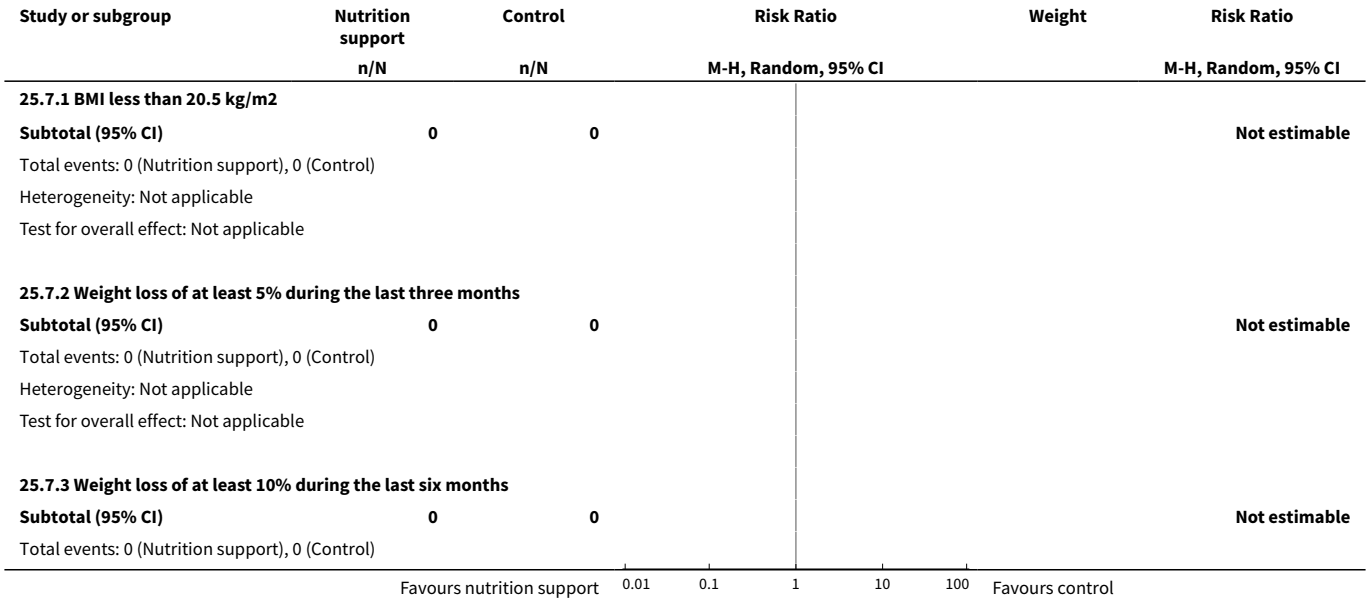


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bellantone 1988	1/54	1/46		0.38%	0.85[0.05,13.24]
Brennan 1994	4/60	1/57		0.62%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Fan 1989	5/64	9/60		2.69%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		1.32%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.38%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Lough 1990	4/14	7/15		2.94%	0.61[0.23,1.65]
Müller 1982a	3/66	5/29		1.55%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		3.54%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Roth 2013	1/74	1/83		0.38%	1.12[0.07,17.62]
Smith 1988	0/17	0/17			Not estimable
Thompson 1981	0/12	0/9			Not estimable
Von Meyenfeldt 1992a	2/51	1/25		0.52%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.45%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.92%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.29%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**1040**	**782**		**22.05%**	**0.8[0.56,1.15]**
Total events: 53 (Nutrition support), 52 (Control)					
Heterogeneity: Tau^2=0; Chi^2=7.92, df=17(P=0.97); I^2=0%					
Test for overall effect: Z=1.22(P=0.22)					
25.6.2 Stroke					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.6.3 ICU participants including trauma					
Abrishami 2010	1/9	2/10		0.58%	0.56[0.06,5.14]
Casaer 2011	146/2312	141/2328		57.33%	1.04[0.83,1.3]
Heidegger 2013	8/153	12/152		3.84%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		7.05%	1.15[0.61,2.19]
Sacks 1995	2/8	1/9		0.59%	2.25[0.25,20.38]
Stein 2002	2/40	3/40		0.96%	0.67[0.12,3.78]
Subtotal (95% CI)	**2535**	**2554**		**70.35%**	**1.02[0.84,1.25]**
Total events: 167 (Nutrition support), 167 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.15, df=5(P=0.83); I^2=0%					
Test for overall effect: Z=0.22(P=0.83)					
25.6.4 Frail elderly participants with less severe conditions known to increase protein requirements					
Liu 1996b	1/16	0/18		0.29%	3.35[0.15,76.93]

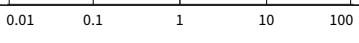




Analysis 25.7. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria.



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.7.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.7.5 Participants characterised as 'at nutritional risk' by other means					
Abel 1976	4/20	3/24		1.53%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.58%	0.56[0.06,5.14]
Bellantone 1988	1/54	1/46		0.38%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.62%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		57.33%	1.04[0.83,1.3]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		2.69%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		1.32%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.38%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3.84%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		7.05%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.29%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		2.94%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.58%	1.16[0.4,3.33]
Müller 1982a	3/66	5/29		1.55%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		3.54%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.39%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Roth 2013	1/74	1/83		0.38%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.59%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.63%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.39%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		1.06%	1.7[0.33,8.84]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.33%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.96%	0.67[0.12,3.78]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		1.93%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.52%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.45%	0.97[0.39,2.41]



Favours nutrition support — Favours control

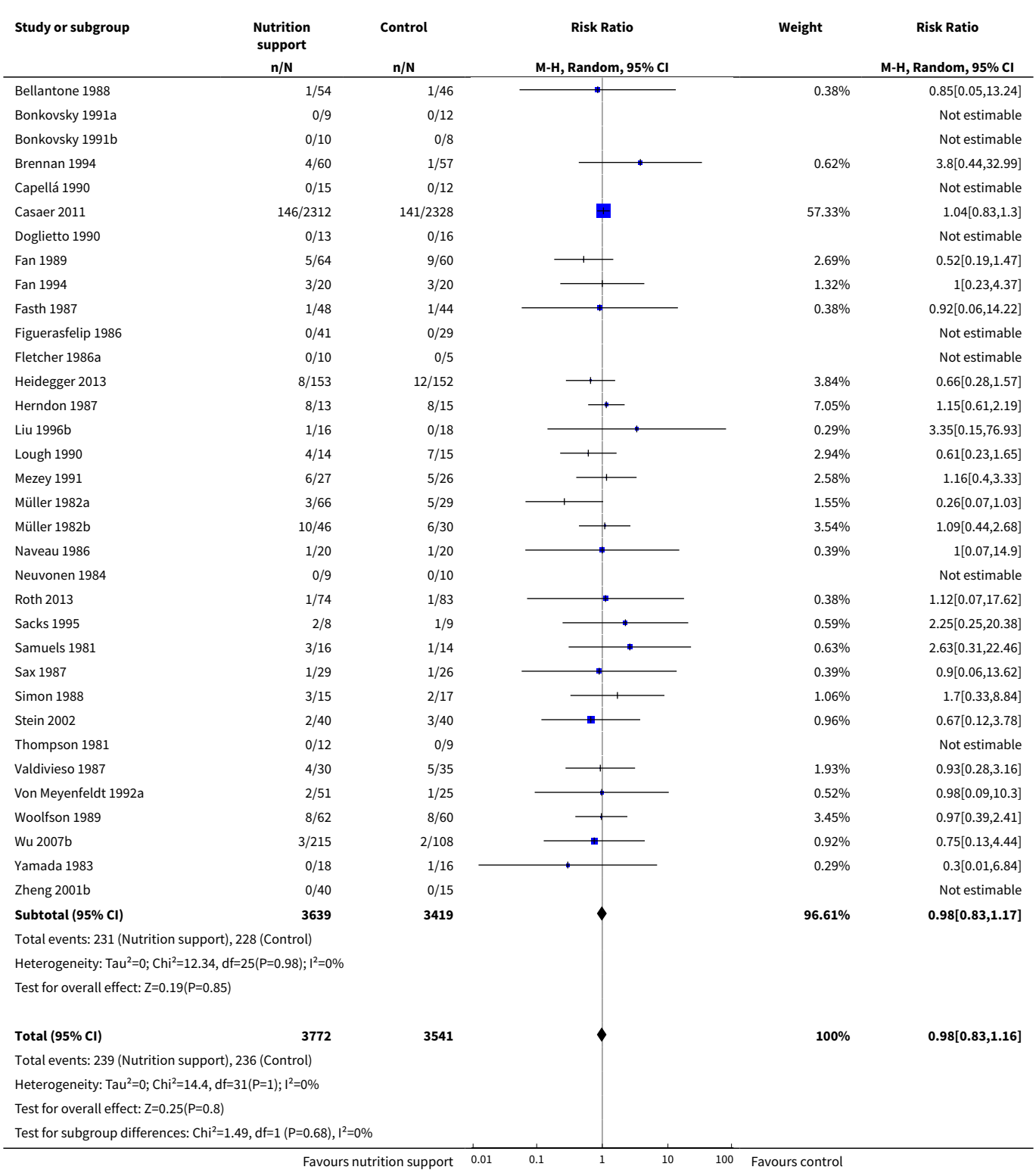
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Wu 2007b	3/215	2/108		0.92%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.29%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3772**	**3541**		**100%**	**0.98[0.83,1.16]**
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: Tau^2=0; Chi^2=14.4, df=31(P=1); I^2=0%					
Test for overall effect: Z=0.25(P=0.8)					
Total (95% CI)	**3772**	**3541**		**100%**	**0.98[0.83,1.16]**
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: Tau^2=0; Chi^2=14.4, df=31(P=1); I^2=0%					
Test for overall effect: Z=0.25(P=0.8)					
Test for subgroup differences: Not applicable					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 25.8. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

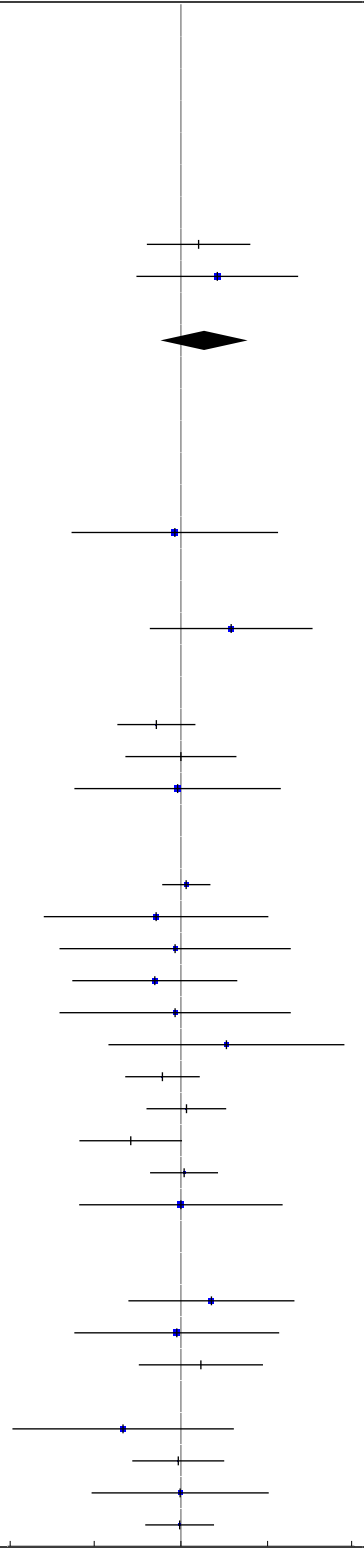
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
25.8.1 Biomarkers					
Reilly 1990	0/8	0/10			Not estimable
Song 1993	0/12	2/13		0.33%	0.22[0.01,4.08]
Subtotal (95% CI)	**20**	**23**		**0.33%**	**0.22[0.01,4.08]**
Total events: 0 (Nutrition support), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.02(P=0.31)					
25.8.2 Anthropometric measures					
Abel 1976	4/20	3/24		1.53%	1.6[0.4,6.32]
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Smith 1988	0/17	0/17			Not estimable
Subtotal (95% CI)	**53**	**84**		**1.85%**	**1.31[0.38,4.58]**
Total events: 4 (Nutrition support), 5 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.46, df=1(P=0.5); I^2=0%					
Test for overall effect: Z=0.43(P=0.67)					
25.8.3 Both					
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Subtotal (95% CI)	**60**	**15**		**1.21%**	**0.66[0.14,3.07]**
Total events: 4 (Nutrition support), 1 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.12, df=2(P=0.94); I^2=0%					
Test for overall effect: Z=0.54(P=0.59)					
25.8.4 Characterised by other means					
Abrishami 2010	1/9	2/10		0.58%	0.56[0.06,5.14]

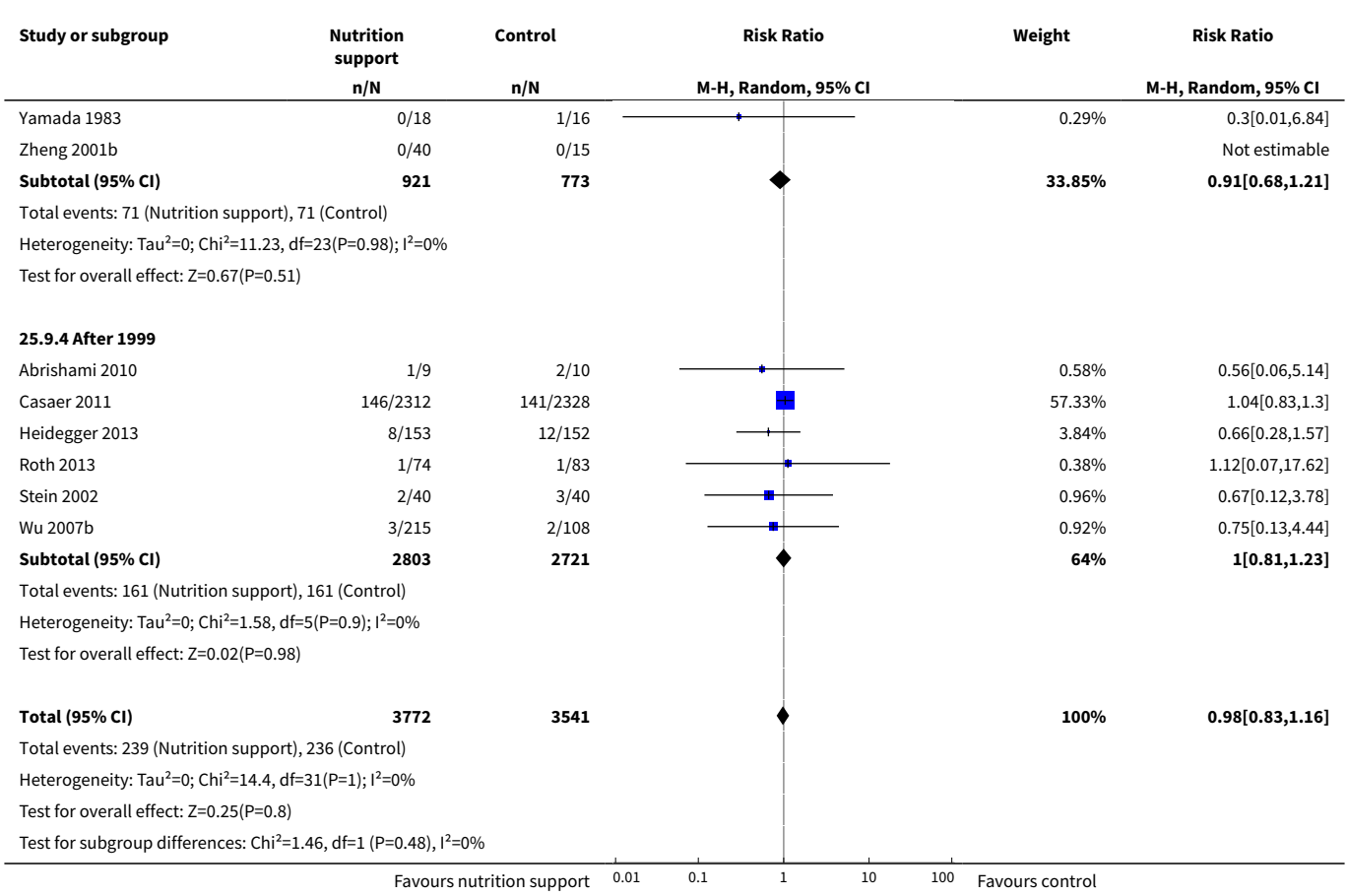
Favours nutrition support 0.01 0.1 1 10 100 Favours control



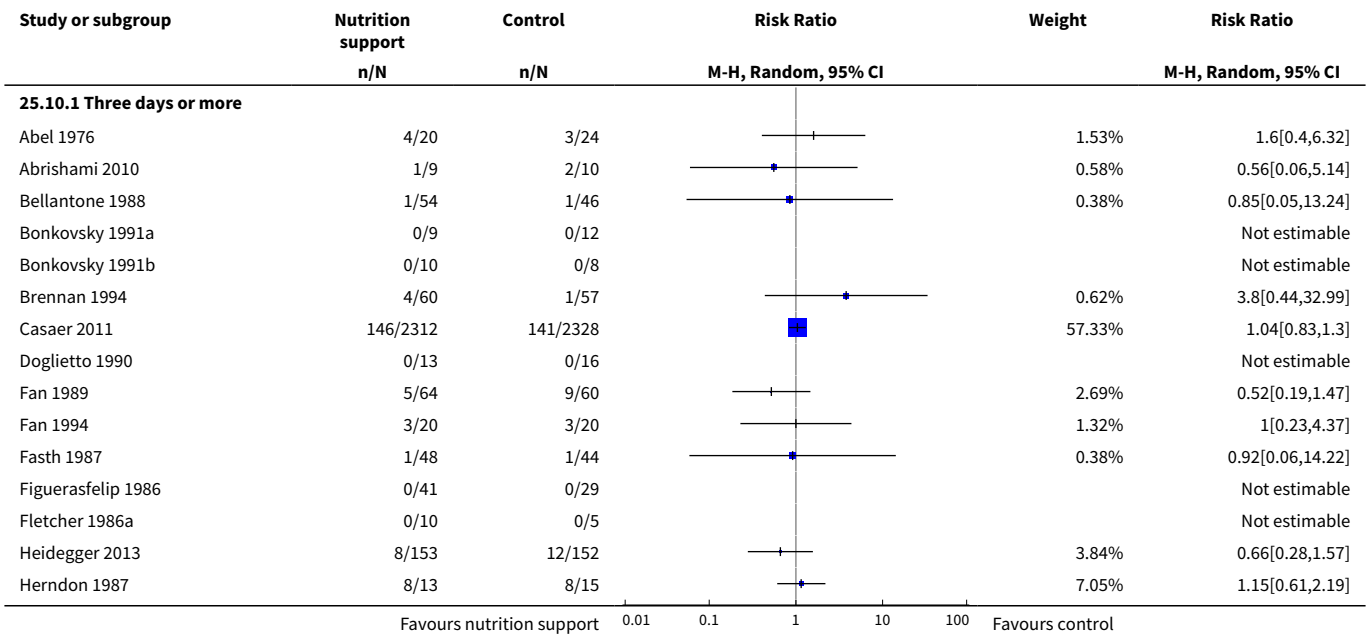
Analysis 25.9. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 9 All-cause mortality - randomisation year.

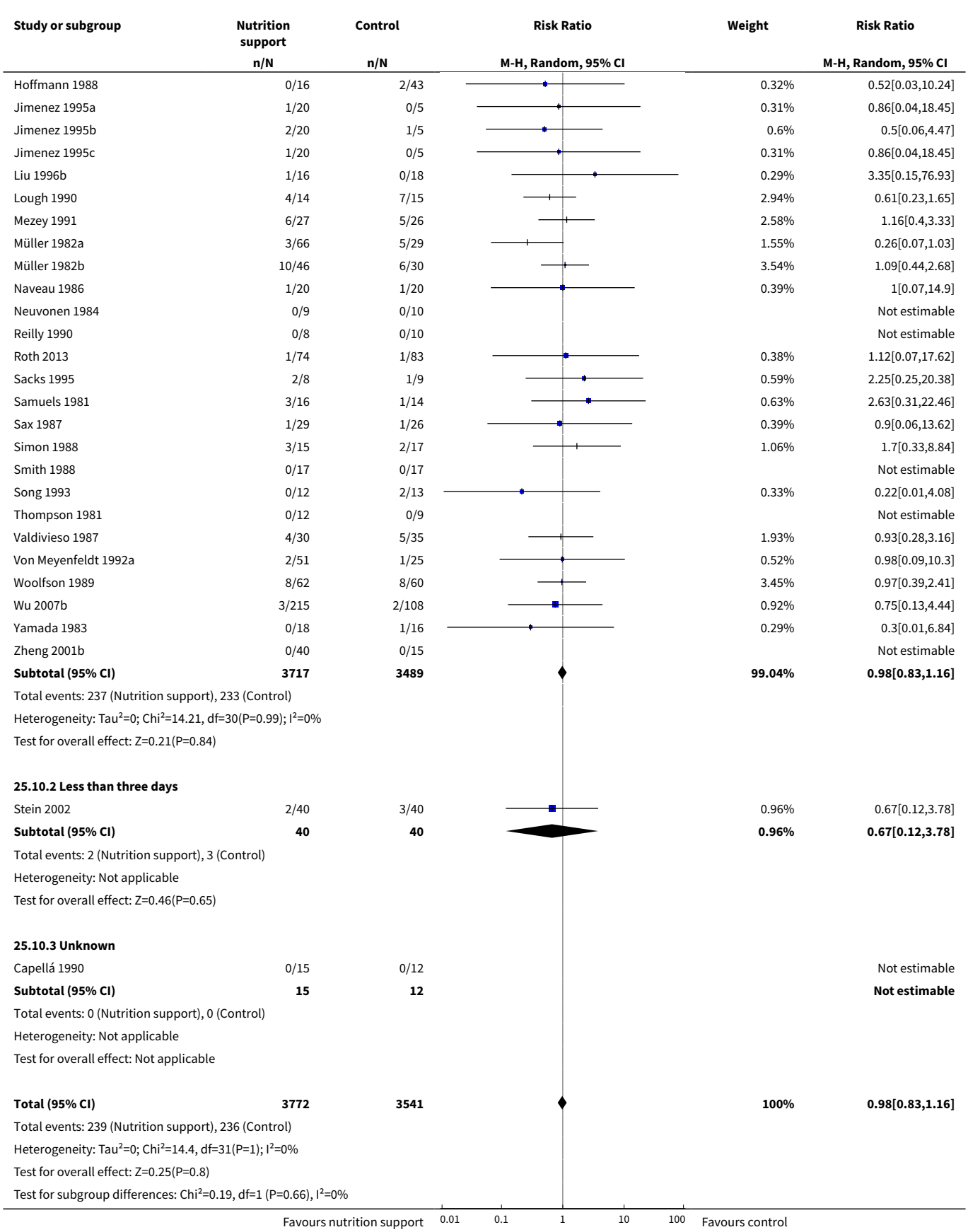
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
25.9.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
25.9.2 1960-1979					
Abel 1976	4/20	3/24		1.53%	1.6[0.4,6.32]
Samuels 1981	3/16	1/14		0.63%	2.63[0.31,22.46]
Thompson 1981	0/12	0/9			Not estimable
Subtotal (95% CI)	**48**	**47**		**2.15%**	**1.85[0.58,5.88]**
Total events: 7 (Nutrition support), 4 (Control)					
Heterogeneity: $Tau^2=0$; $Chi^2=0.15$, df=1(P=0.7); $I^2=0\%$					
Test for overall effect: Z=1.04(P=0.3)					
25.9.3 1980-1999					
Bellantone 1988	1/54	1/46		0.38%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.62%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		2.69%	0.52[0.19,1.47]
Fan 1994	3/20	3/20		1.32%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.38%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Herndon 1987	8/13	8/15		7.05%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.29%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		2.94%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.58%	1.16[0.4,3.33]
Müller 1982a	3/66	5/29		1.55%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		3.54%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.39%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Sacks 1995	2/8	1/9		0.59%	2.25[0.25,20.38]
Sax 1987	1/29	1/26		0.39%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		1.06%	1.7[0.33,8.84]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.33%	0.22[0.01,4.08]
Valdivieso 1987	4/30	5/35		1.93%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.52%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.45%	0.97[0.39,2.41]





Analysis 25.10. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

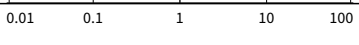




Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hoffmann 1988	0/16	2/43		0.32%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.31%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.6%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.31%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.29%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		2.94%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.58%	1.16[0.4,3.33]
Müller 1982a	3/66	5/29		1.55%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		3.54%	1.09[0.44,2.68]
Naveau 1986	1/20	1/20		0.39%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Roth 2013	1/74	1/83		0.38%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.59%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.63%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.39%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		1.06%	1.7[0.33,8.84]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.33%	0.22[0.01,4.08]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		1.93%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.52%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.45%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.92%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.29%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3717**	**3489**		**99.04%**	**0.98[0.83,1.16]**
Total events: 237 (Nutrition support), 233 (Control)					
Heterogeneity: Tau²=0; Chi²=14.21, df=30(P=0.99); I²=0%					
Test for overall effect: Z=0.21(P=0.84)					
25.10.2 Less than three days					
Stein 2002	2/40	3/40		0.96%	0.67[0.12,3.78]
Subtotal (95% CI)	**40**	**40**		**0.96%**	**0.67[0.12,3.78]**
Total events: 2 (Nutrition support), 3 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.46(P=0.65)					
25.10.3 Unknown					
Capellá 1990	0/15	0/12			Not estimable
Subtotal (95% CI)	**15**	**12**			**Not estimable**
Total events: 0 (Nutrition support), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**3772**	**3541**		**100%**	**0.98[0.83,1.16]**
Total events: 239 (Nutrition support), 236 (Control)					
Heterogeneity: Tau²=0; Chi²=14.4, df=31(P=1); I²=0%					
Test for overall effect: Z=0.25(P=0.8)					
Test for subgroup differences: Chi²=0.19, df=1 (P=0.66), I²=0%					

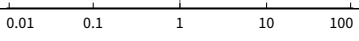
Analysis 25.11. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 11 All-cause mortality - 'best-worst case' scenario.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		3.21%	1.6[0.4,6.32]
Abrishami 2010	1/10	2/10		1.38%	0.5[0.05,4.67]
Bellantone 1988	1/54	1/46		0.94%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		1.47%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		14.95%	1.04[0.83,1.3]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/75	24/75		5.88%	0.21[0.08,0.52]
Fan 1994	3/20	3/20		2.86%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.94%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		6.25%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		8.73%	1.15[0.61,2.19]
Hoffmann 1988	0/51	10/51		0.9%	0.05[0,0.79]
Jimenez 1995a	1/20	0/5		0.76%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		1.43%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.76%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.73%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		5.26%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		4.79%	1.16[0.4,3.33]
Müller 1982a	3/80	16/40		4.11%	0.09[0.03,0.3]
Müller 1982b	10/55	16/40		8.25%	0.45[0.23,0.89]
Naveau 1986	1/20	1/20		0.97%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Roth 2013	1/74	1/83		0.94%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		1.42%	2.25[0.25,20.38]
Samuels 1981	3/18	2/15		2.36%	1.25[0.24,6.53]
Sax 1987	1/29	1/26		0.96%	0.9[0.06,13.62]
Simon 1988	3/16	3/18		2.94%	1.13[0.26,4.8]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.83%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		2.17%	0.67[0.12,3.78]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		3.87%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		1.26%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		5.84%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		2.09%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.73%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**3845**	**3587**		**100%**	**0.73[0.56,0.97]**
Total events: 239 (Nutrition support), 282 (Control)					



Favours nutrition support | Favours control

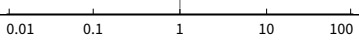
Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Tau²=0.12; Chi²=42.32, df=31(P=0.08); I²=26.75%					
Test for overall effect: Z=2.21(P=0.03)					



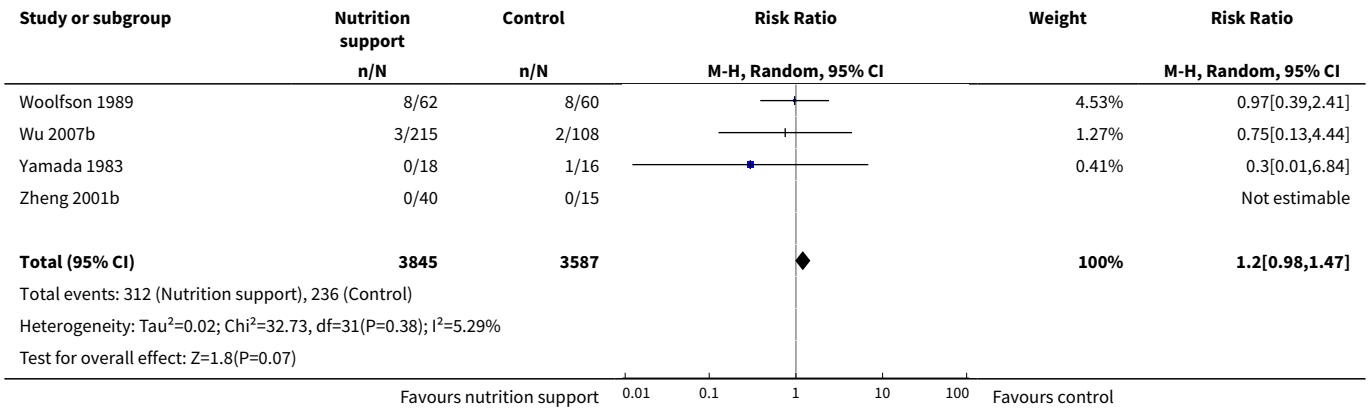
Favours nutrition support — Favours control

Analysis 25.12. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 12 All-cause mortality - 'worst-best case' scenario.

Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		2.09%	1.6[0.4,6.32]
Abrishami 2010	2/10	2/10		1.3%	1[0.17,5.77]
Bellantone 1988	1/54	1/46		0.54%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.86%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		34.84%	1.04[0.83,1.3]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	16/75	9/75		6.47%	1.78[0.84,3.77]
Fan 1994	3/20	3/20		1.82%	1[0.23,4.37]
Fasth 1987	1/48	1/44		0.54%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		5%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		8.59%	1.15[0.61,2.19]
Hoffmann 1988	35/51	2/51		2.1%	17.5[4.44,68.94]
Jimenez 1995a	1/20	0/5		0.43%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.84%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.43%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.41%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		3.91%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		3.45%	1.16[0.4,3.33]
Müller 1982a	17/80	5/40		4.45%	1.7[0.68,4.27]
Müller 1982b	19/55	6/40		5.49%	2.3[1.01,5.24]
Naveau 1986	1/20	1/20		0.55%	1[0.07,14.9]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	0/10			Not estimable
Roth 2013	1/74	1/83		0.53%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.83%	2.25[0.25,20.38]
Samuels 1981	5/18	1/15		0.97%	4.17[0.54,31.88]
Sax 1987	1/29	1/26		0.55%	0.9[0.06,13.62]
Simon 1988	4/16	2/18		1.64%	2.25[0.47,10.69]
Smith 1988	0/17	0/17			Not estimable
Song 1993	0/12	2/13		0.47%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		1.33%	0.67[0.12,3.78]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	4/30	5/35		2.62%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.73%	0.98[0.09,10.3]

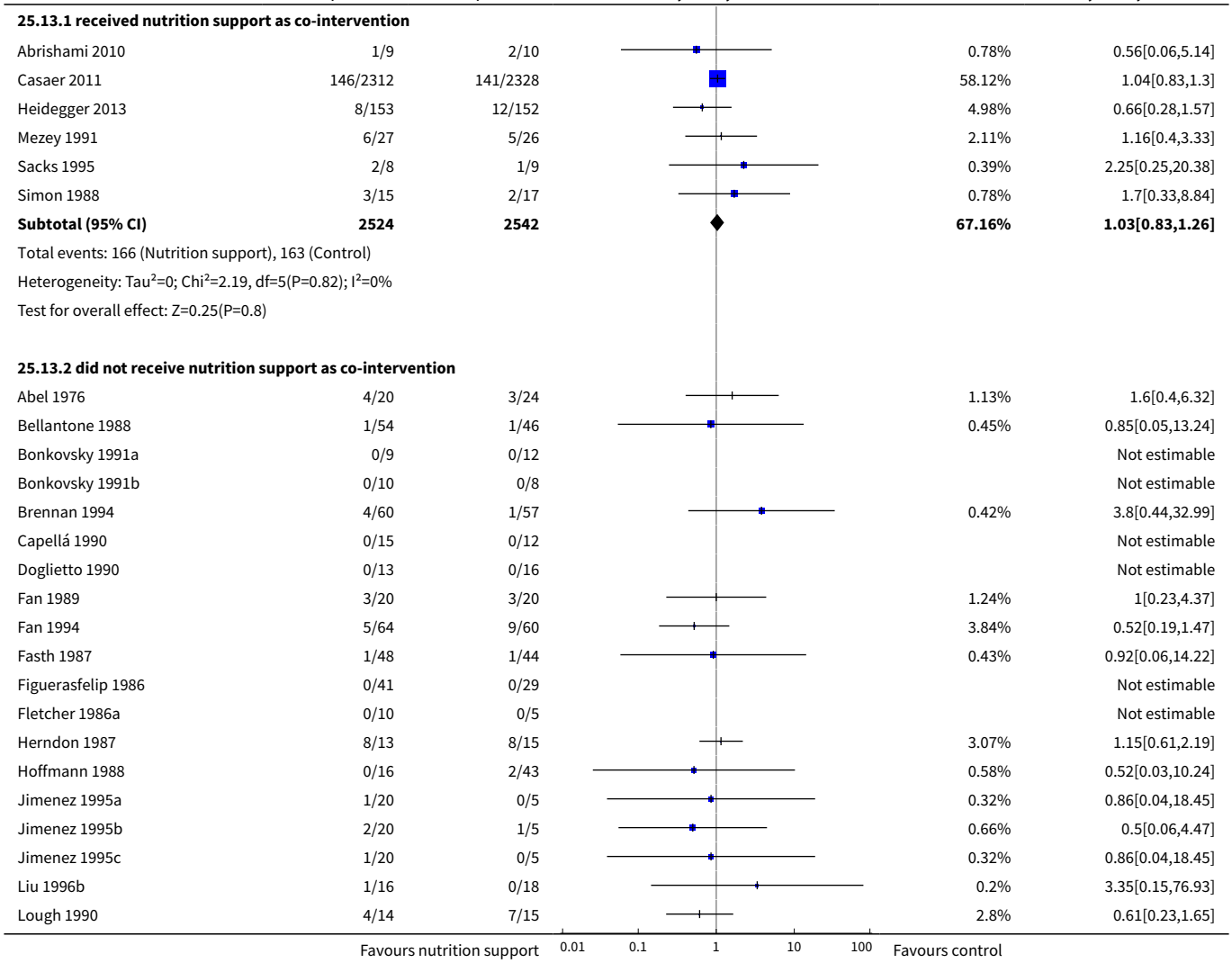


Favours nutrition support — Favours control

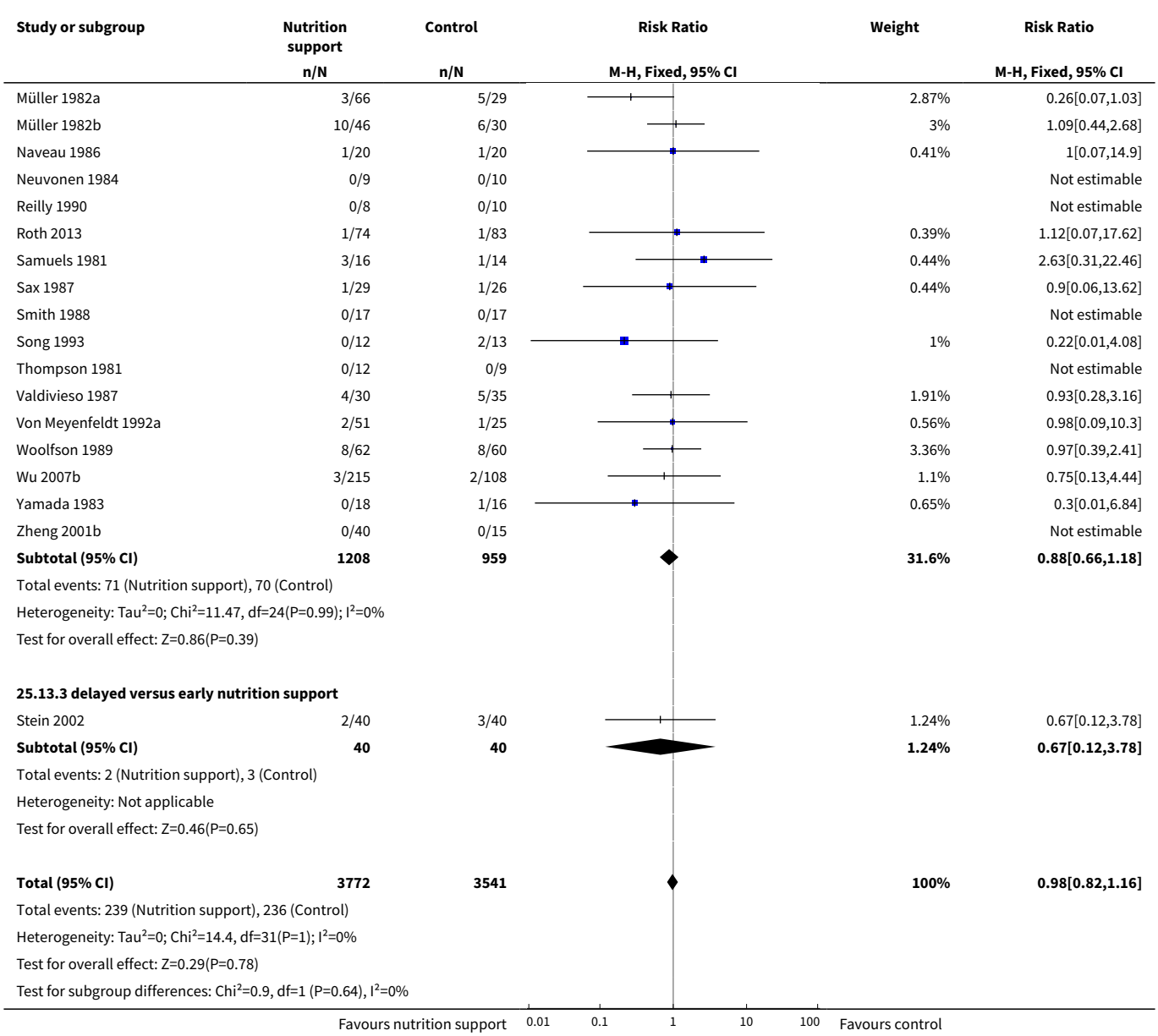


Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Woolfson 1989	8/62	8/60		4.53%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		1.27%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.41%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**3845**	**3587**		**100%**	**1.2[0.98,1.47]**
Total events: 312 (Nutrition support), 236 (Control)					
Heterogeneity: Tau^2=0.02; Chi^2=32.73, df=31(P=0.38); I^2=5.29%					
Test for overall effect: Z=1.8(P=0.07)					

Analysis 25.13. Comparison 25 Parenteral - All cause mortality - end of intervention, Outcome 13 All-cause mortality co-interventions.



Study or subgroup	Nutrition support n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
25.13.1 received nutrition support as co-intervention					
Abrishami 2010	1/9	2/10		0.78%	0.56[0.06,5.14]
Casaer 2011	146/2312	141/2328		58.12%	1.04[0.83,1.3]
Heidegger 2013	8/153	12/152		4.98%	0.66[0.28,1.57]
Mezey 1991	6/27	5/26		2.11%	1.16[0.4,3.33]
Sacks 1995	2/8	1/9		0.39%	2.25[0.25,20.38]
Simon 1988	3/15	2/17		0.78%	1.7[0.33,8.84]
Subtotal (95% CI)	**2524**	**2542**		**67.16%**	**1.03[0.83,1.26]**
Total events: 166 (Nutrition support), 163 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.19, df=5(P=0.82); I^2=0%					
Test for overall effect: Z=0.25(P=0.8)					
25.13.2 did not receive nutrition support as co-intervention					
Abel 1976	4/20	3/24		1.13%	1.6[0.4,6.32]
Bellantone 1988	1/54	1/46		0.45%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.42%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	3/20	3/20		1.24%	1[0.23,4.37]
Fan 1994	5/64	9/60		3.84%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.43%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Herndon 1987	8/13	8/15		3.07%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.58%	0.52[0.03,10.24]
Jimenez 1995a	1/20	0/5		0.32%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.66%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.32%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.2%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		2.8%	0.61[0.23,1.65]



Comparison 26. Parenteral - All cause mortality - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All-cause mortality - overall	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
2 All-cause mortality - bias	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
2.1 High risk of bias	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 All-cause mortality - medical speciality	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	7	254	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.74, 1.42]
3.3 Geriatrics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.4 Pulmonary disease	1	25	Risk Ratio (M-H, Random, 95% CI)	0.22 [0.01, 4.08]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	24	2104	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.68, 1.28]
3.11 Trauma surgery	2	45	Risk Ratio (M-H, Random, 95% CI)	1.22 [0.66, 2.25]
3.12 Ortopaedics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	1	15	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Transplant surgery	2	47	Risk Ratio (M-H, Random, 95% CI)	0.56 [0.22, 1.42]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.17 Thoracic surgery	1	44	Risk Ratio (M-H, Random, 95% CI)	1.6 [0.40, 6.32]
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	7	5208	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.84, 1.12]
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.24 Oncology	6	379	Risk Ratio (M-H, Random, 95% CI)	1.03 [0.87, 1.21]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4 All-cause mortality - based on adequacy of the amount of calories	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
4.1 Clearly adequate in intervention and clearly inadequate in control	7	5641	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.88, 1.10]
4.2 Inadequate in the experimental or adequate in the control	4	165	Risk Ratio (M-H, Random, 95% CI)	1.17 [0.80, 1.72]
4.3 Experimental group is overfed	4	272	Risk Ratio (M-H, Random, 95% CI)	0.56 [0.23, 1.34]
4.4 Unclear intake in control or experimental	36	2043	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.80, 1.22]
5 All-cause mortality - different screening tools	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
5.1 NRS 2002	1	4640	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.85, 1.18]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 SGA	1	323	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.13, 4.44]
5.5 Other means	49	3158	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.88, 1.11]
6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
6.1 Major surgery	30	2381	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.67, 1.15]
6.2 Stroke	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.3 ICU participants including trauma	7	5209	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.86, 1.14]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	1	34	Risk Ratio (M-H, Random, 95% CI)	3.35 [0.15, 76.93]
6.5 Participants do not fall into one of the categories above	13	497	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.88, 1.18]
7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
7.1 BMI less than 20.5 kg/m2	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	2	92	Risk Ratio (M-H, Random, 95% CI)	0.33 [0.01, 7.78]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	49	8029	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
8 All-cause mortality - participants characterised as 'at nutritional	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
risk' due to biomarkers or anthropometrics				
8.1 Biomarkers	5	169	Risk Ratio (M-H, Random, 95% CI)	0.47 [0.10, 2.12]
8.2 Anthropometric measures	3	137	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.32, 2.75]
8.3 Both anthropometrics and biomarkers	3	75	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.14, 3.07]
8.4 Characterised by other means	40	7740	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
9 All-cause mortality - randomisation year	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	4	151	Risk Ratio (M-H, Random, 95% CI)	1.50 [0.56, 4.03]
9.3 1980 to 1999	41	2446	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.88, 1.12]
9.4 After 1999	6	5524	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.84, 1.13]
10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	51	8121	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.09]
10.1 Three days or more	49	8014	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.89, 1.08]
10.2 Less than three days	1	80	Risk Ratio (M-H, Random, 95% CI)	1.2 [0.59, 2.45]
10.3 Unknown	1	27	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
11 All-cause mortality - 'best-worst case' scenario	51	8240	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.74, 1.02]
12 All-cause mortality - 'worst-best case' scenario	51	8240	Risk Ratio (M-H, Random, 95% CI)	1.06 [0.95, 1.19]
13 All-cause mortality co-interventions	51	8121	Risk Ratio (M-H, Fixed, 95% CI)	0.97 [0.87, 1.09]
13.1 received nutrition support as co-intervention	5	5044	Risk Ratio (M-H, Fixed, 95% CI)	0.97 [0.84, 1.13]

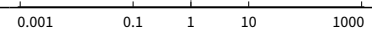
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
13.2 did not receive nutrition support as co-intervention	45	2997	Risk Ratio (M-H, Fixed, 95% CI)	0.96 [0.81, 1.14]
13.3 delayed versus early nutrition support	1	80	Risk Ratio (M-H, Fixed, 95% CI)	1.2 [0.59, 2.45]

Analysis 26.1. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 1 All-cause mortality - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		0.48%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.18%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.75%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.12%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.2%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		34.14%	1[0.85,1.18]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		1.02%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.12%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		3.27%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		2.23%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.26%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.32%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.19%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.1%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.19%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.1%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.09%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.93%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.7%	0.95[0.61,1.48]
Müller 1982a	3/66	5/29		0.49%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		1.12%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		2.14%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		1.11%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]

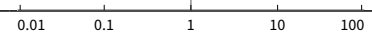
Favours nutrition support | Favours control

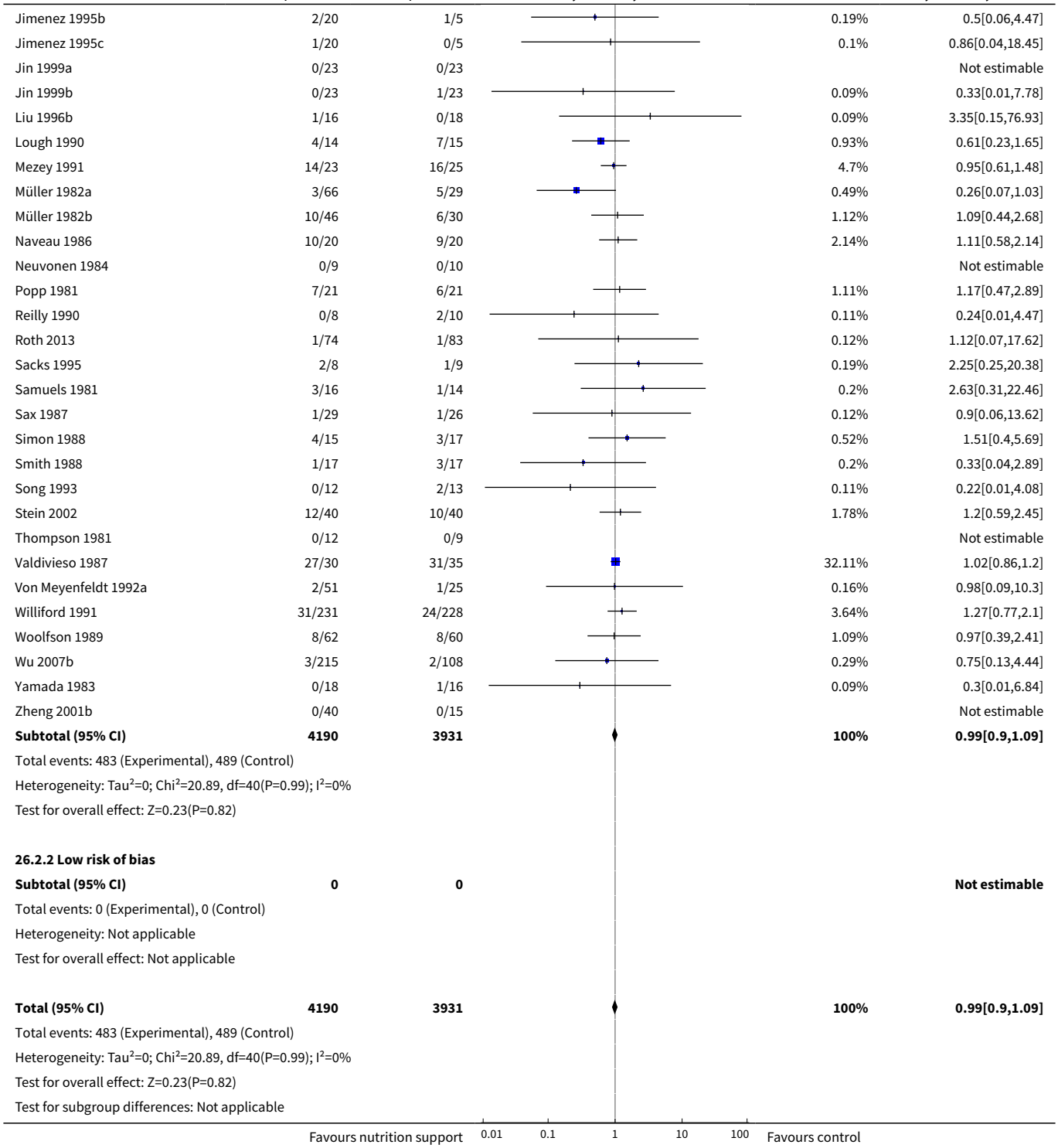
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Samuels 1981	3/16	1/14		0.2%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.12%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.52%	1.51[0.4,5.69]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		1.78%	1.2[0.59,2.45]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		32.11%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.16%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		3.64%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.09%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.29%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.09%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**4190**	**3931**		**100%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau²=0; Chi²=20.89, df=40(P=0.99); I²=0%					
Test for overall effect: Z=0.23(P=0.82)					



Analysis 26.2. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 2 All-cause mortality - bias.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
26.2.1 High risk of bias					
Abel 1976	4/20	3/24		0.48%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.18%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.75%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.12%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.2%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		34.14%	1[0.85,1.18]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		1.02%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.12%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		3.27%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		2.23%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.26%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.32%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.19%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.1%	0.86[0.04,18.45]

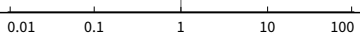




Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Jimenez 1995b	2/20	1/5		0.19%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.1%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.09%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.93%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.7%	0.95[0.61,1.48]
Müller 1982a	3/66	5/29		0.49%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		1.12%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		2.14%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		1.11%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.2%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.12%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.52%	1.51[0.4,5.69]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		1.78%	1.2[0.59,2.45]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		32.11%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.16%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		3.64%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.09%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.29%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.09%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**4190**	**3931**		**100%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.89, df=40(P=0.99); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
26.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**4190**	**3931**		**100%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.89, df=40(P=0.99); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
Test for subgroup differences: Not applicable					

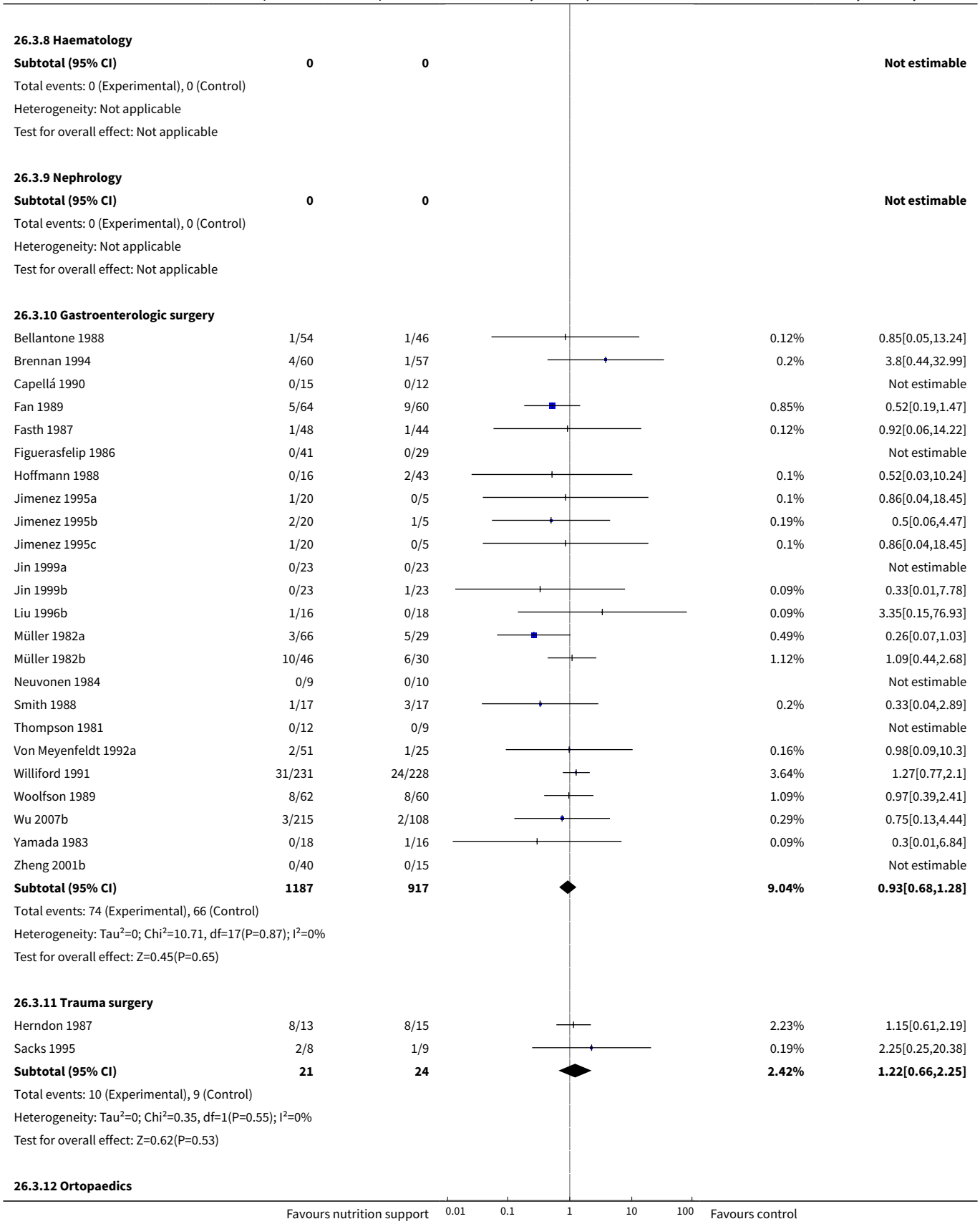
Analysis 26.3. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 3 All-cause mortality - medical speciality.

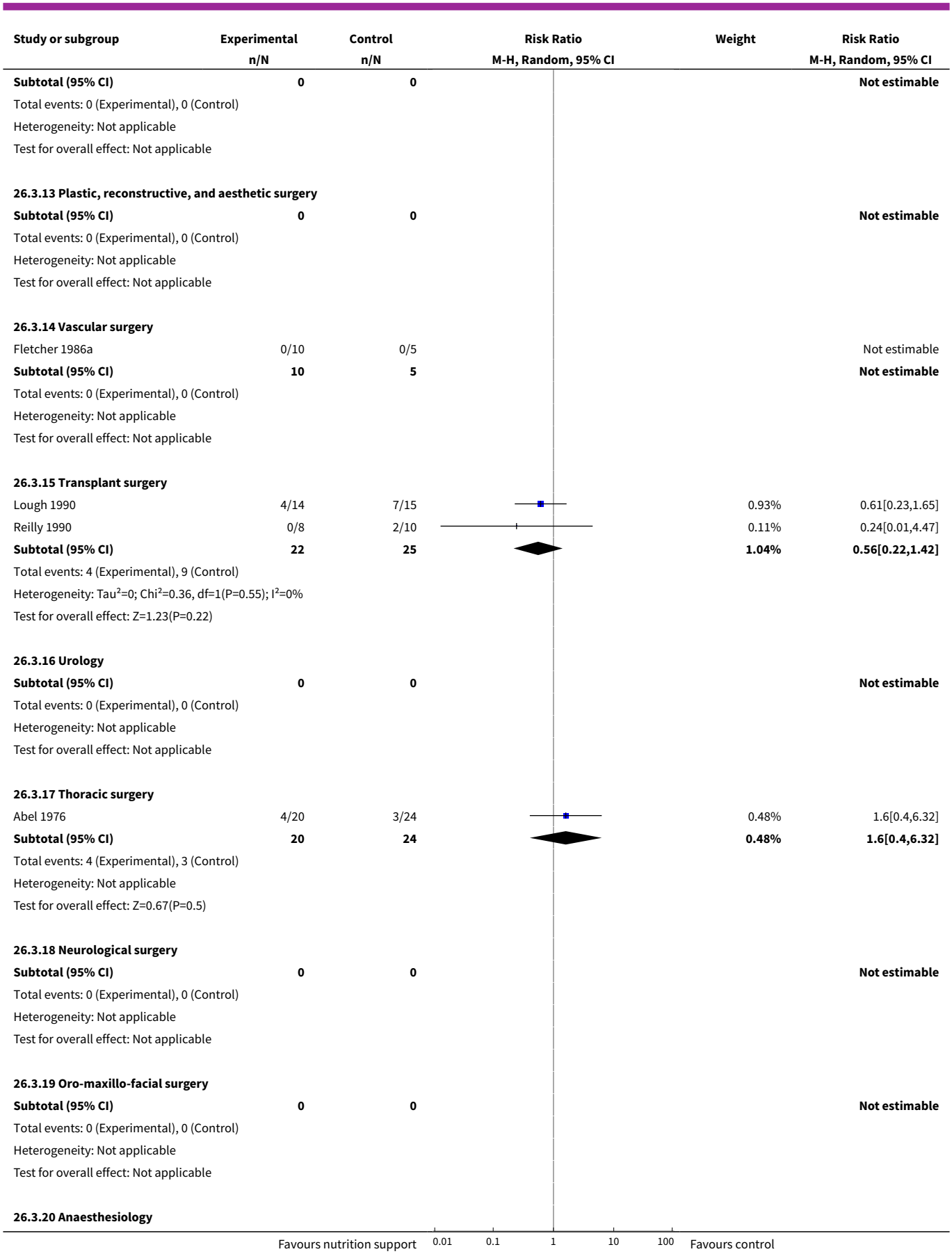
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
26.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.3.2 Medical gastroenterology and hepatology					
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Fan 1994	6/20	6/20		1.02%	1[0.39,2.58]
Mezey 1991	14/23	16/25		4.7%	0.95[0.61,1.48]
Naveau 1986	10/20	9/20		2.14%	1.11[0.58,2.14]
Sax 1987	1/29	1/26		0.12%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.52%	1.51[0.4,5.69]
Subtotal (95% CI)	**126**	**128**		**8.5%**	**1.02[0.74,1.42]**
Total events: 35 (Experimental), 35 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.53, df=4(P=0.97); I^2=0%					
Test for overall effect: Z=0.13(P=0.89)					
26.3.3 Geriatrics					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.3.4 Pulmonary disease					
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Subtotal (95% CI)	**12**	**13**		**0.11%**	**0.22[0.01,4.08]**
Total events: 0 (Experimental), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.02(P=0.31)					
26.3.5 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.3.6 Infectious diseases					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.3.7 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					

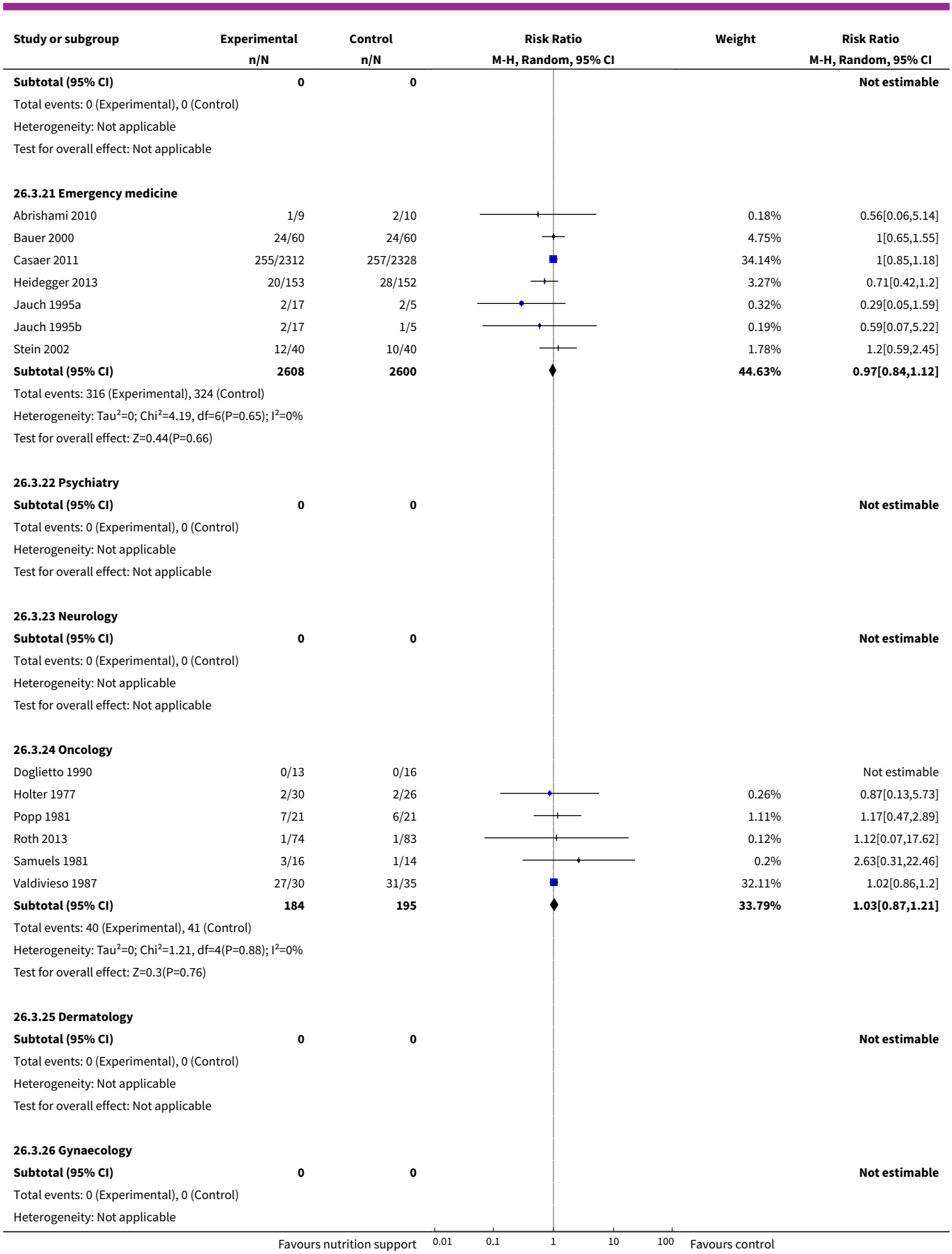


Favours nutrition support

Favours control



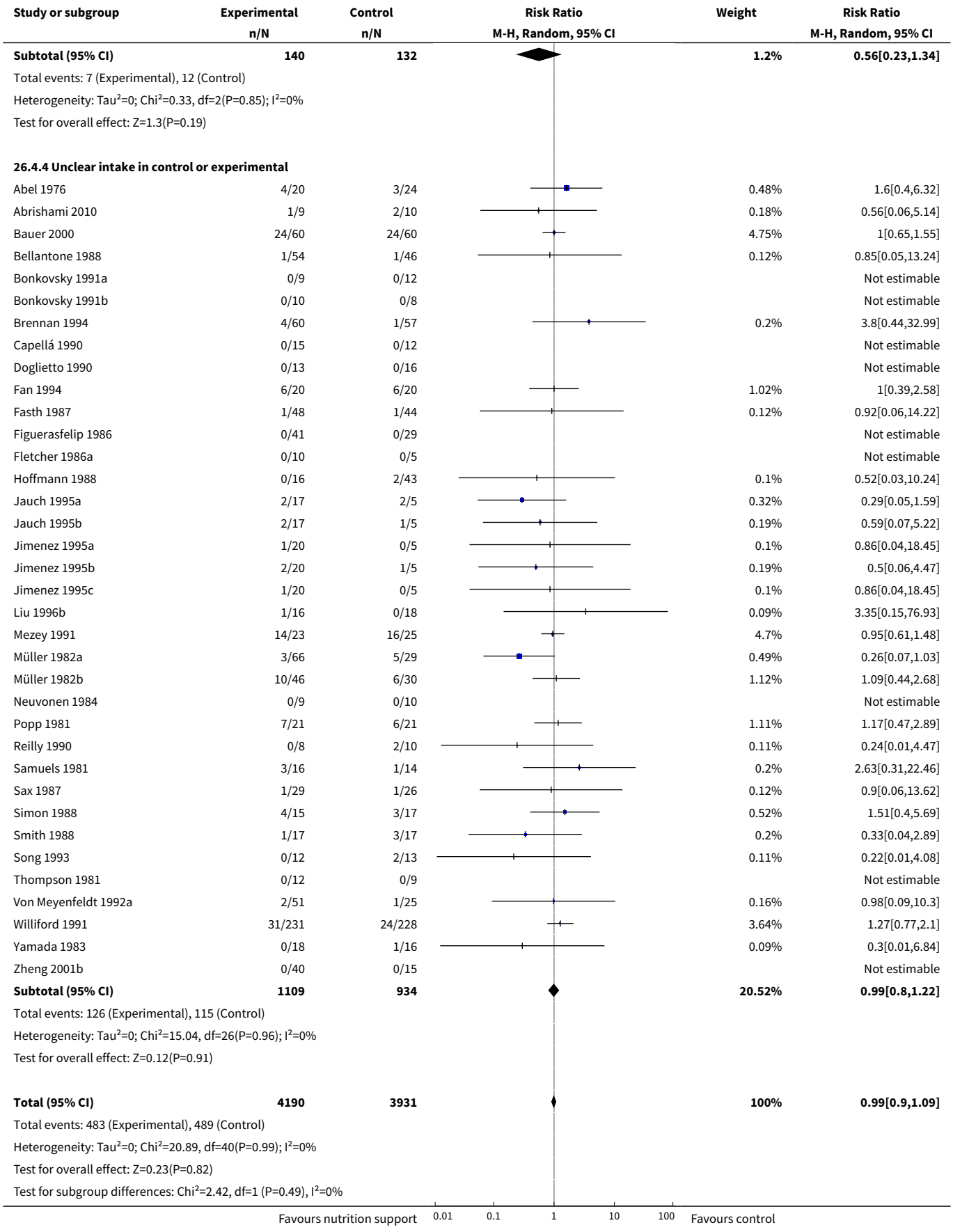




Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Not applicable					
26.3.27 Mixed					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**4190**	**3931**		**100%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.89, df=40(P=0.99); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
Test for subgroup differences: Chi^2=3.84, df=1 (P=0.8), I^2=0%					

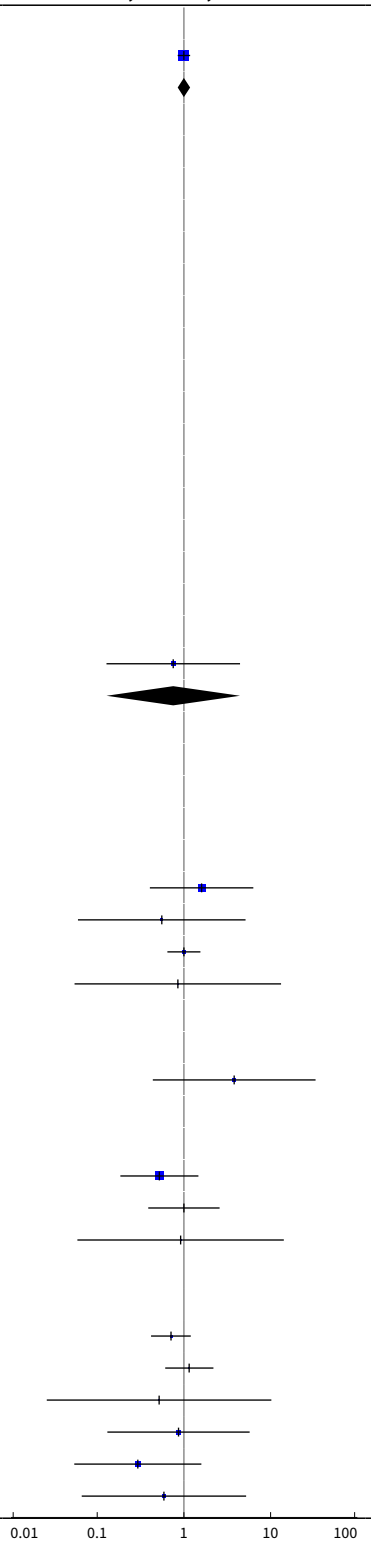
Analysis 26.4. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 4 All-cause mortality - based on adequacy of the amount of calories.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
26.4.1 Clearly adequate in intervention and clearly inadequate in control					
Casaer 2011	255/2312	257/2328		34.14%	1[0.85,1.18]
Heidegger 2013	20/153	28/152		3.27%	0.71[0.42,1.2]
Lough 1990	4/14	7/15		0.93%	0.61[0.23,1.65]
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Valdivieso 1987	27/30	31/35		32.11%	1.02[0.86,1.2]
Woolfson 1989	8/62	8/60		1.09%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.29%	0.75[0.13,4.44]
Subtotal (95% CI)	**2860**	**2781**		**71.95%**	**0.98[0.88,1.1]**
Total events: 318 (Experimental), 334 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.73, df=6(P=0.84); I^2=0%					
Test for overall effect: Z=0.29(P=0.77)					
26.4.2 Inadequate in the experimental or adequate in the control					
Herndon 1987	8/13	8/15		2.23%	1.15[0.61,2.19]
Naveau 1986	10/20	9/20		2.14%	1.11[0.58,2.14]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]
Stein 2002	12/40	10/40		1.78%	1.2[0.59,2.45]
Subtotal (95% CI)	**81**	**84**		**6.33%**	**1.17[0.8,1.72]**
Total events: 32 (Experimental), 28 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.38, df=3(P=0.95); I^2=0%					
Test for overall effect: Z=0.83(P=0.4)					
26.4.3 Experimental group is overfed					
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Holter 1977	2/30	2/26		0.26%	0.87[0.13,5.73]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]



Analysis 26.5. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 5 All-cause mortality - different screening tools.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
26.5.1 NRS 2002					
Casaer 2011	255/2312	257/2328		34.14%	1[0.85,1.18]
Subtotal (95% CI)	**2312**	**2328**		**34.14%**	**1[0.85,1.18]**
Total events: 255 (Experimental), 257 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.01(P=0.99)					
26.5.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.5.3 MNA					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.5.4 SGA					
Wu 2007b	3/215	2/108		0.29%	0.75[0.13,4.44]
Subtotal (95% CI)	**215**	**108**		**0.29%**	**0.75[0.13,4.44]**
Total events: 3 (Experimental), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.31(P=0.75)					
26.5.5 Other means					
Abel 1976	4/20	3/24		0.48%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.18%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.75%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.12%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.2%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		1.02%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.12%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		3.27%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		2.23%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.26%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.32%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.19%	0.59[0.07,5.22]



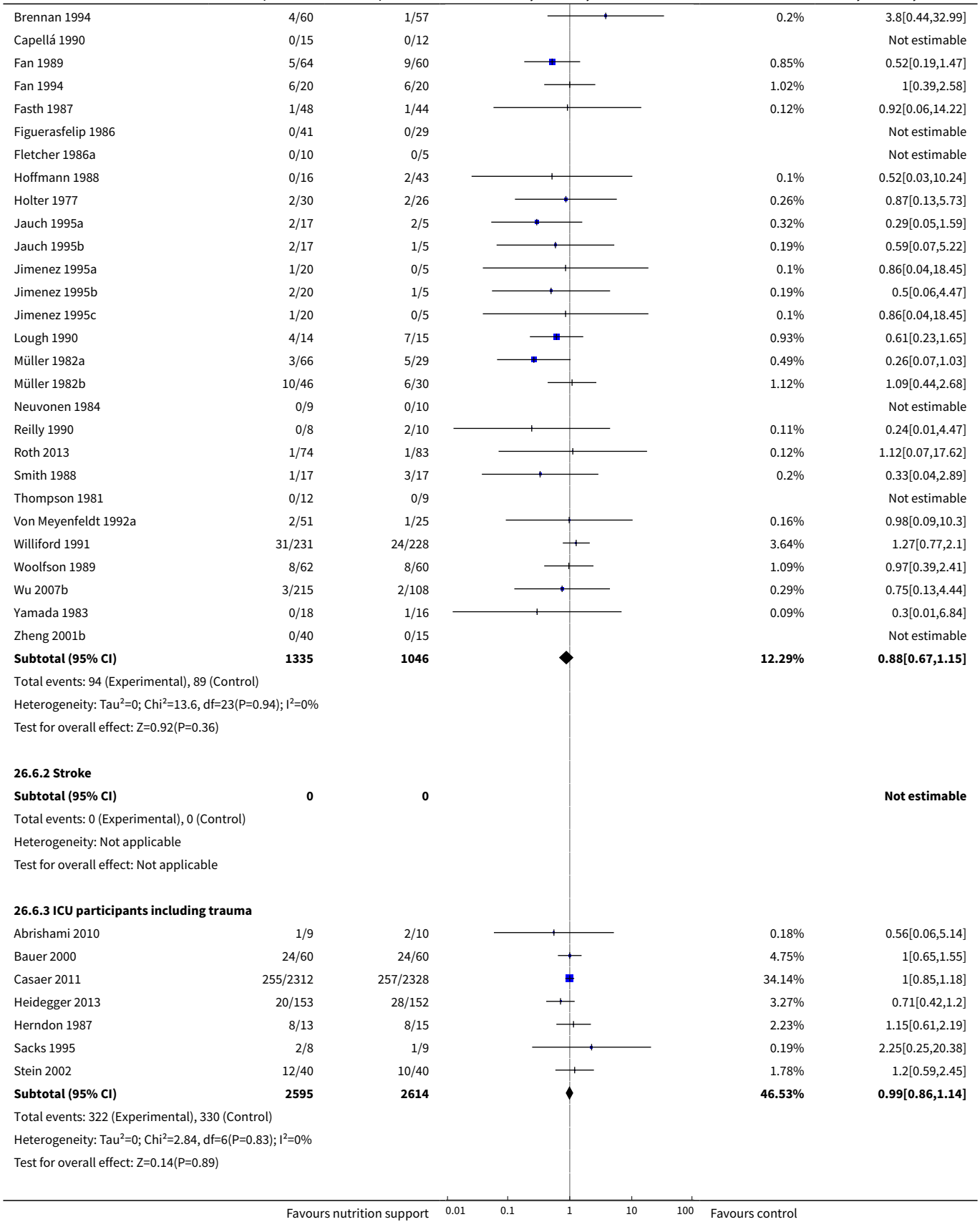
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Jimenez 1995a	1/20	0/5		0.1%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.19%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.1%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.09%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.93%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.7%	0.95[0.61,1.48]
Müller 1982a	3/66	5/29		0.49%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		1.12%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		2.14%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		1.11%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.2%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.12%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.52%	1.51[0.4,5.69]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		1.78%	1.2[0.59,2.45]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		32.11%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.16%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		3.64%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.09%	0.97[0.39,2.41]
Yamada 1983	0/18	1/16		0.09%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**1663**	**1495**		**65.57%**	**0.98[0.88,1.11]**
Total events: 225 (Experimental), 230 (Control)					
Heterogeneity: Tau^2=0; Chi^2=21.06, df=38(P=0.99); I^2=0%					
Test for overall effect: Z=0.26(P=0.8)					
Total (95% CI)	**4190**	**3931**		**100%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.89, df=40(P=0.99); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
Test for subgroup differences: Chi^2=0.11, df=1 (P=0.95), I^2=0%					

Favours nutrition support — Favours control

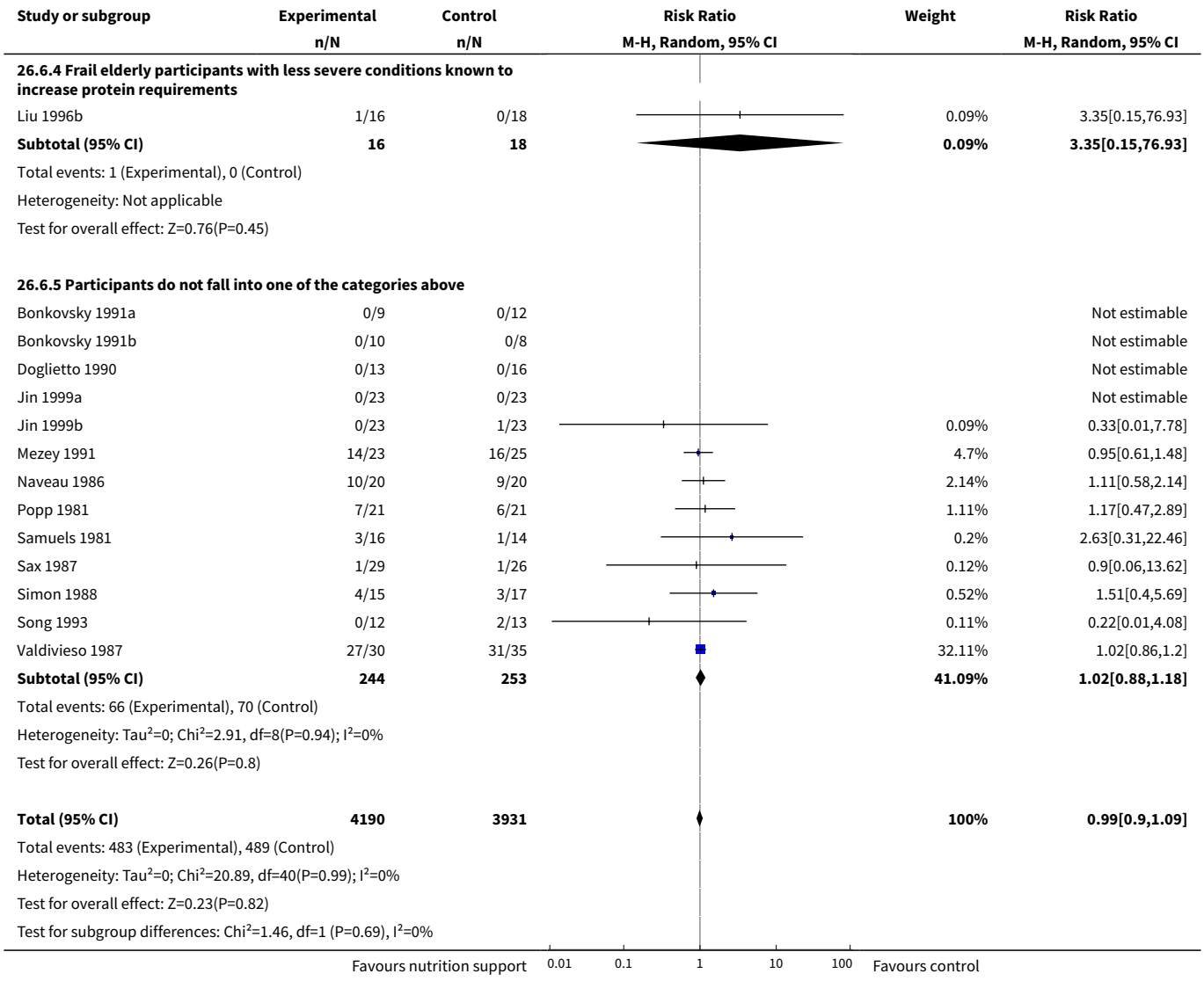
Analysis 26.6. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 6 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
26.6.1 Major surgery					
Abel 1976	4/20	3/24		0.48%	1.6[0.4,6.32]
Bellantone 1988	1/54	1/46		0.12%	0.85[0.05,13.24]

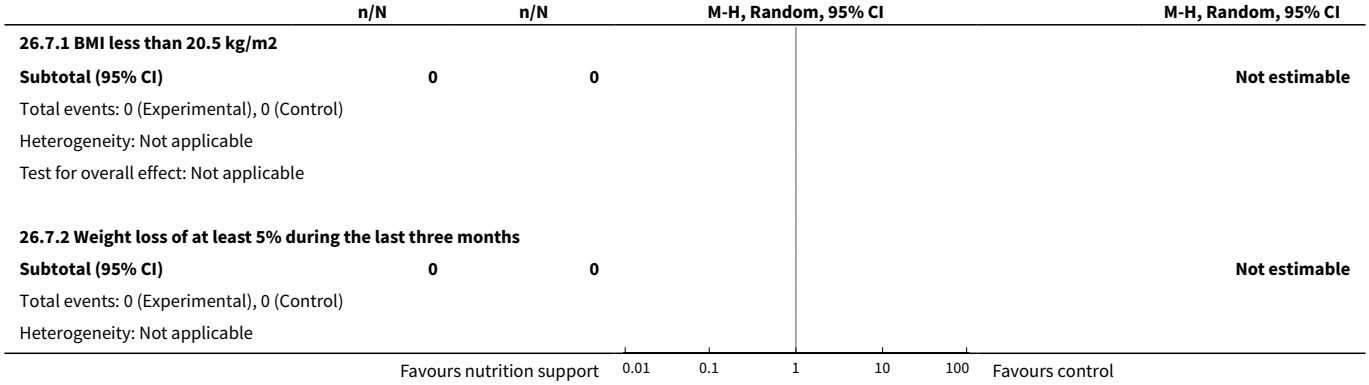
Favours nutrition support — Favours control



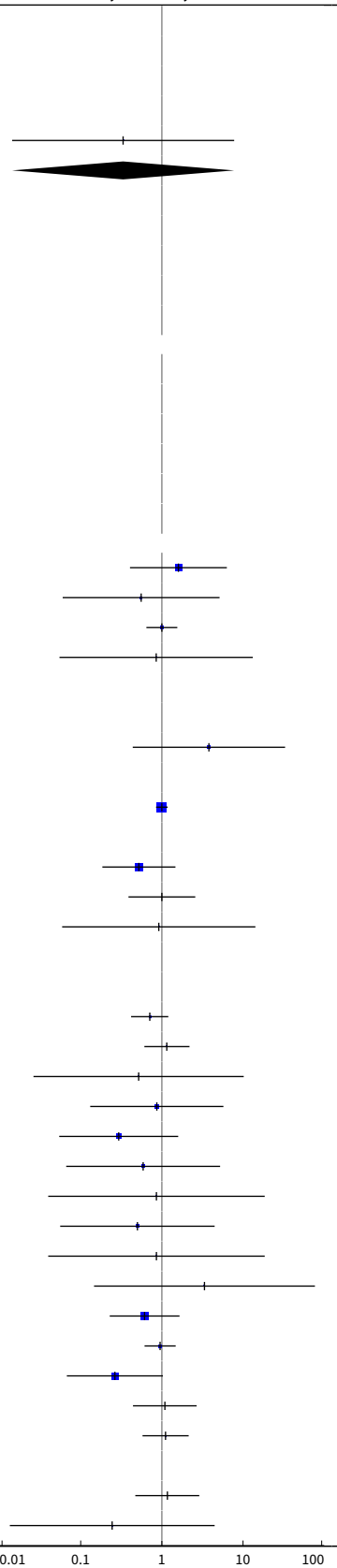
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Brennan 1994	4/60	1/57		0.2%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		1.02%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.12%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.26%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.32%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.19%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.1%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.19%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.1%	0.86[0.04,18.45]
Lough 1990	4/14	7/15		0.93%	0.61[0.23,1.65]
Müller 1982a	3/66	5/29		0.49%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		1.12%	1.09[0.44,2.68]
Neuvonen 1984	0/9	0/10			Not estimable
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Thompson 1981	0/12	0/9			Not estimable
Von Meyenfeldt 1992a	2/51	1/25		0.16%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		3.64%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.09%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.29%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.09%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**1335**	**1046**		**12.29%**	**0.88[0.67,1.15]**
Total events: 94 (Experimental), 89 (Control)					
Heterogeneity: Tau^2=0; Chi^2=13.6, df=23(P=0.94); I^2=0%					
Test for overall effect: Z=0.92(P=0.36)					
26.6.2 Stroke					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.6.3 ICU participants including trauma					
Abrishami 2010	1/9	2/10		0.18%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.75%	1[0.65,1.55]
Casaer 2011	255/2312	257/2328		34.14%	1[0.85,1.18]
Heidegger 2013	20/153	28/152		3.27%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		2.23%	1.15[0.61,2.19]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]
Stein 2002	12/40	10/40		1.78%	1.2[0.59,2.45]
Subtotal (95% CI)	**2595**	**2614**		**46.53%**	**0.99[0.86,1.14]**
Total events: 322 (Experimental), 330 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.84, df=6(P=0.83); I^2=0%					
Test for overall effect: Z=0.14(P=0.89)					



Analysis 26.7. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 7 All-cause mortality - participants characterised as 'at nutritional risk' due to one of the following criteria.



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Not applicable					
26.7.3 Weight loss of at least 10% during the last six months					
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]
Subtotal (95% CI)	**46**	**46**		**0.09%**	**0.33[0.01,7.78]**
Total events: 0 (Experimental), 1 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.68(P=0.49)					
26.7.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.7.5 Participants characterised as 'at nutritional risk' by other means					
Abel 1976	4/20	3/24		0.48%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.18%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.75%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.12%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.2%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		34.14%	1[0.85,1.18]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		1.02%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.12%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		3.27%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		2.23%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.26%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.32%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.19%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.1%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.19%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.1%	0.86[0.04,18.45]
Liu 1996b	1/16	0/18		0.09%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.93%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.7%	0.95[0.61,1.48]
Müller 1982a	3/66	5/29		0.49%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		1.12%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		2.14%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		1.11%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]



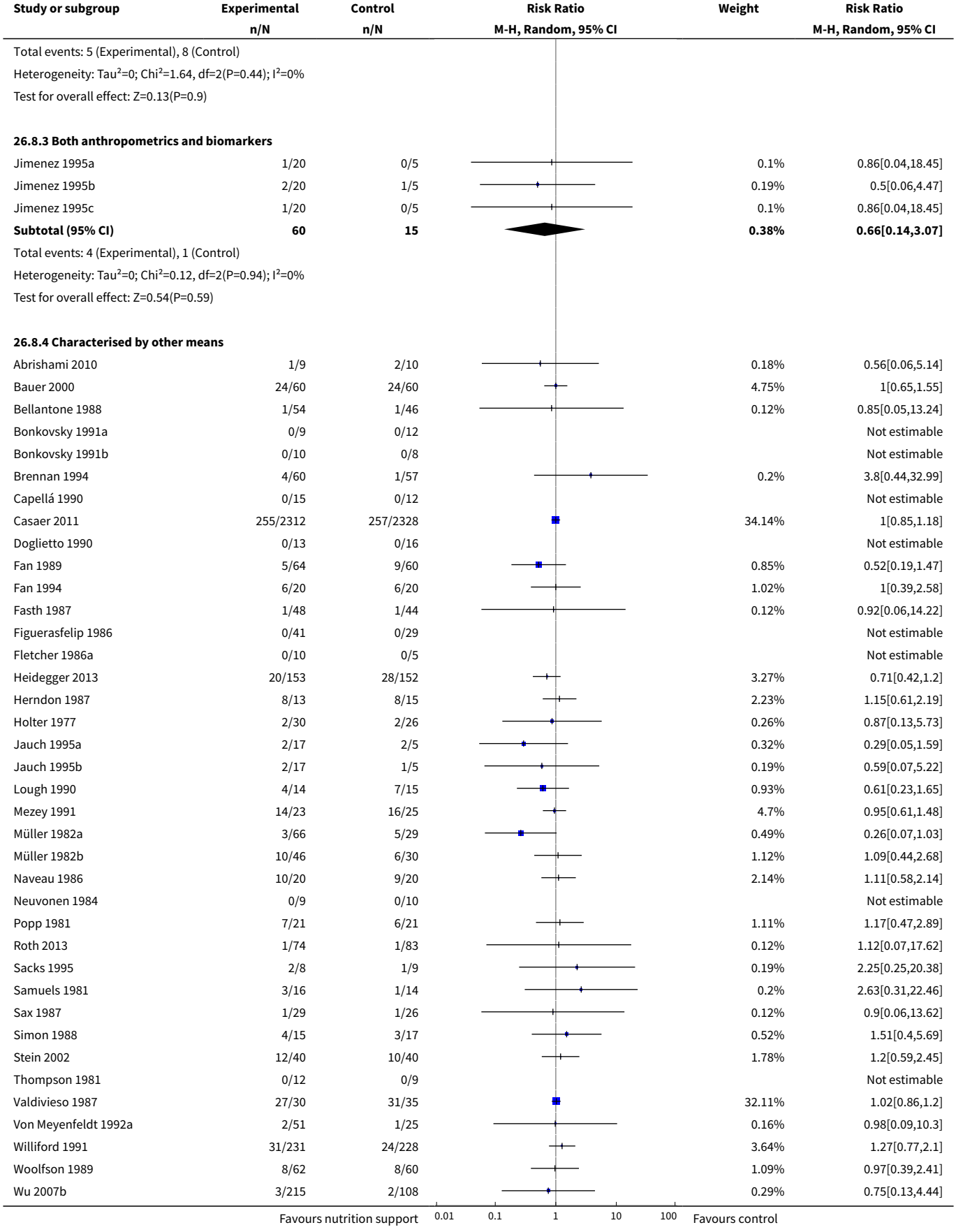
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.2%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.12%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.52%	1.51[0.4,5.69]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		1.78%	1.2[0.59,2.45]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		32.11%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.16%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		3.64%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.09%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.29%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.09%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**4144**	**3885**		**99.91%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 488 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.42, df=39(P=0.99); I^2=0%					
Test for overall effect: Z=0.21(P=0.83)					
Total (95% CI)	**4190**	**3931**		**100%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.89, df=40(P=0.99); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
Test for subgroup differences: Chi^2=0.46, df=1 (P=0.5), I^2=0%					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 26.8. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 8 All-cause mortality - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
26.8.1 Biomarkers					
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.09%	3.35[0.15,76.93]
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Subtotal (95% CI)	**82**	**87**		**0.4%**	**0.47[0.1,2.12]**
Total events: 1 (Experimental), 5 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.02, df=3(P=0.57); I^2=0%					
Test for overall effect: Z=0.98(P=0.33)					
26.8.2 Anthropometric measures					
Abel 1976	4/20	3/24		0.48%	1.6[0.4,6.32]
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Subtotal (95% CI)	**53**	**84**		**0.78%**	**0.93[0.32,2.75]**

Favours nutrition support 0.01 0.1 1 10 100 Favours control



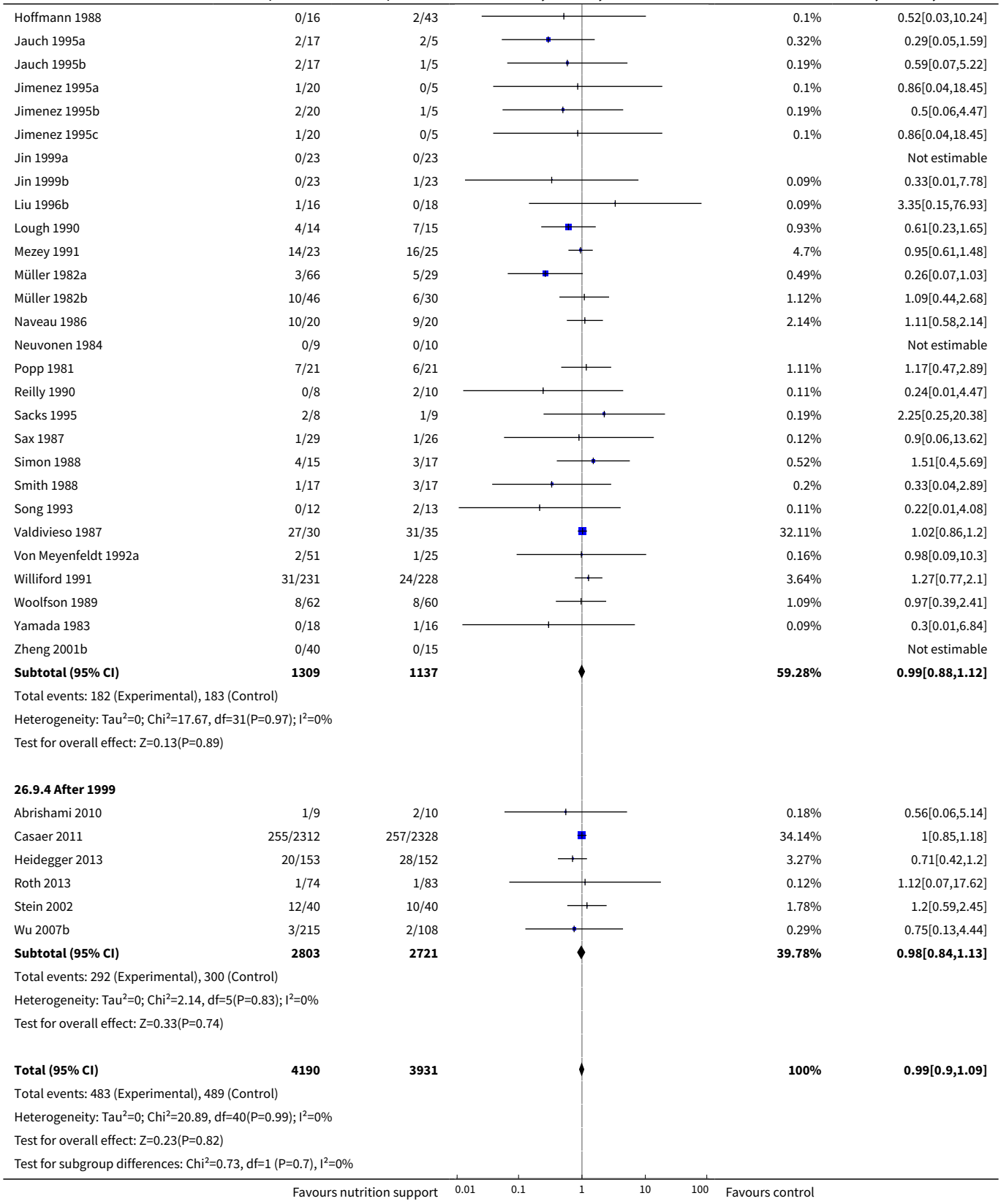
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Yamada 1983	0/18	1/16		0.09%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3995**	**3745**		**98.44%**	**0.99[0.9,1.09]**
Total events: 473 (Experimental), 475 (Control)					
Heterogeneity: Tau^2=0; Chi^2=15.84, df=30(P=0.98); I^2=0%					
Test for overall effect: Z=0.13(P=0.9)					
Total (95% CI)	**4190**	**3931**		**100%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.89, df=40(P=0.99); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
Test for subgroup differences: Chi^2=1.23, df=1 (P=0.74), I^2=0%					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 26.9. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 9 All-cause mortality - randomisation year.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
26.9.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
26.9.2 1960 to 1979					
Abel 1976	4/20	3/24		0.48%	1.6[0.4,6.32]
Holter 1977	2/30	2/26		0.26%	0.87[0.13,5.73]
Samuels 1981	3/16	1/14		0.2%	2.63[0.31,22.46]
Thompson 1981	0/12	0/9			Not estimable
Subtotal (95% CI)	**78**	**73**		**0.94%**	**1.5[0.56,4.03]**
Total events: 9 (Experimental), 6 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.59, df=2(P=0.74); I^2=0%					
Test for overall effect: Z=0.81(P=0.42)					
26.9.3 1980 to 1999					
Bauer 2000	24/60	24/60		4.75%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.12%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.2%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		1.02%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.12%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Herndon 1987	8/13	8/15		2.23%	1.15[0.61,2.19]

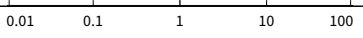
Favours nutrition support 0.01 0.1 1 10 100 Favours control



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Jauch 1995a	2/17	2/5		0.32%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.19%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.1%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.19%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.1%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.09%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.93%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.7%	0.95[0.61,1.48]
Müller 1982a	3/66	5/29		0.49%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		1.12%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		2.14%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		1.11%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]
Sax 1987	1/29	1/26		0.12%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.52%	1.51[0.4,5.69]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Valdivieso 1987	27/30	31/35		32.11%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.16%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		3.64%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.09%	0.97[0.39,2.41]
Yamada 1983	0/18	1/16		0.09%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**1309**	**1137**		**59.28%**	**0.99[0.88,1.12]**
Total events: 182 (Experimental), 183 (Control)					
Heterogeneity: Tau^2=0; Chi^2=17.67, df=31(P=0.97); I^2=0%					
Test for overall effect: Z=0.13(P=0.89)					
26.9.4 After 1999					
Abrishami 2010	1/9	2/10		0.18%	0.56[0.06,5.14]
Casaer 2011	255/2312	257/2328		34.14%	1[0.85,1.18]
Heidegger 2013	20/153	28/152		3.27%	0.71[0.42,1.2]
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Stein 2002	12/40	10/40		1.78%	1.2[0.59,2.45]
Wu 2007b	3/215	2/108		0.29%	0.75[0.13,4.44]
Subtotal (95% CI)	**2803**	**2721**		**39.78%**	**0.98[0.84,1.13]**
Total events: 292 (Experimental), 300 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.14, df=5(P=0.83); I^2=0%					
Test for overall effect: Z=0.33(P=0.74)					
Total (95% CI)	**4190**	**3931**		**100%**	**0.99[0.9,1.09]**
Total events: 483 (Experimental), 489 (Control)					
Heterogeneity: Tau^2=0; Chi^2=20.89, df=40(P=0.99); I^2=0%					
Test for overall effect: Z=0.23(P=0.82)					
Test for subgroup differences: Chi^2=0.73, df=1 (P=0.7), I^2=0%					

Analysis 26.10. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 10 All-cause mortality - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
26.10.1 Three days or more					
Abel 1976	4/20	3/24		0.48%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.18%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.75%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.12%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.2%	3.8[0.44,32.99]
Casaer 2011	255/2312	257/2328		34.14%	1[0.85,1.18]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	5/64	9/60		0.85%	0.52[0.19,1.47]
Fan 1994	6/20	6/20		1.02%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.12%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		3.27%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		2.23%	1.15[0.61,2.19]
Hoffmann 1988	0/16	2/43		0.1%	0.52[0.03,10.24]
Holter 1977	2/30	2/26		0.26%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.32%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.19%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.1%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.19%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.1%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.09%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.09%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		0.93%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.7%	0.95[0.61,1.48]
Müller 1982a	3/66	5/29		0.49%	0.26[0.07,1.03]
Müller 1982b	10/46	6/30		1.12%	1.09[0.44,2.68]
Naveau 1986	10/20	9/20		2.14%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		1.11%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.11%	0.24[0.01,4.47]
Roth 2013	1/74	1/83		0.12%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.19%	2.25[0.25,20.38]
Samuels 1981	3/16	1/14		0.2%	2.63[0.31,22.46]
Sax 1987	1/29	1/26		0.12%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.52%	1.51[0.4,5.69]
Smith 1988	1/17	3/17		0.2%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.11%	0.22[0.01,4.08]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		32.11%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.16%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		3.64%	1.27[0.77,2.1]



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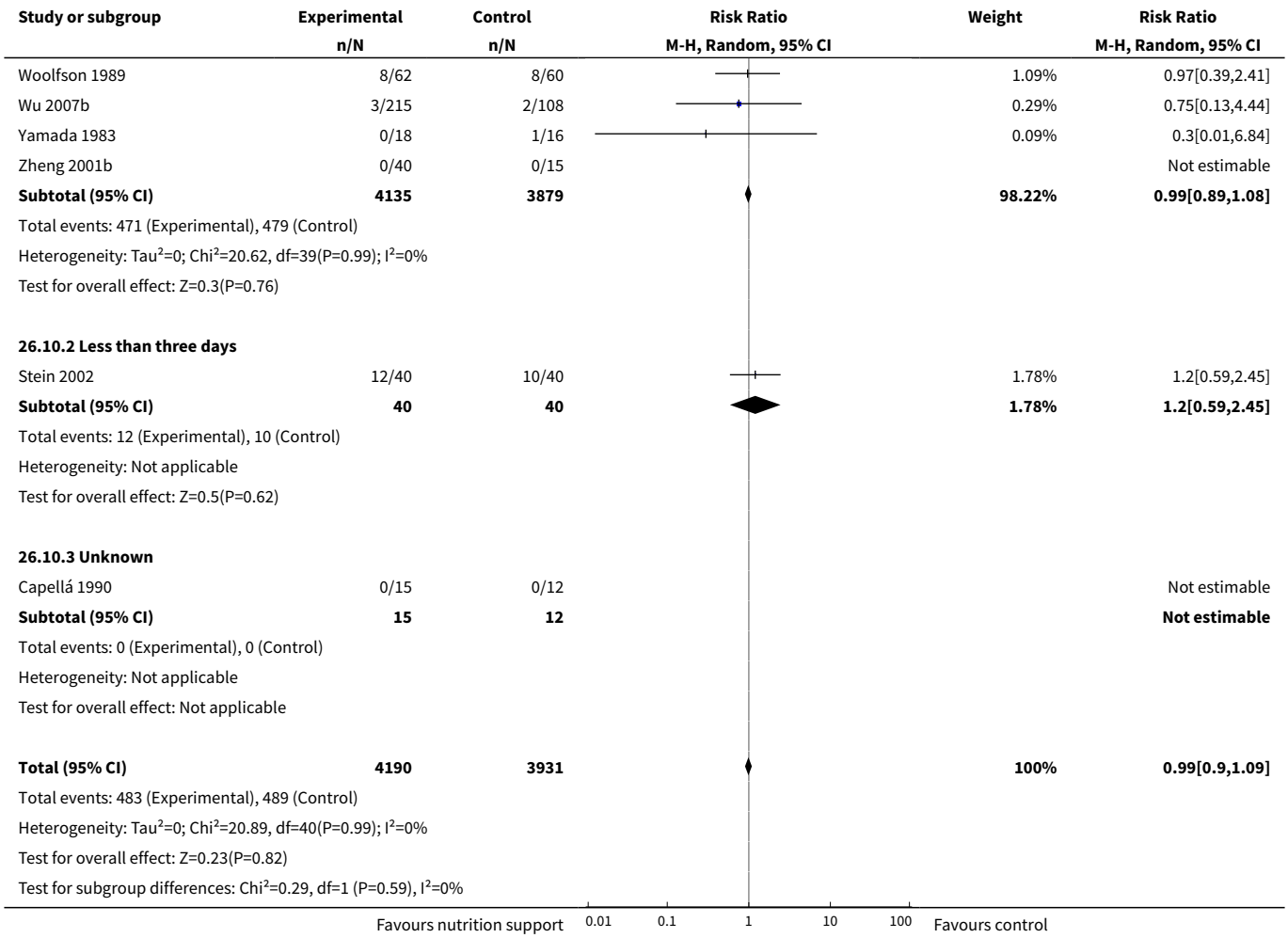
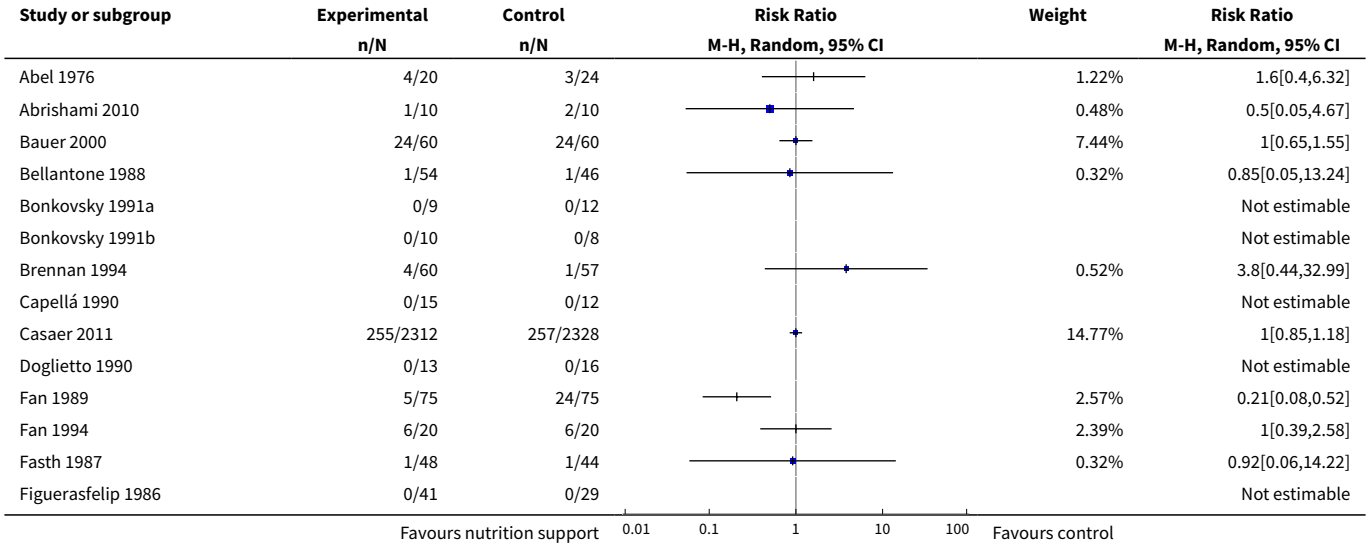
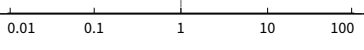


Analysis 26.11. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 11 All-cause mortality - 'best-worst case' scenario.

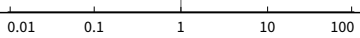


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		5.91%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		4.51%	1.15[0.61,2.19]
Hoffmann 1988	0/51	10/51		0.31%	0.05[0,0.79]
Holter 1977	2/30	2/26		0.67%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.83%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.51%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.26%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.5%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.26%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.25%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.25%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		2.22%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		7.41%	0.95[0.61,1.48]
Müller 1982a	3/80	16/40		1.63%	0.09[0.03,0.3]
Müller 1982b	10/55	16/40		4.14%	0.45[0.23,0.89]
Naveau 1986	10/20	9/20		4.37%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		2.57%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.29%	0.24[0.01,4.47]
Roth 2013	1/74	1/83		0.32%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.5%	2.25[0.25,20.38]
Samuels 1981	3/18	2/15		0.86%	1.25[0.24,6.53]
Sax 1987	1/29	1/26		0.33%	0.9[0.06,13.62]
Simon 1988	4/16	4/18		1.54%	1.13[0.34,3.78]
Smith 1988	1/17	3/17		0.52%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.28%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		3.8%	1.2[0.59,2.45]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		14.63%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.44%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		6.33%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		2.54%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.75%	0.75[0.13,4.44]
Yamada 1983	0/18	1/16		0.25%	0.3[0.01,6.84]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**4263**	**3977**		**100%**	**0.87[0.74,1.02]**
Total events: 483 (Experimental), 535 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=52.24, df=40(P=0.09); I^2=23.43%					
Test for overall effect: Z=1.72(P=0.09)					



Analysis 26.12. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 12 All-cause mortality - 'worst-best case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		0.66%	1.6[0.4,6.32]
Abrishami 2010	2/10	2/10		0.41%	1[0.17,5.77]
Bauer 2000	24/60	24/60		5.97%	1[0.65,1.55]
Bellantone 1988	1/54	1/46		0.17%	0.85[0.05,13.24]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	4/60	1/57		0.27%	3.8[0.44,32.99]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		26.83%	1[0.85,1.18]
Doglietto 1990	0/13	0/16			Not estimable
Fan 1989	16/75	9/75		2.17%	1.78[0.84,3.77]
Fan 1994	6/20	6/20		1.38%	1[0.39,2.58]
Fasth 1987	1/48	1/44		0.17%	0.92[0.06,14.22]
Figuerasfelip 1986	0/41	0/29			Not estimable
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		4.24%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		2.95%	1.15[0.61,2.19]
Hoffmann 1988	35/51	2/51		0.67%	17.5[4.44,68.94]
Holter 1977	2/30	2/26		0.35%	0.87[0.13,5.73]
Jauch 1995a	2/17	2/5		0.44%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.26%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.13%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.26%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.13%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.13%	0.33[0.01,7.78]
Liu 1996b	1/16	0/18		0.13%	3.35[0.15,76.93]
Lough 1990	4/14	7/15		1.27%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		5.92%	0.95[0.61,1.48]
Müller 1982a	17/80	5/40		1.46%	1.7[0.68,4.27]
Müller 1982b	19/55	6/40		1.82%	2.3[1.01,5.24]
Naveau 1986	10/20	9/20		2.84%	1.11[0.58,2.14]
Neuvonen 1984	0/9	0/10			Not estimable
Popp 1981	7/21	6/21		1.5%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.15%	0.24[0.01,4.47]
Roth 2013	1/74	1/83		0.17%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.26%	2.25[0.25,20.38]
Samuels 1981	5/18	1/15		0.3%	4.17[0.54,31.88]
Sax 1987	1/29	1/26		0.17%	0.9[0.06,13.62]
Simon 1988	5/16	3/18		0.79%	1.88[0.53,6.63]
Smith 1988	1/17	3/17		0.27%	0.33[0.04,2.89]
Song 1993	0/12	2/13		0.15%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		2.38%	1.2[0.59,2.45]
Thompson 1981	0/12	0/9			Not estimable
Valdivieso 1987	27/30	31/35		25.9%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.23%	0.98[0.09,10.3]
Williford 1991	31/231	24/228		4.68%	1.27[0.77,2.1]
Woolfson 1989	8/62	8/60		1.48%	0.97[0.39,2.41]
Wu 2007b	3/215	2/108		0.4%	0.75[0.13,4.44]



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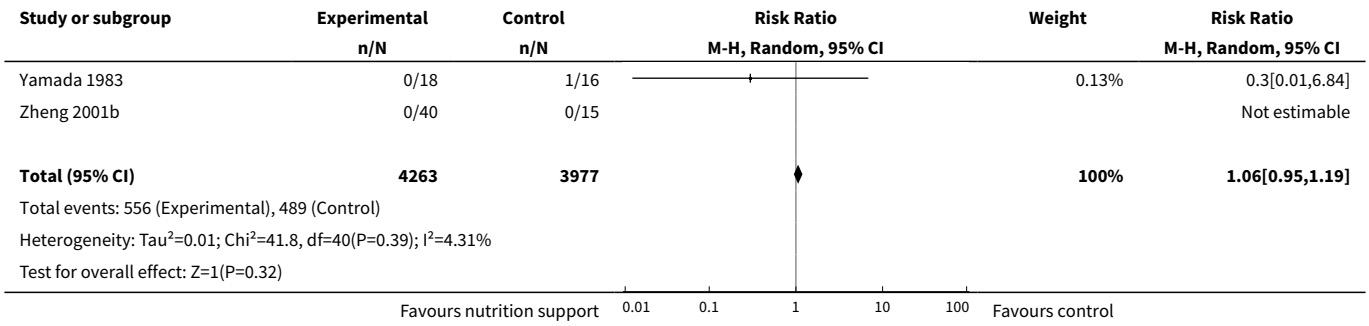
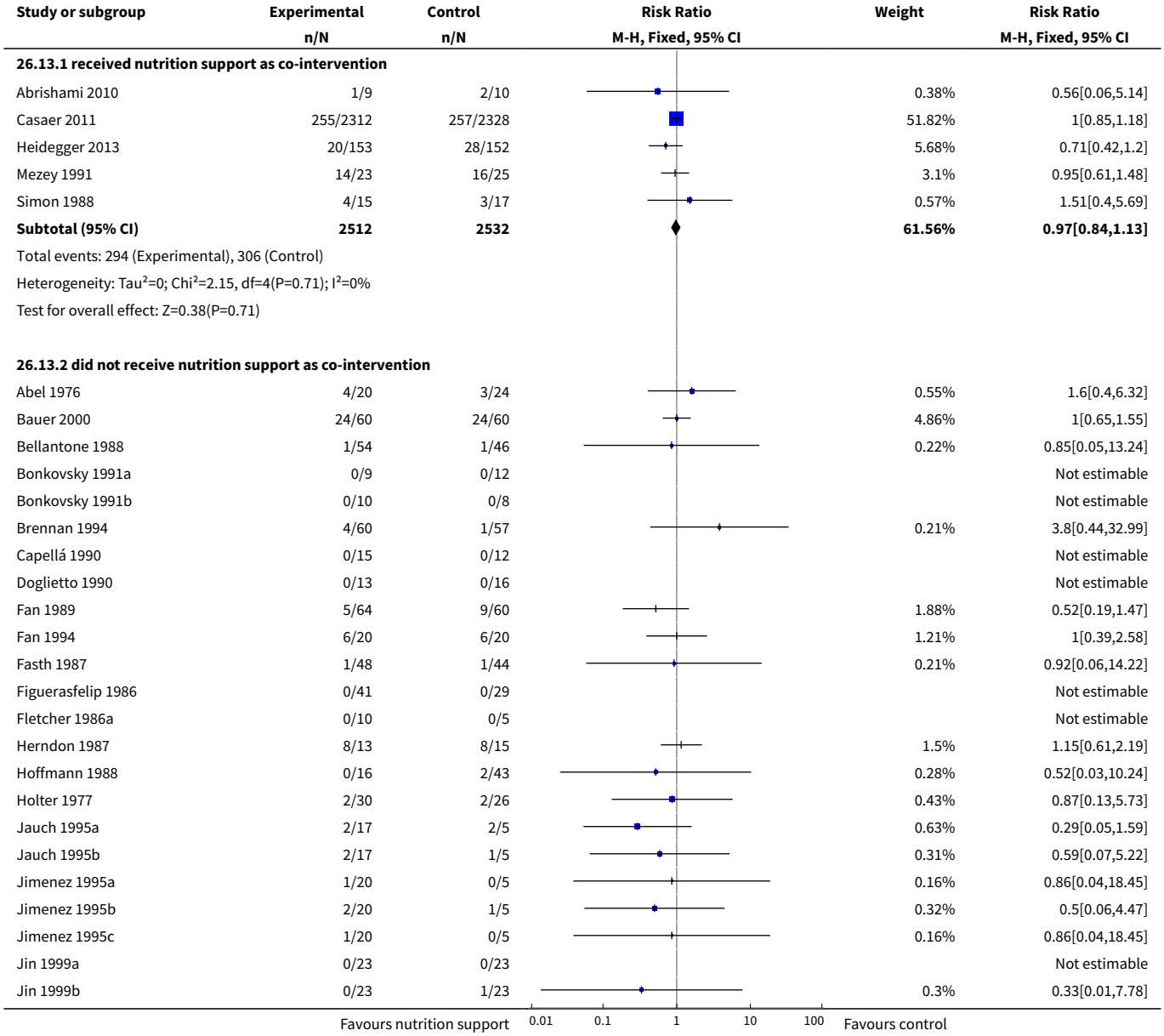
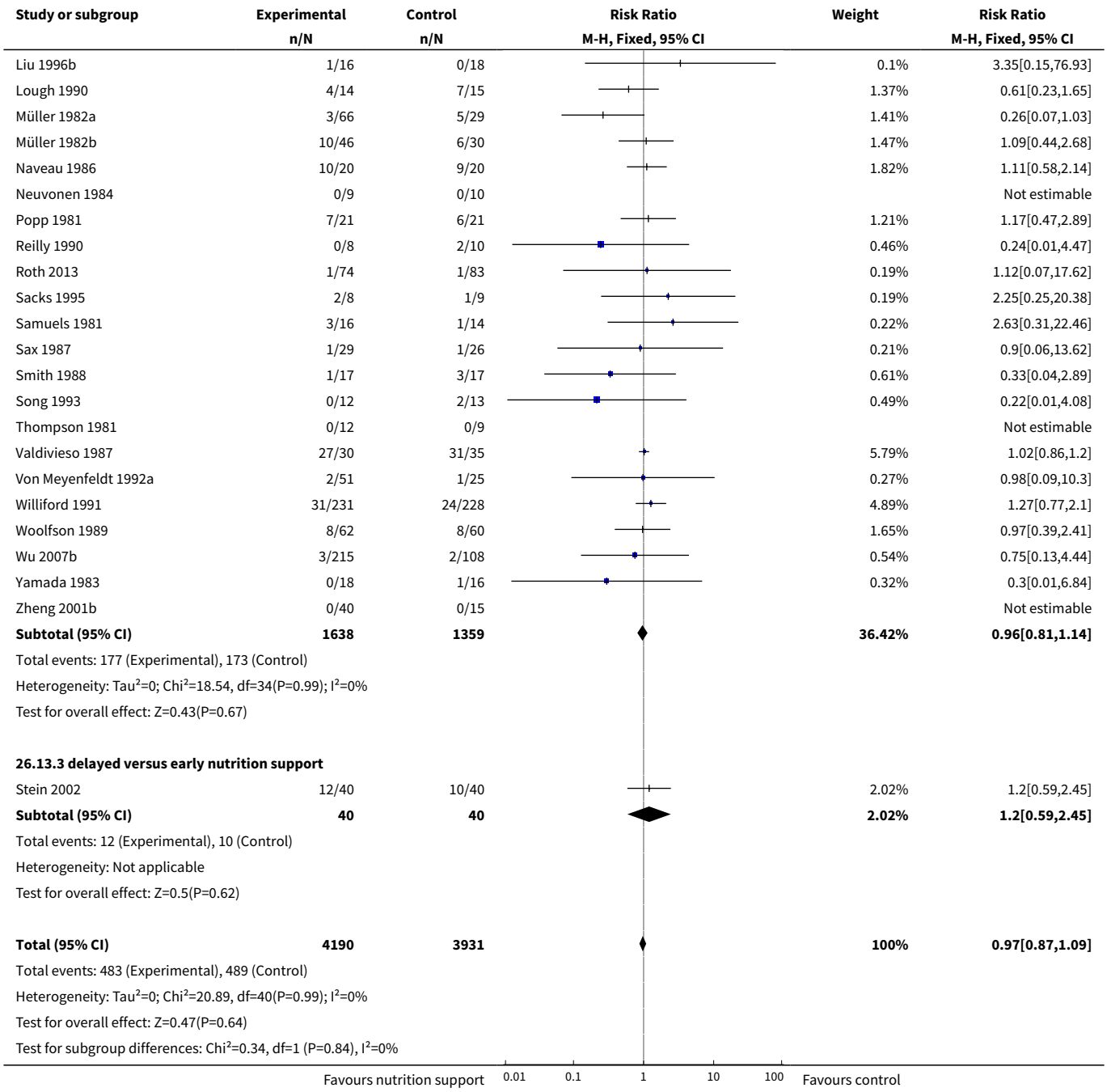


Analysis 26.13. Comparison 26 Parenteral - All cause mortality - maximum follow-up, Outcome 13 All-cause mortality co-interventions.





Comparison 27. Parenteral - Serious adverse event end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Serious adverse events - overall	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
2 Serious adverse events - bias	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
2.1 High risk of bias	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Serious adverse events - by medical specialty	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	7	259	Risk Ratio (M-H, Random, 95% CI)	1.29 [0.73, 2.29]
3.3 High risk	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.4 Geriatrics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.5 Pulmonary disease	1	25	Risk Ratio (M-H, Random, 95% CI)	0.22 [0.01, 4.08]
3.6 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Infectious diseases	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.11 Gastroenterologic surgery	24	1663	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.56, 1.10]
3.12 Trauma surgery	2	45	Risk Ratio (M-H, Random, 95% CI)	1.22 [0.66, 2.25]
3.13 Ortopaedics	1	80	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.15 Vascular surgery	2	35	Risk Ratio (M-H, Random, 95% CI)	0.5 [0.05, 4.67]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.16 Transplant surgery	2	47	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.23, 1.65]
3.17 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.18 Thoracic surgery	1	44	Risk Ratio (M-H, Random, 95% CI)	1.6 [0.40, 6.32]
3.19 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.20 Oro-maxillo-facial surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.22 Emergency medicine	4	5044	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.81, 1.24]
3.23 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.24 Neurology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.25 Oncology	4	277	Risk Ratio (M-H, Random, 95% CI)	1.12 [0.51, 2.44]
3.26 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.28 Mixed	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4 Serious adverse events - based on adequacy of the amount of calories	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
4.1 Clearly adequate in intervention and clearly inadequate in control	9	5736	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.80, 1.19]
4.2 Inadequate in the experimental or adequate in the control	5	218	Risk Ratio (M-H, Random, 95% CI)	1.20 [0.74, 1.95]
4.3 Experimental group is overfed	1	124	Risk Ratio (M-H, Random, 95% CI)	0.52 [0.19, 1.47]
4.4 Unclear intake in control or experimental	33	1441	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.65, 1.23]

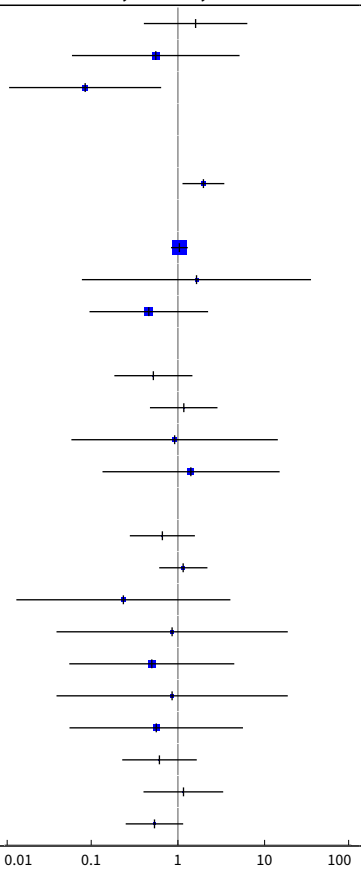
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5 Serious adverse events - different screening tools	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
5.1 NRS 2002	1	4640	Risk Ratio (M-H, Random, 95% CI)	1.04 [0.83, 1.30]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 SGA	1	323	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.28, 1.83]
5.5 Other means	46	2556	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.77, 1.17]
6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
6.1 Major surgery	30	1952	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.66, 1.13]
6.2 Stroke	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.3 ICU participants including trauma	6	5089	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.84, 1.25]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	2	114	Risk Ratio (M-H, Random, 95% CI)	0.56 [0.06, 5.63]
6.5 Participants do not fall into one of the categories above	10	364	Risk Ratio (M-H, Random, 95% CI)	1.18 [0.69, 2.02]
7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
7.1 BMI less than 20.5 kg/m2	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
8.1 Biomarkers	3	77	Risk Ratio (M-H, Random, 95% CI)	0.39 [0.06, 2.39]
8.2 Anthropometric measures	3	137	Risk Ratio (M-H, Random, 95% CI)	0.69 [0.16, 3.01]
8.3 Mixed	3	75	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.14, 3.07]
8.4 Characterised by other means	39	7230	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.86, 1.16]
9 Serious adverse events - randomisation year	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	3	98	Risk Ratio (M-H, Random, 95% CI)	2.02 [0.82, 4.98]
9.3 1980 to 1999	37	1754	Risk Ratio (M-H, Random, 95% CI)	0.95 [0.76, 1.19]
9.4 After 1999	8	5667	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.79, 1.20]
10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	48	7519	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.85, 1.14]
10.1 Three days or more	46	7412	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.85, 1.15]
10.2 Less than three days	1	80	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.12, 3.78]
10.3 Unknown	1	27	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

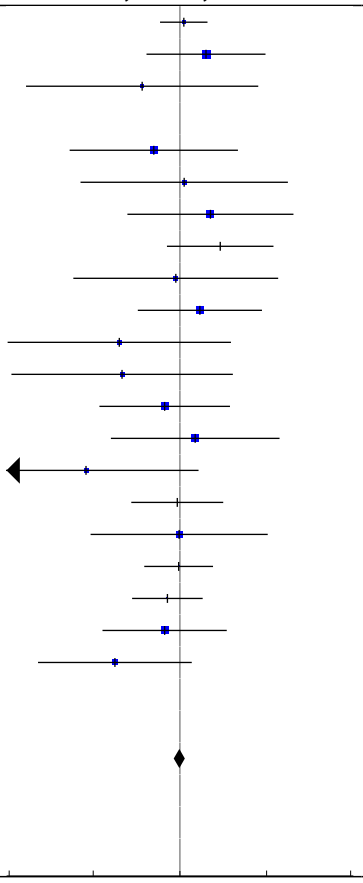
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
11 Serious adverse events - 'best-worst case' scenario	48	8293	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.63, 0.98]
12 Serious adverse events - 'worst-best case' scenario	48	8293	Risk Ratio (M-H, Random, 95% CI)	1.16 [0.95, 1.42]
13 Serious adverse events co-interventions	48	7519	Risk Ratio (M-H, Fixed, 95% CI)	0.94 [0.81, 1.09]
13.1 received nutrition support as co-intervention	5	5049	Risk Ratio (M-H, Fixed, 95% CI)	1.02 [0.83, 1.26]
13.2 did not receive nutrition support as co-intervention	42	2390	Risk Ratio (M-H, Fixed, 95% CI)	0.87 [0.70, 1.07]
13.3 delayed versus early nutrition support	1	80	Risk Ratio (M-H, Fixed, 95% CI)	0.67 [0.12, 3.78]

Analysis 27.1. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 1 Serious adverse events - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		1.19%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.45%	0.56[0.06,5.14]
Bellantone 1988	1/54	10/46		0.55%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		7.33%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		44.72%	1.04[0.83,1.3]
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.91%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		2.1%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		2.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.3%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.41%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		5.5%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.24%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.47%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.24%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.42%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		2.3%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.01%	1.16[0.4,3.33]
Müller 1982a	11/66	9/29		3.84%	0.54[0.25,1.15]

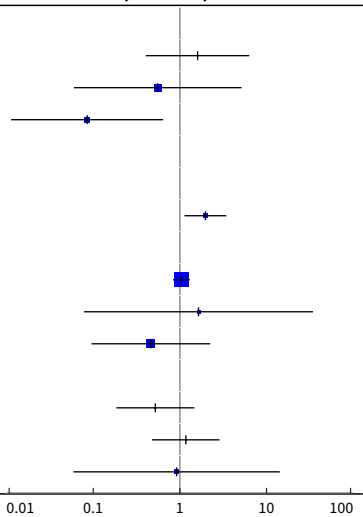


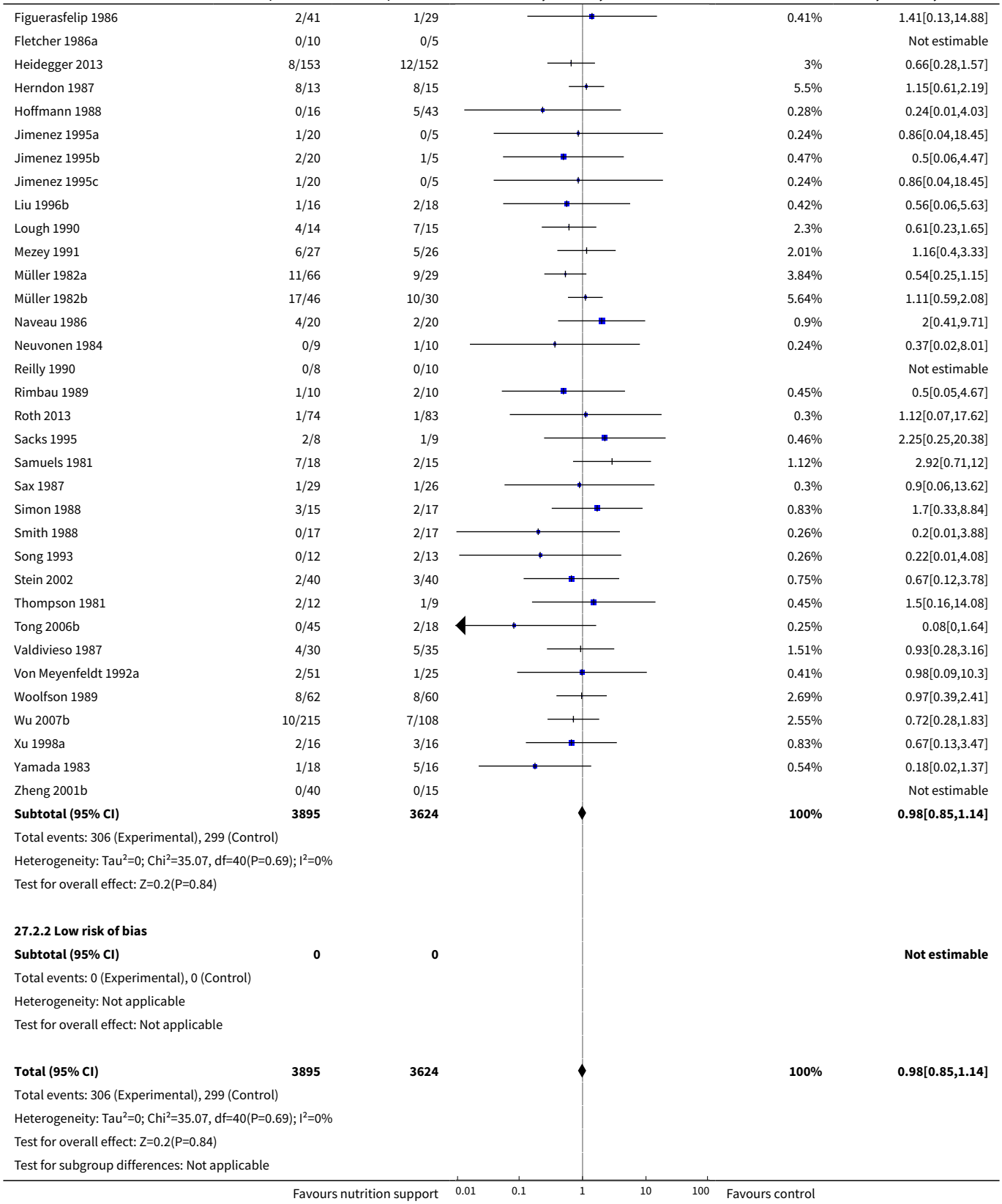
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Müller 1982b	17/46	10/30		5.64%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.9%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.24%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.45%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.46%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		1.12%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.3%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.83%	1.7[0.33,8.84]
Smith 1988	0/17	2/17		0.26%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.26%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.75%	0.67[0.12,3.78]
Thompson 1981	2/12	1/9		0.45%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		1.51%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.41%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		2.69%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.55%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.83%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.54%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**3895**	**3624**		**100%**	**0.98[0.85,1.14]**
Total events: 306 (Experimental), 299 (Control)					
Heterogeneity: Tau²=0; Chi²=35.07, df=40(P=0.69); I²=0%					
Test for overall effect: Z=0.2(P=0.84)					



Analysis 27.2. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 2 Serious adverse events - bias.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
27.2.1 High risk of bias					
Abel 1976	4/20	3/24		1.19%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.45%	0.56[0.06,5.14]
Bellantone 1988	1/54	10/46		0.55%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		7.33%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		44.72%	1.04[0.83,1.3]
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.91%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		2.1%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		2.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.3%	0.92[0.06,14.22]

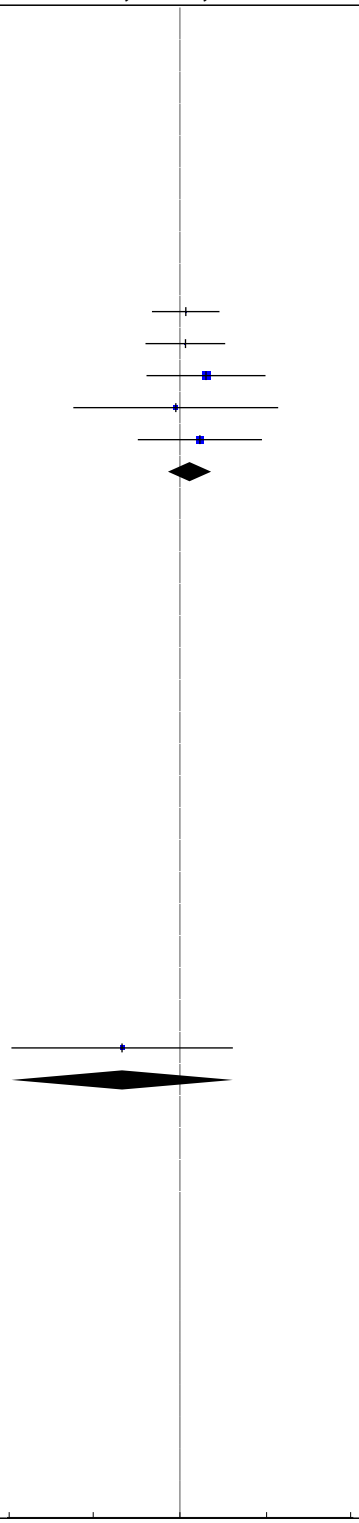




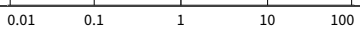
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Figuerasfelip 1986	2/41	1/29		0.41%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		5.5%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.24%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.47%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.24%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.42%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		2.3%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.01%	1.16[0.4,3.33]
Müller 1982a	11/66	9/29		3.84%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		5.64%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.9%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.24%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.45%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.46%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		1.12%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.3%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.83%	1.7[0.33,8.84]
Smith 1988	0/17	2/17		0.26%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.26%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.75%	0.67[0.12,3.78]
Thompson 1981	2/12	1/9		0.45%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		1.51%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.41%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		2.69%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.55%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.83%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.54%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3895**	**3624**		**100%**	**0.98[0.85,1.14]**
Total events: 306 (Experimental), 299 (Control)					
Heterogeneity: Tau^2=0; Chi^2=35.07, df=40(P=0.69); I^2=0%					
Test for overall effect: Z=0.2(P=0.84)					
27.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**3895**	**3624**		**100%**	**0.98[0.85,1.14]**
Total events: 306 (Experimental), 299 (Control)					
Heterogeneity: Tau^2=0; Chi^2=35.07, df=40(P=0.69); I^2=0%					
Test for overall effect: Z=0.2(P=0.84)					
Test for subgroup differences: Not applicable					

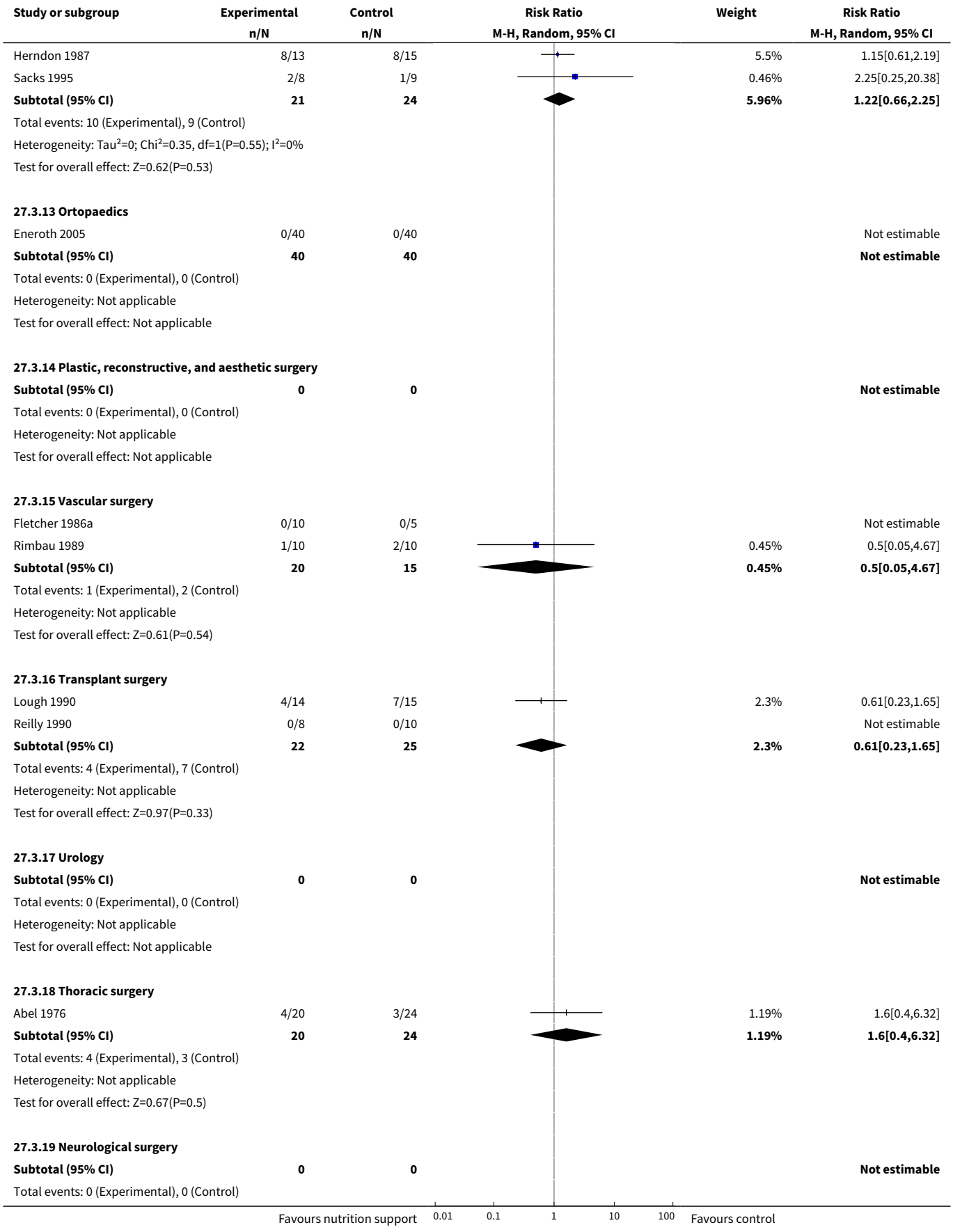
Analysis 27.3. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 3 Serious adverse events - by medical specialty.

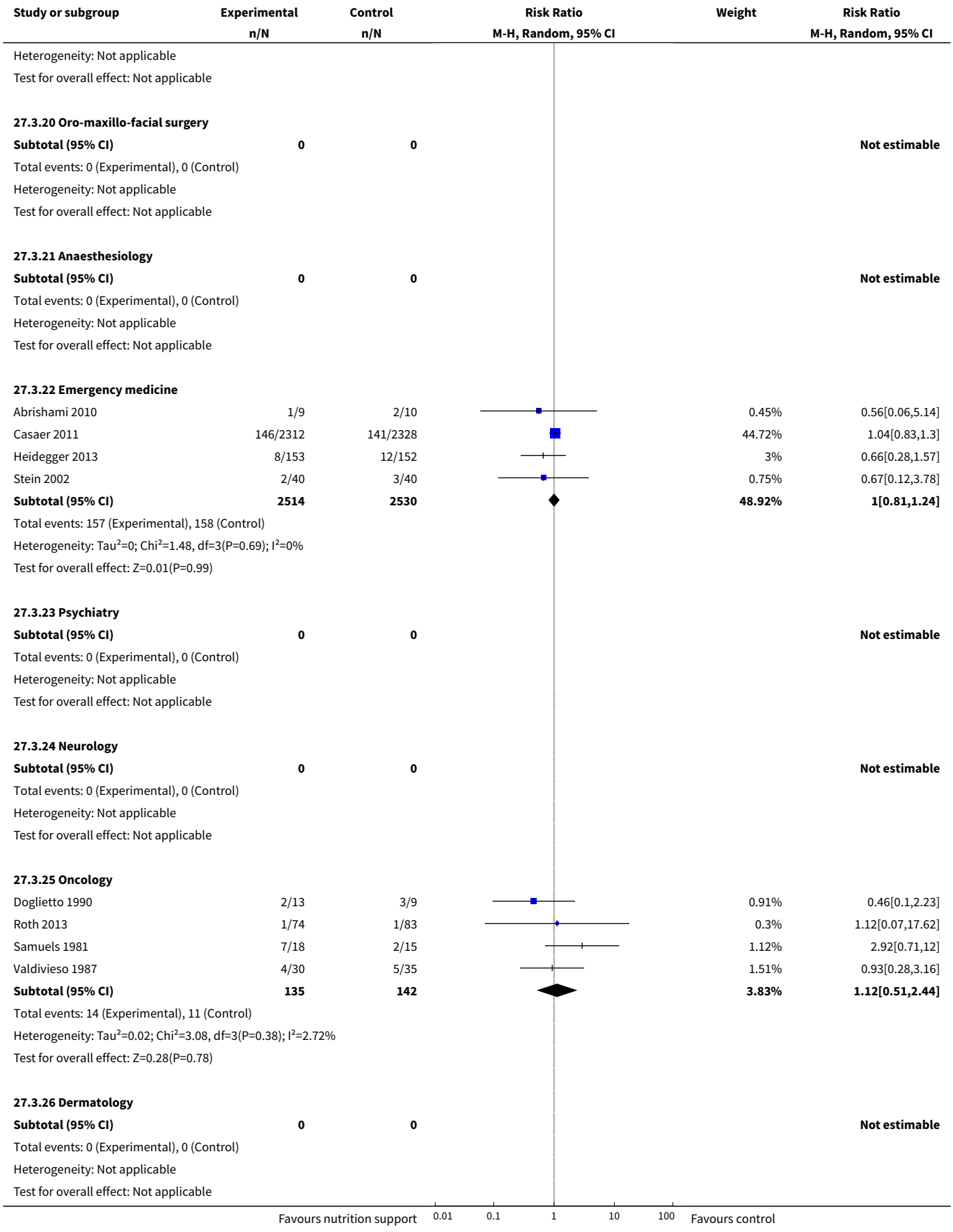
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
27.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.2 Medical gastroenterology and hepatology					
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Fan 1994	7/20	6/20		2.79%	1.17[0.48,2.86]
Mezey 1991	6/27	5/26		2.01%	1.16[0.4,3.33]
Naveau 1986	4/20	2/20		0.9%	2[0.41,9.71]
Sax 1987	1/29	1/26		0.3%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.83%	1.7[0.33,8.84]
Subtotal (95% CI)	**130**	**129**		**6.83%**	**1.29[0.73,2.29]**
Total events: 21 (Experimental), 16 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.56, df=4(P=0.97); I^2=0%					
Test for overall effect: Z=0.88(P=0.38)					
27.3.3 High risk					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.4 Geriatrics					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.5 Pulmonary disease					
Song 1993	0/12	2/13		0.26%	0.22[0.01,4.08]
Subtotal (95% CI)	**12**	**13**		**0.26%**	**0.22[0.01,4.08]**
Total events: 0 (Experimental), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.02(P=0.31)					
27.3.6 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.7 Infectious diseases					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					



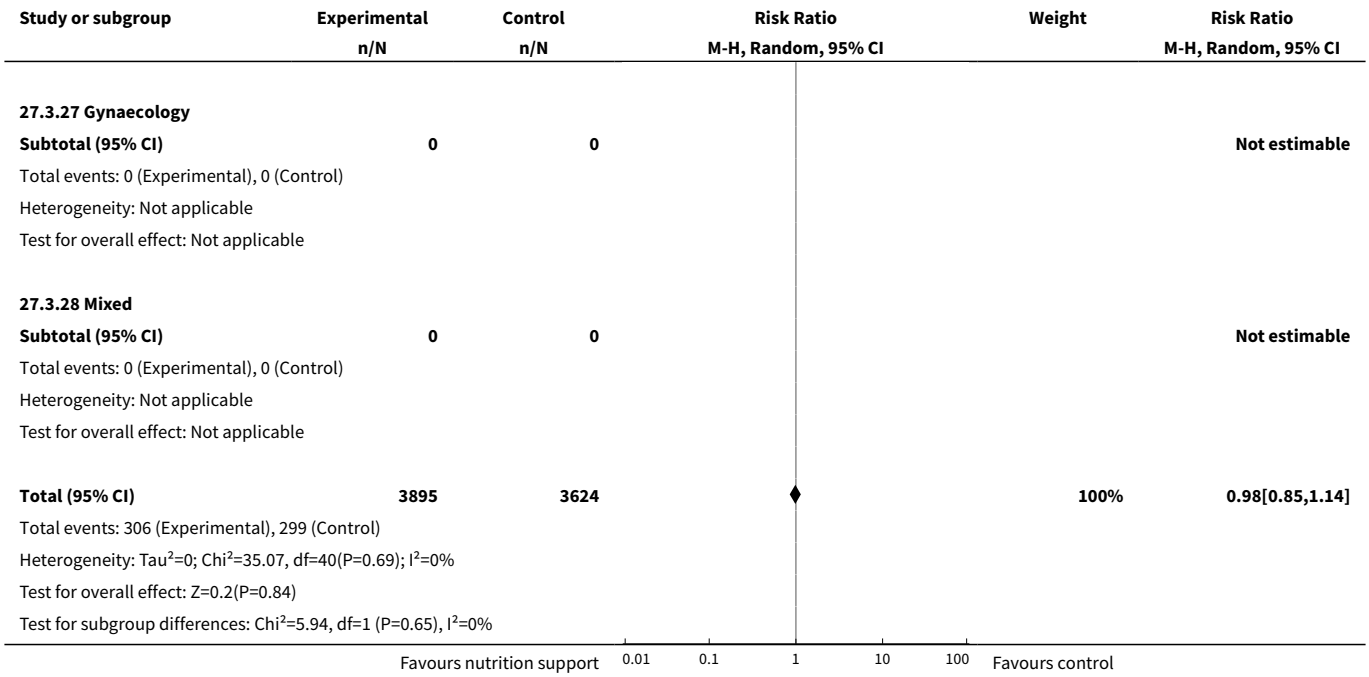
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.8 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.9 Haematology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.10 Nephrology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.11 Gastroenterologic surgery					
Bellantone 1988	1/54	10/46		0.55%	0.09[0.01,0.64]
Brennan 1994	27/60	13/57		7.33%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Fan 1989	5/64	9/60		2.1%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.3%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.41%	1.41[0.13,14.88]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.24%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.47%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.24%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.42%	0.56[0.06,5.63]
Müller 1982a	11/66	9/29		3.84%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		5.64%	1.11[0.59,2.08]
Neuvonen 1984	0/9	1/10		0.24%	0.37[0.02,8.01]
Smith 1988	0/17	2/17		0.26%	0.2[0.01,3.88]
Thompson 1981	2/12	1/9		0.45%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Von Meyenfeldt 1992a	2/51	1/25		0.41%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		2.69%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.55%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.83%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.54%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**981**	**682**		**30.27%**	**0.78[0.56,1.1]**
Total events: 95 (Experimental), 91 (Control)					
Heterogeneity: Tau^2=0.1; Chi^2=25.41, df=21(P=0.23); I^2=17.35%					
Test for overall effect: Z=1.43(P=0.15)					
27.3.12 Trauma surgery					



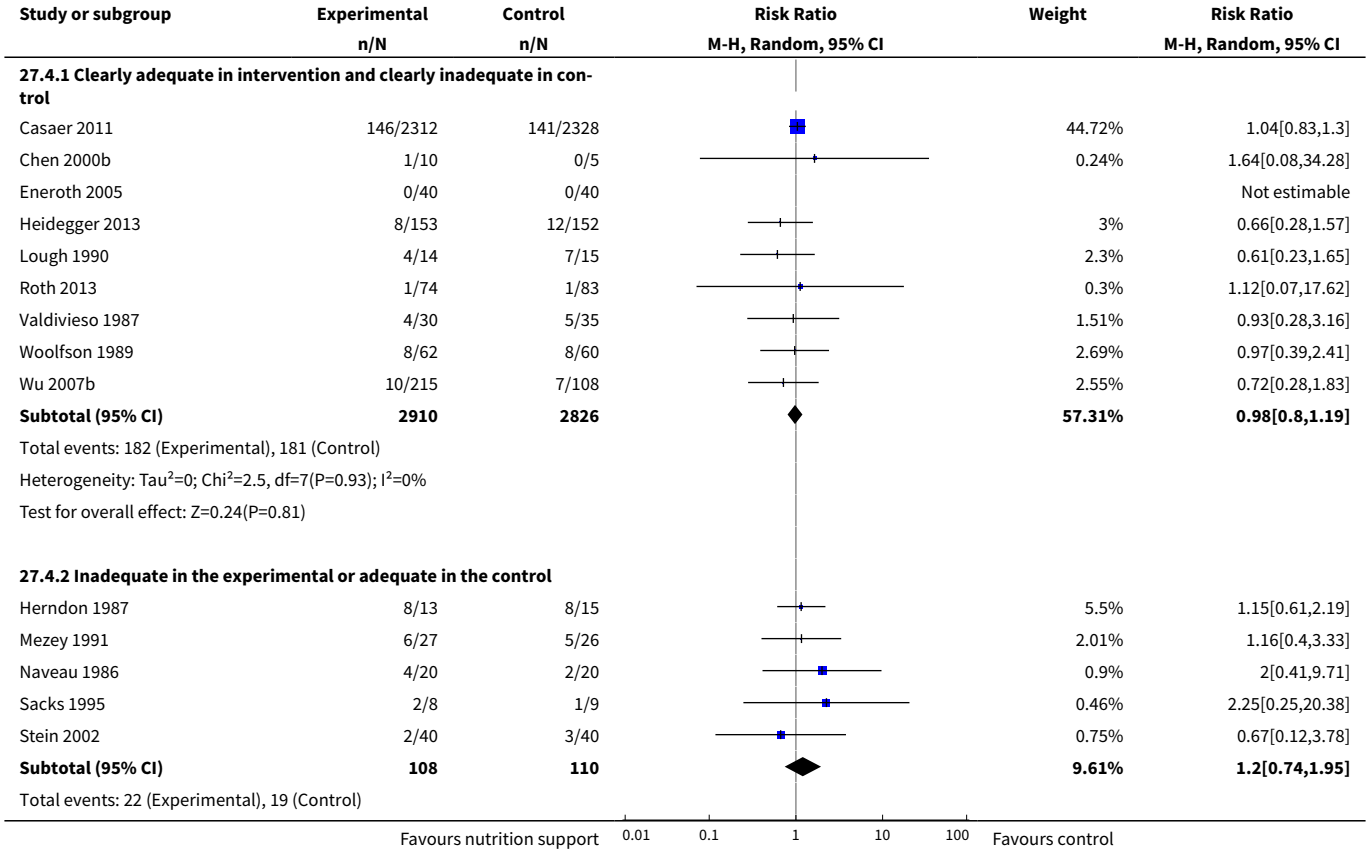


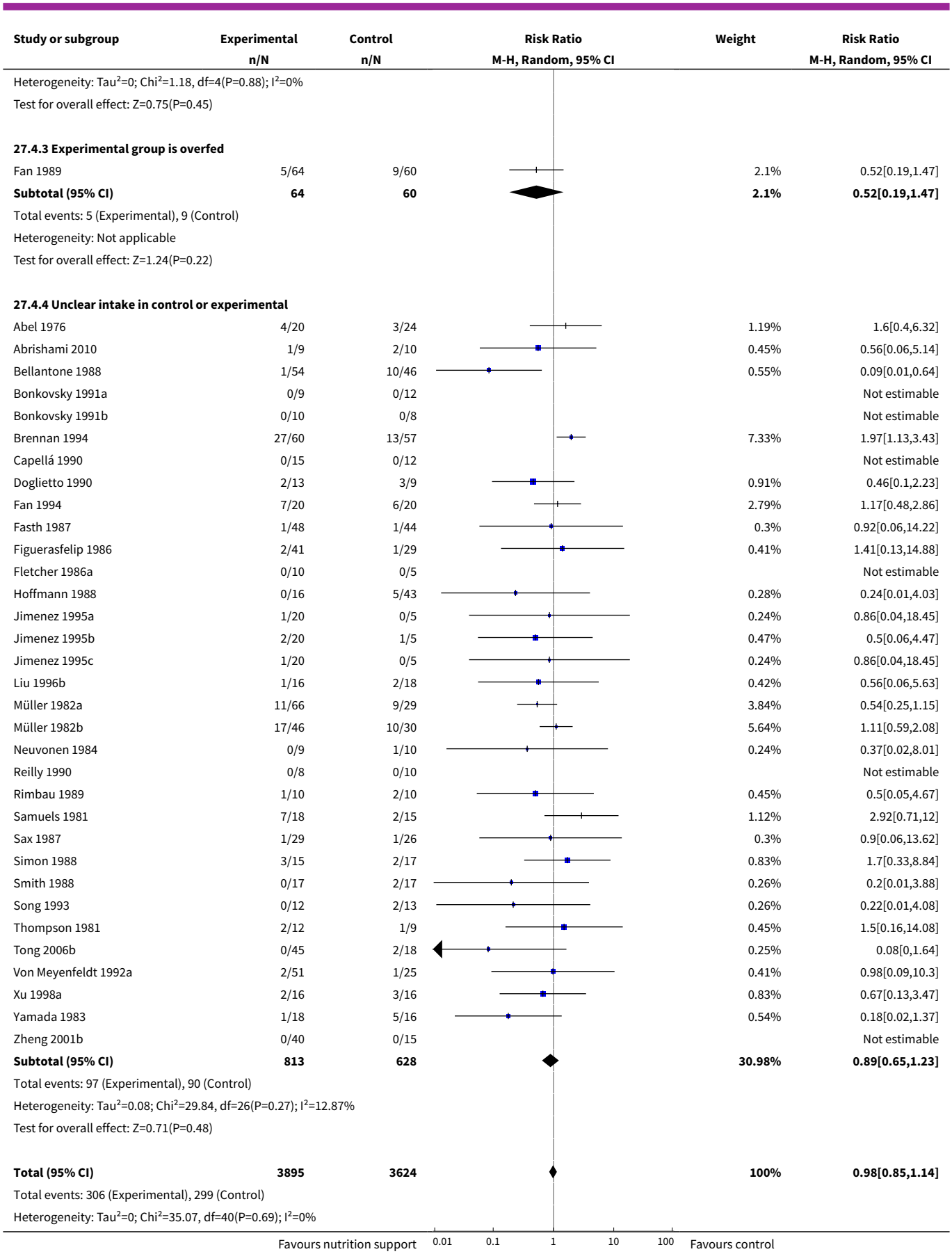


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.20 Oro-maxillo-facial surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.21 Anaesthesiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.22 Emergency medicine					
Abrishami 2010	1/9	2/10		0.45%	0.56[0.06,5.14]
Casaer 2011	146/2312	141/2328		44.72%	1.04[0.83,1.3]
Heidegger 2013	8/153	12/152		3%	0.66[0.28,1.57]
Stein 2002	2/40	3/40		0.75%	0.67[0.12,3.78]
Subtotal (95% CI)	**2514**	**2530**		**48.92%**	**1[0.81,1.24]**
Total events: 157 (Experimental), 158 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.48, df=3(P=0.69); I^2=0%					
Test for overall effect: Z=0.01(P=0.99)					
27.3.23 Psychiatry					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.24 Neurology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.3.25 Oncology					
Doglietto 1990	2/13	3/9		0.91%	0.46[0.1,2.23]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]
Samuels 1981	7/18	2/15		1.12%	2.92[0.71,12]
Valdivieso 1987	4/30	5/35		1.51%	0.93[0.28,3.16]
Subtotal (95% CI)	**135**	**142**		**3.83%**	**1.12[0.51,2.44]**
Total events: 14 (Experimental), 11 (Control)					
Heterogeneity: Tau^2=0.02; Chi^2=3.08, df=3(P=0.38); I^2=2.72%					
Test for overall effect: Z=0.28(P=0.78)					
27.3.26 Dermatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					



Analysis 27.4. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 4 Serious adverse events - based on adequacy of the amount of calories.

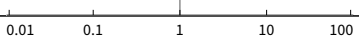


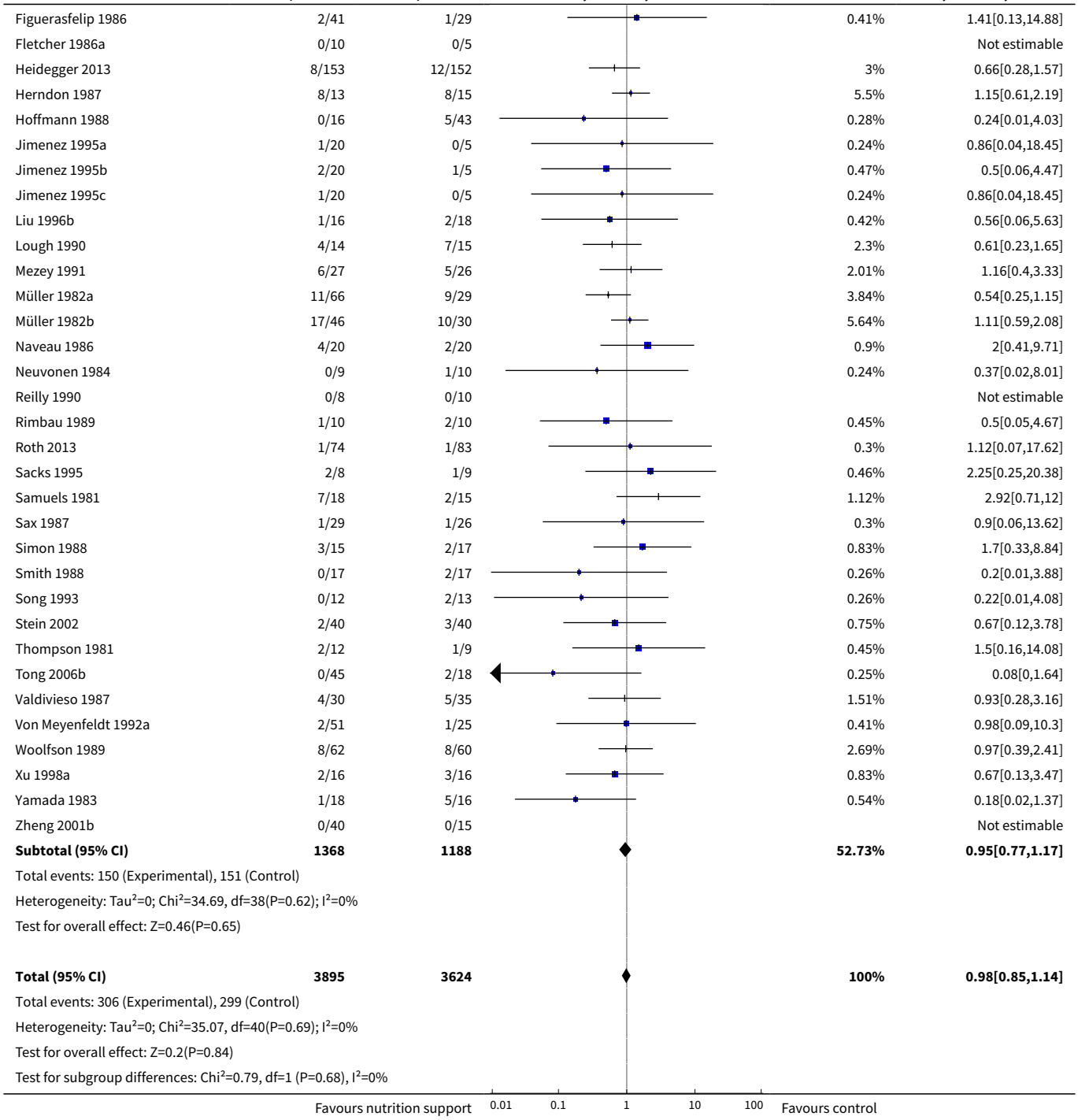


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.2(P=0.84)					
Test for subgroup differences: Chi²=2.41, df=1 (P=0.49), I²=0%					

Analysis 27.5. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 5 Serious adverse events - different screening tools.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
27.5.1 NRS 2002					
Casaer 2011	146/2312	141/2328		44.72%	1.04[0.83,1.3]
Subtotal (95% CI)	**2312**	**2328**		**44.72%**	**1.04[0.83,1.3]**
Total events: 146 (Experimental), 141 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.36(P=0.72)					
27.5.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.5.3 MNA					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.5.4 SGA					
Wu 2007b	10/215	7/108		2.55%	0.72[0.28,1.83]
Subtotal (95% CI)	**215**	**108**		**2.55%**	**0.72[0.28,1.83]**
Total events: 10 (Experimental), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.69(P=0.49)					
27.5.5 Other means					
Abel 1976	4/20	3/24		1.19%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.45%	0.56[0.06,5.14]
Bellantone 1988	1/54	10/46		0.55%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		7.33%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.91%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		2.1%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		2.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.3%	0.92[0.06,14.22]

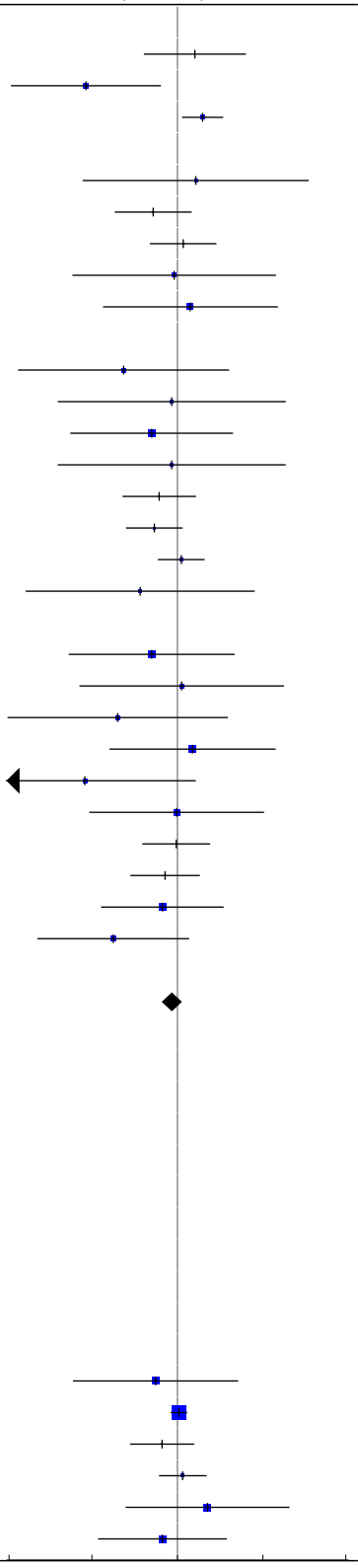


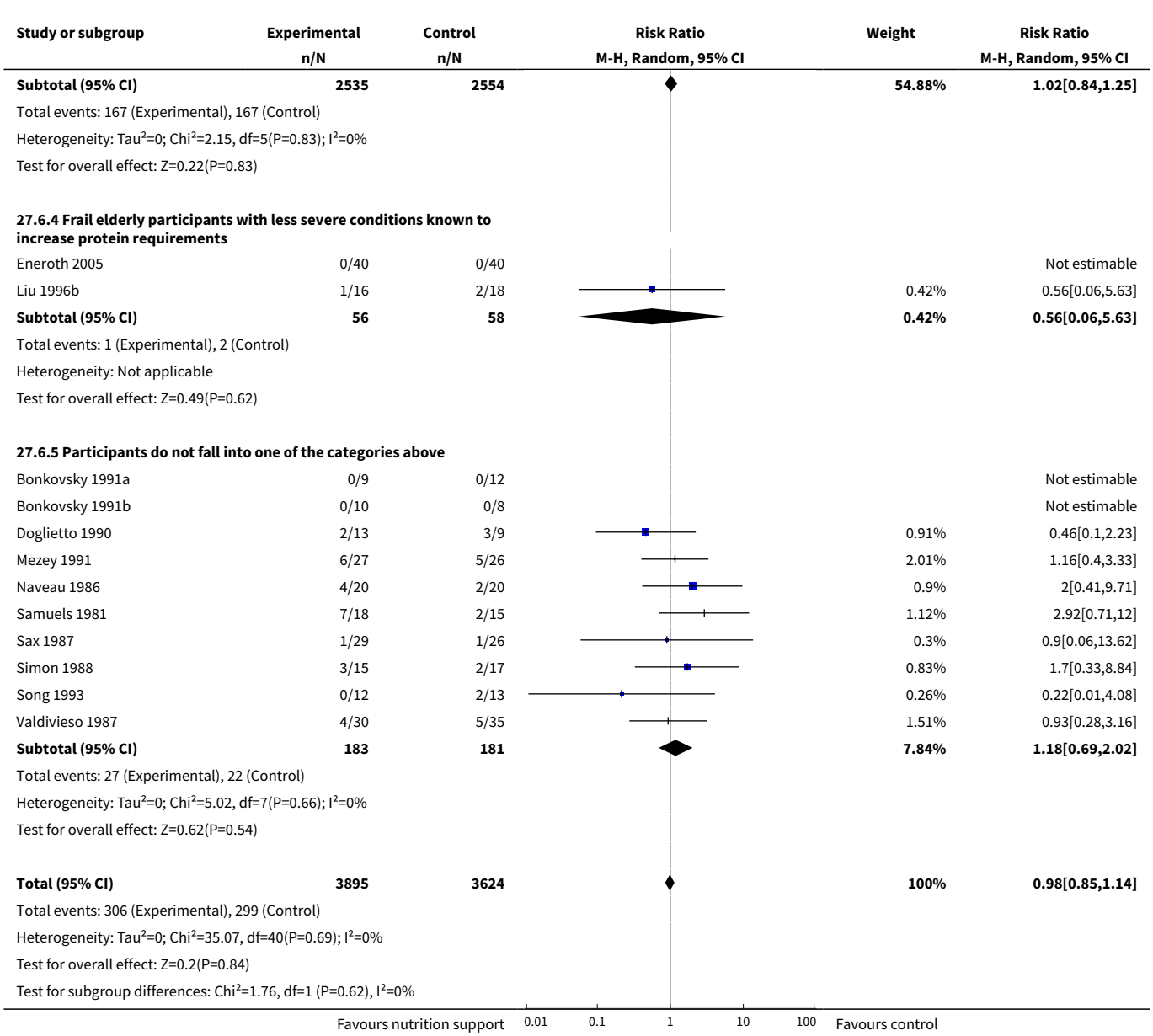


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Figuerasfelip 1986	2/41	1/29		0.41%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		5.5%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.24%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.47%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.24%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.42%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		2.3%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.01%	1.16[0.4,3.33]
Müller 1982a	11/66	9/29		3.84%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		5.64%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.9%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.24%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.45%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.46%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		1.12%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.3%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.83%	1.7[0.33,8.84]
Smith 1988	0/17	2/17		0.26%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.26%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.75%	0.67[0.12,3.78]
Thompson 1981	2/12	1/9		0.45%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		1.51%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.41%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		2.69%	0.97[0.39,2.41]
Xu 1998a	2/16	3/16		0.83%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.54%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**1368**	**1188**		**52.73%**	**0.95[0.77,1.17]**
Total events: 150 (Experimental), 151 (Control)					
Heterogeneity: Tau^2=0; Chi^2=34.69, df=38(P=0.62); I^2=0%					
Test for overall effect: Z=0.46(P=0.65)					
Total (95% CI)	**3895**	**3624**		**100%**	**0.98[0.85,1.14]**
Total events: 306 (Experimental), 299 (Control)					
Heterogeneity: Tau^2=0; Chi^2=35.07, df=40(P=0.69); I^2=0%					
Test for overall effect: Z=0.2(P=0.84)					
Test for subgroup differences: Chi^2=0.79, df=1 (P=0.68), I^2=0%					

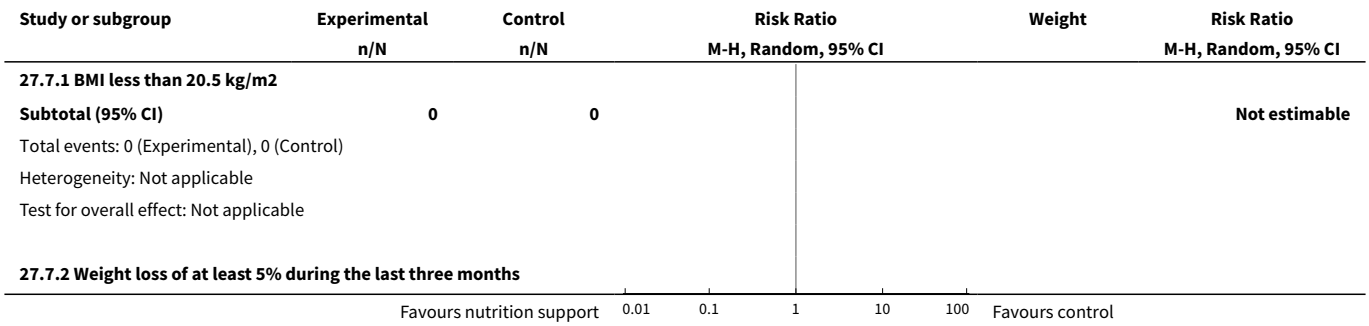
Analysis 27.6. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
27.6.1 Major surgery					
Abel 1976	4/20	3/24		1.19%	1.6[0.4,6.32]
Bellantone 1988	1/54	10/46		0.55%	0.09[0.01,0.64]
Brennan 1994	27/60	13/57		7.33%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Fan 1989	5/64	9/60		2.1%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		2.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.3%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.41%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.24%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.47%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.24%	0.86[0.04,18.45]
Lough 1990	4/14	7/15		2.3%	0.61[0.23,1.65]
Müller 1982a	11/66	9/29		3.84%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		5.64%	1.11[0.59,2.08]
Neuvonen 1984	0/9	1/10		0.24%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.45%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]
Smith 1988	0/17	2/17		0.26%	0.2[0.01,3.88]
Thompson 1981	2/12	1/9		0.45%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Von Meyenfeldt 1992a	2/51	1/25		0.41%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		2.69%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.55%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.83%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.54%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**1121**	**831**		**36.87%**	**0.86[0.66,1.13]**
Total events: 111 (Experimental), 108 (Control)					
Heterogeneity: Tau^2=0.04; Chi^2=27.01, df=25(P=0.36); I^2=7.45%					
Test for overall effect: Z=1.09(P=0.27)					
27.6.2 Stroke					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.6.3 ICU participants including trauma					
Abrishami 2010	1/9	2/10		0.45%	0.56[0.06,5.14]
Casaer 2011	146/2312	141/2328		44.72%	1.04[0.83,1.3]
Heidegger 2013	8/153	12/152		3%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		5.5%	1.15[0.61,2.19]
Sacks 1995	2/8	1/9		0.46%	2.25[0.25,20.38]
Stein 2002	2/40	3/40		0.75%	0.67[0.12,3.78]

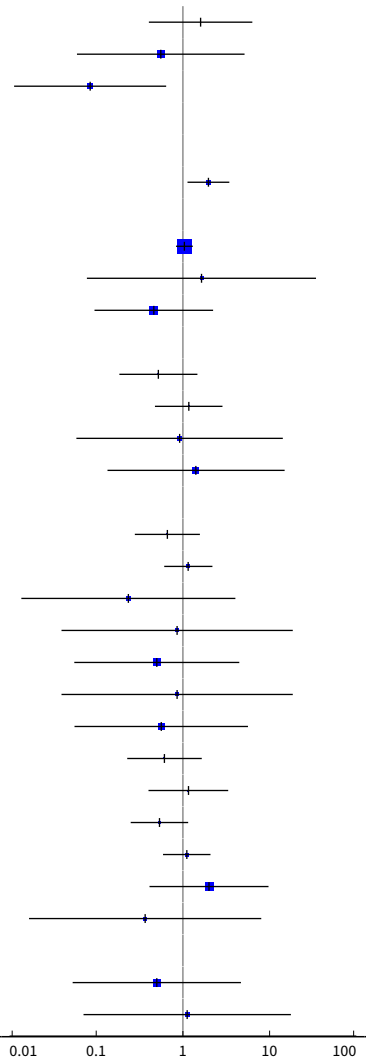




Analysis 27.7. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria.



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.7.3 Weight loss of at least 10% during the last six months					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.7.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
27.7.5 Participants characterised as 'at nutritional risk' by other means					
Abel 1976	4/20	3/24		1.19%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.45%	0.56[0.06,5.14]
Bellantone 1988	1/54	10/46		0.55%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		7.33%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		44.72%	1.04[0.83,1.3]
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.91%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		2.1%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		2.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.3%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.41%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		5.5%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.24%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.47%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.24%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.42%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		2.3%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.01%	1.16[0.4,3.33]
Müller 1982a	11/66	9/29		3.84%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		5.64%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.9%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.24%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.45%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]



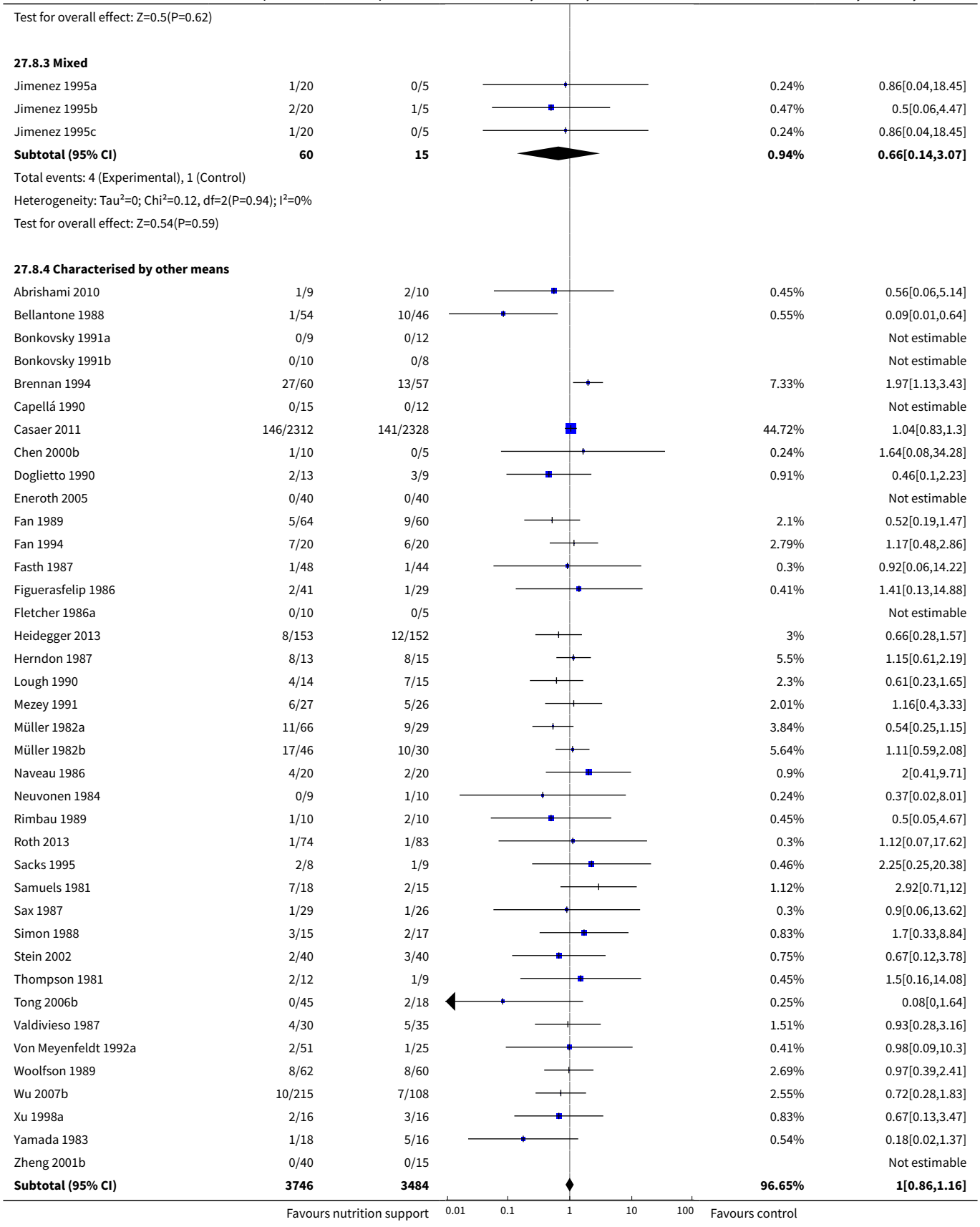
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Sacks 1995	2/8	1/9		0.46%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		1.12%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.3%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.83%	1.7[0.33,8.84]
Smith 1988	0/17	2/17		0.26%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.26%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		0.75%	0.67[0.12,3.78]
Thompson 1981	2/12	1/9		0.45%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		1.51%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.41%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		2.69%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.55%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.83%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.54%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3895**	**3624**		**100%**	**0.98[0.85,1.14]**
Total events: 306 (Experimental), 299 (Control)					
Heterogeneity: Tau^2=0; Chi^2=35.07, df=40(P=0.69); I^2=0%					
Test for overall effect: Z=0.2(P=0.84)					
Total (95% CI)	**3895**	**3624**		**100%**	**0.98[0.85,1.14]**
Total events: 306 (Experimental), 299 (Control)					
Heterogeneity: Tau^2=0; Chi^2=35.07, df=40(P=0.69); I^2=0%					
Test for overall effect: Z=0.2(P=0.84)					
Test for subgroup differences: Not applicable					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

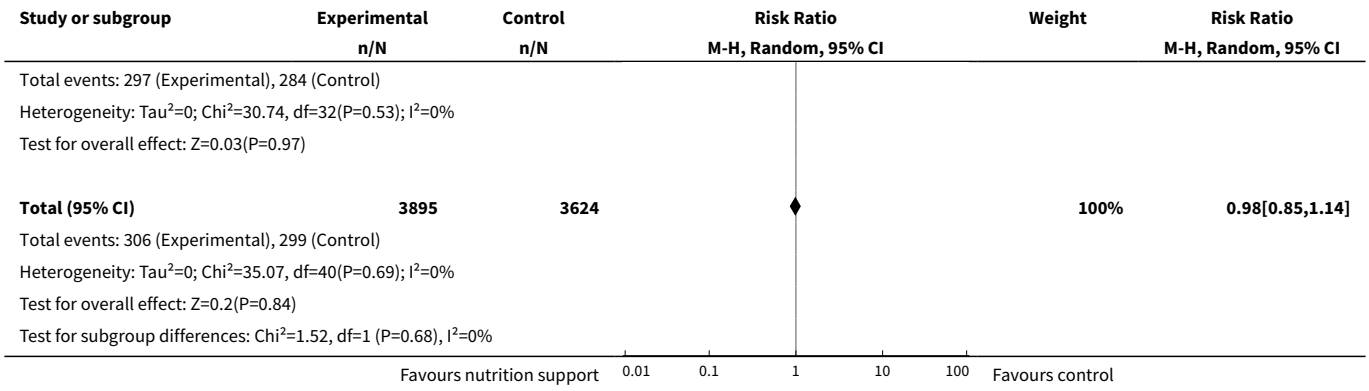
Analysis 27.8. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
27.8.1 Biomarkers					
Liu 1996b	1/16	2/18		0.42%	0.56[0.06,5.63]
Reilly 1990	0/8	0/10			Not estimable
Song 1993	0/12	2/13		0.26%	0.22[0.01,4.08]
Subtotal (95% CI)	**36**	**41**		**0.68%**	**0.39[0.06,2.39]**
Total events: 1 (Experimental), 4 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.26, df=1(P=0.61); I^2=0%					
Test for overall effect: Z=1.02(P=0.31)					
27.8.2 Anthropometric measures					
Abel 1976	4/20	3/24		1.19%	1.6[0.4,6.32]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Smith 1988	0/17	2/17		0.26%	0.2[0.01,3.88]
Subtotal (95% CI)	**53**	**84**		**1.72%**	**0.69[0.16,3.01]**
Total events: 4 (Experimental), 10 (Control)					
Heterogeneity: Tau^2=0.49; Chi^2=2.69, df=2(P=0.26); I^2=25.75%					

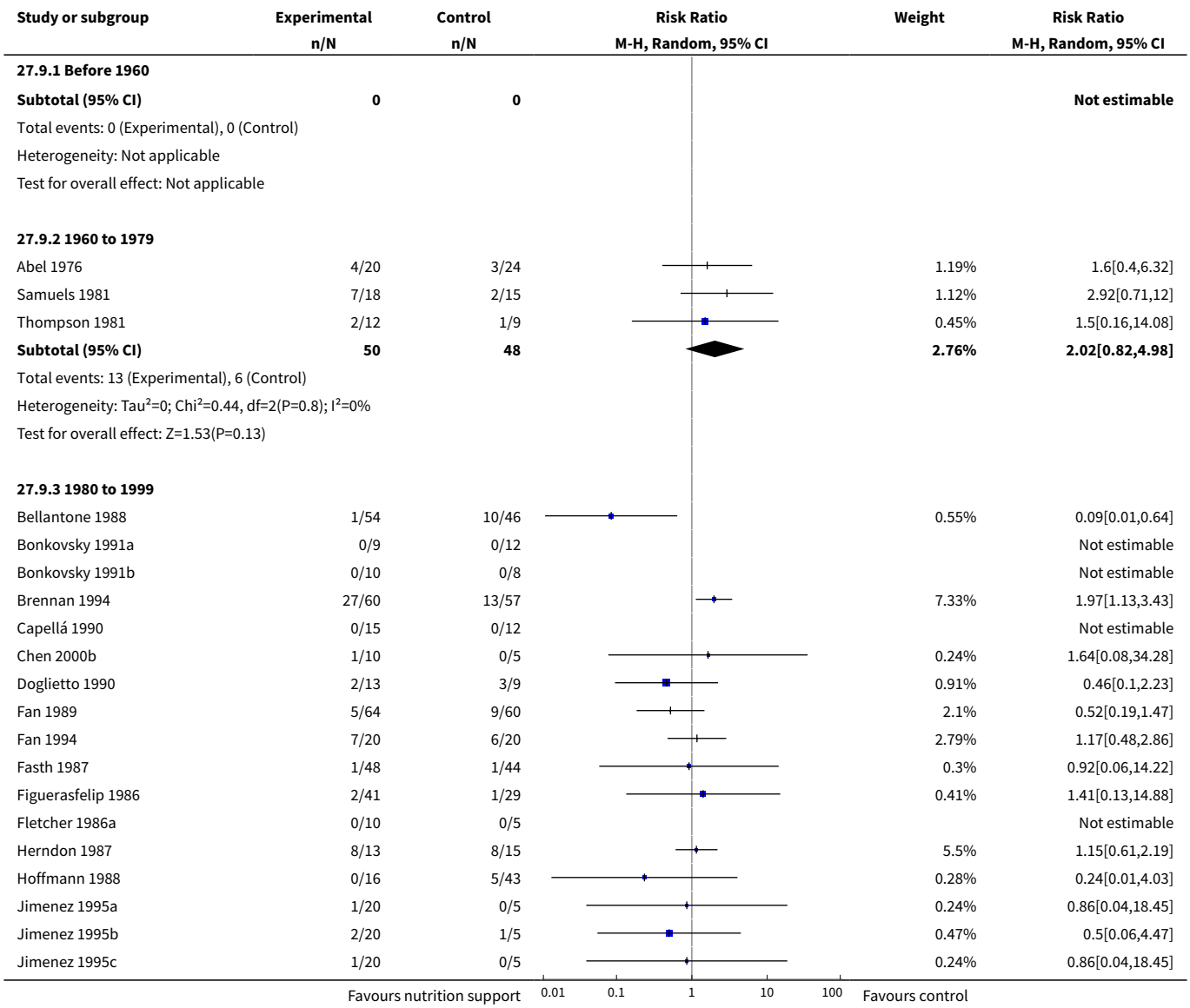
Favours nutrition support 0.01 0.1 1 10 100 Favours control

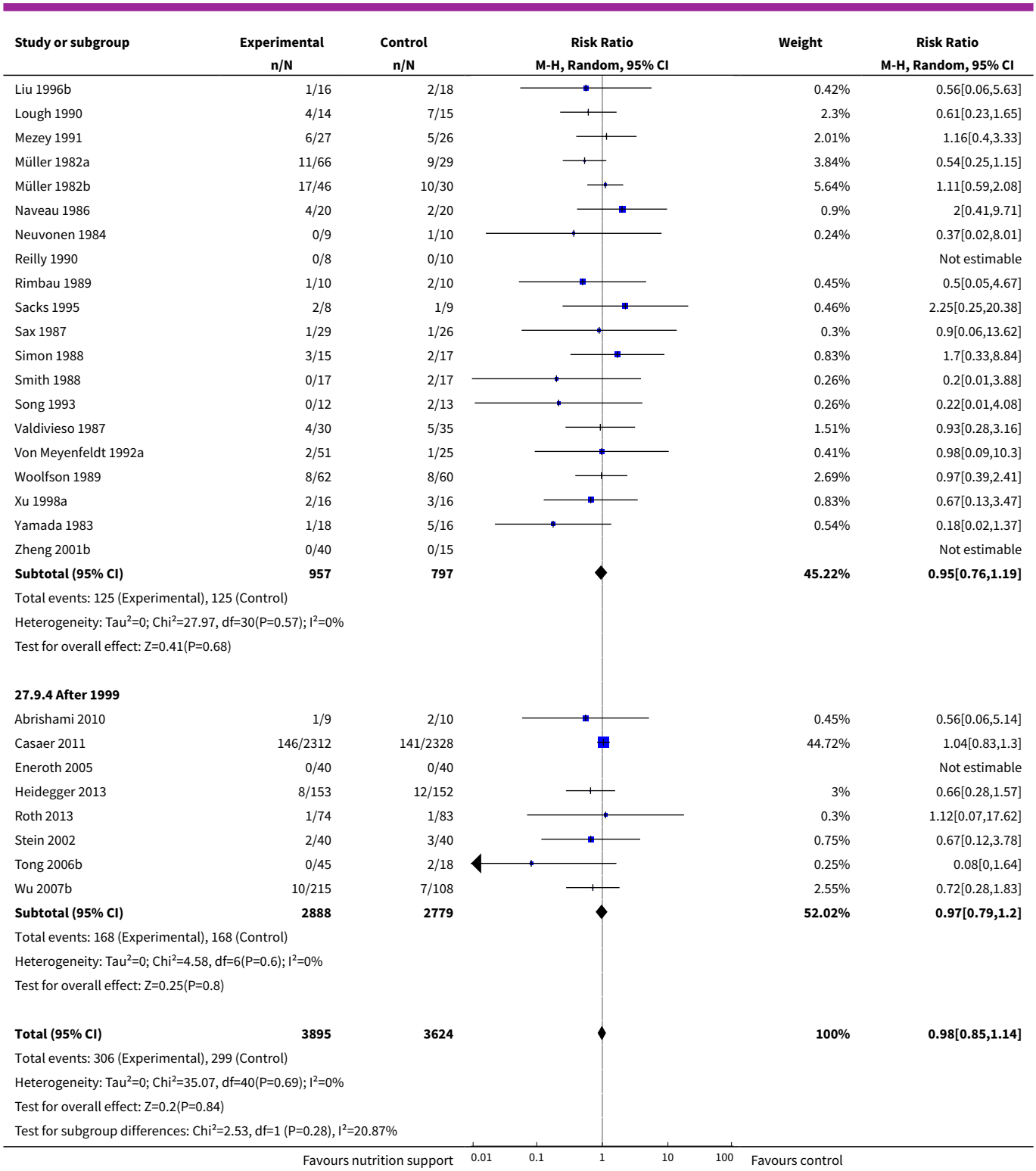


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.5(P=0.62)					
27.8.3 Mixed					
Jimenez 1995a	1/20	0/5		0.24%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.47%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.24%	0.86[0.04,18.45]
Subtotal (95% CI)	**60**	**15**		**0.94%**	**0.66[0.14,3.07]**
Total events: 4 (Experimental), 1 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.12, df=2(P=0.94); I^2=0%					
Test for overall effect: Z=0.54(P=0.59)					
27.8.4 Characterised by other means					
Abrishami 2010	1/9	2/10		0.45%	0.56[0.06,5.14]
Bellantone 1988	1/54	10/46		0.55%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		7.33%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		44.72%	1.04[0.83,1.3]
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.91%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		2.1%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		2.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.3%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.41%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		5.5%	1.15[0.61,2.19]
Lough 1990	4/14	7/15		2.3%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.01%	1.16[0.4,3.33]
Müller 1982a	11/66	9/29		3.84%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		5.64%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.9%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.24%	0.37[0.02,8.01]
Rimbau 1989	1/10	2/10		0.45%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.46%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		1.12%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.3%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.83%	1.7[0.33,8.84]
Stein 2002	2/40	3/40		0.75%	0.67[0.12,3.78]
Thompson 1981	2/12	1/9		0.45%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		1.51%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.41%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		2.69%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.55%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.83%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.54%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3746**	**3484**		**96.65%**	**1[0.86,1.16]**



Analysis 27.9. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 9 Serious adverse events - randomisation year.

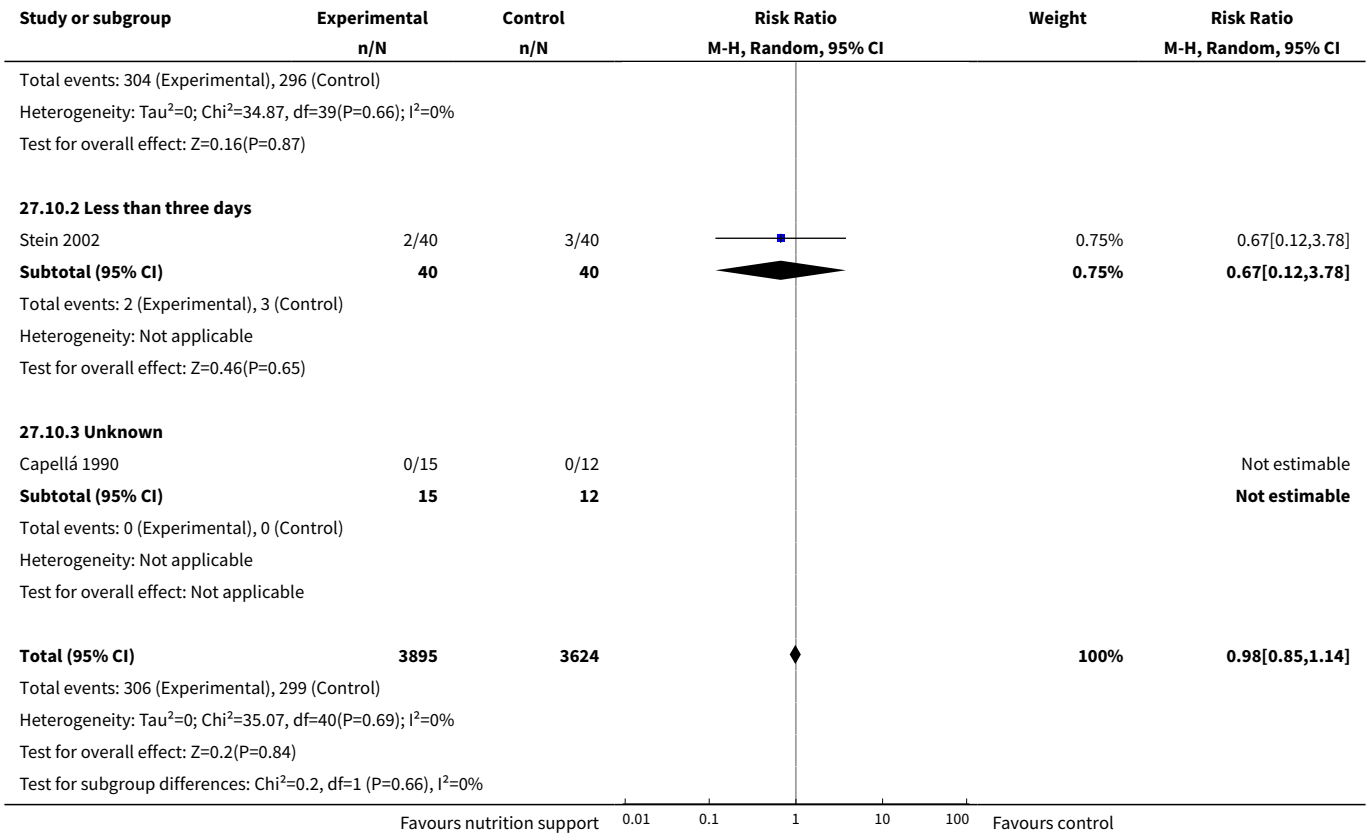




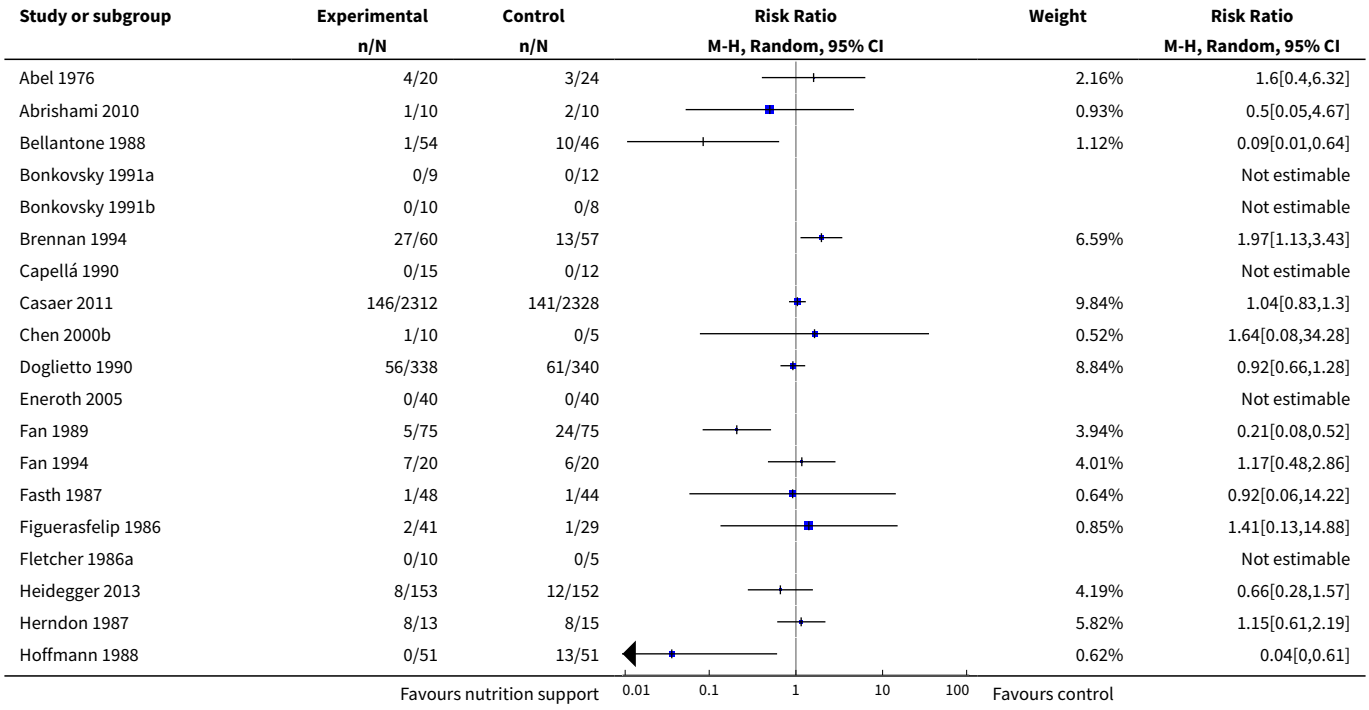
Analysis 27.10. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

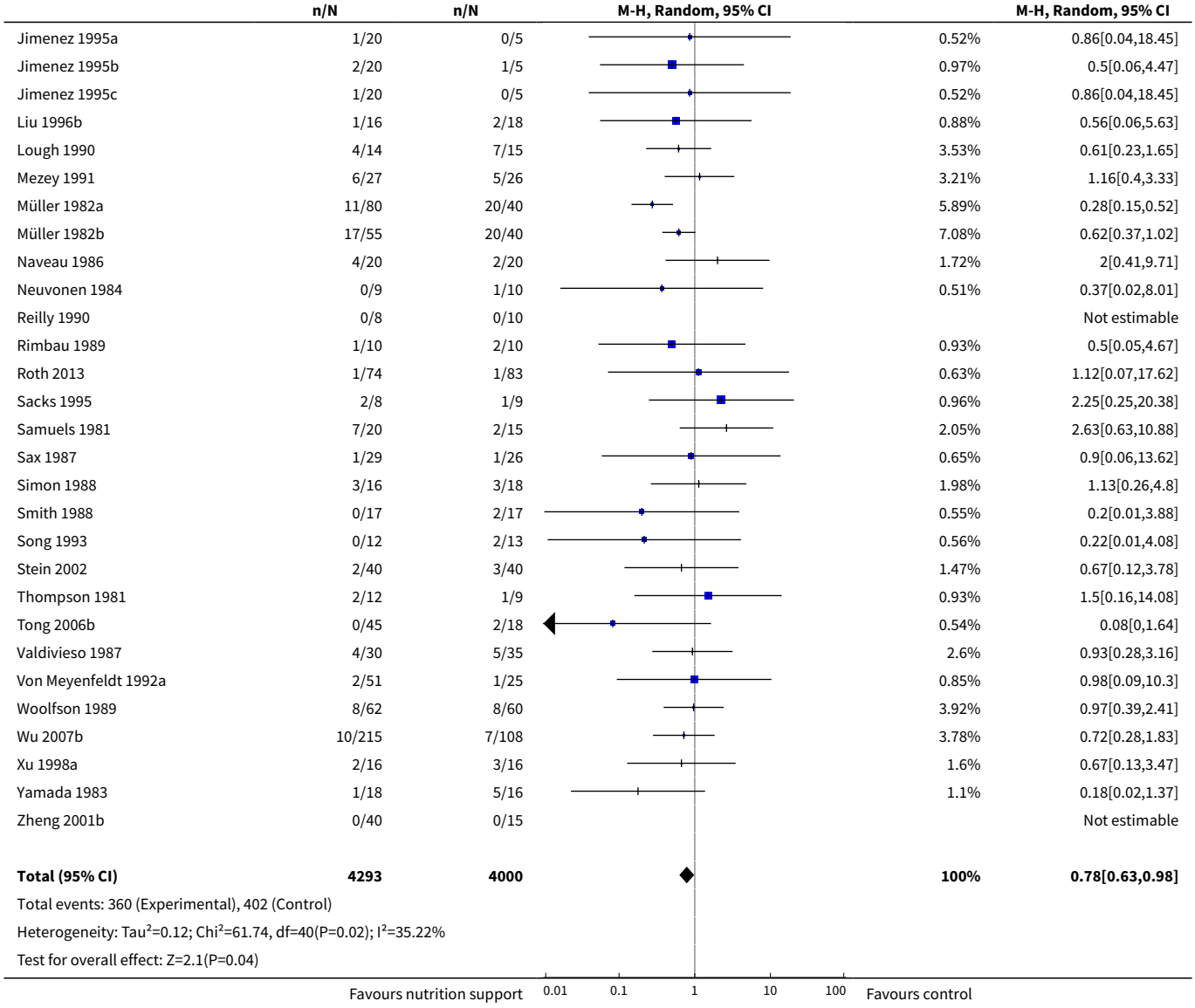
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
27.10.1 Three days or more					
Abel 1976	4/20	3/24		1.19%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.45%	0.56[0.06,5.14]
Bellantone 1988	1/54	10/46		0.55%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		7.33%	1.97[1.13,3.43]
Casaer 2011	146/2312	141/2328		44.72%	1.04[0.83,1.3]
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.91%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		2.1%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		2.79%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.3%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.41%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		5.5%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.28%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.24%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.47%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.24%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.42%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		2.3%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.01%	1.16[0.4,3.33]
Müller 1982a	11/66	9/29		3.84%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		5.64%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.9%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.24%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.45%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.46%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		1.12%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.3%	0.9[0.06,13.62]
Simon 1988	3/15	2/17		0.83%	1.7[0.33,8.84]
Smith 1988	0/17	2/17		0.26%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.26%	0.22[0.01,4.08]
Thompson 1981	2/12	1/9		0.45%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		1.51%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.41%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		2.69%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.55%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.83%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.54%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**3840**	**3572**		**99.25%**	**0.99[0.85,1.15]**

Favours nutrition support 0.01 0.1 1 10 100 Favours control



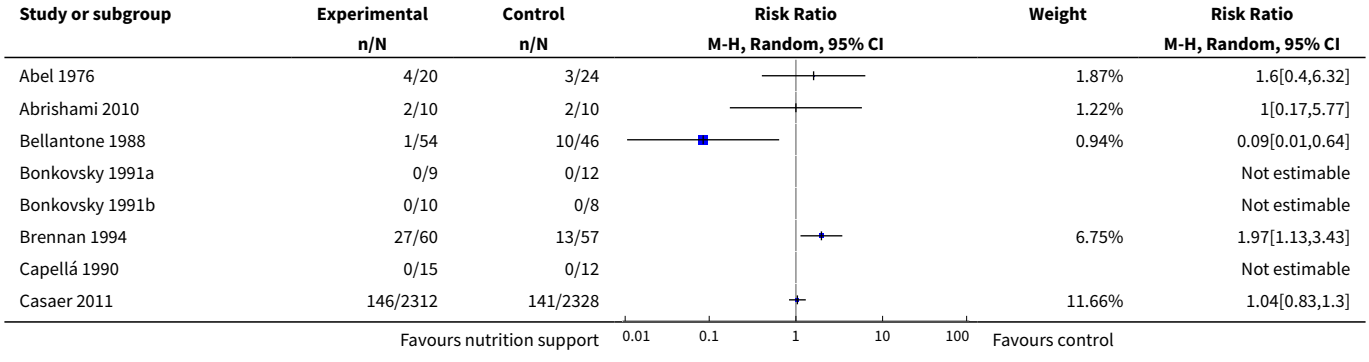
Analysis 27.11. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 11 Serious adverse events - 'best-worst case' scenario.



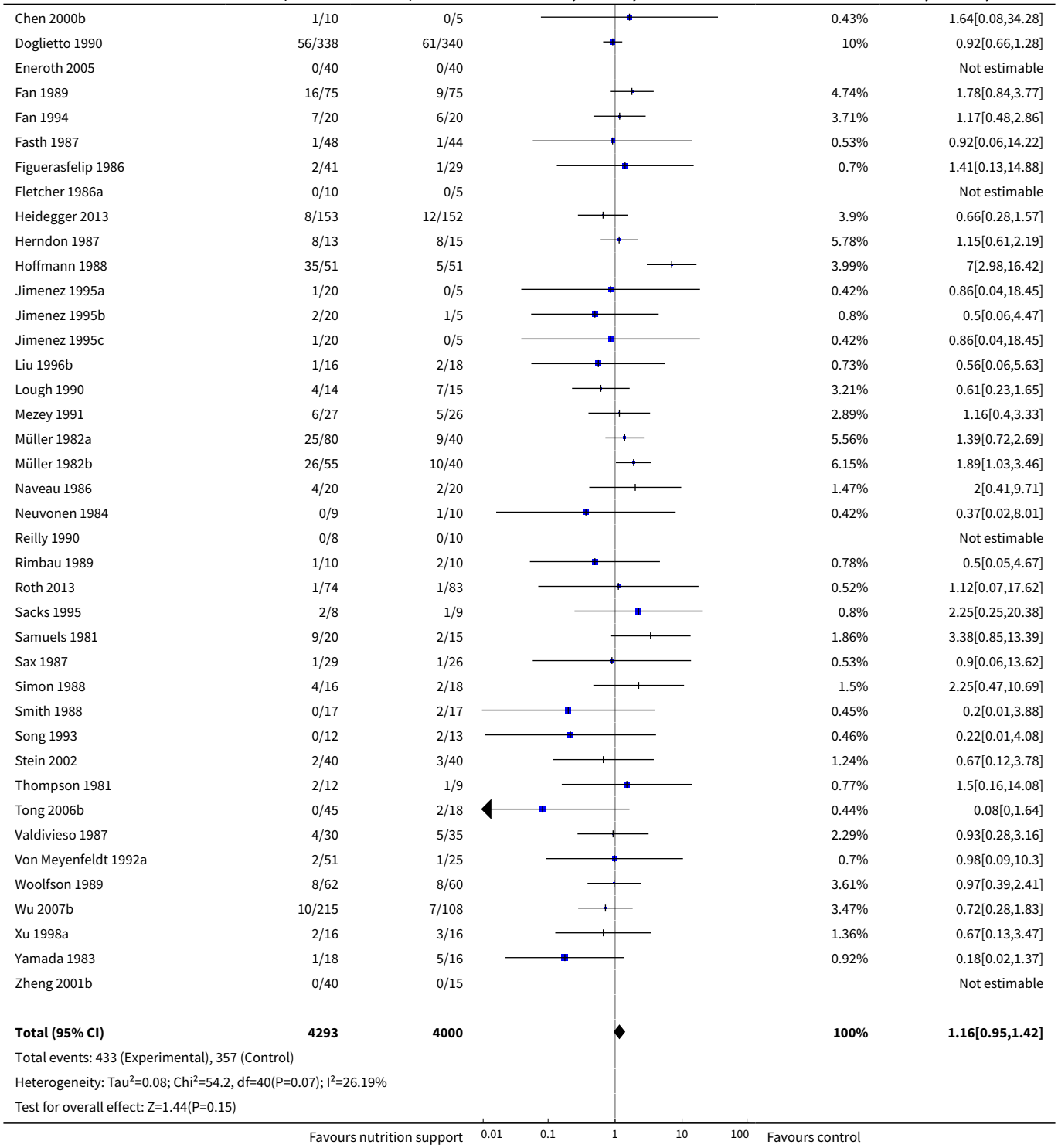


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Jimenez 1995a	1/20	0/5		0.52%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.97%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.52%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.88%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		3.53%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		3.21%	1.16[0.4,3.33]
Müller 1982a	11/80	20/40		5.89%	0.28[0.15,0.52]
Müller 1982b	17/55	20/40		7.08%	0.62[0.37,1.02]
Naveau 1986	4/20	2/20		1.72%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.51%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.93%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.63%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.96%	2.25[0.25,20.38]
Samuels 1981	7/20	2/15		2.05%	2.63[0.63,10.88]
Sax 1987	1/29	1/26		0.65%	0.9[0.06,13.62]
Simon 1988	3/16	3/18		1.98%	1.13[0.26,4.8]
Smith 1988	0/17	2/17		0.55%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.56%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		1.47%	0.67[0.12,3.78]
Thompson 1981	2/12	1/9		0.93%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.54%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		2.6%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.85%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.92%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		3.78%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		1.6%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		1.1%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**4293**	**4000**		**100%**	**0.78[0.63,0.98]**
Total events: 360 (Experimental), 402 (Control)					
Heterogeneity: Tau^2=0.12; Chi^2=61.74, df=40(P=0.02); I^2=35.22%					
Test for overall effect: Z=2.1(P=0.04)					

Analysis 27.12. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 12 Serious adverse events - 'worst-best case' scenario.



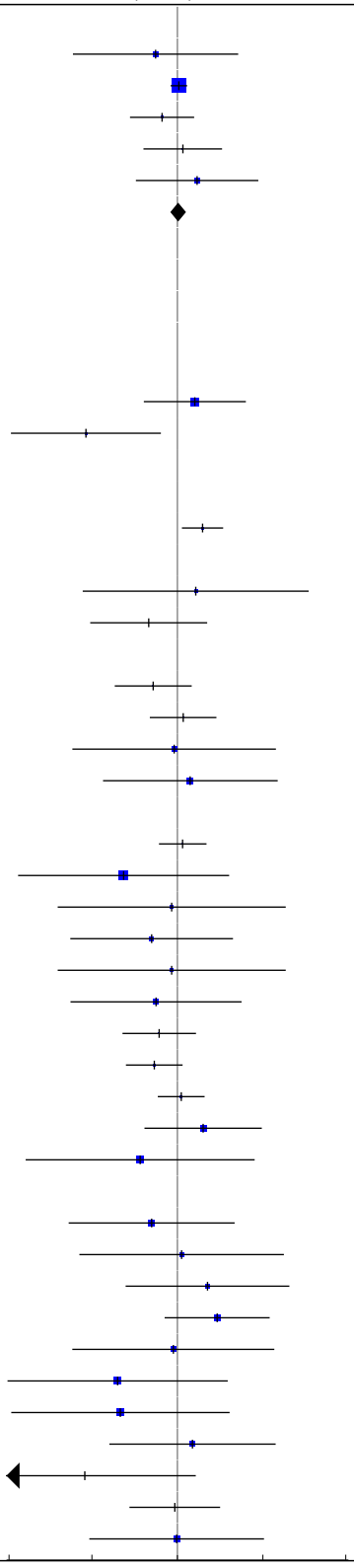
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		1.87%	1.6[0.4,6.32]
Abrishami 2010	2/10	2/10		1.22%	1[0.17,5.77]
Bellantone 1988	1/54	10/46		0.94%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		6.75%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	146/2312	141/2328		11.66%	1.04[0.83,1.3]

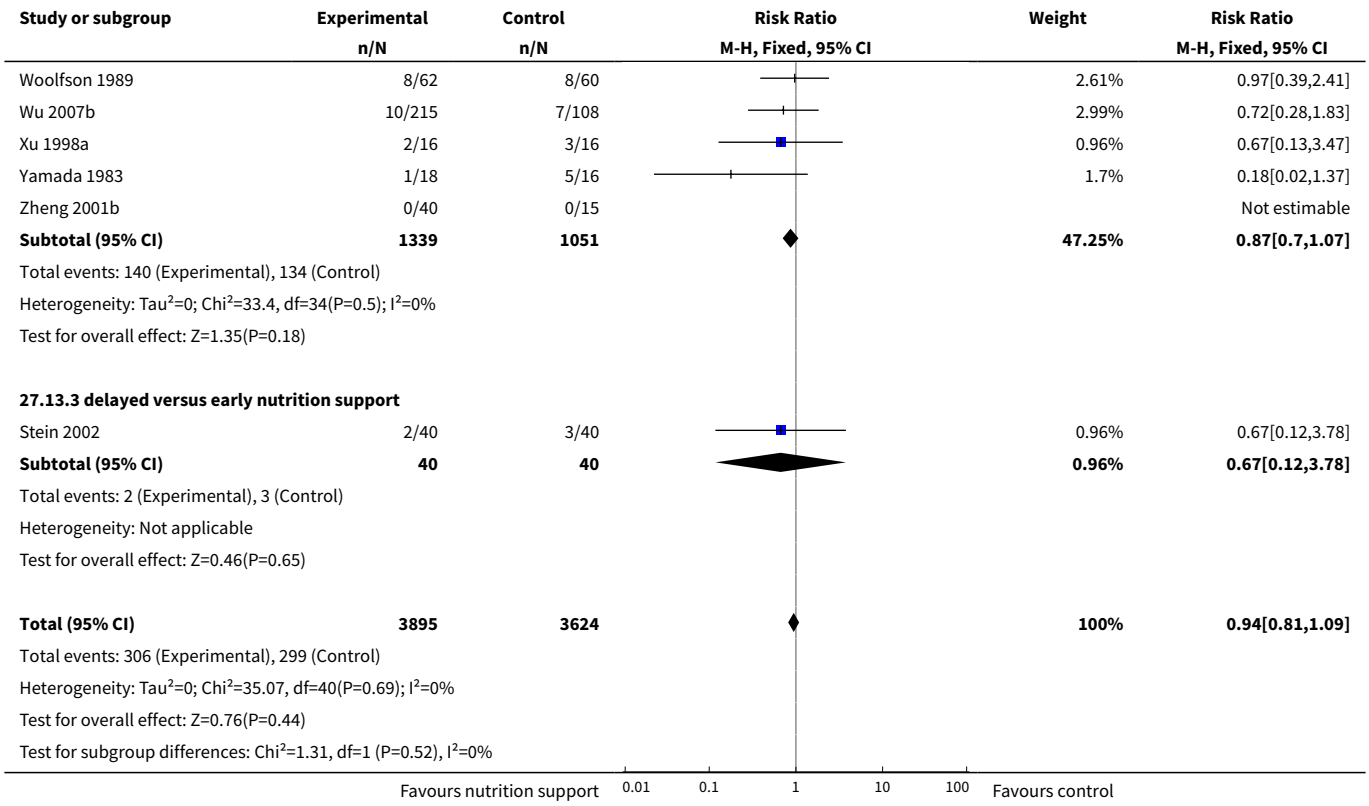


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chen 2000b	1/10	0/5		0.43%	1.64[0.08,34.28]
Doglietto 1990	56/338	61/340		10%	0.92[0.66,1.28]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	16/75	9/75		4.74%	1.78[0.84,3.77]
Fan 1994	7/20	6/20		3.71%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.53%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.7%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	8/153	12/152		3.9%	0.66[0.28,1.57]
Herndon 1987	8/13	8/15		5.78%	1.15[0.61,2.19]
Hoffmann 1988	35/51	5/51		3.99%	7[2.98,16.42]
Jimenez 1995a	1/20	0/5		0.42%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.8%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.42%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.73%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		3.21%	0.61[0.23,1.65]
Mezey 1991	6/27	5/26		2.89%	1.16[0.4,3.33]
Müller 1982a	25/80	9/40		5.56%	1.39[0.72,2.69]
Müller 1982b	26/55	10/40		6.15%	1.89[1.03,3.46]
Naveau 1986	4/20	2/20		1.47%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.42%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.78%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.52%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.8%	2.25[0.25,20.38]
Samuels 1981	9/20	2/15		1.86%	3.38[0.85,13.39]
Sax 1987	1/29	1/26		0.53%	0.9[0.06,13.62]
Simon 1988	4/16	2/18		1.5%	2.25[0.47,10.69]
Smith 1988	0/17	2/17		0.45%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.46%	0.22[0.01,4.08]
Stein 2002	2/40	3/40		1.24%	0.67[0.12,3.78]
Thompson 1981	2/12	1/9		0.77%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.44%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		2.29%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.7%	0.98[0.09,10.3]
Woolfson 1989	8/62	8/60		3.61%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		3.47%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		1.36%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.92%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**4293**	**4000**		**100%**	**1.16[0.95,1.42]**
Total events: 433 (Experimental), 357 (Control)					
Heterogeneity: Tau²=0.08; Chi²=54.2, df=40(P=0.07); I²=26.19%					
Test for overall effect: Z=1.44(P=0.15)					

Analysis 27.13. Comparison 27 Parenteral - Serious adverse event end of intervention, Outcome 13 Serious adverse events co-interventions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
27.13.1 received nutrition support as co-intervention					
Abrishami 2010	1/9	2/10		0.61%	0.56[0.06,5.14]
Casaer 2011	146/2312	141/2328		45.08%	1.04[0.83,1.3]
Heidegger 2013	8/153	12/152		3.86%	0.66[0.28,1.57]
Mezey 1991	6/27	5/26		1.63%	1.16[0.4,3.33]
Simon 1988	3/15	2/17		0.6%	1.7[0.33,8.84]
Subtotal (95% CI)	**2516**	**2533**		**51.78%**	**1.02[0.83,1.26]**
Total events: 164 (Experimental), 162 (Control)					
Heterogeneity: Tau^2=0; Chi^2=1.7, df=4(P=0.79); I^2=0%					
Test for overall effect: Z=0.18(P=0.85)					
27.13.2 did not receive nutrition support as co-intervention					
Abel 1976	4/20	3/24		0.87%	1.6[0.4,6.32]
Bellantone 1988	1/54	10/46		3.46%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		4.28%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 2000b	1/10	0/5		0.21%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		1.14%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		2.98%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		1.92%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.33%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.38%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Herndon 1987	8/13	8/15		2.38%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.98%	0.24[0.01,4.03]
Jimenez 1995a	1/20	0/5		0.25%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.51%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.25%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.6%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		2.17%	0.61[0.23,1.65]
Müller 1982a	11/66	9/29		4.01%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		3.88%	1.11[0.59,2.08]
Naveau 1986	4/20	2/20		0.64%	2[0.41,9.71]
Neuvonen 1984	0/9	1/10		0.46%	0.37[0.02,8.01]
Reilly 1990	0/8	0/10			Not estimable
Rimbau 1989	1/10	2/10		0.64%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.3%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.3%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.7%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.34%	0.9[0.06,13.62]
Smith 1988	0/17	2/17		0.8%	0.2[0.01,3.88]
Song 1993	0/12	2/13		0.77%	0.22[0.01,4.08]
Thompson 1981	2/12	1/9		0.37%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		1.14%	0.08[0,1.64]
Valdivieso 1987	4/30	5/35		1.48%	0.93[0.28,3.16]
Von Meyenfeldt 1992a	2/51	1/25		0.43%	0.98[0.09,10.3]





Comparison 28. Parenteral - Serious adverse event maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Serious adverse events - overall	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
2 Serious adverse events - bias	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
2.1 High risk of bias	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
2.2 Low risk of bias	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Serious adverse events - by medical speciality	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
3.1 Cardiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Medical gastroenterology and hepatology	7	338	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.69, 1.33]
3.3 Geriatrics	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.4 Pulmonary disease	1	25	Risk Ratio (M-H, Random, 95% CI)	0.22 [0.01, 4.08]
3.5 Endocrinology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Infectious diseases	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.7 Rheumatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.8 Haematology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.9 Nephrology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.10 Gastroenterologic surgery	27	2066	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.72, 1.16]
3.11 Trauma surgery	2	45	Risk Ratio (M-H, Random, 95% CI)	1.22 [0.66, 2.25]
3.12 Ortopaedics	1	80	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.13 Plastic, reconstructive, and aesthetic surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.14 Vascular surgery	2	35	Risk Ratio (M-H, Random, 95% CI)	0.5 [0.05, 4.67]
3.15 Transplant surgery	2	47	Risk Ratio (M-H, Random, 95% CI)	0.56 [0.22, 1.42]
3.16 Urology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.17 Thoracic surgery	1	44	Risk Ratio (M-H, Random, 95% CI)	1.6 [0.40, 6.32]
3.18 Neurological surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.19 Oro-maxillo-facial surgery	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.20 Anaesthesiology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.21 Emergency medicine	7	5208	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.84, 1.12]

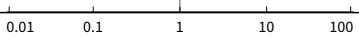
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.22 Psychiatry	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.23 Neurology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.24 Oncology	6	375	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.87, 1.20]
3.25 Dermatology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.26 Gynaecology	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.27 Mixed	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4 Serious adverse events - based on adequacy of the amount of calories	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
4.1 Clearly adequate in intervention and clearly inadequate in control	9	5736	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.88, 1.10]
4.2 Inadequate in the experimental or adequate in the control	4	165	Risk Ratio (M-H, Random, 95% CI)	1.17 [0.80, 1.72]
4.3 Experimental group is overfed	5	583	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.74, 1.32]
4.4 Unclear intake in control or experimental	38	1779	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.73, 1.11]
5 Serious adverse events - different screening tools	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
5.1 NRS 2002	1	4640	Risk Ratio (M-H, Random, 95% CI)	1.00 [0.85, 1.18]
5.2 MUST	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 MNA	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 SGA	1	323	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.28, 1.83]
5.5 Other means	54	3300	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.88, 1.08]
6 Serious adverse events - participants characterised as 'at nutri-	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
tional risk' due to one of the following conditions				
6.1 Major surgery	34	2447	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.75, 1.09]
6.2 Stroke	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
6.3 ICU participants including trauma	7	5209	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.86, 1.14]
6.4 Frail elderly participants with less severe conditions known to increase protein requirements	2	114	Risk Ratio (M-H, Random, 95% CI)	0.56 [0.06, 5.63]
6.5 Participants do not fall into one of the categories above	13	493	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.88, 1.18]
7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
7.1 BMI less than 20.5 kg/m2	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.2 Weight loss of at least 5% during the last three months	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.3 Weight loss of at least 10% during the last six months	2	92	Risk Ratio (M-H, Random, 95% CI)	0.33 [0.01, 7.78]
7.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
7.5 Participants characterised as 'at nutritional risk' by other means	54	8171	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
8.1 Biomarkers	6	184	Risk Ratio (M-H, Random, 95% CI)	0.45 [0.13, 1.57]
8.2 Anthropometric measures	3	137	Risk Ratio (M-H, Random, 95% CI)	0.74 [0.29, 1.89]
8.3 Both	3	75	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.14, 3.07]
8.4 Characterised by other means	44	7867	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.90, 1.08]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
9 Serious adverse events - randomisation year	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
9.1 Before 1960	0	0	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 1960 to 1979	4	154	Risk Ratio (M-H, Random, 95% CI)	1.38 [0.67, 2.83]
9.3 1980 to 1999	44	2442	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.88, 1.10]
9.4 After 1999	8	5667	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.83, 1.12]
10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	56	8263	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.90, 1.07]
10.1 Three days or more	54	8156	Risk Ratio (M-H, Random, 95% CI)	0.98 [0.89, 1.07]
10.2 Less than three days	1	80	Risk Ratio (M-H, Random, 95% CI)	1.2 [0.59, 2.45]
10.3 Unknown	1	27	Risk Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
11 Serious adverse events - 'best-worst case' scenario	56	8452	Risk Ratio (M-H, Random, 95% CI)	0.80 [0.68, 0.94]
12 Serious adverse events - 'worst-best case' scenario	56	8452	Risk Ratio (M-H, Random, 95% CI)	1.12 [0.96, 1.30]
13 Serious adverse events co-interventions	56	8263	Risk Ratio (M-H, Fixed, 95% CI)	0.94 [0.85, 1.04]
13.1 Received nutrition support as co-intervention	6	5164	Risk Ratio (M-H, Fixed, 95% CI)	0.97 [0.85, 1.12]
13.2 did not receive nutrition support as co-intervention	49	3019	Risk Ratio (M-H, Fixed, 95% CI)	0.90 [0.77, 1.04]
13.3 delayed versus early nutrition support	1	80	Risk Ratio (M-H, Fixed, 95% CI)	1.2 [0.59, 2.45]

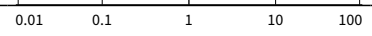
Analysis 28.1. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 1 Serious adverse events - overall.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.15%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.2%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		29.87%	1[0.85,1.18]
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.32%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		2.86%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		1.95%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.08%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.15%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.97%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.4%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.11%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.45%	1.51[0.4,5.69]
Smith 1988	3/17	6/17		0.54%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		1.56%	1.2[0.59,2.45]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.09%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		28.09%	1.02[0.86,1.2]



Favours nutrition support — Favours control

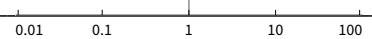
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Williford 1991	54/192	57/203		8.01%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.96%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		0.91%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.29%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.19%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau^2=0; Chi^2=39.43, df=48(P=0.81); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					



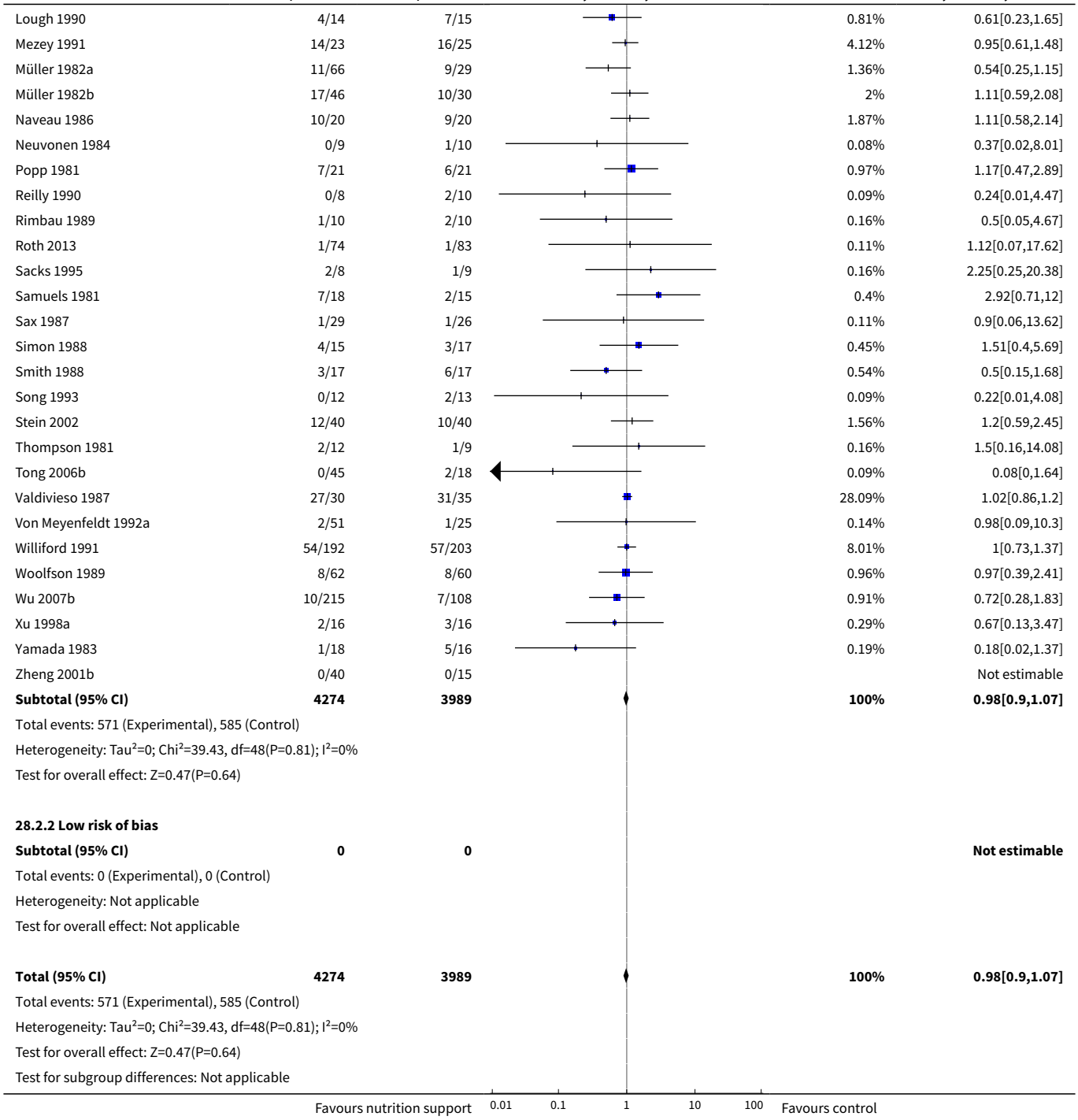
Favours nutrition support — Favours control

Analysis 28.2. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 2 Serious adverse events - bias.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.2.1 High risk of bias					
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.15%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.2%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		29.87%	1[0.85,1.18]
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.32%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		2.86%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		1.95%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.08%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.15%	0.56[0.06,5.63]



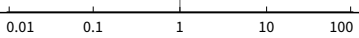
Favours nutrition support — Favours control



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.97%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.4%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.11%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.45%	1.51[0.4,5.69]
Smith 1988	3/17	6/17		0.54%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		1.56%	1.2[0.59,2.45]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.09%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		28.09%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Williford 1991	54/192	57/203		8.01%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.96%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		0.91%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.29%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.19%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau^2=0; Chi^2=39.43, df=48(P=0.81); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					
28.2.2 Low risk of bias					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau^2=0; Chi^2=39.43, df=48(P=0.81); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					
Test for subgroup differences: Not applicable					

Analysis 28.3. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 3 Serious adverse events - by medical speciality.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.3.1 Cardiology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.2 Medical gastroenterology and hepatology					
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Sax 1987	1/29	1/26		0.11%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.45%	1.51[0.4,5.69]
Subtotal (95% CI)	**170**	**168**		**7.29%**	**0.96[0.69,1.33]**
Total events: 34 (Experimental), 38 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.03, df=4(P=0.73); I^2=0%					
Test for overall effect: Z=0.26(P=0.79)					
28.3.3 Geriatrics					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.4 Pulmonary disease					
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Subtotal (95% CI)	**12**	**13**		**0.09%**	**0.22[0.01,4.08]**
Total events: 0 (Experimental), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=1.02(P=0.31)					
28.3.5 Endocrinology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.6 Infectious diseases					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.7 Rheumatology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					



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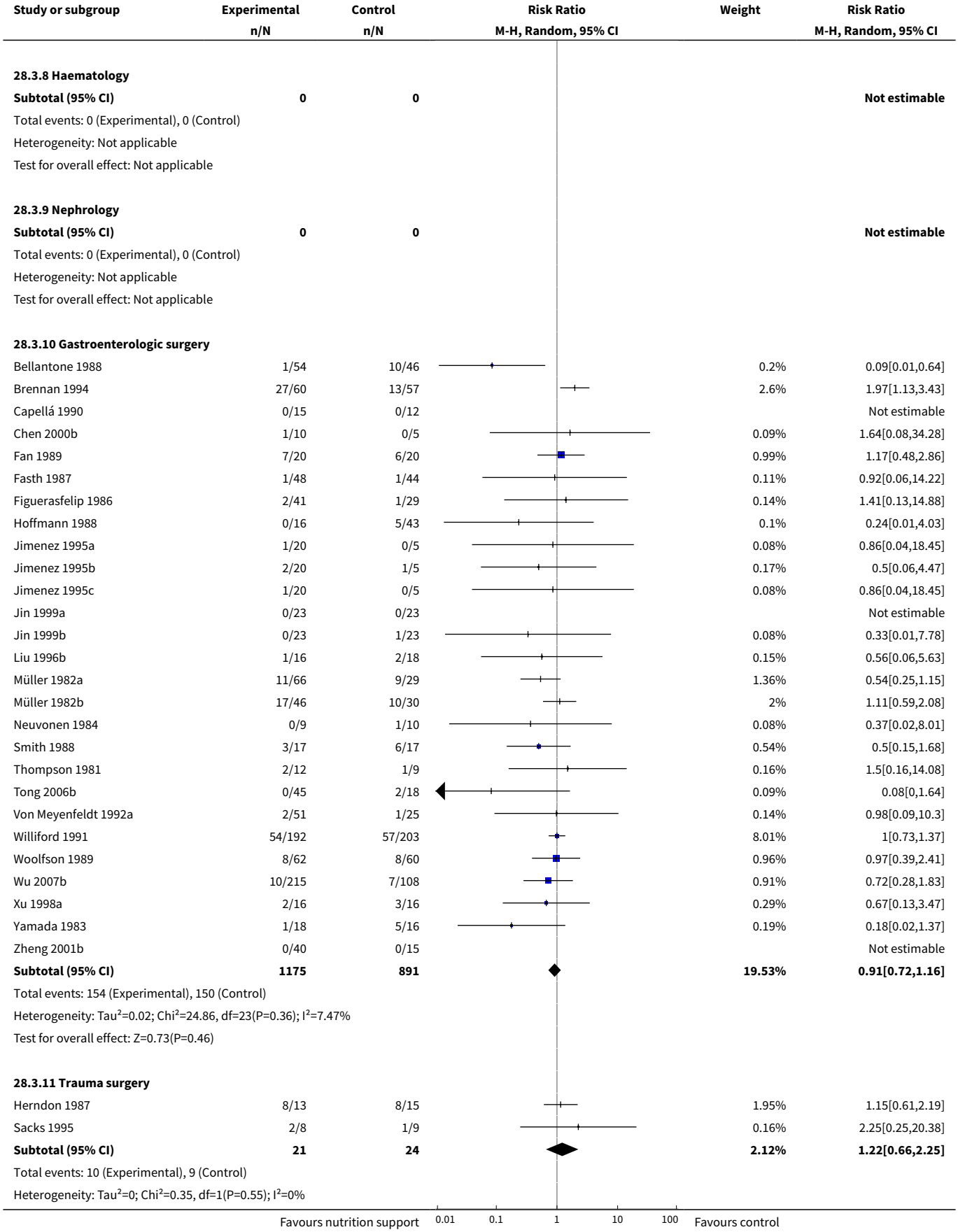
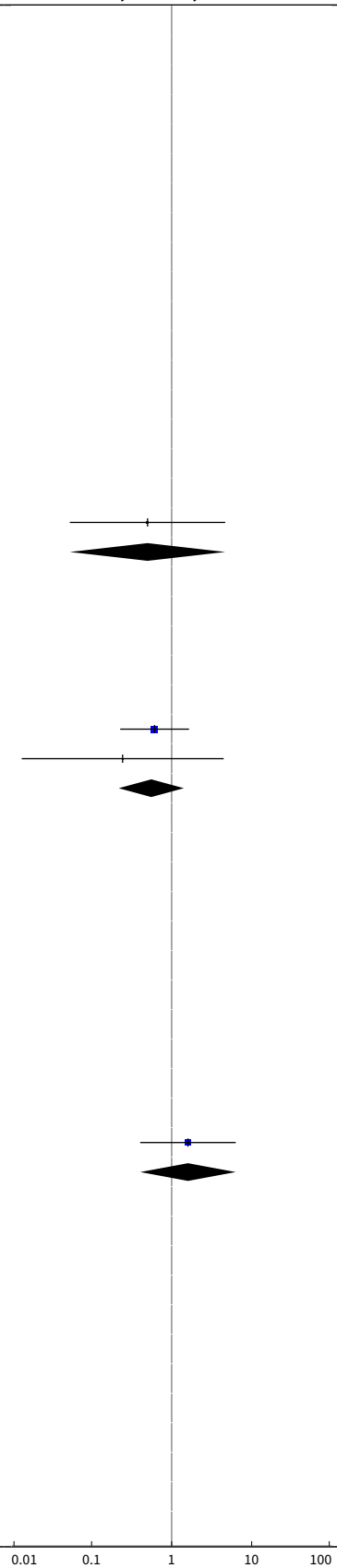
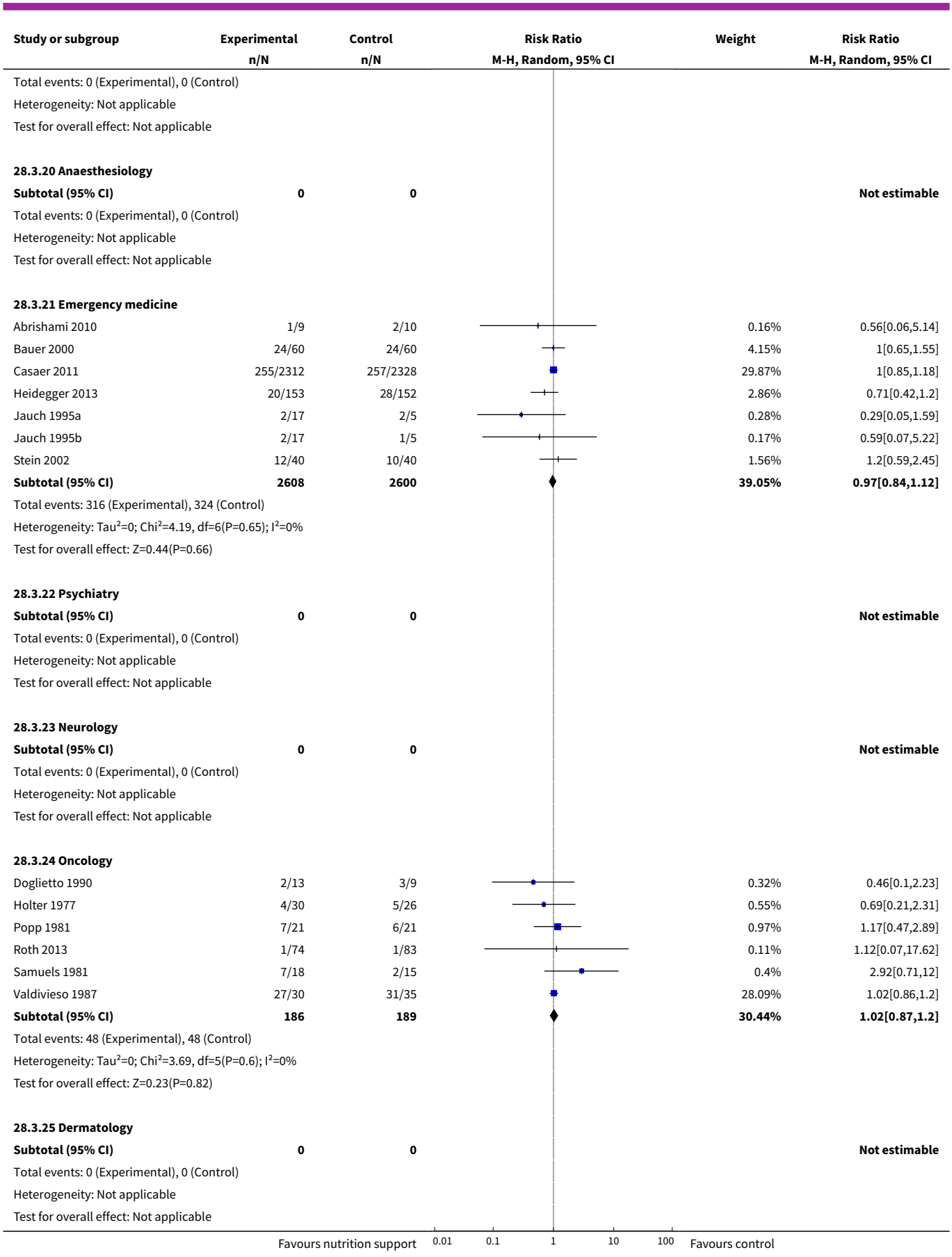


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.62(P=0.53)					
28.3.12 Ortopaedics					
Eneroth 2005	0/40	0/40			Not estimable
Subtotal (95% CI)	**40**	**40**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.13 Plastic, reconstructive, and aesthetic surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.14 Vascular surgery					
Fletcher 1986a	0/10	0/5			Not estimable
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Subtotal (95% CI)	**20**	**15**		**0.16%**	**0.5[0.05,4.67]**
Total events: 1 (Experimental), 2 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.61(P=0.54)					
28.3.15 Transplant surgery					
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Subtotal (95% CI)	**22**	**25**		**0.91%**	**0.56[0.22,1.42]**
Total events: 4 (Experimental), 9 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.36, df=1(P=0.55); I^2=0%					
Test for overall effect: Z=1.23(P=0.22)					
28.3.16 Urology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.17 Thoracic surgery					
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Subtotal (95% CI)	**20**	**24**		**0.42%**	**1.6[0.4,6.32]**
Total events: 4 (Experimental), 3 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.67(P=0.5)					
28.3.18 Neurological surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.19 Oro-maxillo-facial surgery					
Subtotal (95% CI)	**0**	**0**			**Not estimable**





Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.3.26 Gynaecology					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.3.27 Mixed					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau^2=0; Chi^2=39.43, df=48(P=0.81); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					
Test for subgroup differences: Chi^2=4.31, df=1 (P=0.83), I^2=0%					

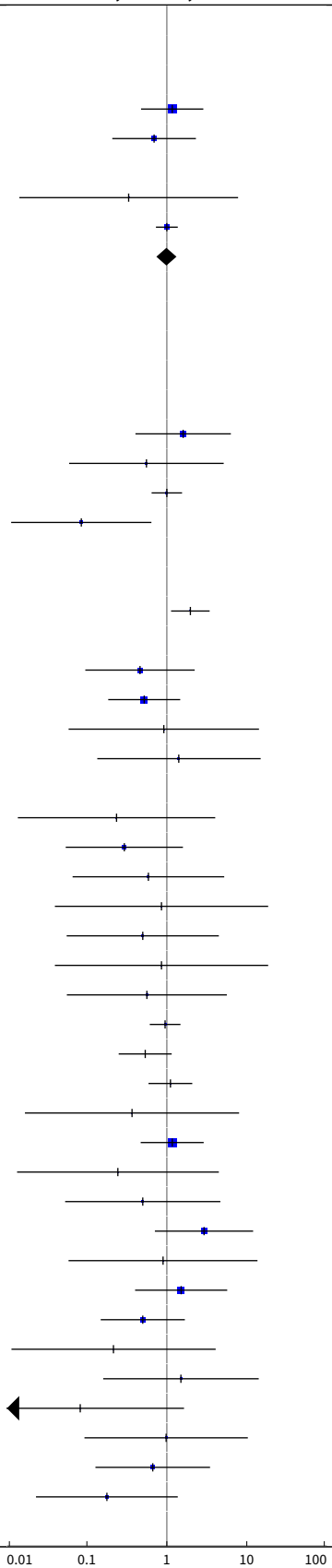
Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 28.4. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 4 Serious adverse events - based on adequacy of the amount of calories.

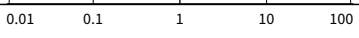
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.4.1 Clearly adequate in intervention and clearly inadequate in control					
Casaer 2011	255/2312	257/2328		29.87%	1[0.85,1.18]
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Eneroth 2005	0/40	0/40			Not estimable
Heidegger 2013	20/153	28/152		2.86%	0.71[0.42,1.2]
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Valdivieso 1987	27/30	31/35		28.09%	1.02[0.86,1.2]
Woolfson 1989	8/62	8/60		0.96%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		0.91%	0.72[0.28,1.83]
Subtotal (95% CI)	**2910**	**2826**		**63.69%**	**0.98[0.88,1.1]**
Total events: 326 (Experimental), 339 (Control)					
Heterogeneity: Tau^2=0; Chi^2=3.19, df=7(P=0.87); I^2=0%					
Test for overall effect: Z=0.34(P=0.73)					
28.4.2 Inadequate in the experimental or adequate in the control					
Herndon 1987	8/13	8/15		1.95%	1.15[0.61,2.19]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Stein 2002	12/40	10/40		1.56%	1.2[0.59,2.45]
Subtotal (95% CI)	**81**	**84**		**5.54%**	**1.17[0.8,1.72]**
Total events: 32 (Experimental), 28 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.38, df=3(P=0.95); I^2=0%					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.83(P=0.4)					
28.4.3 Experimental group is overfed					
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.08%	0.33[0.01,7.78]
Williford 1991	54/192	57/203		8.01%	1[0.73,1.37]
Subtotal (95% CI)	**288**	**295**		**9.63%**	**0.99[0.74,1.32]**
Total events: 65 (Experimental), 69 (Control)					
Heterogeneity: Tau^2=0; Chi^2=0.93, df=3(P=0.82); I^2=0%					
Test for overall effect: Z=0.09(P=0.93)					
28.4.4 Unclear intake in control or experimental					
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.15%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.2%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Doglietto 1990	2/13	3/9		0.32%	0.46[0.1,2.23]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.15%	0.56[0.06,5.63]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.97%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Samuels 1981	7/18	2/15		0.4%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.11%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.45%	1.51[0.4,5.69]
Smith 1988	3/17	6/17		0.54%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.09%	0.08[0,1.64]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Xu 1998a	2/16	3/16		0.29%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.19%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable

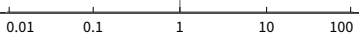


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Subtotal (95% CI)	**995**	**784**		**21.14%**	**0.9[0.73,1.11]**
Total events: 148 (Experimental), 149 (Control)					
Heterogeneity: Tau^2=0.02; Chi^2=33.93, df=32(P=0.37); I^2=5.69%					
Test for overall effect: Z=0.97(P=0.33)					
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau^2=0; Chi^2=39.43, df=48(P=0.81); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					
Test for subgroup differences: Chi^2=1.49, df=1 (P=0.68), I^2=0%					

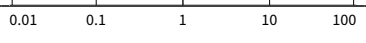


Analysis 28.5. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 5 Serious adverse events - different screening tools.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.5.1 NRS 2002					
Casaer 2011	255/2312	257/2328		29.87%	1[0.85,1.18]
Subtotal (95% CI)	**2312**	**2328**		**29.87%**	**1[0.85,1.18]**
Total events: 255 (Experimental), 257 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.01(P=0.99)					
28.5.2 MUST					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.5.3 MNA					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.5.4 SGA					
Wu 2007b	10/215	7/108		0.91%	0.72[0.28,1.83]
Subtotal (95% CI)	**215**	**108**		**0.91%**	**0.72[0.28,1.83]**
Total events: 10 (Experimental), 7 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.69(P=0.49)					
28.5.5 Other means					
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.15%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.2%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable

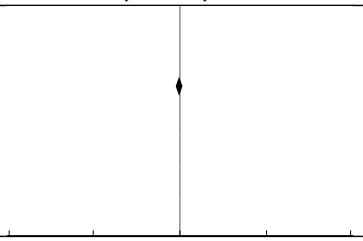


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.32%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		2.86%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		1.95%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.08%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.15%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.97%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.4%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.11%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.45%	1.51[0.4,5.69]
Smith 1988	3/17	6/17		0.54%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		1.56%	1.2[0.59,2.45]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.09%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		28.09%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Williford 1991	54/192	57/203		8.01%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.96%	0.97[0.39,2.41]
Xu 1998a	2/16	3/16		0.29%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.19%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**1747**	**1553**		**69.22%**	**0.97[0.88,1.08]**
Total events: 306 (Experimental), 321 (Control)					
Heterogeneity: Tau²=0; Chi²=40, df=46(P=0.72); I²=0%					



Favours nutrition support — Favours control

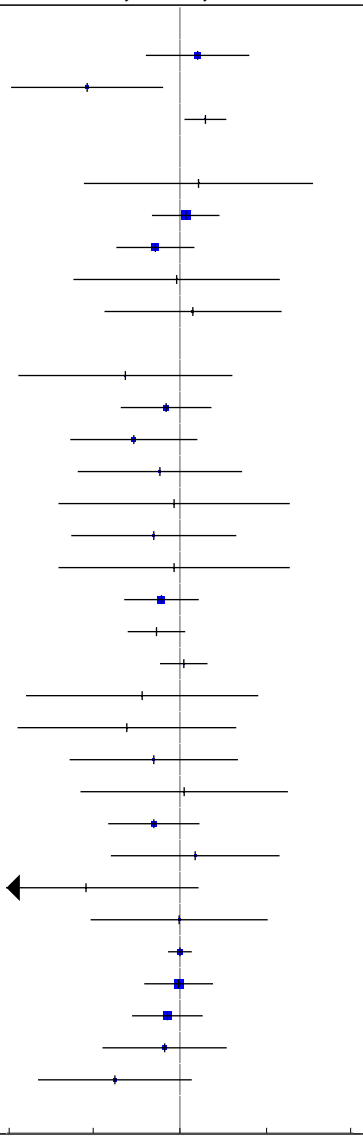
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Test for overall effect: Z=0.47(P=0.64)					
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau^2=0; Chi^2=39.43, df=48(P=0.81); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					
Test for subgroup differences: Chi^2=0.49, df=1 (P=0.78), I^2=0%					



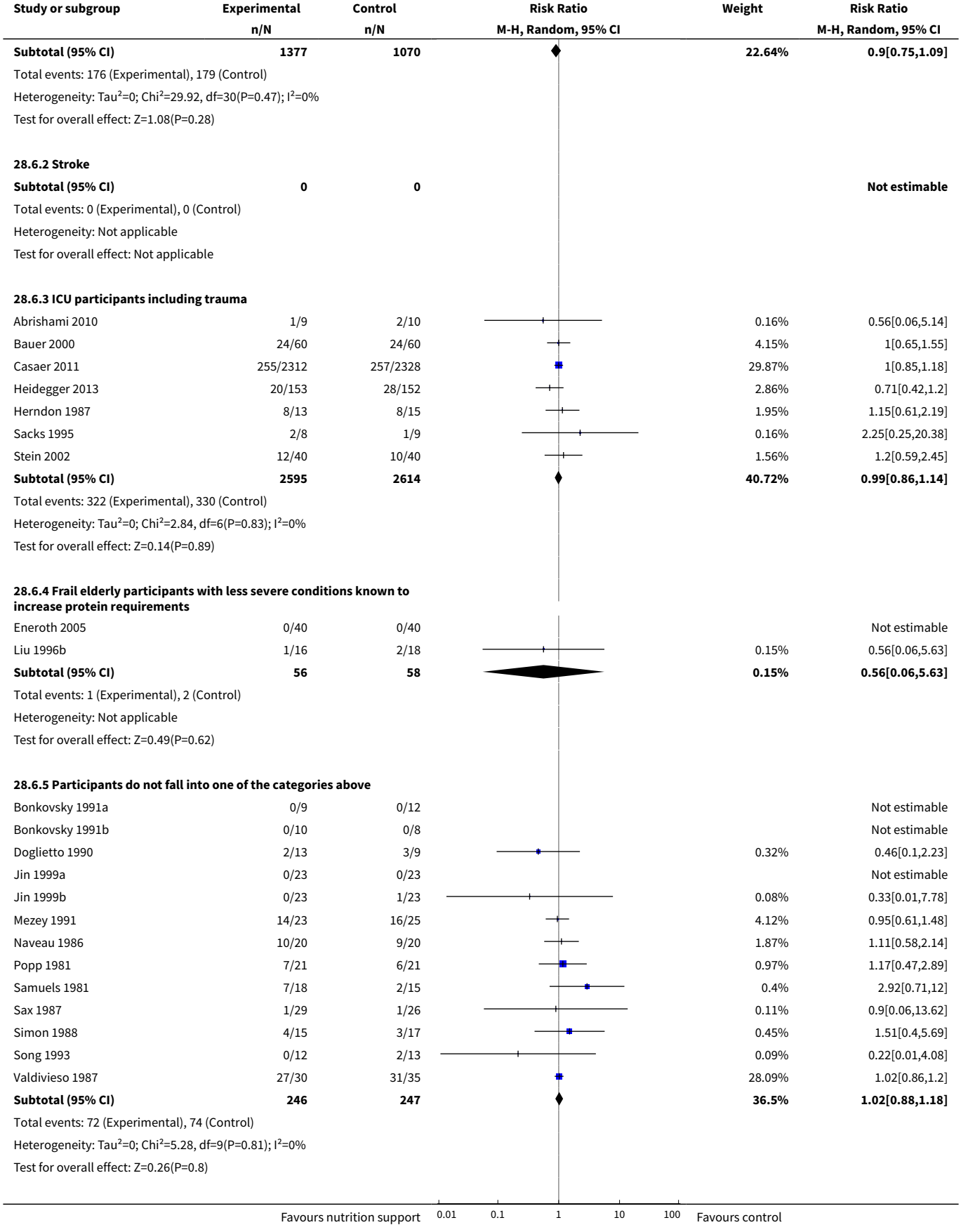
Favours nutrition support — Favours control

Analysis 28.6. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 6 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.6.1 Major surgery					
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Bellantone 1988	1/54	10/46		0.2%	0.09[0.01,0.64]
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Smith 1988	3/17	6/17		0.54%	0.5[0.15,1.68]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.09%	0.08[0,1.64]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Williford 1991	54/192	57/203		8.01%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.96%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		0.91%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.29%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.19%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable



Favours nutrition support — Favours control

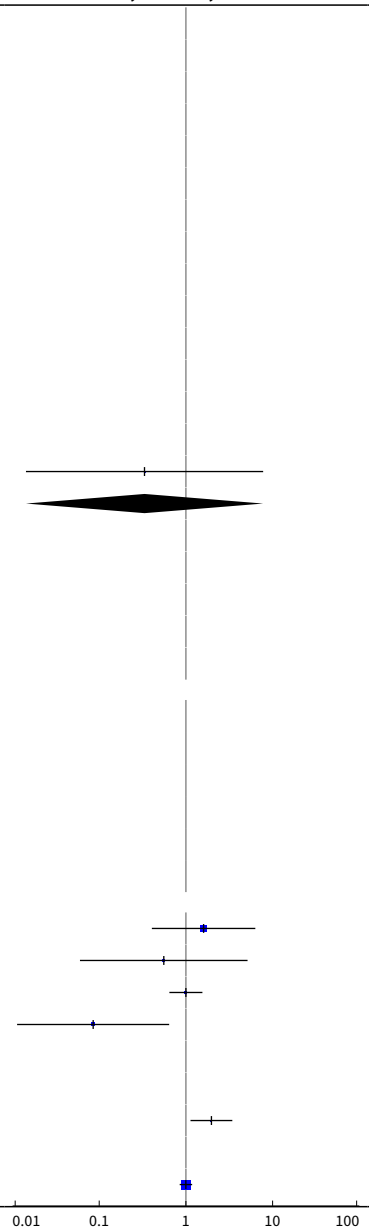


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau^2=0; Chi^2=39.43, df=48(P=0.81); I^2=0%					
Test for overall effect: Z=0.47(P=0.64)					
Test for subgroup differences: Chi^2=1.28, df=1 (P=0.73), I^2=0%					

Favours nutrition support — Favours control

Analysis 28.7. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 7 Serious adverse events - participants characterised as 'at nutritional risk' due to one of the following criteria.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.7.1 BMI less than 20.5 kg/m2					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.7.2 Weight loss of at least 5% during the last three months					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.7.3 Weight loss of at least 10% during the last six months					
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.08%	0.33[0.01,7.78]
Subtotal (95% CI)	**46**	**46**		**0.08%**	**0.33[0.01,7.78]**
Total events: 0 (Experimental), 1 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.68(P=0.49)					
28.7.4 Insufficient food intake during the last week (50% of requirements or less)					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.7.5 Participants characterised as 'at nutritional risk' by other means					
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.15%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.2%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		29.87%	1[0.85,1.18]



Favours nutrition support — Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.32%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		2.86%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		1.95%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Liu 1996b	1/16	2/18		0.15%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.97%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.4%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.11%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.45%	1.51[0.4,5.69]
Smith 1988	3/17	6/17		0.54%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		1.56%	1.2[0.59,2.45]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.09%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		28.09%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Williford 1991	54/192	57/203		8.01%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.96%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		0.91%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.29%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.19%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**4228**	**3943**		**99.92%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 584 (Control)					
Heterogeneity: Tau²=0; Chi²=38.96, df=47(P=0.79); I²=0%					
Test for overall effect: Z=0.45(P=0.65)					
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					

Favours nutrition support

Favours control

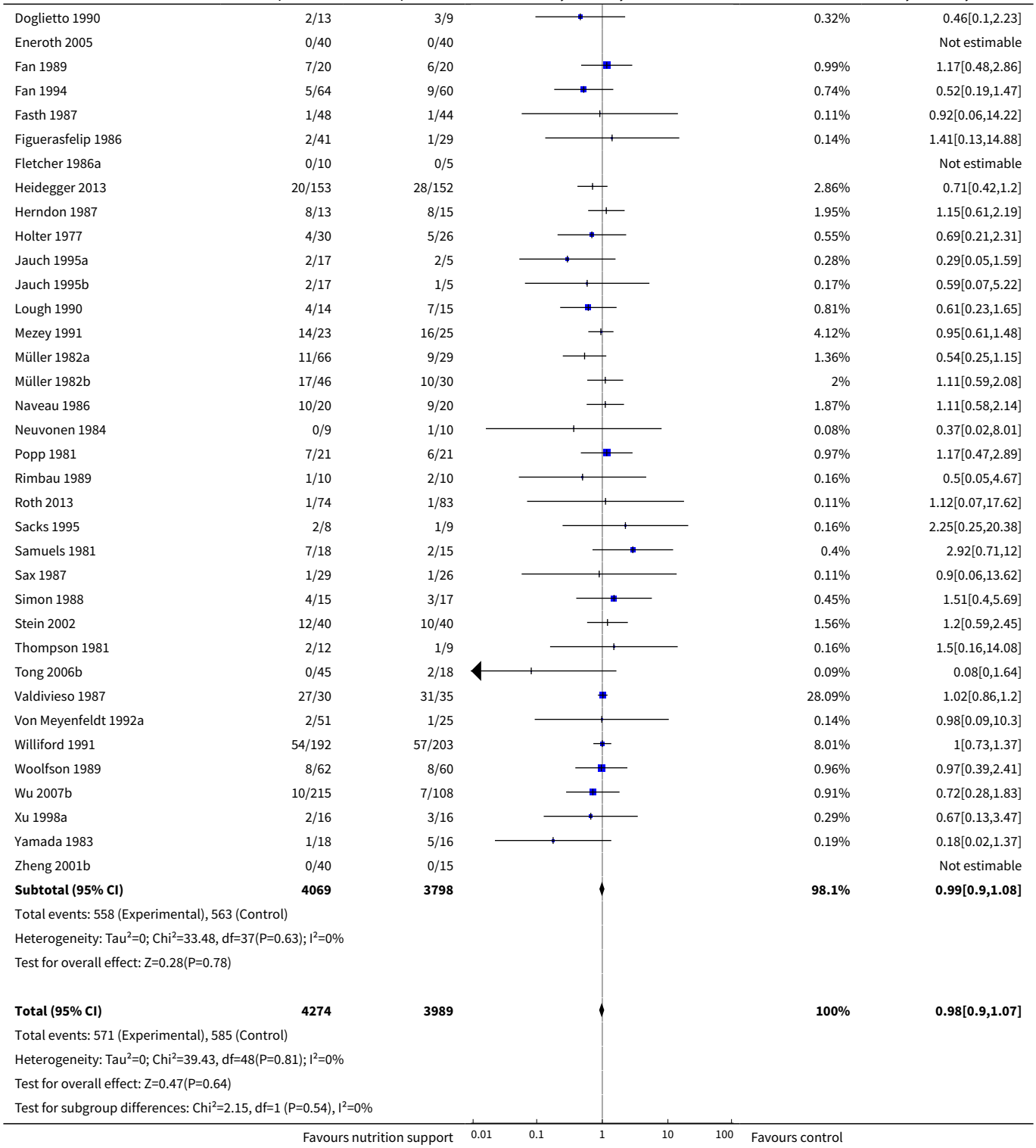
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Tau²=0; Chi²=39.43, df=48(P=0.81); I²=0%					
Test for overall effect: Z=0.47(P=0.64)					
Test for subgroup differences: Chi²=0.45, df=1 (P=0.5), I²=0%					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 28.8. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 8 Serious adverse events - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.8.1 Biomarkers					
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.08%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.15%	0.56[0.06,5.63]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Subtotal (95% CI)	**92**	**92**		**0.5%**	**0.45[0.13,1.57]**
Total events: 2 (Experimental), 7 (Control)					
Heterogeneity: Tau²=0; Chi²=1.18, df=4(P=0.88); I²=0%					
Test for overall effect: Z=1.26(P=0.21)					
28.8.2 Anthropometric measures					
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Smith 1988	3/17	6/17		0.54%	0.5[0.15,1.68]
Subtotal (95% CI)	**53**	**84**		**1.06%**	**0.74[0.29,1.89]**
Total events: 7 (Experimental), 14 (Control)					
Heterogeneity: Tau²=0.09; Chi²=2.27, df=2(P=0.32); I²=11.74%					
Test for overall effect: Z=0.64(P=0.52)					
28.8.3 Both					
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Subtotal (95% CI)	**60**	**15**		**0.34%**	**0.66[0.14,3.07]**
Total events: 4 (Experimental), 1 (Control)					
Heterogeneity: Tau²=0; Chi²=0.12, df=2(P=0.94); I²=0%					
Test for overall effect: Z=0.54(P=0.59)					
28.8.4 Characterised by other means					
Abrishami 2010	1/9	2/10		0.16%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.15%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.2%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		29.87%	1[0.85,1.18]

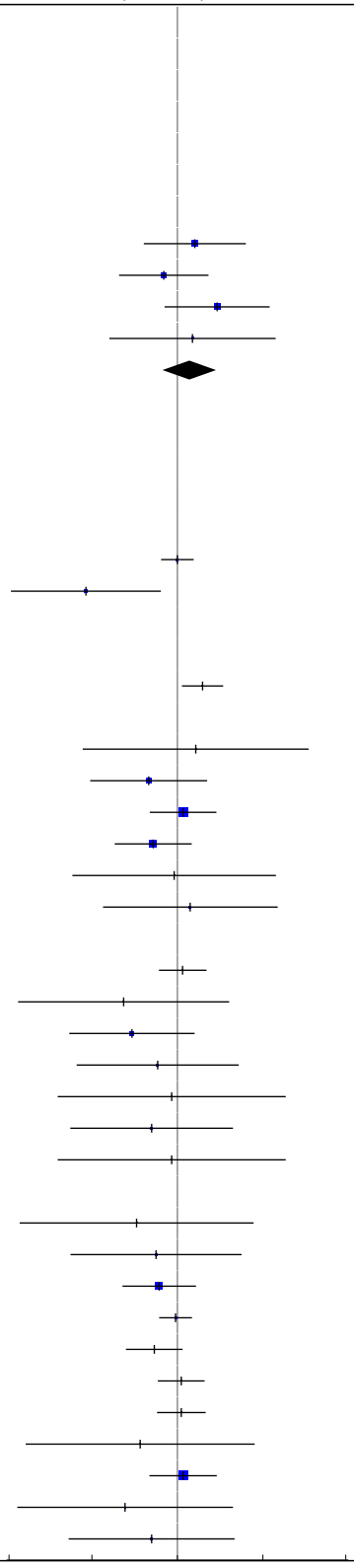
Favours nutrition support 0.01 0.1 1 10 100 Favours control

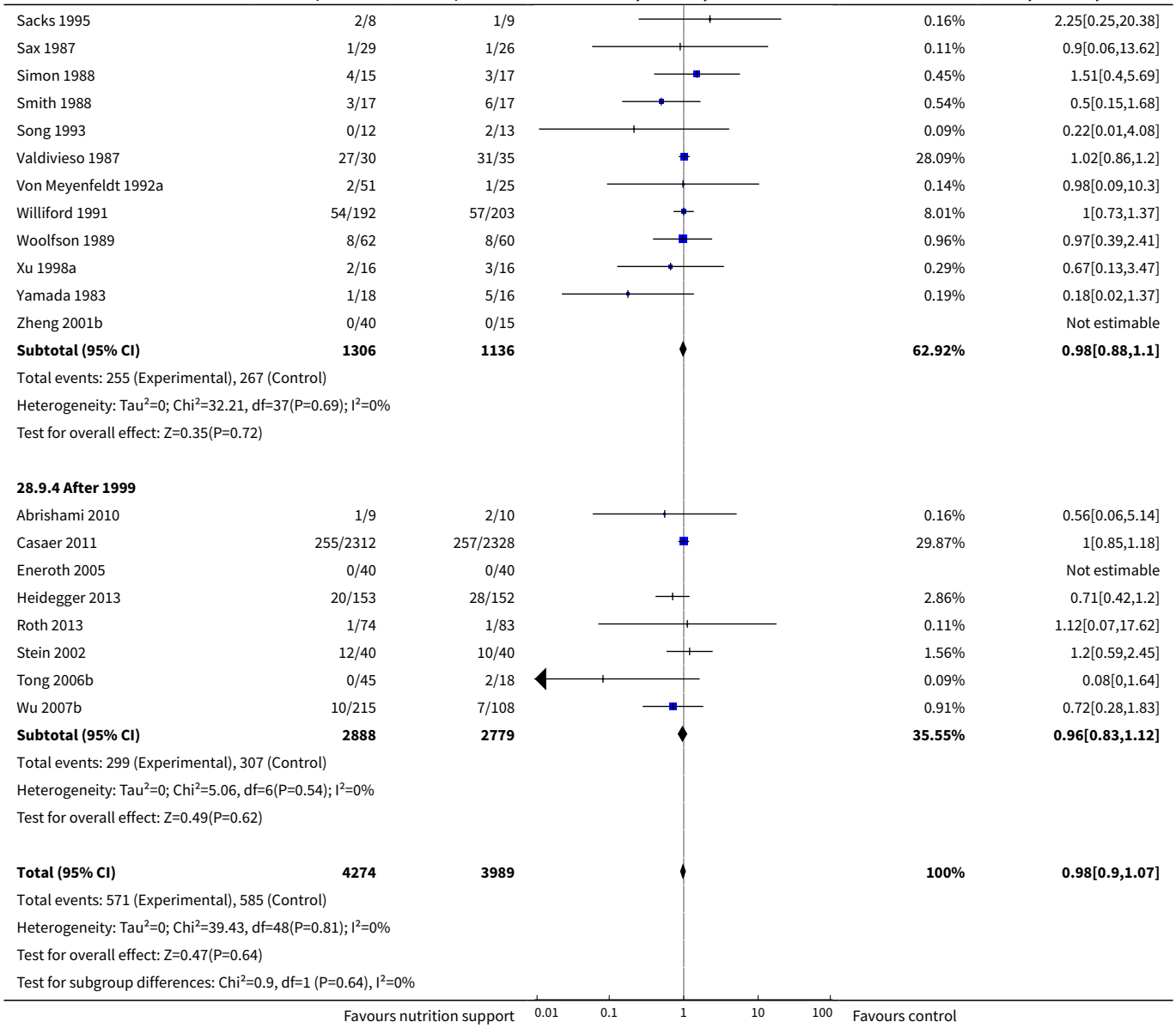


Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Doglietto 1990	2/13	3/9		0.32%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		2.86%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		1.95%	1.15[0.61,2.19]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.97%	1.17[0.47,2.89]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.4%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.11%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.45%	1.51[0.4,5.69]
Stein 2002	12/40	10/40		1.56%	1.2[0.59,2.45]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.09%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		28.09%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Williford 1991	54/192	57/203		8.01%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.96%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		0.91%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.29%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.19%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**4069**	**3798**		**98.1%**	**0.99[0.9,1.08]**
Total events: 558 (Experimental), 563 (Control)					
Heterogeneity: Tau²=0; Chi²=33.48, df=37(P=0.63); I²=0%					
Test for overall effect: Z=0.28(P=0.78)					
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau²=0; Chi²=39.43, df=48(P=0.81); I²=0%					
Test for overall effect: Z=0.47(P=0.64)					
Test for subgroup differences: Chi²=2.15, df=1 (P=0.54), I²=0%					

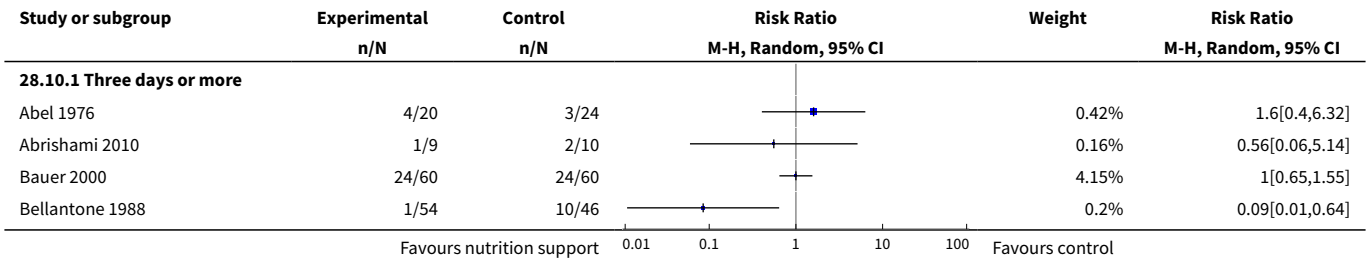
Analysis 28.9. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 9 Serious adverse events - randomisation year.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
28.9.1 Before 1960					
Subtotal (95% CI)	**0**	**0**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
28.9.2 1960 to 1979					
Abel 1976	4/20	3/24		0.42%	1.6[0.4,6.32]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Samuels 1981	7/18	2/15		0.4%	2.92[0.71,12]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Subtotal (95% CI)	**80**	**74**		**1.53%**	**1.38[0.67,2.83]**
Total events: 17 (Experimental), 11 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.38, df=3(P=0.5); I^2=0%					
Test for overall effect: Z=0.87(P=0.39)					
28.9.3 1980 to 1999					
Bauer 2000	24/60	24/60		4.15%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.2%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.32%	0.46[0.1,2.23]
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Herndon 1987	8/13	8/15		1.95%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.08%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.15%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.97%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]





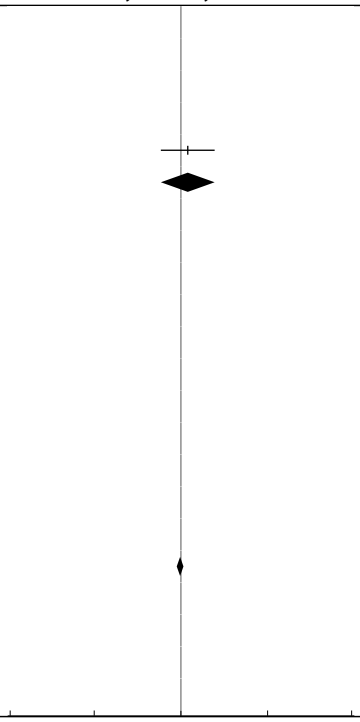
Analysis 28.10. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 10 Serious adverse events - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.



Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.6%	1.97[1.13,3.43]
Casaer 2011	255/2312	257/2328		29.87%	1[0.85,1.18]
Chen 2000b	1/10	0/5		0.09%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.32%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	7/20	6/20		0.99%	1.17[0.48,2.86]
Fan 1994	5/64	9/60		0.74%	0.52[0.19,1.47]
Fasth 1987	1/48	1/44		0.11%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.14%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		2.86%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		1.95%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.1%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.55%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.28%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.17%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.08%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.17%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.08%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.08%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.15%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		0.81%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		4.12%	0.95[0.61,1.48]
Müller 1982a	11/66	9/29		1.36%	0.54[0.25,1.15]
Müller 1982b	17/46	10/30		2%	1.11[0.59,2.08]
Naveau 1986	10/20	9/20		1.87%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.08%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		0.97%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.09%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.16%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.11%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.16%	2.25[0.25,20.38]
Samuels 1981	7/18	2/15		0.4%	2.92[0.71,12]
Sax 1987	1/29	1/26		0.11%	0.9[0.06,13.62]
Simon 1988	4/15	3/17		0.45%	1.51[0.4,5.69]
Smith 1988	3/17	6/17		0.54%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.09%	0.22[0.01,4.08]
Thompson 1981	2/12	1/9		0.16%	1.5[0.16,14.08]
Tong 2006a	0/45	2/18		0.09%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		28.09%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.14%	0.98[0.09,10.3]
Williford 1991	54/192	57/203		8.01%	1[0.73,1.37]
Woolfson 1989	8/62	8/60		0.96%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		0.91%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.29%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.19%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Subtotal (95% CI)	**4219**	**3937**		**98.44%**	**0.98[0.89,1.07]**
Total events: 559 (Experimental), 575 (Control)					

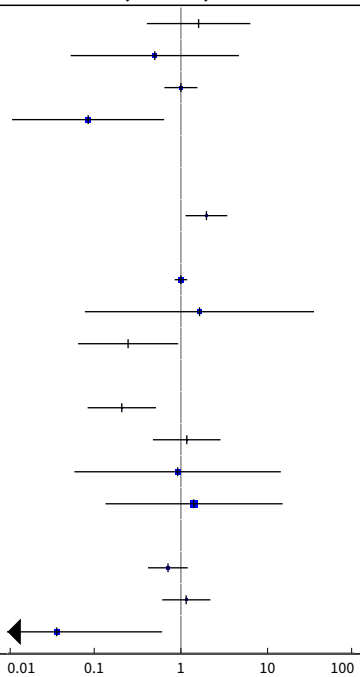
Favours nutrition support — Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Heterogeneity: Tau²=0; Chi²=39.16, df=47(P=0.78); I²=0%					
Test for overall effect: Z=0.53(P=0.59)					
28.10.2 Less than three days					
Stein 2002	12/40	10/40		1.56%	1.2[0.59,2.45]
Subtotal (95% CI)	**40**	**40**		**1.56%**	**1.2[0.59,2.45]**
Total events: 12 (Experimental), 10 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Z=0.5(P=0.62)					
28.10.3 Unknown					
Capellá 1990	0/15	0/12			Not estimable
Subtotal (95% CI)	**15**	**12**			**Not estimable**
Total events: 0 (Experimental), 0 (Control)					
Heterogeneity: Not applicable					
Test for overall effect: Not applicable					
Total (95% CI)	**4274**	**3989**		**100%**	**0.98[0.9,1.07]**
Total events: 571 (Experimental), 585 (Control)					
Heterogeneity: Tau²=0; Chi²=39.43, df=48(P=0.81); I²=0%					
Test for overall effect: Z=0.47(P=0.64)					
Test for subgroup differences: Chi²=0.32, df=1 (P=0.57), I²=0%					

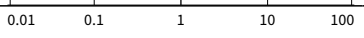


Analysis 28.11. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 11 Serious adverse events - 'best-worst case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		1.25%	1.6[0.4,6.32]
Abrishami 2010	1/10	2/10		0.51%	0.5[0.05,4.67]
Bauer 2000	24/60	24/60		5.72%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.62%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		4.61%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		8.77%	1[0.85,1.18]
Chen 2000b	1/10	0/5		0.28%	1.64[0.08,34.28]
Doglietto 1990	2/13	10/16		1.32%	0.25[0.07,0.93]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/75	24/75		2.45%	0.21[0.08,0.52]
Fan 1994	7/20	6/20		2.5%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.35%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.47%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		4.84%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		3.93%	1.15[0.61,2.19]
Hoffmann 1988	0/51	13/51		0.34%	0.04[0,0.61]



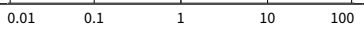
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Holter 1977	4/30	5/26		1.57%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.87%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.54%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.28%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.53%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.28%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.27%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.49%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		2.15%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		5.7%	0.95[0.61,1.48]
Müller 1982a	11/80	20/40		3.99%	0.28[0.15,0.52]
Müller 1982b	17/55	20/40		5.08%	0.62[0.37,1.02]
Naveau 1986	10/20	9/20		3.83%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.28%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		2.46%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.31%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.51%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.35%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.53%	2.25[0.25,20.38]
Samuels 1981	7/20	2/15		1.18%	2.63[0.63,10.88]
Sax 1987	1/29	1/26		0.35%	0.9[0.06,13.62]
Simon 1988	4/16	4/18		1.55%	1.13[0.34,3.78]
Smith 1988	3/17	6/17		1.55%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.3%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		3.42%	1.2[0.59,2.45]
Thompson 1981	2/12	1/9		0.51%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.29%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		8.73%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.47%	0.98[0.09,10.3]
Williford 1991	54/231	82/228		7.39%	0.65[0.49,0.87]
Woolfson 1989	8/62	8/60		2.43%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.34%	0.72[0.28,1.83]
Xu 1998a	2/16	3/16		0.9%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.61%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**4386**	**4066**		**100%**	**0.8[0.68,0.94]**
Total events: 571 (Experimental), 662 (Control)					
Heterogeneity: Tau^2=0.07; Chi^2=78.45, df=48(P=0); I^2=38.82%					
Test for overall effect: Z=2.69(P=0.01)					



Favours nutrition support — Favours control

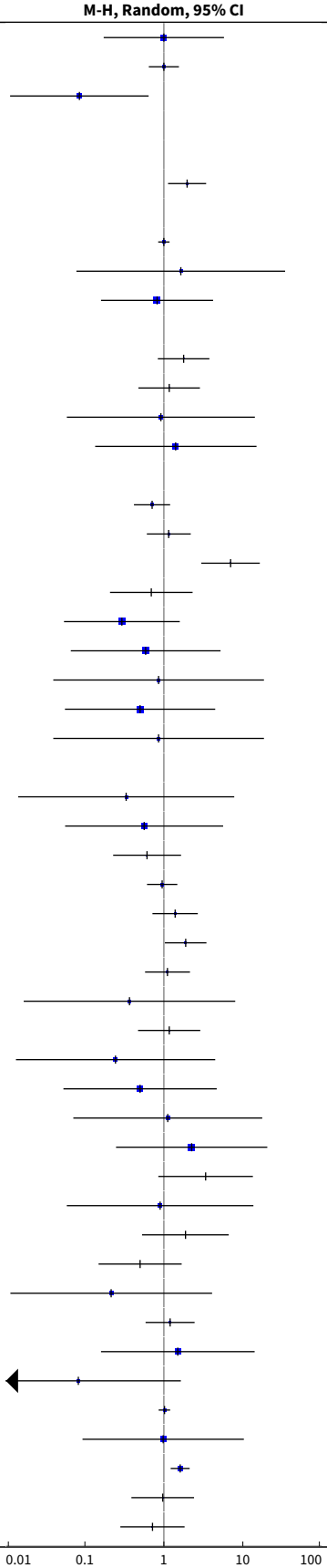
Analysis 28.12. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 12 Serious adverse events - 'worst-best case' scenario.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abel 1976	4/20	3/24		1.08%	1.6[0.4,6.32]



Favours nutrition support — Favours control

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Abrishami 2010	2/10	2/10		0.69%	1[0.17,5.77]
Bauer 2000	24/60	24/60		5.82%	1[0.65,1.55]
Bellantone 1988	1/54	10/46		0.53%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		4.49%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Casaer 2011	255/2312	257/2328		10.22%	1[0.85,1.18]
Chen 2000b	1/10	0/5		0.24%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/16		0.78%	0.82[0.16,4.2]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	16/75	9/75		2.96%	1.78[0.84,3.77]
Fan 1994	7/20	6/20		2.25%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.29%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.39%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Heidegger 2013	20/153	28/152		4.75%	0.71[0.42,1.2]
Herndon 1987	8/13	8/15		3.72%	1.15[0.61,2.19]
Hoffmann 1988	35/51	5/51		2.43%	7[2.98,16.42]
Holter 1977	4/30	5/26		1.36%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.74%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.45%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.23%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.45%	0.5[0.06,4.47]
Jimenez 1995c	1/20	0/5		0.23%	0.86[0.04,18.45]
Jin 1999a	0/23	0/23			Not estimable
Jin 1999b	0/23	1/23		0.22%	0.33[0.01,7.78]
Liu 1996b	1/16	2/18		0.41%	0.56[0.06,5.63]
Lough 1990	4/14	7/15		1.91%	0.61[0.23,1.65]
Mezey 1991	14/23	16/25		5.8%	0.95[0.61,1.48]
Müller 1982a	25/80	9/40		3.56%	1.39[0.72,2.69]
Müller 1982b	26/55	10/40		4.01%	1.89[1.03,3.46]
Naveau 1986	10/20	9/20		3.62%	1.11[0.58,2.14]
Neuvonen 1984	0/9	1/10		0.23%	0.37[0.02,8.01]
Popp 1981	7/21	6/21		2.2%	1.17[0.47,2.89]
Reilly 1990	0/8	2/10		0.26%	0.24[0.01,4.47]
Rimbau 1989	1/10	2/10		0.43%	0.5[0.05,4.67]
Roth 2013	1/74	1/83		0.29%	1.12[0.07,17.62]
Sacks 1995	2/8	1/9		0.44%	2.25[0.25,20.38]
Samuels 1981	9/20	2/15		1.07%	3.38[0.85,13.39]
Sax 1987	1/29	1/26		0.29%	0.9[0.06,13.62]
Simon 1988	5/16	3/18		1.25%	1.88[0.53,6.63]
Smith 1988	3/17	6/17		1.35%	0.5[0.15,1.68]
Song 1993	0/12	2/13		0.25%	0.22[0.01,4.08]
Stein 2002	12/40	10/40		3.18%	1.2[0.59,2.45]
Thompson 1981	2/12	1/9		0.43%	1.5[0.16,14.08]
Tong 2006b	0/45	2/18		0.25%	0.08[0,1.64]
Valdivieso 1987	27/30	31/35		10.14%	1.02[0.86,1.2]
Von Meyenfeldt 1992a	2/51	1/25		0.39%	0.98[0.09,10.3]
Williford 1991	93/231	57/228		8.37%	1.61[1.22,2.12]
Woolfson 1989	8/62	8/60		2.18%	0.97[0.39,2.41]
Wu 2007b	10/215	7/108		2.09%	0.72[0.28,1.83]



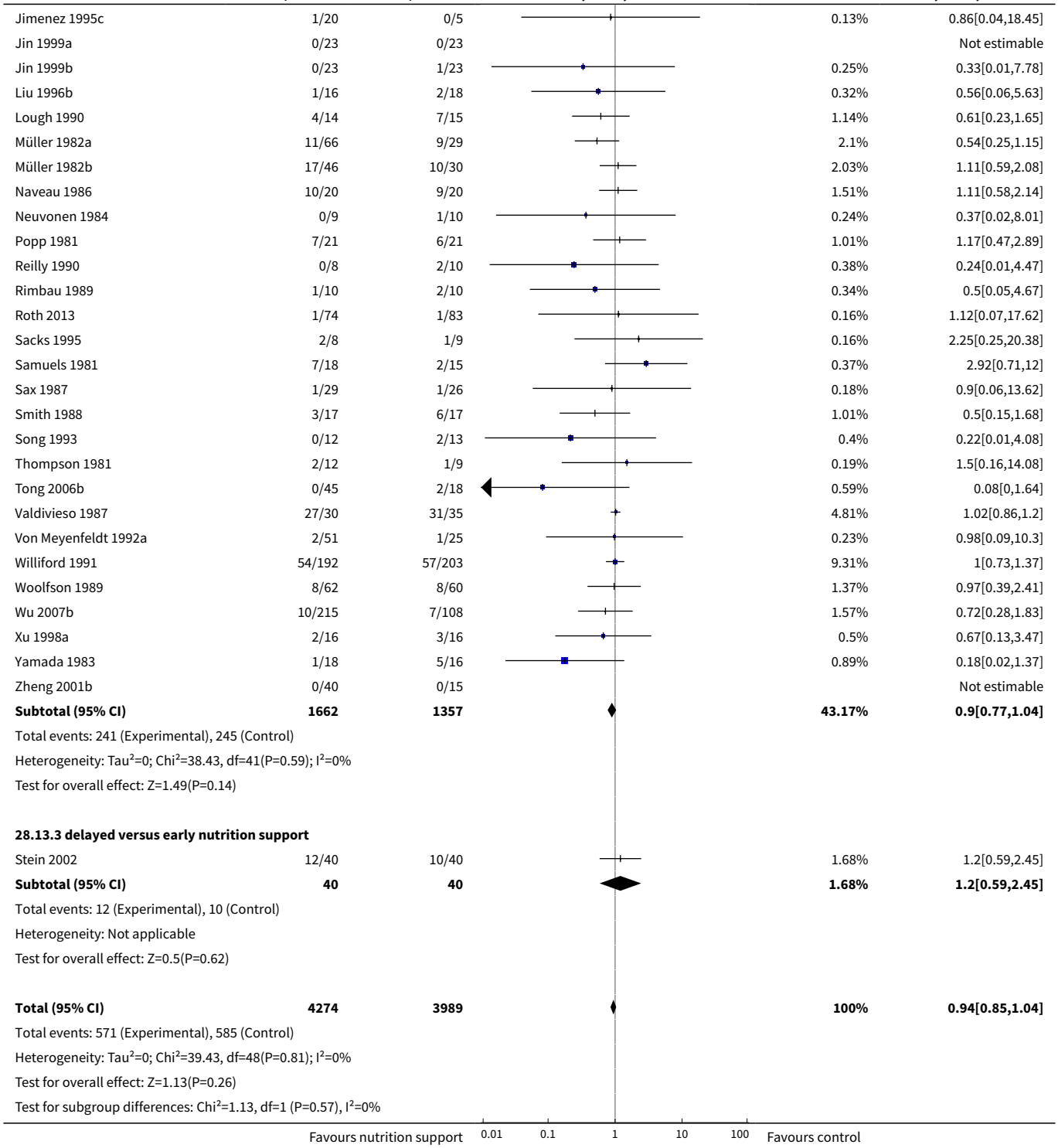
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Random, 95% CI	Weight	Risk Ratio M-H, Random, 95% CI
Xu 1998a	2/16	3/16		0.77%	0.67[0.13,3.47]
Yamada 1983	1/18	5/16		0.51%	0.18[0.02,1.37]
Zheng 2001b	0/40	0/15			Not estimable
Total (95% CI)	**4386**	**4066**		**100%**	**1.12[0.96,1.3]**
Total events: 683 (Experimental), 585 (Control)					
Heterogeneity: Tau^2=0.05; Chi^2=69.06, df=48(P=0.02); I^2=30.49%					
Test for overall effect: Z=1.48(P=0.14)					

Favours nutrition support 0.01 0.1 1 10 100 Favours control

Analysis 28.13. Comparison 28 Parenteral - Serious adverse event maximum follow-up, Outcome 13 Serious adverse events co-interventions.

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H, Fixed, 95% CI	Weight	Risk Ratio M-H, Fixed, 95% CI
28.13.1 Received nutrition support as co-intervention					
Abrishami 2010	1/9	2/10		0.32%	0.56[0.06,5.14]
Bauer 2000	24/60	24/60		4.03%	1[0.65,1.55]
Casaer 2011	255/2312	257/2328		43.03%	1[0.85,1.18]
Heidegger 2013	20/153	28/152		4.72%	0.71[0.42,1.2]
Mezey 1991	14/23	16/25		2.58%	0.95[0.61,1.48]
Simon 1988	4/15	3/17		0.47%	1.51[0.4,5.69]
Subtotal (95% CI)	**2572**	**2592**		**55.15%**	**0.97[0.85,1.12]**
Total events: 318 (Experimental), 330 (Control)					
Heterogeneity: Tau^2=0; Chi^2=2.17, df=5(P=0.83); I^2=0%					
Test for overall effect: Z=0.37(P=0.71)					
28.13.2 did not receive nutrition support as co-intervention					
Abel 1976	4/20	3/24		0.46%	1.6[0.4,6.32]
Bellantone 1988	1/54	10/46		1.81%	0.09[0.01,0.64]
Bonkovsky 1991a	0/9	0/12			Not estimable
Bonkovsky 1991b	0/10	0/8			Not estimable
Brennan 1994	27/60	13/57		2.24%	1.97[1.13,3.43]
Capellá 1990	0/15	0/12			Not estimable
Chen 2000b	1/10	0/5		0.11%	1.64[0.08,34.28]
Doglietto 1990	2/13	3/9		0.6%	0.46[0.1,2.23]
Eneroth 2005	0/40	0/40			Not estimable
Fan 1989	5/64	9/60		1.56%	0.52[0.19,1.47]
Fan 1994	7/20	6/20		1.01%	1.17[0.48,2.86]
Fasth 1987	1/48	1/44		0.18%	0.92[0.06,14.22]
Figuerasfelip 1986	2/41	1/29		0.2%	1.41[0.13,14.88]
Fletcher 1986a	0/10	0/5			Not estimable
Herndon 1987	8/13	8/15		1.25%	1.15[0.61,2.19]
Hoffmann 1988	0/16	5/43		0.52%	0.24[0.01,4.03]
Holter 1977	4/30	5/26		0.9%	0.69[0.21,2.31]
Jauch 1995a	2/17	2/5		0.52%	0.29[0.05,1.59]
Jauch 1995b	2/17	1/5		0.26%	0.59[0.07,5.22]
Jimenez 1995a	1/20	0/5		0.13%	0.86[0.04,18.45]
Jimenez 1995b	2/20	1/5		0.27%	0.5[0.06,4.47]

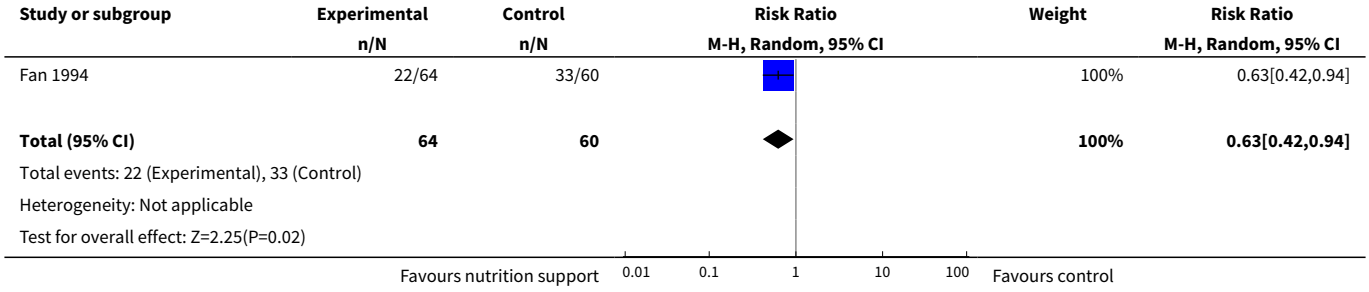
Favours nutrition support 0.01 0.1 1 10 100 Favours control



Comparison 29. Morbidity - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Morbidity - overall	1	124	Risk Ratio (M-H, Random, 95% CI)	0.63 [0.42, 0.94]

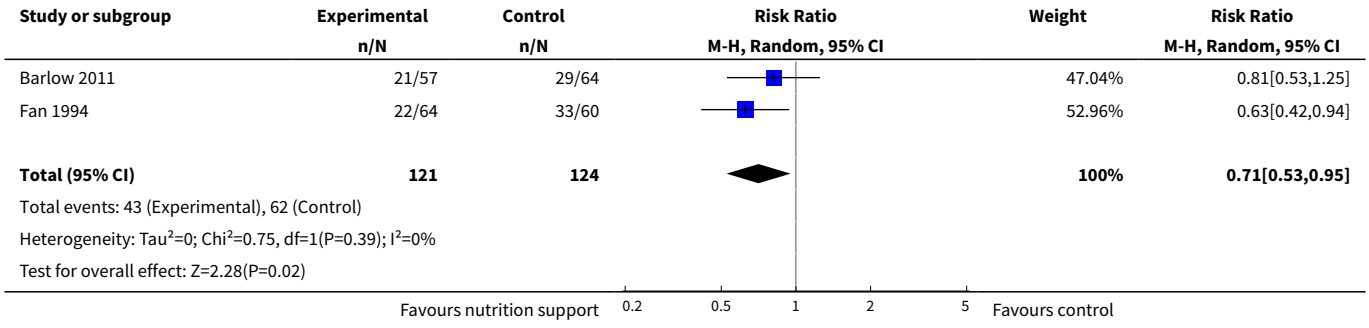
Analysis 29.1. Comparison 29 Morbidity - end of intervention, Outcome 1 Morbidity - overall.



Comparison 30. Morbidity - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Morbidity - overall	2	245	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.53, 0.95]

Analysis 30.1. Comparison 30 Morbidity - maximum follow-up, Outcome 1 Morbidity - overall.



Comparison 31. BMI - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 BMI - overall	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
2 BMI - bias	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
2.1 High risk of bias	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
2.2 Low risk of bias	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
3 BMI - mode of administration	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
3.1 General nutrition support	1	132	Mean Difference (IV, Random, 95% CI)	1.0 [-0.67, 2.67]
3.2 Fortified nutrition	1	146	Mean Difference (IV, Random, 95% CI)	1.10 [-0.24, 2.44]
3.3 Oral nutrition support	7	363	Mean Difference (IV, Random, 95% CI)	0.63 [-0.09, 1.35]
3.4 Enteral nutrition	5	288	Mean Difference (IV, Random, 95% CI)	0.53 [0.32, 0.75]
3.5 Parenteral nutrition	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Mixed nutrition support	1	79	Mean Difference (IV, Random, 95% CI)	1.12 [-0.15, 2.39]
4 BMI - by medical delivery	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
4.1 Cardiology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Medical gastroenterology and hepatology	2	101	Mean Difference (IV, Random, 95% CI)	1.77 [-0.19, 3.72]
4.3 Geriatrics	3	227	Mean Difference (IV, Random, 95% CI)	0.86 [-0.10, 1.82]
4.4 Pulmonary disease	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.5 Endocrinology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.6 Infectious diseases	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.7 Rheumatology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.8 Haematology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.9 Nephrology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.10 Gastroenterologic surgery	5	279	Mean Difference (IV, Random, 95% CI)	0.48 [0.25, 0.70]
4.11 Trauma surgery	2	184	Mean Difference (IV, Random, 95% CI)	0.64 [0.10, 1.18]
4.12 Ortopaedics	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.13 Plastic, reconstructive, and aesthetic surgery	1	37	Mean Difference (IV, Random, 95% CI)	1.30 [0.04, 2.56]
4.14 Vascular surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.15 Transplant surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.16 Urology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.17 Thoracic surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.18 Neurological surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.19 Oro-maxillo-facial surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.20 Anaesthesiology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.21 Emergency medicine	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.22 Psychiatry	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.23 Neurology	1	48	Mean Difference (IV, Random, 95% CI)	1.0 [-1.11, 3.11]
4.24 Oncology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.25 Dermatology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.26 Gynaecology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.27 Mixed	1	132	Mean Difference (IV, Random, 95% CI)	1.0 [-0.67, 2.67]
5 BMI - based on adequacy of the amount of calories	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
5.1 Clearly adequate in intervention and clearly inadequate in control	7	544	Mean Difference (IV, Random, 95% CI)	0.90 [0.23, 1.58]
5.2 Inadequate in the experimental or adequate in the control	1	37	Mean Difference (IV, Random, 95% CI)	1.30 [0.04, 2.56]
5.3 Experimental group is overfed	1	46	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 Unclear intake in control or experimental	6	381	Mean Difference (IV, Random, 95% CI)	0.52 [0.31, 0.73]
6 BMI - different screening tools	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
6.1 NRS 2002	2	211	Mean Difference (IV, Random, 95% CI)	1.08 [0.06, 2.09]
6.2 MUST	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
6.3 MNA	1	35	Mean Difference (IV, Random, 95% CI)	0.60 [-0.78, 1.98]
6.4 SGA	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
6.5 Other means	12	762	Mean Difference (IV, Random, 95% CI)	0.55 [0.35, 0.76]
7 BMI - participants characterised as 'at nutritional risk' due to one of the following conditions	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
7.1 Major surgery	6	316	Mean Difference (IV, Random, 95% CI)	0.50 [0.28, 0.73]
7.2 Stroke	1	48	Mean Difference (IV, Random, 95% CI)	1.0 [-1.11, 3.11]
7.3 ICU participants including trauma	1	64	Mean Difference (IV, Random, 95% CI)	0.40 [-1.22, 2.02]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
7.4 Frail elderly participants with less severe conditions known to increase protein requirements	2	199	Mean Difference (IV, Random, 95% CI)	0.75 [0.22, 1.27]
7.5 Participants do not fall into one of the categories above	5	381	Mean Difference (IV, Random, 95% CI)	1.06 [0.26, 1.87]
8 BMI - participants characterised as 'at nutritional risk' due to one of the following criteria	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
8.1 BMI less than 20.5 kg/m2	3	229	Mean Difference (IV, Random, 95% CI)	1.21 [0.29, 2.12]
8.2 Weight loss of at least 5% during the last three months	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
8.3 Weight loss of at least 10% during the last six months	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
8.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
8.5 Participants characterised as 'at nutritional risk' by other means	12	779	Mean Difference (IV, Random, 95% CI)	0.54 [0.34, 0.75]
9 BMI - participants characterised as 'at nutritional risk' due to biomarkers of anthropometrics	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
9.1 Biomarkers	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 Anthropometric measures	3	229	Mean Difference (IV, Random, 95% CI)	1.21 [0.29, 2.12]
9.3 Characterised by other means	12	779	Mean Difference (IV, Random, 95% CI)	0.54 [0.34, 0.75]
10 BMI - randomisation year	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
10.1 Before 1960	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
10.2 1960 to 1979	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
10.3 1980 to 1999	4	182	Mean Difference (IV, Random, 95% CI)	1.03 [-0.91, 2.97]

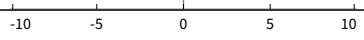
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
10.4 After 1999	11	826	Mean Difference (IV, Random, 95% CI)	0.56 [0.36, 0.76]
11 BMI - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
11.1 Three days or more	15	1008	Mean Difference (IV, Random, 95% CI)	0.57 [0.38, 0.77]
11.2 Less than three days	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]

Analysis 31.1. Comparison 31 BMI - end of intervention, Outcome 1 BMI - overall.

Study or subgroup	Control N	Control Mean(SD)	Experimental N	Experimental Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Total * **	**511**		**497**			**100%**	**0.57[0.38,0.77]**

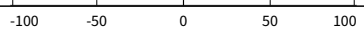
Heterogeneity: $Tau^2=0$; $Chi^2=9.1$, df=13(P=0.77); $I^2=0\%$

Test for overall effect: Z=5.7(P<0.0001)

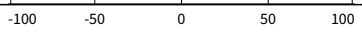


Analysis 31.2. Comparison 31 BMI - end of intervention, Outcome 2 BMI - bias.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.2.1 High risk of bias							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable

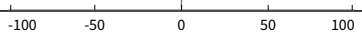


Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal * **	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau^2=0; Chi^2=9.1, df=13(P=0.77); I^2=0%							
Test for overall effect: Z=5.7(P<0.0001)							
31.2.2 Low risk of bias							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
Total * **	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau^2=0; Chi^2=9.1, df=13(P=0.77); I^2=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Not applicable							



Analysis 31.3. Comparison 31 BMI - end of intervention, Outcome 3 BMI - mode of administration.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.3.1 General nutrition support							
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Subtotal * **	**66**		**66**			**1.4%**	**1[-0.67,2.67]**
Heterogeneity: Not applicable							
Test for overall effect: Z=1.17(P=0.24)							
31.3.2 Fortified nutrition							
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Subtotal * **	**73**		**73**			**2.18%**	**1.1[-0.24,2.44]**
Heterogeneity: Not applicable							
Test for overall effect: Z=1.61(P=0.11)							
31.3.3 Oral nutrition support							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]

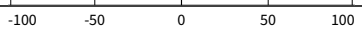


Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Subtotal ***	**182**		**181**			**7.59%**	**0.63[-0.09,1.35]**
Heterogeneity: Tau²=0; Chi²=3.76, df=5(P=0.58); I²=0%							
Test for overall effect: Z=1.72(P=0.08)							
31.3.4 Enteral nutrition							
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal ***	**148**		**140**			**86.43%**	**0.53[0.32,0.75]**
Heterogeneity: Tau²=0; Chi²=3.63, df=4(P=0.46); I²=0%							
Test for overall effect: Z=4.93(P<0.0001)							
31.3.5 Parenteral nutrition							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.3.6 Mixed nutrition support							
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Subtotal ***	**42**		**37**			**2.4%**	**1.12[-0.15,2.39]**
Heterogeneity: Not applicable							
Test for overall effect: Z=1.72(P=0.09)							
Total ***	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau²=0; Chi²=9.1, df=13(P=0.77); I²=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Chi²=1.71, df=1 (P=0.79), I²=0%							

Analysis 31.4. Comparison 31 BMI - end of intervention, Outcome 4 BMI - by medical delivery.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.4.1 Cardiology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.2 Medical gastroenterology and hepatology							
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Subtotal ***	**54**		**47**			**2.83%**	**1.77[-0.19,3.72]**
Heterogeneity: Tau²=0.99; Chi²=1.71, df=1(P=0.19); I²=41.51%							
Test for overall effect: Z=1.77(P=0.08)							

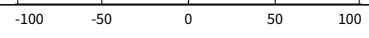
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.4.3 Geriatrics							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Subtotal ***	**116**		**111**			**4.24%**	**0.86[-0.1,1.82]**
Heterogeneity: Tau^2=0; Chi^2=0.26, df=1(P=0.61); I^2=0%							
Test for overall effect: Z=1.75(P=0.08)							
31.4.4 Pulmonary disease							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.5 Endocrinology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.6 Infectious diseases							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.7 Rheumatology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.8 Haematology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.9 Nephrology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.10 Gastroenterologic surgery							
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal ***	**141**		**138**			**74.9%**	**0.48[0.25,0.7]**
Heterogeneity: Tau^2=0; Chi^2=2.12, df=4(P=0.71); I^2=0%							
Test for overall effect: Z=4.09(P<0.0001)							
31.4.11 Trauma surgery							
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]



Favours control — Favours nutrition support

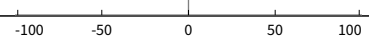
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Subtotal ***	**92**		**92**			**13.32%**	**0.64[0.1,1.18]**
Heterogeneity: Tau²=0; Chi²=0.1, df=1(P=0.76); I²=0%							
Test for overall effect: Z=2.32(P=0.02)							
31.4.12 Ortopaedics							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.13 Plastic, reconstructive, and aesthetic surgery							
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Subtotal ***	**18**		**19**			**2.45%**	**1.3[0.04,2.56]**
Heterogeneity: Not applicable							
Test for overall effect: Z=2.02(P=0.04)							
31.4.14 Vascular surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.15 Transplant surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.16 Urology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.17 Thoracic surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.18 Neurological surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.19 Oro-maxillo-facial surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.20 Anaesthesiology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.21 Emergency medicine							
Subtotal ***	**0**		**0**				**Not estimable**

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.22 Psychiatry							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.23 Neurology							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
Subtotal ***	**24**		**24**			**0.88%**	**1[-1.11,3.11]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.93(P=0.35)							
31.4.24 Oncology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.25 Dermatology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.26 Gynaecology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.4.27 Mixed							
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Subtotal ***	**66**		**66**			**1.4%**	**1[-0.67,2.67]**
Heterogeneity: Not applicable							
Test for overall effect: Z=1.17(P=0.24)							
Total ***	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau²=0; Chi²=9.1, df=13(P=0.77); I²=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Chi²=4.19, df=1 (P=0.65), I²=0%							



Analysis 31.5. Comparison 31 BMI - end of intervention, Outcome 5 BMI - based on adequacy of the amount of calories.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.5.1 Clearly adequate in intervention and clearly inadequate in control							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]

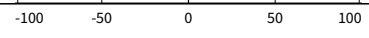


Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Subtotal ***	**275**		**269**			**8.76%**	**0.9[0.23,1.58]**
Heterogeneity: Tau²=0.01; Chi²=6.1, df=6(P=0.41); I²=1.62%							
Test for overall effect: Z=2.62(P=0.01)							
31.5.2 Inadequate in the experimental or adequate in the control							
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Subtotal ***	**18**		**19**			**2.45%**	**1.3[0.04,2.56]**
Heterogeneity: Not applicable							
Test for overall effect: Z=2.02(P=0.04)							
31.5.3 Experimental group is overfed							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Subtotal ***	**23**		**23**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.5.4 Unclear intake in control or experimental							
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal ***	**195**		**186**			**88.79%**	**0.52[0.31,0.73]**
Heterogeneity: Tau²=0; Chi²=0.56, df=5(P=0.99); I²=0%							
Test for overall effect: Z=4.88(P<0.0001)							
Total ***	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau²=0; Chi²=9.1, df=13(P=0.77); I²=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Chi²=2.42, df=1 (P=0.3), I²=17.3%							

Analysis 31.6. Comparison 31 BMI - end of intervention, Outcome 6 BMI - different screening tools.

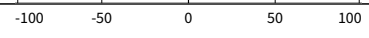
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.6.1 NRS 2002							
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Subtotal ***	**108**		**103**			**3.8%**	**1.08[0.06,2.09]**
Heterogeneity: Tau²=0; Chi²=0.01, df=1(P=0.91); I²=0%							
Test for overall effect: Z=2.08(P=0.04)							

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.6.2 MUST							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.6.3 MNA							
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Subtotal ***	**20**		**15**			**2.05%**	**0.6[-0.78,1.98]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.85(P=0.39)							
31.6.4 SGA							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.6.5 Other means							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal ***	**383**		**379**			**94.15%**	**0.55[0.35,0.76]**
Heterogeneity: Tau^2=0; Chi^2=8.11, df=10(P=0.62); I^2=0%							
Test for overall effect: Z=5.33(P<0.0001)							
Total ***	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau^2=0; Chi^2=9.1, df=13(P=0.77); I^2=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Chi^2=0.98, df=1 (P=0.61), I^2=0%							

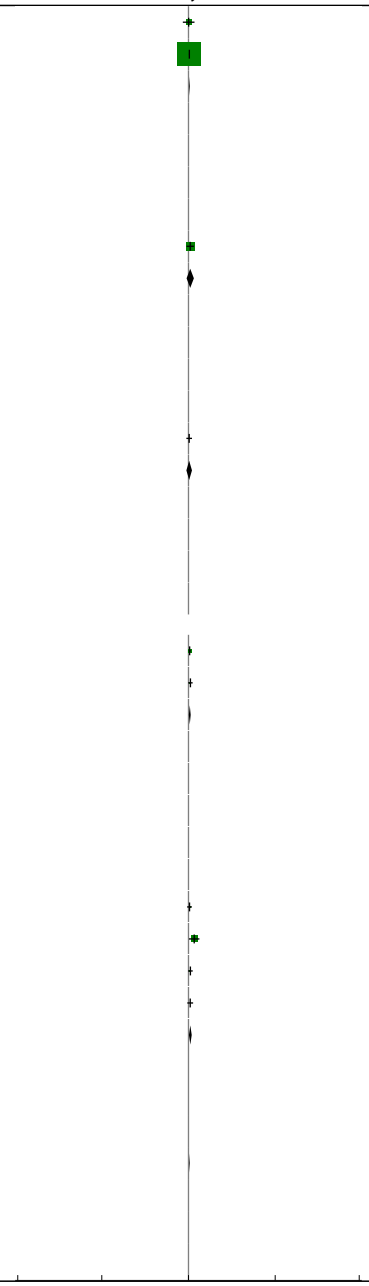


Analysis 31.7. Comparison 31 BMI - end of intervention, Outcome 7 BMI - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.7.1 Major surgery							
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]

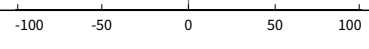


Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal ***	**159**		**157**			**77.35%**	**0.5[0.28,0.73]**
Heterogeneity: Tau²=0; Chi²=3.7, df=5(P=0.59); I²=0%							
Test for overall effect: Z=4.39(P<0.0001)							
31.7.2 Stroke							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
Subtotal ***	**24**		**24**			**0.88%**	**1[-1.11,3.11]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.93(P=0.35)							
31.7.3 ICU participants including trauma							
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Subtotal ***	**32**		**32**			**1.49%**	**0.4[-1.22,2.02]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.48(P=0.63)							
31.7.4 Frail elderly participants with less severe conditions known to increase protein requirements							
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Subtotal ***	**102**		**97**			**14.22%**	**0.75[0.22,1.27]**
Heterogeneity: Tau²=0; Chi²=0.4, df=1(P=0.53); I²=0%							
Test for overall effect: Z=2.79(P=0.01)							
31.7.5 Participants do not fall into one of the categories above							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Subtotal ***	**194**		**187**			**6.06%**	**1.06[0.26,1.87]**
Heterogeneity: Tau²=0; Chi²=2.56, df=3(P=0.46); I²=0%							
Test for overall effect: Z=2.6(P=0.01)							
Total ***	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau²=0; Chi²=9.1, df=13(P=0.77); I²=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Chi²=2.44, df=1 (P=0.66), I²=0%							

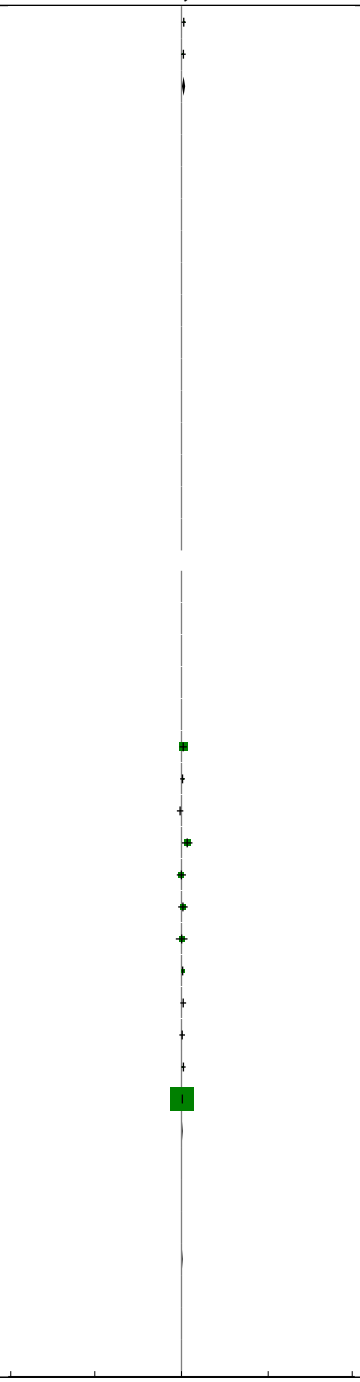


Analysis 31.8. Comparison 31 BMI - end of intervention, Outcome 8 BMI - participants characterised as 'at nutritional risk' due to one of the following criteria.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.8.1 BMI less than 20.5 kg/m2							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable

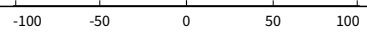


Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Subtotal ***	**114**		**115**			**4.63%**	**1.21[0.29,2.12]**
Heterogeneity: Tau^2=0; Chi^2=0.05, df=1(P=0.83); I^2=0%							
Test for overall effect: Z=2.57(P=0.01)							
31.8.2 Weight loss of at least 5% during the last three months							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.8.3 Weight loss of at least 10% during the last six months							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.8.4 Insufficient food intake during the last week (50% of requirements or less)							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.8.5 Participants characterised as 'at nutritional risk' by other means							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal ***	**397**		**382**			**95.37%**	**0.54[0.34,0.75]**
Heterogeneity: Tau^2=0; Chi^2=7.15, df=11(P=0.79); I^2=0%							
Test for overall effect: Z=5.27(P<0.0001)							
Total ***	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau^2=0; Chi^2=9.1, df=13(P=0.77); I^2=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Chi^2=1.91, df=1 (P=0.17), I^2=47.54%							



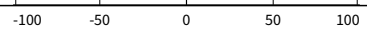
Analysis 31.9. Comparison 31 BMI - end of intervention, Outcome 9 BMI - participants characterised as 'at nutritional risk' due to biomarkers of anthropometrics.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.9.1 Biomarkers							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.9.2 Anthropometric measures							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Subtotal ***	**114**		**115**			**4.63%**	**1.21[0.29,2.12]**
Heterogeneity: Tau^2=0; Chi^2=0.05, df=1(P=0.83); I^2=0%							
Test for overall effect: Z=2.57(P=0.01)							
31.9.3 Characterised by other means							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal ***	**397**		**382**			**95.37%**	**0.54[0.34,0.75]**
Heterogeneity: Tau^2=0; Chi^2=7.15, df=11(P=0.79); I^2=0%							
Test for overall effect: Z=5.27(P<0.0001)							
Total ***	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau^2=0; Chi^2=9.1, df=13(P=0.77); I^2=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Chi^2=1.91, df=1 (P=0.17), I^2=47.54%							

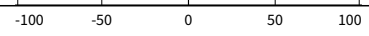


Analysis 31.10. Comparison 31 BMI - end of intervention, Outcome 10 BMI - randomisation year.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.10.1 Before 1960							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.10.2 1960 to 1979							
Subtotal ***	**0**		**0**				**Not estimable**

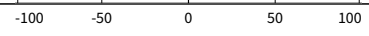


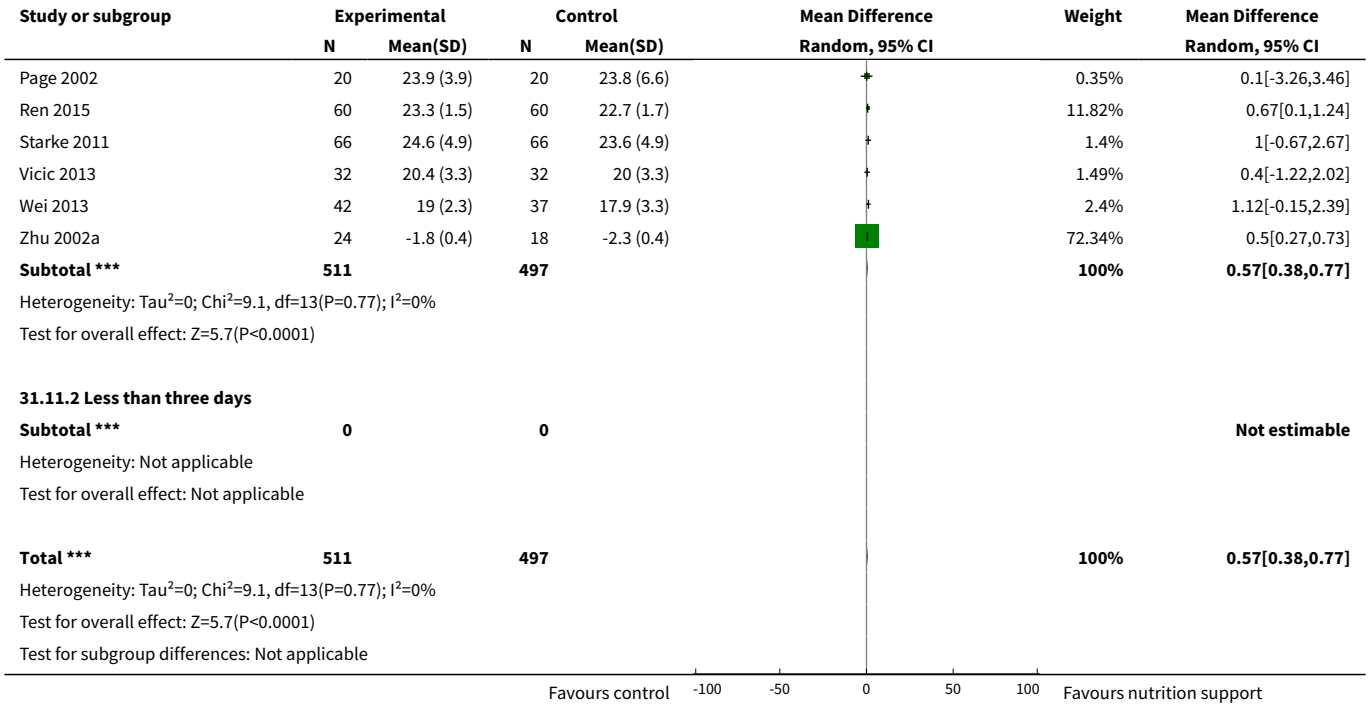
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
31.10.3 1980 to 1999							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Subtotal ***	**91**		**91**			**4.01%**	**1.03[-0.91,2.97]**
Heterogeneity: Tau^2=1.91; Chi^2=6.04, df=2(P=0.05); I^2=66.89%							
Test for overall effect: Z=1.04(P=0.3)							
31.10.4 After 1999							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		0.35%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		11.82%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		1.4%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		1.49%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		2.4%	1.12[-0.15,2.39]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		72.34%	0.5[0.27,0.73]
Subtotal ***	**420**		**406**			**95.99%**	**0.56[0.36,0.76]**
Heterogeneity: Tau^2=0; Chi^2=2.56, df=10(P=0.99); I^2=0%							
Test for overall effect: Z=5.44(P<0.0001)							
Total ***	**511**		**497**			**100%**	**0.57[0.38,0.77]**
Heterogeneity: Tau^2=0; Chi^2=9.1, df=13(P=0.77); I^2=0%							
Test for overall effect: Z=5.7(P<0.0001)							
Test for subgroup differences: Chi^2=0.22, df=1 (P=0.64), I^2=0%							



Analysis 31.11. Comparison 31 BMI - end of intervention, Outcome 11 BMI - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
31.11.1 Three days or more							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		0.88%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		2.05%	0.6[-0.78,1.98]
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		2.45%	1.3[0.04,2.56]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		1.13%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		0.43%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		0.56%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		0.52%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		2.18%	1.1[-0.24,2.44]





Comparison 32. BMI - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 BMI - overall	20	1528	Mean Difference (IV, Random, 95% CI)	0.40 [-0.02, 0.83]
2 BMI - bias	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
2.1 High risk of bias	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
2.2 Low risk of bias	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
3 BMI - mode of delivery	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
3.1 General nutrition support	2	196	Mean Difference (IV, Random, 95% CI)	0.92 [0.26, 1.57]
3.2 Fortified nutrition	1	146	Mean Difference (IV, Random, 95% CI)	1.10 [-0.24, 2.44]
3.3 Oral nutrition support	8	588	Mean Difference (IV, Random, 95% CI)	0.43 [-0.16, 1.02]
3.4 Enteral nutrition	8	519	Mean Difference (IV, Random, 95% CI)	0.17 [-0.60, 0.93]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.5 Parenteral nutrition	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
3.6 Mixed nutrition support	1	79	Mean Difference (IV, Random, 95% CI)	1.12 [-0.15, 2.39]
4 BMI - by medical speciality	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
4.1 Cardiology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Medical gastroenterology and hepatology	3	201	Mean Difference (IV, Random, 95% CI)	1.02 [0.13, 1.90]
4.3 Geriatrics	4	452	Mean Difference (IV, Random, 95% CI)	0.47 [-0.24, 1.17]
4.4 Pulmonary disease	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.5 Endocrinology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.6 Infectious diseases	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.7 Rheumatology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.8 Haematology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.9 Nephrology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.10 Gastroenterologic surgery	6	346	Mean Difference (IV, Random, 95% CI)	-0.52 [-2.16, 1.11]
4.11 Trauma surgery	2	184	Mean Difference (IV, Random, 95% CI)	0.64 [0.10, 1.18]
4.12 Ortopaedics	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.13 Plastic, reconstructive, and aesthetic surgery	1	37	Mean Difference (IV, Random, 95% CI)	1.30 [0.04, 2.56]
4.14 Vascular surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.15 Transplant surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]

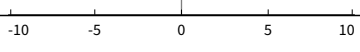
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.16 Urology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.17 Thoracic surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.18 Neurological surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.19 Oro-maxillo-facial surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.20 Anaesthesiology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.21 Emergency medicine	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.22 Psychiatry	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.23 Neurology	2	112	Mean Difference (IV, Random, 95% CI)	0.91 [0.24, 1.58]
4.24 Oncology	1	64	Mean Difference (IV, Random, 95% CI)	0.40 [-1.40, 2.20]
4.25 Dermatology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.26 Gynaecology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.27 Mixed	1	132	Mean Difference (IV, Random, 95% CI)	1.0 [-0.67, 2.67]
5 BMI - based on adequacy of the amount of calories	20	1528	Mean Difference (IV, Random, 95% CI)	0.40 [-0.02, 0.83]
5.1 Clearly adequate in intervention and clearly inadequate in control	9	686	Mean Difference (IV, Random, 95% CI)	0.54 [0.33, 0.74]
5.2 Inadequate in the experimental or adequate in the control	2	101	Mean Difference (IV, Random, 95% CI)	1.00 [0.38, 1.61]
5.3 Experimental group is overfed	1	46	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
5.4 Unclear intake in control or experimental	8	695	Mean Difference (IV, Random, 95% CI)	-0.04 [-1.11, 1.03]
6 BMI - different screening tools	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
6.1 NRS 2002	2	211	Mean Difference (IV, Random, 95% CI)	1.08 [0.06, 2.09]
6.2 MUST	1	64	Mean Difference (IV, Random, 95% CI)	0.90 [0.19, 1.61]
6.3 MNA	1	35	Mean Difference (IV, Random, 95% CI)	0.60 [-0.78, 1.98]
6.4 SGA	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
6.5 Other means	16	1218	Mean Difference (IV, Random, 95% CI)	0.30 [-0.22, 0.83]
7 BMI - participants characterised as 'at nutritional risk' due to one of the following conditions	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
7.1 Major surgery	7	383	Mean Difference (IV, Random, 95% CI)	-0.23 [-1.55, 1.09]
7.2 Stroke	2	112	Mean Difference (IV, Random, 95% CI)	0.91 [0.24, 1.58]
7.3 ICU participants including trauma	1	64	Mean Difference (IV, Random, 95% CI)	0.40 [-1.22, 2.02]
7.4 Frail elderly participants with less severe conditions known to increase protein requirements	2	199	Mean Difference (IV, Random, 95% CI)	0.75 [0.22, 1.27]
7.5 Participants do not fall into one of the categories above	8	770	Mean Difference (IV, Random, 95% CI)	0.65 [0.22, 1.09]
8 BMI - participants characterised as 'at nutritional risk' due to one of the following criteria	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
8.1 BMI less than 20.5 kg/m2	3	229	Mean Difference (IV, Random, 95% CI)	1.21 [0.29, 2.12]
8.2 Weight loss of at least 5% during the last three months	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
8.3 Weight loss of at least 10% during the last six months	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
8.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
8.5 Participants characterised as 'at nutritional risk' by other means	17	1299	Mean Difference (IV, Random, 95% CI)	0.35 [-0.11, 0.81]
9 BMI - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
9.1 Biomarkers	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
9.2 Anthropometric measures	3	229	Mean Difference (IV, Random, 95% CI)	1.21 [0.29, 2.12]
9.3 Characterised by other means	17	1299	Mean Difference (IV, Random, 95% CI)	0.35 [-0.11, 0.81]
10 BMI - randomisation year	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
10.1 Before 1960	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
10.2 1960 to 1979	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
10.3 1980 to 1999	5	249	Mean Difference (IV, Random, 95% CI)	0.02 [-2.62, 2.67]
10.4 After 1999	15	1279	Mean Difference (IV, Random, 95% CI)	0.57 [0.39, 0.75]
11 BMI - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
11.1 Three days or more	20	1528	Mean Difference (IV, Random, 95% CI)	0.44 [0.02, 0.87]
11.2 Less than three days	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]

Analysis 32.1. Comparison 32 BMI - maximum follow-up, Outcome 1 BMI - overall.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		3.05%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable



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Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
De Sousa 2012	20	20.2 (3.3)	15	19 (1.4)		4.46%	1.2[-0.41,2.81]
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.94%	1.3[0.04,2.56]
Gariballa 2006	119	26 (4)	106	26 (4)		7.12%	0[-1.05,1.05]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		9.34%	0.9[0.19,1.61]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.67%	-0.8[-2.66,1.06]
Ledinghen 1997	12	24.4 (4)	10	23.1 (2.8)		1.87%	1.3[-1.55,4.15]
Lidder 2013a	32	25.4 (6.1)	30	25.3 (4.5)		2.11%	0.04[-2.62,2.7]
Lidder 2013b	27	25.3 (4.3)	31	24.9 (4.3)		2.84%	0.4[-1.81,2.61]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.58%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.41%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		10.24%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.25%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (4)		3.85%	0.4[-1.4,2.2]
Wei 2013	42	19 (3.3)	37	17.9 (8.8)		1.71%	1.12[-1.89,4.13]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.69%	-3[-4.12,-1.88]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.87%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.85%	0.4[-1.4,2.2]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		12.16%	0.5[0.27,0.73]
Total * **	**775**		**753**			**100%**	**0.4[-0.02,0.83]**

Heterogeneity: Tau^2=0.37; Chi^2=46.24, df=18(P=0); I^2=61.08%

Test for overall effect: Z=1.87(P=0.06)

Analysis 32.2. Comparison 32 BMI - maximum follow-up, Outcome 2 BMI - bias.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.2.1 High risk of bias							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Subtotal ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau²=0.39; Chi²=49.45, df=18(P<0.0001); I²=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
32.2.2 Low risk of bias							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
Total ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau²=0.39; Chi²=49.45, df=18(P<0.0001); I²=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
Test for subgroup differences: Not applicable							

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Analysis 32.3. Comparison 32 BMI - maximum follow-up, Outcome 3 BMI - mode of delivery.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.3.1 General nutrition support							
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Subtotal ***	**99**		**97**			**12.93%**	**0.92[0.26,1.57]**
Heterogeneity: Tau²=0; Chi²=0.01, df=1(P=0.91); I²=0%							
Test for overall effect: Z=2.76(P=0.01)							
32.3.2 Fortified nutrition							
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Subtotal ***	**73**		**73**			**5.38%**	**1.1[-0.24,2.44]**
Heterogeneity: Not applicable							
Test for overall effect: Z=1.61(P=0.11)							
32.3.3 Oral nutrition support							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Subtotal ***	**301**		**287**			**28.32%**	**0.43[-0.16,1.02]**
Heterogeneity: Tau²=0; Chi²=4.71, df=6(P=0.58); I²=0%							
Test for overall effect: Z=1.42(P=0.16)							
32.3.4 Enteral nutrition							
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]

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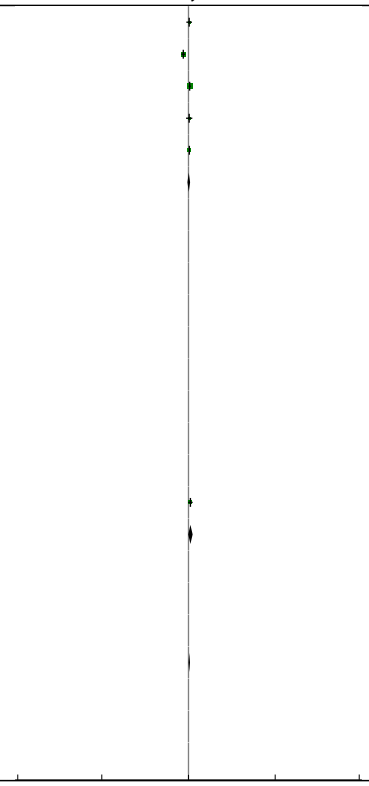
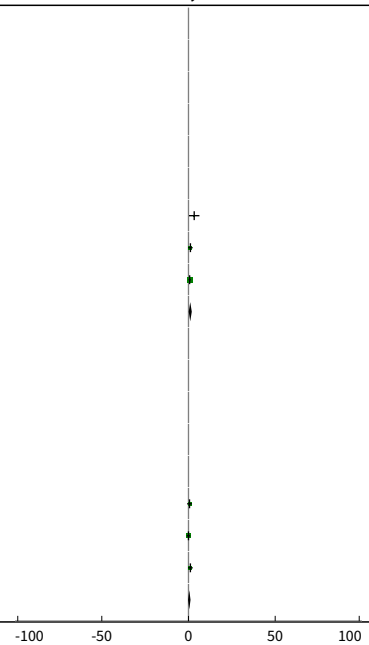
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]
Subtotal * **	**260**		**259**			**47.73%**	**0.17[-0.6,0.93]**
Heterogeneity: Tau²=0.75; Chi²=41.03, df=7(P<0.0001); I²=82.94%							
Test for overall effect: Z=0.42(P=0.67)							
32.3.5 Parenteral nutrition							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.3.6 Mixed nutrition support							
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Subtotal * **	**42**		**37**			**5.65%**	**1.12[-0.15,2.39]**
Heterogeneity: Not applicable							
Test for overall effect: Z=1.72(P=0.09)							
Total * **	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau²=0.39; Chi²=49.45, df=18(P<0.0001); I²=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
Test for subgroup differences: Chi²=3.63, df=1 (P=0.46), I²=0%							

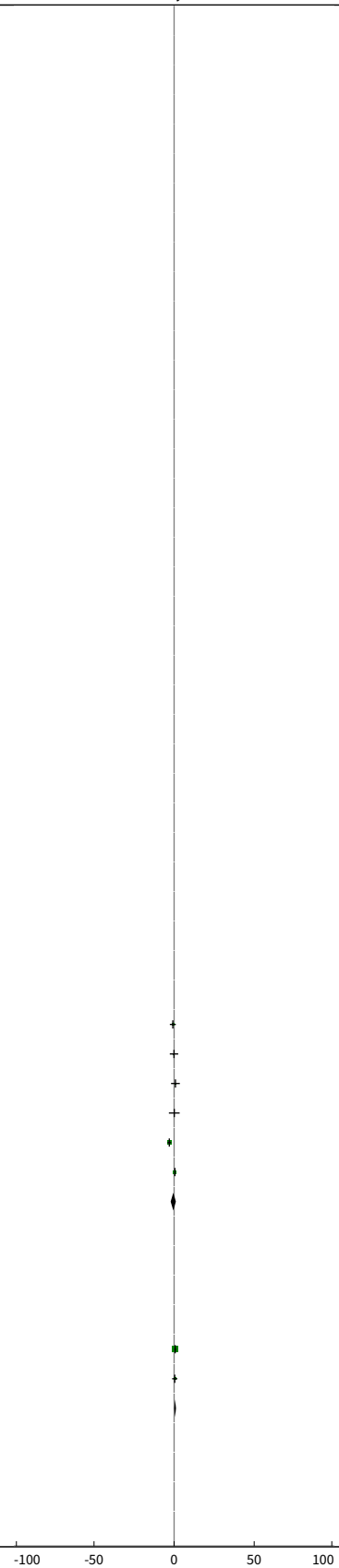


Analysis 32.4. Comparison 32 BMI - maximum follow-up, Outcome 4 BMI - by medical speciality.

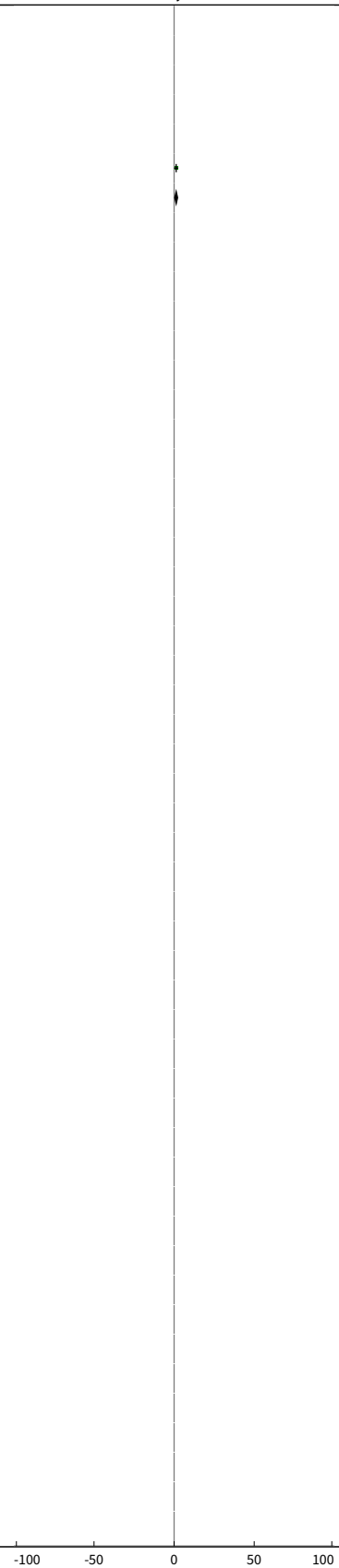
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.4.1 Cardiology							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.2 Medical gastroenterology and hepatology							
Lediginhen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Subtotal * **	**104**		**97**			**16.62%**	**1.02[0.13,1.9]**
Heterogeneity: Tau²=0.23; Chi²=3.03, df=2(P=0.22); I²=34.07%							
Test for overall effect: Z=2.26(P=0.02)							
32.4.3 Geriatrics							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Subtotal * **	**235**		**217**			**17.36%**	**0.47[-0.24,1.17]**



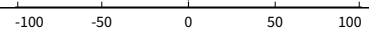
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Heterogeneity: Tau²=0; Chi²=1.66, df=2(P=0.44); I²=0%							
Test for overall effect: Z=1.29(P=0.2)							
32.4.4 Pulmonary disease							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.5 Endocrinology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.6 Infectious diseases							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.7 Rheumatology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.8 Haematology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.9 Nephrology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.10 Gastroenterologic surgery							
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]
Subtotal ***	**171**		**175**			**26.75%**	**-0.52[-2.16,1.11]**
Heterogeneity: Tau²=3.07; Chi²=37.56, df=5(P<0.0001); I²=86.69%							
Test for overall effect: Z=0.63(P=0.53)							
32.4.11 Trauma surgery							
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Subtotal ***	**92**		**92**			**13.92%**	**0.64[0.1,1.18]**
Heterogeneity: Tau²=0; Chi²=0.1, df=1(P=0.76); I²=0%							
Test for overall effect: Z=2.32(P=0.02)							
32.4.12 Ortopaedics							



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.13 Plastic, reconstructive, and aesthetic surgery							
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Subtotal ***	**18**		**19**			**5.71%**	**1.3[0.04,2.56]**
Heterogeneity: Not applicable							
Test for overall effect: Z=2.02(P=0.04)							
32.4.14 Vascular surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.15 Transplant surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.16 Urology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.17 Thoracic surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.18 Neurological surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.19 Oro-maxillo-facial surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.20 Anaesthesiology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.21 Emergency medicine							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.22 Psychiatry							
Subtotal ***	**0**		**0**				**Not estimable**



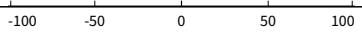
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.23 Neurology							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Subtotal ***	**57**		**55**			**11.79%**	**0.91[0.24,1.58]**
Heterogeneity: Tau^2=0; Chi^2=0.01, df=1(P=0.93); I^2=0%							
Test for overall effect: Z=2.66(P=0.01)							
32.4.24 Oncology							
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]
Subtotal ***	**32**		**32**			**3.74%**	**0.4[-1.4,2.2]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.44(P=0.66)							
32.4.25 Dermatology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.26 Gynaecology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.4.27 Mixed							
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Subtotal ***	**66**		**66**			**4.12%**	**1[-0.67,2.67]**
Heterogeneity: Not applicable							
Test for overall effect: Z=1.17(P=0.24)							
Total ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau^2=0.39; Chi^2=49.45, df=18(P<0.0001); I^2=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
Test for subgroup differences: Chi^2=4.58, df=1 (P=0.71), I^2=0%							



Analysis 32.5. Comparison 32 BMI - maximum follow-up, Outcome 5 BMI - based on adequacy of the amount of calories.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.5.1 Clearly adequate in intervention and clearly inadequate in control							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		3.05%	1[-1.11,3.11]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.67%	-0.8[-2.66,1.06]
Ledinghen 1997	12	24.4 (4)	10	23.1 (2.8)		1.87%	1.3[-1.55,4.15]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.58%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.41%	0.1[-3.26,3.46]

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.25%	1[-0.67,2.67]
Wei 2013	42	19 (3.3)	37	17.9 (8.8)		1.71%	1.12[-1.89,4.13]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.87%	0.67[0.04,1.3]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		12.16%	0.5[0.27,0.73]
Subtotal ***	**349**		**337**			**43.57%**	**0.54[0.33,0.74]**
Heterogeneity: Tau^2=0; Chi^2=3.9, df=8(P=0.87); I^2=0%							
Test for overall effect: Z=5.01(P<0.0001)							
32.5.2 Inadequate in the experimental or adequate in the control							
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.94%	1.3[0.04,2.56]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		9.34%	0.9[0.19,1.61]
Subtotal ***	**51**		**50**			**15.27%**	**1[0.38,1.61]**
Heterogeneity: Tau^2=0; Chi^2=0.29, df=1(P=0.59); I^2=0%							
Test for overall effect: Z=3.16(P=0)							
32.5.3 Experimental group is overfed							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Subtotal ***	**23**		**23**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.5.4 Unclear intake in control or experimental							
De Sousa 2012	20	20.2 (3.3)	15	19 (1.4)		4.46%	1.2[-0.41,2.81]
Gariballa 2006	119	26 (4)	106	26 (4)		7.12%	0[-1.05,1.05]
Lidder 2013a	32	25.4 (6.1)	30	25.3 (4.5)		2.11%	0.04[-2.62,2.7]
Lidder 2013b	27	25.3 (4.3)	31	24.9 (4.3)		2.84%	0.4[-1.81,2.61]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		10.24%	0.67[0.1,1.24]
Vicic 2013	32	20.4 (3.3)	32	20 (4)		3.85%	0.4[-1.4,2.2]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.69%	-3[-4.12,-1.88]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.85%	0.4[-1.4,2.2]
Subtotal ***	**352**		**343**			**41.15%**	**-0.04[-1.11,1.03]**
Heterogeneity: Tau^2=1.72; Chi^2=35.22, df=7(P<0.0001); I^2=80.13%							
Test for overall effect: Z=0.07(P=0.94)							
Total ***	**775**		**753**			**100%**	**0.4[-0.02,0.83]**
Heterogeneity: Tau^2=0.37; Chi^2=46.24, df=18(P=0); I^2=61.08%							
Test for overall effect: Z=1.87(P=0.06)							
Test for subgroup differences: Chi^2=3.18, df=1 (P=0.2), I^2=37.05%							



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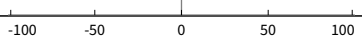
Analysis 32.6. Comparison 32 BMI - maximum follow-up, Outcome 6 BMI - different screening tools.

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.6.1 NRS 2002							
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Subtotal ***	**108**		**103**			**9.77%**	**1.08[0.06,2.09]**
Heterogeneity: Tau^2=0; Chi^2=0.01, df=1(P=0.91); I^2=0%							



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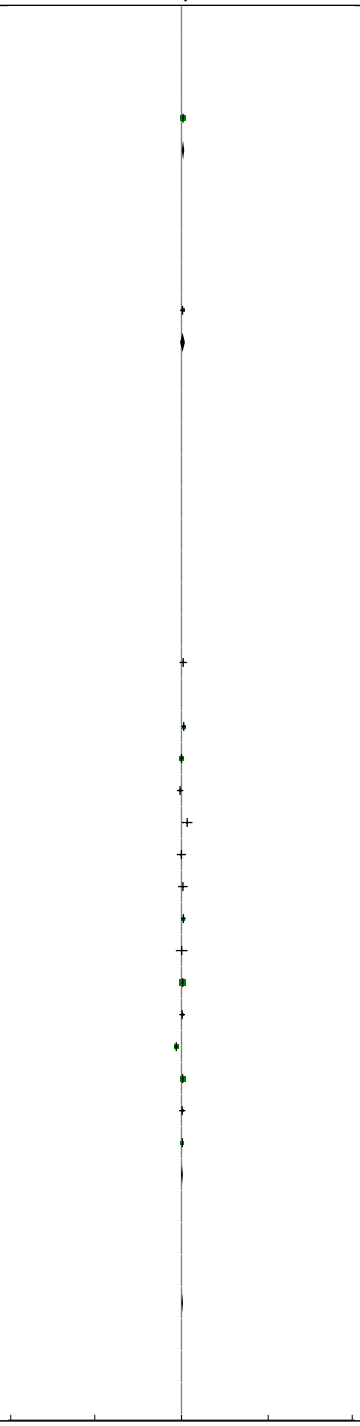
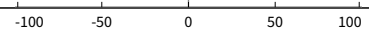
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Test for overall effect: Z=2.08(P=0.04)							
32.6.2 MUST							
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Subtotal ***	**33**		**31**			**8.81%**	**0.9[0.19,1.61]**
Heterogeneity: Not applicable							
Test for overall effect: Z=2.5(P=0.01)							
32.6.3 MNA							
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Subtotal ***	**20**		**15**			**5.19%**	**0.6[-0.78,1.98]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.85(P=0.39)							
32.6.4 SGA							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.6.5 Other means							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]
Subtotal ***	**614**		**604**			**76.23%**	**0.3[-0.22,0.83]**
Heterogeneity: Tau^2=0.53; Chi^2=46.62, df=14(P<0.0001); I^2=69.97%							
Test for overall effect: Z=1.13(P=0.26)							
Total ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau^2=0.39; Chi^2=49.45, df=18(P<0.0001); I^2=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
Test for subgroup differences: Chi^2=2.76, df=1 (P=0.43), I^2=0%							



Analysis 32.7. Comparison 32 BMI - maximum follow-up, Outcome 7 BMI - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.7.1 Major surgery							
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]
Subtotal ***	**189**		**194**			**32.45%**	**-0.23[-1.55,1.09]**
Heterogeneity: Tau^2=2.26; Chi^2=39.72, df=6(P<0.0001); I^2=84.89%							
Test for overall effect: Z=0.34(P=0.73)							
32.7.2 Stroke							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Subtotal ***	**57**		**55**			**11.79%**	**0.91[0.24,1.58]**
Heterogeneity: Tau^2=0; Chi^2=0.01, df=1(P=0.93); I^2=0%							
Test for overall effect: Z=2.66(P=0.01)							
32.7.3 ICU participants including trauma							
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Subtotal ***	**32**		**32**			**4.3%**	**0.4[-1.22,2.02]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.48(P=0.63)							
32.7.4 Frail elderly participants with less severe conditions known to increase protein requirements							
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Subtotal ***	**102**		**97**			**15.27%**	**0.75[0.22,1.27]**
Heterogeneity: Tau^2=0; Chi^2=0.4, df=1(P=0.53); I^2=0%							
Test for overall effect: Z=2.79(P=0.01)							
32.7.5 Participants do not fall into one of the categories above							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]
Subtotal ***	**395**		**375**			**36.19%**	**0.65[0.22,1.09]**
Heterogeneity: Tau^2=0; Chi^2=5.15, df=6(P=0.53); I^2=0%							
Test for overall effect: Z=2.95(P=0)							
Total ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau^2=0.39; Chi^2=49.45, df=18(P<0.0001); I^2=63.6%							
Test for overall effect: Z=2.07(P=0.04)							



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Test for subgroup differences: Chi²=2.46, df=1 (P=0.65), I²=0%							

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Analysis 32.8. Comparison 32 BMI - maximum follow-up, Outcome 8 BMI - participants characterised as 'at nutritional risk' due to one of the following criteria.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.8.1 BMI less than 20.5 kg/m2							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Subtotal ***	**114**		**115**			**11.08%**	**1.21[0.29,2.12]**
Heterogeneity: Tau²=0; Chi²=0.05, df=1(P=0.83); I²=0%							
Test for overall effect: Z=2.57(P=0.01)							
32.8.2 Weight loss of at least 5% during the last three months							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.8.3 Weight loss of at least 10% during the last six months							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.8.4 Insufficient food intake during the last week (50% of requirements or less)							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.8.5 Participants characterised as 'at nutritional risk' by other means							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]

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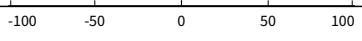
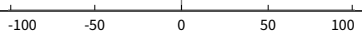
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]
Subtotal ***	**661**		**638**			**88.92%**	**0.35[-0.11,0.81]**
Heterogeneity: Tau^2=0.42; Chi^2=47.01, df=16(P<0.0001); I^2=65.97%							
Test for overall effect: Z=1.51(P=0.13)							
Total ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau^2=0.39; Chi^2=49.45, df=18(P<0.0001); I^2=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
Test for subgroup differences: Chi^2=2.68, df=1 (P=0.1), I^2=62.68%							



Analysis 32.9. Comparison 32 BMI - maximum follow-up, Outcome 9 BMI - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.9.1 Biomarkers							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.9.2 Anthropometric measures							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Subtotal ***	**114**		**115**			**11.08%**	**1.21[0.29,2.12]**
Heterogeneity: Tau^2=0; Chi^2=0.05, df=1(P=0.83); I^2=0%							
Test for overall effect: Z=2.57(P=0.01)							
32.9.3 Characterised by other means							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]
Subtotal ***	**661**		**638**			**88.92%**	**0.35[-0.11,0.81]**
Heterogeneity: Tau^2=0.42; Chi^2=47.01, df=16(P<0.0001); I^2=65.97%							



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Test for overall effect: Z=1.51(P=0.13)							
Total ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau²=0.39; Chi²=49.45, df=18(P<0.0001); I²=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
Test for subgroup differences: Chi²=2.68, df=1 (P=0.1), I²=62.68%							

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Analysis 32.10. Comparison 32 BMI - maximum follow-up, Outcome 10 BMI - randomisation year.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.10.1 Before 1960							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.10.2 1960 to 1979							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
32.10.3 1980 to 1999							
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Subtotal ***	**121**		**128**			**17.35%**	**0.02[-2.62,2.67]**
Heterogeneity: Tau²=6.37; Chi²=32.53, df=3(P<0.0001); I²=90.78%							
Test for overall effect: Z=0.02(P=0.99)							
32.10.4 After 1999							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]
Subtotal ***	**654**		**625**			**82.65%**	**0.57[0.39,0.75]**

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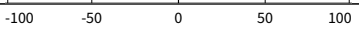
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Heterogeneity: Tau²=0; Chi²=4.68, df=14(P=0.99); I²=0%							
Test for overall effect: Z=6.19(P<0.0001)							
Total ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau²=0.39; Chi²=49.45, df=18(P<0.0001); I²=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
Test for subgroup differences: Chi²=0.17, df=1 (P=0.68), I²=0%							

Analysis 32.11. Comparison 32 BMI - maximum follow-up, Outcome 11 BMI - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
32.11.1 Three days or more							
Aquilani 2008	24	24.6 (2.9)	24	23.6 (4.4)		2.98%	1[-1.11,3.11]
Carver 1995	23	19.2 (0)	23	18.1 (0)			Not estimable
De Sousa 2012	20	20.1 (2.7)	15	19.5 (1.4)		5.19%	0.6[-0.78,1.98]
Førli 2001	18	18.3 (1.7)	19	17 (2.2)		5.71%	1.3[0.04,2.56]
Gariballa 2006	119	26 (4)	106	26 (4)		6.8%	0[-1.05,1.05]
Ha 2010	33	-0.3 (1.1)	31	-1.2 (1.7)		8.81%	0.9[0.19,1.61]
Keele 1997	38	22.8 (3.8)	39	23.6 (4.5)		3.57%	-0.8[-2.66,1.06]
Ledinghen 1997	12	27.6 (3.9)	10	24.3 (3.3)		1.68%	3.3[0.29,6.31]
Lidder 2013a	32	25.4 (6)	30	25.4 (4.5)		2.1%	-0.06[-2.69,2.57]
Lidder 2013b	27	25.1 (4.1)	31	24.3 (6.4)		1.97%	0.83[-1.91,3.57]
Neelemaat 2012	73	22.1 (4.5)	73	21 (3.7)		5.38%	1.1[-0.24,2.44]
Page 2002	20	23.9 (3.9)	20	23.8 (6.6)		1.39%	0.1[-3.26,3.46]
Ren 2015	60	23.3 (1.5)	60	22.7 (1.7)		9.62%	0.67[0.1,1.24]
Starke 2011	66	24.6 (4.9)	66	23.6 (4.9)		4.12%	1[-0.67,2.67]
Vicic 2013	32	20.4 (3.3)	32	20 (3.3)		4.3%	0.4[-1.22,2.02]
Wei 2013	42	19 (2.3)	37	17.9 (3.3)		5.65%	1.12[-0.15,2.39]
Yie 1996	30	2.5 (2.5)	37	5.5 (2.1)		6.4%	-3[-4.12,-1.88]
Zhang 2013	50	23.3 (1.5)	50	22.7 (1.7)		9.29%	0.67[0.04,1.3]
Zhao 2014	32	20.4 (3.3)	32	20 (4)		3.74%	0.4[-1.4,2.2]
Zhu 2002a	24	-1.8 (0.4)	18	-2.3 (0.4)		11.32%	0.5[0.27,0.73]
Subtotal ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau²=0.39; Chi²=49.45, df=18(P<0.0001); I²=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
32.11.2 Less than three days							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
Total ***	**775**		**753**			**100%**	**0.44[0.02,0.87]**
Heterogeneity: Tau²=0.39; Chi²=49.45, df=18(P<0.0001); I²=63.6%							
Test for overall effect: Z=2.07(P=0.04)							
Test for subgroup differences: Not applicable							



Comparison 33. Weight - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Weight - overall	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
2 Weight - bias	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
2.1 High risk of bias	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
2.2 Low risk of bias	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
3 Weight - mode of delivery	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
3.1 General nutrition support	4	962	Mean Difference (IV, Random, 95% CI)	-0.00 [-0.17, 0.16]
3.2 Fortified nutrition	2	230	Mean Difference (IV, Random, 95% CI)	1.45 [-0.92, 3.83]
3.3 Oral nutrition support	31	1924	Mean Difference (IV, Random, 95% CI)	0.33 [-0.21, 0.87]
3.4 Enteral nutrition	26	1616	Mean Difference (IV, Random, 95% CI)	2.62 [1.23, 4.01]
3.5 Parenteral nutrition	17	667	Mean Difference (IV, Random, 95% CI)	1.48 [-0.20, 3.15]
3.6 Mixed nutrition support	1	46	Mean Difference (IV, Random, 95% CI)	-3.90 [-4.45, -3.35]
4 Weight - by medical specialty	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
4.1 Cardiology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Medical gastroenterology and hepatology	7	345	Mean Difference (IV, Random, 95% CI)	0.88 [-0.03, 1.79]
4.3 Geriatrics	10	1422	Mean Difference (IV, Random, 95% CI)	0.62 [-0.30, 1.54]
4.4 Pulmonary disease	4	91	Mean Difference (IV, Random, 95% CI)	0.95 [-0.43, 2.33]
4.5 Endocrinology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.6 Infectious diseases	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.7 Rheumatology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.8 Haematology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.9 Nephrology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.10 Gastroenterologic surgery	35	1423	Mean Difference (IV, Random, 95% CI)	1.26 [-0.12, 2.63]
4.11 Trauma surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.12 Ortopaedics	7	395	Mean Difference (IV, Random, 95% CI)	2.79 [1.36, 4.23]
4.13 Plastic, reconstructive, and aesthetic surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.14 Vascular surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.15 Transplant surgery	1	29	Mean Difference (IV, Random, 95% CI)	-4.60 [-15.21, 6.01]
4.16 Urology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.17 Thoracic surgery	2	548	Mean Difference (IV, Random, 95% CI)	0.06 [-2.39, 2.51]
4.18 Neurological surgery	1	48	Mean Difference (IV, Random, 95% CI)	10.53 [6.72, 14.34]
4.19 Oro-maxillo-facial surgery	1	32	Mean Difference (IV, Random, 95% CI)	0.6 [-1.10, 2.30]
4.20 Anaesthesiology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.21 Emergency medicine	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.22 Psychiatry	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.23 Neurology	5	247	Mean Difference (IV, Random, 95% CI)	0.74 [-2.15, 3.63]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.24 Oncology	1	23	Mean Difference (IV, Random, 95% CI)	-1.0 [-7.41, 5.41]
4.25 Dermatology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.26 Gynaecology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.27 Mixed	7	842	Mean Difference (IV, Random, 95% CI)	0.21 [-0.58, 1.00]
5 Weight - based on adequacy of the amount of calories	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
5.1 Clearly adequate in intervention and clearly inadequate in control	20	1287	Mean Difference (IV, Random, 95% CI)	1.46 [-0.19, 3.12]
5.2 Inadequate in the experimental or adequate in the control	19	1626	Mean Difference (IV, Random, 95% CI)	0.79 [0.06, 1.51]
5.3 Experimental group is overfed	5	151	Mean Difference (IV, Random, 95% CI)	0.64 [-0.86, 2.13]
5.4 Unclear intake in control or experimental	37	2381	Mean Difference (IV, Random, 95% CI)	1.61 [0.50, 2.72]
6 Weight - different screening tools	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
6.1 NRS 2002	4	353	Mean Difference (IV, Random, 95% CI)	1.12 [-0.29, 2.53]
6.2 MUST	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
6.3 MNA	2	104	Mean Difference (IV, Random, 95% CI)	1.45 [-0.02, 2.91]
6.4 SGA	2	445	Mean Difference (IV, Random, 95% CI)	-0.65 [-3.30, 2.00]
6.5 Other means	73	4543	Mean Difference (IV, Random, 95% CI)	1.41 [0.68, 2.15]
7 Weight - participants characterised as 'at nutritional risk' due to one of the following conditions	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
7.1 Major surgery	40	2213	Mean Difference (IV, Random, 95% CI)	1.24 [0.11, 2.37]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
7.2 Stroke	3	181	Mean Difference (IV, Random, 95% CI)	0.39 [-2.75, 3.54]
7.3 ICU participants including trauma	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
7.4 Frail elderly participants with less severe conditions known to increase protein requirements	8	1256	Mean Difference (IV, Random, 95% CI)	1.83 [0.71, 2.96]
7.5 Participants do not fall into one of the categories above	30	1795	Mean Difference (IV, Random, 95% CI)	0.93 [0.38, 1.48]
8 Weight - participants characterised as 'at nutritional risk' due to one of the following criteria	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
8.1 BMI less than 20.5 kg/m2	5	309	Mean Difference (IV, Random, 95% CI)	3.97 [1.06, 6.89]
8.2 Weight loss of at least 5% during the last three months	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
8.3 Weight loss of at least 10% during the last six months	2	79	Mean Difference (IV, Random, 95% CI)	0.30 [-0.36, 0.96]
8.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
8.5 Participants characterised as 'at nutritional risk' by other means	74	5057	Mean Difference (IV, Random, 95% CI)	1.30 [0.59, 2.00]
9 Weight - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
9.1 Biomarkers	9	750	Mean Difference (IV, Random, 95% CI)	4.37 [2.16, 6.58]
9.2 Anthropometric measures	15	996	Mean Difference (IV, Random, 95% CI)	1.04 [-0.15, 2.23]
9.3 Characterised by other means	54	3639	Mean Difference (IV, Random, 95% CI)	0.66 [0.13, 1.20]
9.4 Mixed	3	60	Mean Difference (IV, Random, 95% CI)	-0.37 [-1.95, 1.22]
10 Weight - randomisation year	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
10.1 Before 1960	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
10.2 1960 to 1979	1	21	Mean Difference (IV, Random, 95% CI)	3.85 [1.69, 6.01]
10.3 1980 to 1999	48	2365	Mean Difference (IV, Random, 95% CI)	1.23 [0.24, 2.22]
10.4 After 1999	32	3059	Mean Difference (IV, Random, 95% CI)	1.07 [0.35, 1.79]
11 Weight - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	81	5445	Mean Difference (IV, Random, 95% CI)	1.32 [0.65, 2.00]
11.1 Three days or more	76	5287	Mean Difference (IV, Random, 95% CI)	1.40 [0.70, 2.10]
11.2 Less than three days	5	158	Mean Difference (IV, Random, 95% CI)	0.15 [-1.62, 1.92]
12 Weight - Missing SDs	81	5445	Mean Difference (IV, Random, 95% CI)	1.40 [0.76, 2.03]
12.1 missing SDs imputed from all trials	81	5445	Mean Difference (IV, Random, 95% CI)	1.40 [0.76, 2.03]

Analysis 33.1. Comparison 33 Weight - end of intervention, Outcome 1 Weight - overall.

Study or subgroup	Experimental		Control		Mean Difference	Weight	Mean Difference
	N	Mean(SD)	N	Mean(SD)	Random, 95% CI		Random, 95% CI
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
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Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]

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Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Total * **	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							

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Analysis 33.2. Comparison 33 Weight - end of intervention, Outcome 2 Weight - bias.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.2.1 High risk of bias							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable

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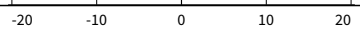
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]

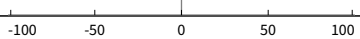
Favours control -20 -10 0 10 20 Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal * **	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
33.2.2 Low risk of bias							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
Total * **	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Not applicable							



Analysis 33.3. Comparison 33 Weight - end of intervention, Outcome 3 Weight - mode of delivery.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.3.1 General nutrition support							
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Subtotal * **	**482**		**480**			**4.5%**	**-0[-0.17,0.16]**
Heterogeneity: Tau²=0; Chi²=1.77, df=2(P=0.41); I²=0%							
Test for overall effect: Z=0.03(P=0.97)							
33.3.2 Fortified nutrition							
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Subtotal * **	**117**		**113**			**2.87%**	**1.45[-0.92,3.83]**
Heterogeneity: Tau²=1.64; Chi²=1.64, df=1(P=0.2); I²=38.96%							
Test for overall effect: Z=1.2(P=0.23)							
33.3.3 Oral nutrition support							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Subtotal * **	**972**		**952**			**35.77%**	**0.33[-0.21,0.87]**
Heterogeneity: Tau^2=0.77; Chi^2=70.93, df=28(P<0.0001); I^2=60.52%							
Test for overall effect: Z=1.2(P=0.23)							
33.3.4 Enteral nutrition							
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Chen 1995a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 1995b	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 2000b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]

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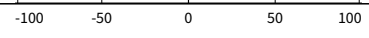
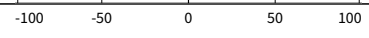
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal ***	**865**		**751**			**31.77%**	**2.62[1.23,4.01]**
Heterogeneity: Tau^2=8.85; Chi^2=1706.95, df=22(P<0.0001); I^2=98.71%							
Test for overall effect: Z=3.7(P=0)							
33.3.5 Parenteral nutrition							
Chen 2000a	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Subtotal ***	**369**		**298**			**23.23%**	**1.48[-0.2,3.15]**
Heterogeneity: Tau^2=9.54; Chi^2=425.18, df=15(P<0.0001); I^2=96.47%							
Test for overall effect: Z=1.73(P=0.08)							
33.3.6 Mixed nutrition support							
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Subtotal ***	**24**		**22**			**1.86%**	**-3.9[-4.45,-3.35]**
Heterogeneity: Tau^2=0; Chi^2=0, df=0(P<0.0001); I^2=100%							
Test for overall effect: Z=13.92(P<0.0001)							
Total ***	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau^2=6.32; Chi^2=2967.33, df=73(P<0.0001); I^2=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi^2=205.14, df=1 (P<0.0001), I^2=97.56%							

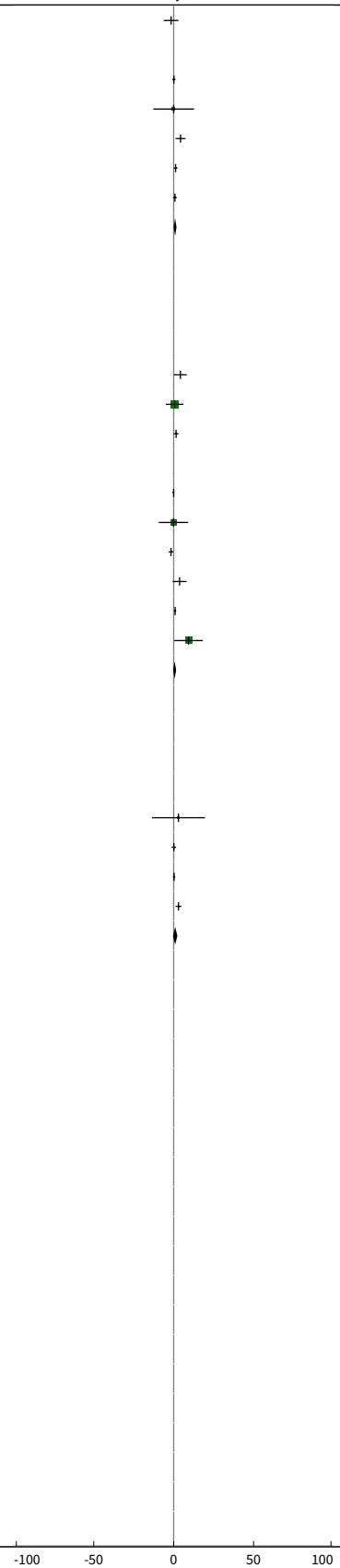


Analysis 33.4. Comparison 33 Weight - end of intervention, Outcome 4 Weight - by medical speciality.

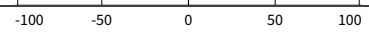
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.4.1 Cardiology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.2 Medical gastroenterology and hepatology							



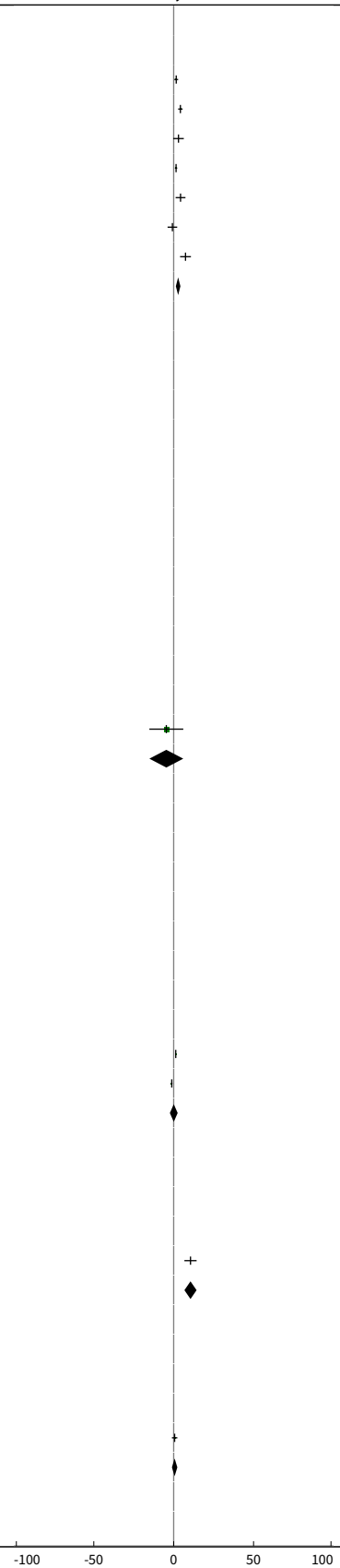
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Subtotal ***	**195**		**150**			**8%**	**0.88[-0.03,1.79]**
Heterogeneity: Tau^2=0.44; Chi^2=8.26, df=5(P=0.14); I^2=39.5%							
Test for overall effect: Z=1.9(P=0.06)							
33.4.3 Geriatrics							
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Subtotal ***	**704**		**718**			**11.1%**	**0.62[-0.3,1.54]**
Heterogeneity: Tau^2=0.77; Chi^2=28.23, df=8(P=0); I^2=71.66%							
Test for overall effect: Z=1.32(P=0.19)							
33.4.4 Pulmonary disease							
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Subtotal ***	**49**		**42**			**5.4%**	**0.95[-0.43,2.33]**
Heterogeneity: Tau^2=1.07; Chi^2=8.38, df=3(P=0.04); I^2=64.2%							
Test for overall effect: Z=1.35(P=0.18)							
33.4.5 Endocrinology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.6 Infectious diseases							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.7 Rheumatology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.8 Haematology							
Subtotal ***	**0**		**0**				**Not estimable**



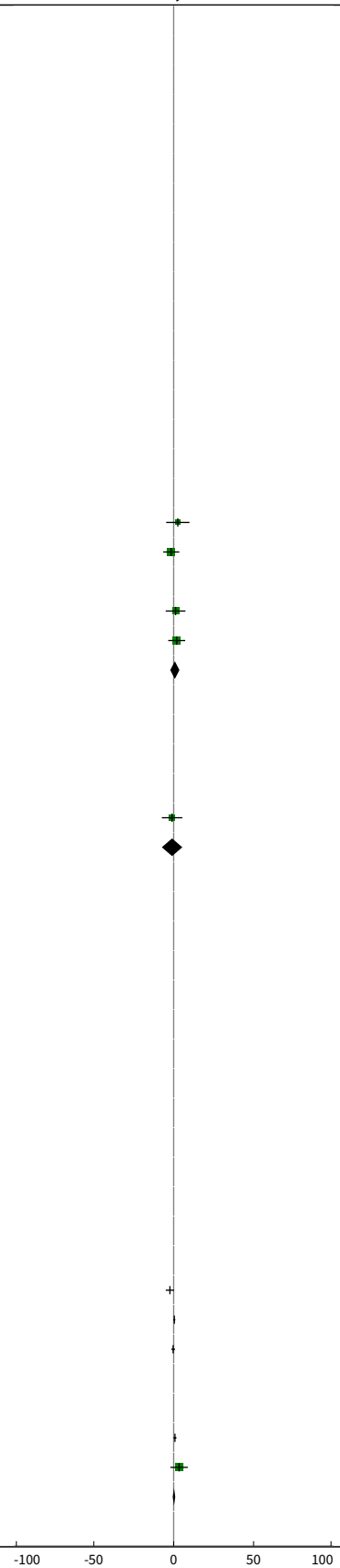
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.9 Nephrology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.10 Gastroenterologic surgery							
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal ***	**773**		**650**			**46.35%**	**1.26[-0.12,2.63]**
Heterogeneity: Tau^2=13.47; Chi^2=2369.74, df=32(P<0.0001); I^2=98.65%							
Test for overall effect: Z=1.8(P=0.07)							
33.4.11 Trauma surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.4.12 Ortopaedics							
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Subtotal ***	**198**		**197**			**10.66%**	**2.79[1.36,4.23]**
Heterogeneity: Tau^2=2.45; Chi^2=27.33, df=6(P=0); I^2=78.04%							
Test for overall effect: Z=3.82(P=0)							
33.4.13 Plastic, reconstructive, and aesthetic surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.14 Vascular surgery							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.15 Transplant surgery							
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Subtotal ***	**14**		**15**			**0.33%**	**-4.6[-15.21,6.01]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.85(P=0.4)							
33.4.16 Urology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.17 Thoracic surgery							
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Subtotal ***	**270**		**278**			**3.74%**	**0.06[-2.39,2.51]**
Heterogeneity: Tau^2=3.09; Chi^2=100.34, df=1(P<0.0001); I^2=99%							
Test for overall effect: Z=0.05(P=0.96)							
33.4.18 Neurological surgery							
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Subtotal ***	**24**		**24**			**1.18%**	**10.53[6.72,14.34]**
Heterogeneity: Not applicable							
Test for overall effect: Z=5.41(P<0.0001)							
33.4.19 Oro-maxillo-facial surgery							
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Subtotal ***	**15**		**17**			**1.68%**	**0.6[-1.1,2.3]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.69(P=0.49)							



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.4.20 Anaesthesiology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.21 Emergency medicine							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.22 Psychiatry							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.23 Neurology							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Subtotal ***	**126**		**121**			**3.11%**	**0.74[-2.15,3.63]**
Heterogeneity: Tau^2=0; Chi^2=1.21, df=3(P=0.75); I^2=0%							
Test for overall effect: Z=0.5(P=0.62)							
33.4.24 Oncology							
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Subtotal ***	**12**		**11**			**0.7%**	**-1[-7.41,5.41]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.31(P=0.76)							
33.4.25 Dermatology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.26 Gynaecology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.4.27 Mixed							
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Subtotal ***	**449**		**393**			**7.75%**	**0.21[-0.58,1]**
Heterogeneity: Tau^2=0.32; Chi^2=7.28, df=4(P=0.12); I^2=45.07%							



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Test for overall effect: Z=0.52(P=0.61)							
Total ***	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi²=36.72, df=1 (P=0), I²=70.04%							

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Analysis 33.5. Comparison 33 Weight - end of intervention, Outcome 5 Weight - based on adequacy of the amount of calories.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.5.1 Clearly adequate in intervention and clearly inadequate in control							
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Subtotal ***	**667**		**620**			**21.02%**	**1.46[-0.19,3.12]**
Heterogeneity: Tau²=8.38; Chi²=1055.13, df=16(P<0.0001); I²=98.48%							
Test for overall effect: Z=1.74(P=0.08)							
33.5.2 Inadequate in the experimental or adequate in the control							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]

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Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Subtotal * **	**816**		**810**			**24.11%**	**0.79[0.06,1.51]**
Heterogeneity: Tau²=1.34; Chi²=74.12, df=16(P<0.0001); I²=78.41%							
Test for overall effect: Z=2.11(P=0.03)							
33.5.3 Experimental group is overfed							
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Subtotal * **	**77**		**74**			**5.39%**	**0.64[-0.86,2.13]**
Heterogeneity: Tau²=0.47; Chi²=4.59, df=4(P=0.33); I²=12.85%							
Test for overall effect: Z=0.83(P=0.4)							
33.5.4 Unclear intake in control or experimental							
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]

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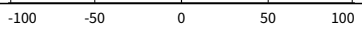
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal * **	**1269**		**1112**			**49.47%**	**1.61[0.5,2.72]**
Heterogeneity: Tau²=8.92; Chi²=1801.3, df=34(P<0.0001); I²=98.11%							
Test for overall effect: Z=2.85(P=0)							
Total * **	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi²=2.02, df=1 (P=0.57), I²=0%							



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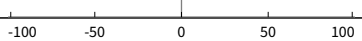
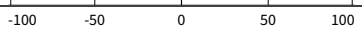
Analysis 33.6. Comparison 33 Weight - end of intervention, Outcome 6 Weight - different screening tools.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.6.1 NRS 2002							
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Subtotal * **	**184**		**169**			**6.24%**	**1.12[-0.29,2.53]**
Heterogeneity: Tau²=1.36; Chi²=12.71, df=3(P=0.01); I²=76.39%							
Test for overall effect: Z=1.55(P=0.12)							
33.6.2 MUST							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.6.3 MNA							
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Subtotal * **	**54**		**50**			**2.56%**	**1.45[-0.02,2.91]**
Heterogeneity: Tau²=0; Chi²=0.1, df=1(P=0.75); I²=0%							
Test for overall effect: Z=1.93(P=0.05)							
33.6.4 SGA							
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Subtotal * **	**226**		**219**			**3.32%**	**-0.65[-3.3,2]**
Heterogeneity: Tau²=2.89; Chi²=4.07, df=1(P=0.04); I²=75.4%							



Favours control — Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Test for overall effect: Z=0.48(P=0.63)							
33.6.5 Other means							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]



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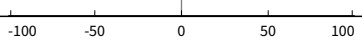
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal * **	**2365**		**2178**			**87.89%**	**1.41[0.68,2.15]**
Heterogeneity: Tau²=6.67; Chi²=2942.67, df=65(P<0.0001); I²=97.79%							
Test for overall effect: Z=3.76(P=0)							
Total * **	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi²=2.26, df=1 (P=0.52), I²=0%							

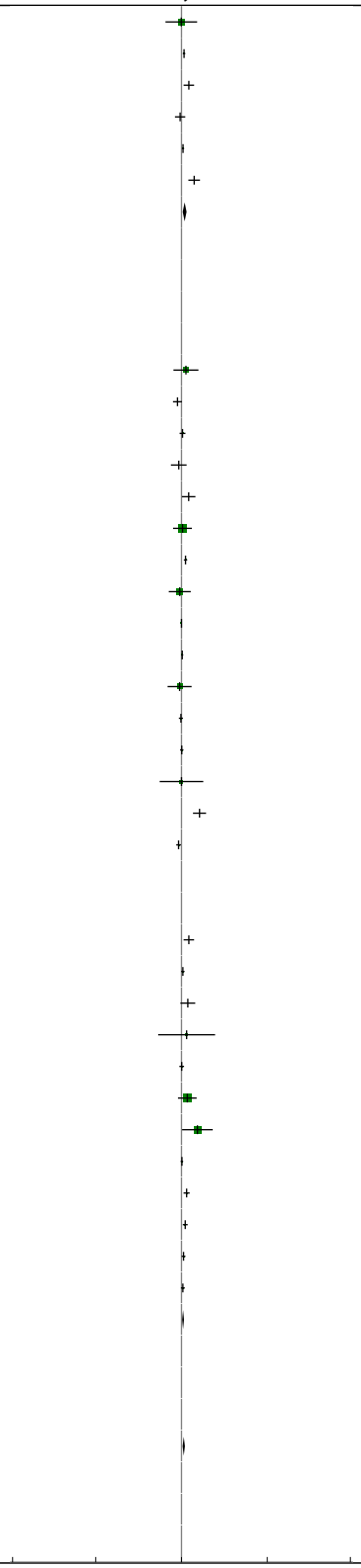
Analysis 33.7. Comparison 33 Weight - end of intervention, Outcome 7 Weight - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.7.1 Major surgery							
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal * **	**1168**		**1045**			**51.07%**	**1.24[0.11,2.37]**
Heterogeneity: Tau²=9.52; Chi²=2589.41, df=35(P<0.0001); I²=98.65%							
Test for overall effect: Z=2.15(P=0.03)							
33.7.2 Stroke							
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Subtotal * **	**93**		**88**			**2.52%**	**0.39[-2.75,3.54]**
Heterogeneity: Tau²=0; Chi²=0.92, df=2(P=0.63); I²=0%							
Test for overall effect: Z=0.24(P=0.81)							
33.7.3 ICU participants including trauma							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.7.4 Frail elderly participants with less severe conditions known to increase protein requirements							
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Subtotal * **	**616**		**640**			**9.83%**	**1.83[0.71,2.96]**
Heterogeneity: Tau²=1.14; Chi²=20.04, df=6(P=0); I²=70.05%							
Test for overall effect: Z=3.18(P=0)							
33.7.5 Participants do not fall into one of the categories above							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Subtotal * **	**952**		**843**			**36.58%**	**0.93[0.38,1.48]**
Heterogeneity: Tau²=0.95; Chi²=107.74, df=27(P<0.0001); I²=74.94%							
Test for overall effect: Z=3.33(P=0)							
Total * **	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi²=2.25, df=1 (P=0.52), I²=0%							



Analysis 33.8. Comparison 33 Weight - end of intervention, Outcome 8 Weight - participants characterised as 'at nutritional risk' due to one of the following criteria.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.8.1 BMI less than 20.5 kg/m2							
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Subtotal ***	**171**		**138**			**2.21%**	**3.97[1.06,6.89]**
Heterogeneity: Tau^2=0; Chi^2=0.03, df=1(P=0.87); I^2=0%							
Test for overall effect: Z=2.67(P=0.01)							
33.8.2 Weight loss of at least 5% during the last three months							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.8.3 Weight loss of at least 10% during the last six months							
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Subtotal ***	**38**		**41**			**3.52%**	**0.3[-0.36,0.96]**
Heterogeneity: Tau^2=0; Chi^2=0.14, df=1(P=0.71); I^2=0%							
Test for overall effect: Z=0.9(P=0.37)							
33.8.4 Insufficient food intake during the last week (50% of requirements or less)							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.8.5 Participants characterised as 'at nutritional risk' by other means							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]

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Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]

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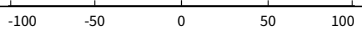
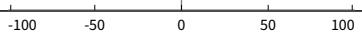
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal ***	**2620**		**2437**			**94.27%**	**1.3[0.59,2]**
Heterogeneity: Tau²=6.46; Chi²=2957.57, df=69(P<0.0001); I²=97.67%							
Test for overall effect: Z=3.62(P=0)							
Total ***	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi²=8.62, df=1 (P=0.01), I²=76.79%							



Analysis 33.9. Comparison 33 Weight - end of intervention, Outcome 9 Weight - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.9.1 Biomarkers							
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
Subtotal ***	**379**		**371**			**14.93%**	**4.37[2.16,6.58]**
Heterogeneity: Tau²=10.44; Chi²=1058.9, df=8(P<0.0001); I²=99.24%							
Test for overall effect: Z=3.87(P=0)							
33.9.2 Anthropometric measures							
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Subtotal ***	**527**		**469**			**15.07%**	**1.04[-0.15,2.23]**
Heterogeneity: Tau²=2.41; Chi²=55.55, df=10(P<0.0001); I²=82%							



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Test for overall effect: Z=1.71(P=0.09)							
33.9.3 Characterised by other means							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]

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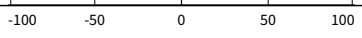
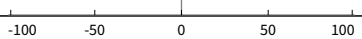
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal ***	**1893**		**1746**			**64.71%**	**0.66[0.13,1.2]**
Heterogeneity: Tau²=1.91; Chi²=571.04, df=50(P<0.0001); I²=91.24%							
Test for overall effect: Z=2.43(P=0.02)							
33.9.4 Mixed							
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Subtotal ***	**30**		**30**			**5.29%**	**-0.37[-1.95,1.22]**
Heterogeneity: Tau²=1.58; Chi²=10.84, df=2(P=0); I²=81.54%							
Test for overall effect: Z=0.45(P=0.65)							
Total ***	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi²=12.5, df=1 (P=0.01), I²=76%							



Analysis 33.10. Comparison 33 Weight - end of intervention, Outcome 10 Weight - randomisation year.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.10.1 Before 1960							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
33.10.2 1960 to 1979							
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Subtotal ***	**12**		**9**			**1.58%**	**3.85[1.69,6.01]**
Heterogeneity: Not applicable							
Test for overall effect: Z=3.5(P=0)							
33.10.3 1980 to 1999							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Subtotal * **	**1252**		**1113**			**58.94%**	**1.23[0.24,2.22]**
Heterogeneity: Tau²=8.28; Chi²=2092.84, df=42(P<0.0001); I²=97.99%							
Test for overall effect: Z=2.44(P=0.01)							
33.10.4 After 1999							
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]

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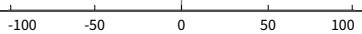
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal * **	**1565**		**1494**			**39.48%**	**1.07[0.35,1.79]**
Heterogeneity: Tau²=2.19; Chi²=331.29, df=29(P<0.0001); I²=91.25%							
Test for overall effect: Z=2.92(P=0)							
Total * **	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi²=5.77, df=1 (P=0.06), I²=65.31%							

Analysis 33.11. Comparison 33 Weight - end of intervention, Outcome 11 Weight - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

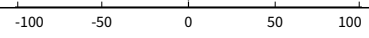
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.11.1 Three days or more							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.59%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.92%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.47%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.78%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.74%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.68%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.29%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		1.01%	-1.59[-6.17,2.99]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.88%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.15%	4.2[0.26,8.14]



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.87%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.87%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.87%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.87%	4.8[4.36,5.24]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.84%	0.6[-4.89,6.09]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.81%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.87%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.7%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.46%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.73%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.72%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.88%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.85%	0.43[-0.18,1.04]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.62%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.68%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.77%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.86%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.85%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.77%	-0.32[-1.53,0.89]
Kearns 1992	16	72 (20)	15	72 (16)		0.25%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.84%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.24%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.55%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.55%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.73%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.18%	10.53[6.72,14.34]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.33%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.84%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.22%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.75%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.36%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.37%	-0.8[-3.8,2.2]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.36%	4.3[1.24,7.36]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.81%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		1.06%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.37%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.85%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.87%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.15%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.86%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.73%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.7%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.75%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.85%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.44%	9.3[0.36,18.24]

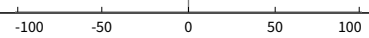
Favours control -100 -50 0 50 100 Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.58%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.32%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.34%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.87%	0.06[-0.37,0.49]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.84%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.86%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.85%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.66%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.74%	2.19[0.77,3.61]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.97%	0.3[-4.48,5.08]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.28%	7.41[4.02,10.8]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.79%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.79%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.9%	0.8[-4.36,5.96]
Subtotal * **	**2740**		**2547**			**93.17%**	**1.4[0.7,2.1]**
Heterogeneity: Tau²=6.39; Chi²=2944.92, df=68(P<0.0001); I²=97.69%							
Test for overall effect: Z=3.9(P<0.0001)							
33.11.2 Less than three days							
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.81%	0.15[-0.83,1.13]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.42%	-0.1[-9.33,9.13]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.63%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.69%	0.3[-1.37,1.97]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.29%	4.3[0.96,7.64]
Subtotal * **	**89**		**69**			**6.83%**	**0.15[-1.62,1.92]**
Heterogeneity: Tau²=2.39; Chi²=13.49, df=4(P=0.01); I²=70.35%							
Test for overall effect: Z=0.17(P=0.87)							
Total * **	**2829**		**2616**			**100%**	**1.32[0.65,2]**
Heterogeneity: Tau²=6.32; Chi²=2967.33, df=73(P<0.0001); I²=97.54%							
Test for overall effect: Z=3.84(P=0)							
Test for subgroup differences: Chi²=1.64, df=1 (P=0.2), I²=39.1%							

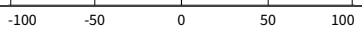


Analysis 33.12. Comparison 33 Weight - end of intervention, Outcome 12 Weight - Missing SDs.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
33.12.1 missing SDs imputed from all trials							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.52%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.82%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.31%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.59%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.56%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.51%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.16%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.7 (7.8)		0.9%	-1.59[-6.17,2.99]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.69%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		1.02%	4.2[0.26,8.14]

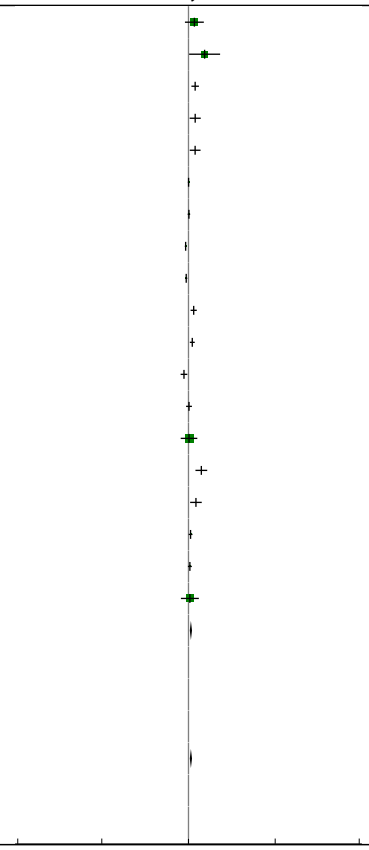


Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.68%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.67%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.68%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.67%	4.8[4.36,5.24]
De Sousa 2012	20	51.8 (10.8)	15	51.2 (5.5)		0.75%	0.6[-4.89,6.09]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.62%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.67%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.62%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.41%	6.09[-2.55,14.73]
Fan 1994	64	55 (15.9)	60	55 (16)		0.73%	0[-5.62,5.62]
Førli 2001	18	1.2 (1.6)	19	0 (1.1)		1.63%	1.2[0.31,2.09]
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.65%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.54%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (1.3)	300	-0.9 (3.5)		1.68%	-0.02[-0.44,0.4]
Hoffmann 1988	43	-1 (2.6)	16	-3.8 (2)		1.58%	2.8[1.55,4.05]
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.69%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.66%	0.43[-0.18,1.04]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.55%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.5%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.68%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.67%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.66%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.59%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.62%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.22%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.74%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.11%	1.1[-2.43,4.63]
Lidder 2013a	32	70.8 (16.7)	30	73 (13.9)		0.49%	-2.2[-9.82,5.42]
Lidder 2013b	27	71.7 (16.3)	31	72.2 (12.8)		0.49%	-0.53[-8.15,7.09]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.55%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.05%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.37%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.3%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.65%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.09%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (3.9)	97	5.1 (0.9)		1.64%	-2[-2.79,-1.21]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.56%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0.9)	13	-2.5 (1.7)		1.62%	5.4[4.43,6.37]
McWhirter 1996b	25	3.3 (1.1)	13	-2.5 (1.7)		1.62%	5.8[4.78,6.82]
Miller 2006a	24	-0.9 (4.8)	25	-5.2 (6.1)		1.21%	4.3[1.23,7.37]
Miller 2006b	23	-2.6 (5.1)	25	-1.8 (5.5)		1.23%	-0.8[-3.8,2.2]
Moreno 2016	24	-0.9 (4.7)	25	-5.2 (6.1)		1.21%	4.3[1.24,7.36]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.62%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.95%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.33%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.66%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.77%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.67%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.55%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.52%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.57%	0.13[-1.24,1.5]



Favours control — Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.75%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.39%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.41%	3.85[1.69,6.01]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.18%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.2%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.68%	0.06[-0.37,0.49]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.65%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.67%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.66%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.49%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.56%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.46%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.51%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.86%	0.3[-4.48,5.08]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.14%	7.41[4.02,10.8]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.15%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.61%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.6%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.8%	0.8[-4.36,5.96]
Subtotal * **	**2829**		**2616**			**100%**	**1.4[0.76,2.03]**
Heterogeneity: Tau²=6.22; Chi²=3217.31, df=80(P<0.0001); I²=97.51%							
Test for overall effect: Z=4.31(P<0.0001)							
Total * **	**2829**		**2616**			**100%**	**1.4[0.76,2.03]**
Heterogeneity: Tau²=6.22; Chi²=3217.31, df=80(P<0.0001); I²=97.51%							
Test for overall effect: Z=4.31(P<0.0001)							



Comparison 34. Weight - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Weight - overall	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
2 Weight - bias	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
2.1 High risk of bias	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
2.2 Low risk of bias	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
3 Weight - mode of delivery	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
3.1 General nutrition support	6	1328	Mean Difference (IV, Random, 95% CI)	0.41 [-0.58, 1.41]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
3.2 Fortified nutrition	2	230	Mean Difference (IV, Random, 95% CI)	1.45 [-0.92, 3.83]
3.3 Oral nutrition support	32	2149	Mean Difference (IV, Random, 95% CI)	0.29 [-0.22, 0.80]
3.4 Enteral nutrition	31	2081	Mean Difference (IV, Random, 95% CI)	1.98 [0.74, 3.22]
3.5 Parenteral nutrition	22	1082	Mean Difference (IV, Random, 95% CI)	1.25 [-0.25, 2.75]
3.6 Mixed	1	46	Mean Difference (IV, Random, 95% CI)	-3.90 [-4.45, -3.35]
4 Weight - by medical specialty	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
4.1 Cardiology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Medical gastroenterology and hepatology	8	388	Mean Difference (IV, Random, 95% CI)	0.13 [-1.05, 1.30]
4.3 Geriatrics	11	1647	Mean Difference (IV, Random, 95% CI)	0.61 [-0.27, 1.50]
4.4 Pulmonary disease	4	91	Mean Difference (IV, Random, 95% CI)	0.95 [-0.43, 2.33]
4.5 Endocrinology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.6 Infectious diseases	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.7 Rheumatology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.8 Haematology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.9 Nephrology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.10 Gastroenterologic surgery	44	2260	Mean Difference (IV, Random, 95% CI)	1.09 [-0.11, 2.29]
4.11 Trauma surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.12 Ortopaedics	8	697	Mean Difference (IV, Random, 95% CI)	2.62 [1.21, 4.02]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
4.13 Plastic, reconstructive, and aesthetic surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.14 Vascular surgery	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.15 Transplant surgery	1	29	Mean Difference (IV, Random, 95% CI)	-4.60 [-15.21, 6.01]
4.16 Urology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.17 Thoracic surgery	2	548	Mean Difference (IV, Random, 95% CI)	0.06 [-2.39, 2.51]
4.18 Neurological surgery	1	48	Mean Difference (IV, Random, 95% CI)	10.53 [6.72, 14.34]
4.19 Oro-maxillo-facial surgery	1	32	Mean Difference (IV, Random, 95% CI)	0.6 [-1.10, 2.30]
4.20 Anaesthesiology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.21 Emergency medicine	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.22 Psychiatry	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.23 Neurology	6	311	Mean Difference (IV, Random, 95% CI)	1.72 [0.19, 3.25]
4.24 Oncology	1	23	Mean Difference (IV, Random, 95% CI)	-1.0 [-7.41, 5.41]
4.25 Dermatology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.26 Gynaecology	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
4.27 Mixed	7	842	Mean Difference (IV, Random, 95% CI)	0.22 [-0.58, 1.02]
5 Weight - based on adequacy of the amount of nutrition	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
5.1 Clearly adequate in intervention and clearly inadequate in control	22	1933	Mean Difference (IV, Random, 95% CI)	1.03 [-0.41, 2.46]
5.2 Inadequate in the experimental or adequate in the control	21	1992	Mean Difference (IV, Random, 95% CI)	0.86 [0.16, 1.57]

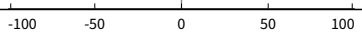
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
5.3 Experimental group is overfed	5	151	Mean Difference (IV, Random, 95% CI)	0.64 [-0.87, 2.14]
5.4 Unclear intake in control or experimental	46	2840	Mean Difference (IV, Random, 95% CI)	1.34 [0.35, 2.33]
6 Weight - different screening tools	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
6.1 NRS 2002	4	353	Mean Difference (IV, Random, 95% CI)	1.12 [-0.29, 2.53]
6.2 MUST	1	64	Mean Difference (IV, Random, 95% CI)	2.10 [0.30, 3.90]
6.3 MNA	2	104	Mean Difference (IV, Random, 95% CI)	1.56 [0.09, 3.03]
6.4 SGA	4	1091	Mean Difference (IV, Random, 95% CI)	-1.03 [-2.12, 0.06]
6.5 Other means	83	5304	Mean Difference (IV, Random, 95% CI)	1.26 [0.56, 1.95]
7 Weight - participants characterised as 'at nutritional risk' due to one of the following conditions	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
7.1 Major surgery	49	3050	Mean Difference (IV, Random, 95% CI)	1.08 [0.08, 2.09]
7.2 Stroke	4	245	Mean Difference (IV, Random, 95% CI)	1.68 [0.12, 3.24]
7.3 ICU participants including trauma	1	43	Mean Difference (IV, Random, 95% CI)	-1.6 [-2.37, -0.83]
7.4 Frail elderly participants with less severe conditions known to increase protein requirements	9	1558	Mean Difference (IV, Random, 95% CI)	1.61 [0.59, 2.64]
7.5 Participants do not fall into one of the categories above	31	2020	Mean Difference (IV, Random, 95% CI)	0.85 [0.33, 1.38]
8 Weight - participants characterised as 'at nutritional risk' due to one of the following criteria	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
8.1 BMI less than 20.5 kg/m2	5	309	Mean Difference (IV, Random, 95% CI)	3.97 [1.06, 6.89]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
8.2 Weight loss of at least 5% during the last three months	2	30	Mean Difference (IV, Random, 95% CI)	-5.83 [-15.15, 3.48]
8.3 Weight loss of at least 10% during the last six months	2	79	Mean Difference (IV, Random, 95% CI)	0.30 [-0.36, 0.96]
8.4 Insufficient food intake during the last week (50% of requirements or less)	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
8.5 Participants characterised as 'at nutritional risk' by other means	85	6498	Mean Difference (IV, Random, 95% CI)	1.12 [0.48, 1.77]
9 Weight - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
9.1 Biomarkers	9	750	Mean Difference (IV, Random, 95% CI)	4.37 [2.16, 6.58]
9.2 Anthropometric measures	15	996	Mean Difference (IV, Random, 95% CI)	0.87 [-0.30, 2.04]
9.3 Characterised by other means	67	5110	Mean Difference (IV, Random, 95% CI)	0.49 [0.01, 0.96]
9.4 Mixed	3	60	Mean Difference (IV, Random, 95% CI)	-0.37 [-1.95, 1.22]
10 Weight - randomisation year	23	1940	Mean Difference (IV, Random, 95% CI)	0.48 [-0.44, 1.39]
10.1 Before 1960	0	0	Mean Difference (IV, Random, 95% CI)	0.0 [0.0, 0.0]
10.2 1960 to 1979	1	21	Mean Difference (IV, Random, 95% CI)	3.83 [1.66, 6.00]
10.3 1980 to 1999	14	372	Mean Difference (IV, Random, 95% CI)	0.34 [-0.95, 1.64]
10.4 After 1999	8	1547	Mean Difference (IV, Random, 95% CI)	0.01 [-1.09, 1.12]
11 Weight - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more	94	6916	Mean Difference (IV, Random, 95% CI)	1.13 [0.50, 1.75]
11.1 Three days or more	89	6758	Mean Difference (IV, Random, 95% CI)	1.18 [0.54, 1.83]

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
11.2 Less than three days	5	158	Mean Difference (IV, Random, 95% CI)	0.15 [-1.62, 1.92]

Analysis 34.1. Comparison 34 Weight - maximum follow-up, Outcome 1 Weight - overall.

Study or subgroup	Experimental		Control		Mean Difference	Weight	Mean Difference
	N	Mean(SD)	N	Mean(SD)	Random, 95% CI		Random, 95% CI
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]

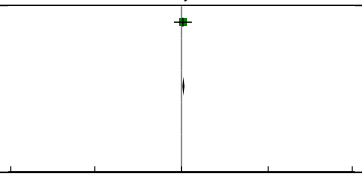


Favours control — Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]

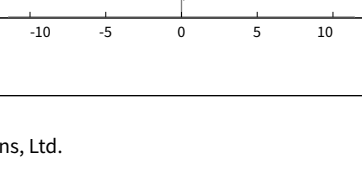
Favours control -100 -50 0 50 100 Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Total ***	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau²=6.15; Chi²=3287.24, df=85(P<0.0001); I²=97.41%							
Test for overall effect: Z=3.54(P=0)							



Analysis 34.2. Comparison 34 Weight - maximum follow-up, Outcome 2 Weight - bias.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.2.1 High risk of bias							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]

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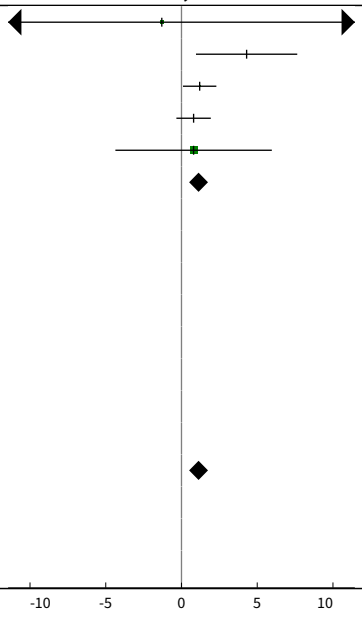
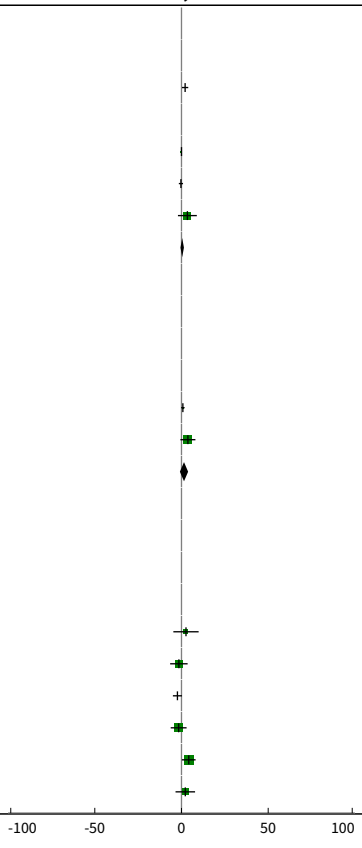
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal ***	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau²=6.15; Chi²=3287.24, df=85(P<0.0001); I²=97.41%							
Test for overall effect: Z=3.54(P=0)							
34.2.2 Low risk of bias							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
Total ***	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau²=6.15; Chi²=3287.24, df=85(P<0.0001); I²=97.41%							
Test for overall effect: Z=3.54(P=0)							
Test for subgroup differences: Not applicable							

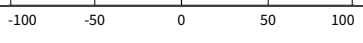


Analysis 34.3. Comparison 34 Weight - maximum follow-up, Outcome 3 Weight - mode of delivery.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.3.1 General nutrition support							
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Subtotal ***	**660**		**668**			**5.37%**	**0.41[-0.58,1.41]**
Heterogeneity: Tau²=0.52; Chi²=6.98, df=3(P=0.07); I²=57.02%							
Test for overall effect: Z=0.81(P=0.42)							
34.3.2 Fortified nutrition							
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Subtotal ***	**117**		**113**			**2.5%**	**1.45[-0.92,3.83]**
Heterogeneity: Tau²=1.64; Chi²=1.64, df=1(P=0.2); I²=38.96%							
Test for overall effect: Z=1.2(P=0.23)							
34.3.3 Oral nutrition support							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]



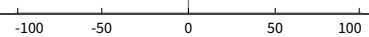
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Subtotal * **	**1091**		**1058**			**31.8%**	**0.29[-0.22,0.8]**
Heterogeneity: Tau^2=0.65; Chi^2=65.3, df=29(P=0); I^2=55.59%							
Test for overall effect: Z=1.13(P=0.26)							
34.3.4 Enteral nutrition							
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Chen 1995a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 1995b	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 2000b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]



Favours control

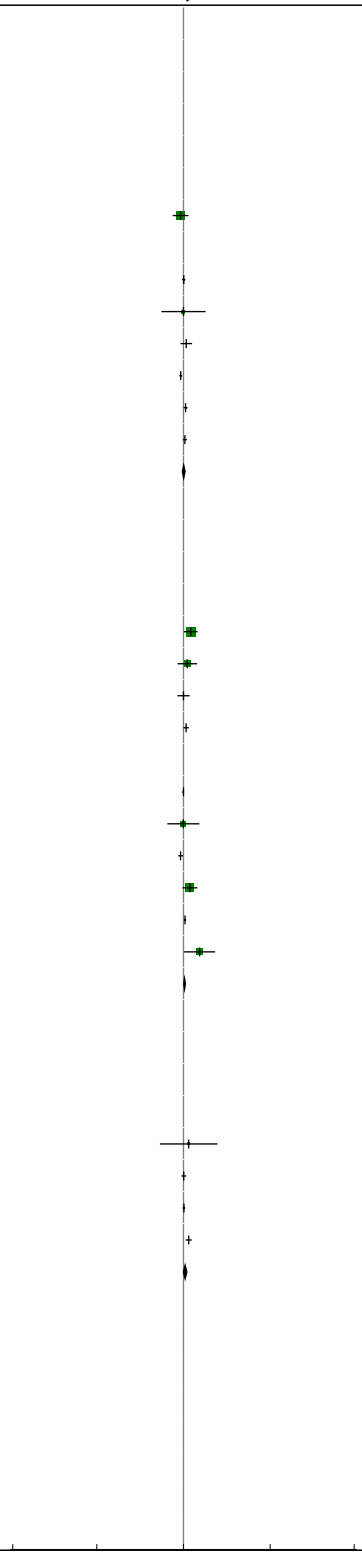
Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal * **	**1159**		**922**			**34.66%**	**1.98[0.74,3.22]**
Heterogeneity: Tau²=8.8; Chi²=2114.67, df=27(P<0.0001); I²=98.72%							
Test for overall effect: Z=3.13(P=0)							
34.3.5 Parenteral nutrition							
Chen 2000a	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Subtotal * **	**640**		**442**			**24.05%**	**1.25[-0.25,2.75]**
Heterogeneity: Tau²=9.07; Chi²=551.99, df=20(P<0.0001); I²=96.38%							
Test for overall effect: Z=1.64(P=0.1)							
34.3.6 Mixed							
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Subtotal * **	**24**		**22**			**1.63%**	**-3.9[-4.45,-3.35]**
Heterogeneity: Tau²=0; Chi²=0, df=0(P<0.0001); I²=100%							
Test for overall effect: Z=13.92(P<0.0001)							
Total * **	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau²=6.15; Chi²=3287.24, df=85(P<0.0001); I²=97.41%							
Test for overall effect: Z=3.54(P=0)							
Test for subgroup differences: Chi²=174.66, df=1 (P<0.0001), I²=97.14%							

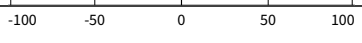


Analysis 34.4. Comparison 34 Weight - maximum follow-up, Outcome 4 Weight - by medical speciality.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.4.1 Cardiology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.2 Medical gastroenterology and hepatology							
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Subtotal ***	**214**		**174**			**8.51%**	**0.13[-1.05,1.3]**
Heterogeneity: Tau^2=1.41; Chi^2=23.87, df=6(P=0); I^2=74.86%							
Test for overall effect: Z=0.21(P=0.83)							
34.4.3 Geriatrics							
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Subtotal ***	**823**		**824**			**10.71%**	**0.61[-0.27,1.5]**
Heterogeneity: Tau^2=0.74; Chi^2=28.75, df=9(P=0); I^2=68.69%							
Test for overall effect: Z=1.36(P=0.17)							
34.4.4 Pulmonary disease							
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Subtotal ***	**49**		**42**			**4.72%**	**0.95[-0.43,2.33]**
Heterogeneity: Tau^2=1.07; Chi^2=8.38, df=3(P=0.04); I^2=64.2%							
Test for overall effect: Z=1.35(P=0.18)							
34.4.5 Endocrinology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							

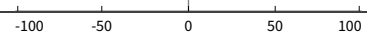


Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.4.6 Infectious diseases							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.7 Rheumatology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.8 Haematology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.9 Nephrology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.10 Gastroenterologic surgery							
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]



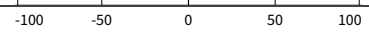
Favours control — Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal * **	**1319**		**941**			**49.58%**	**1.09[-0.11,2.29]**
Heterogeneity: Tau^2=12.52; Chi^2=2853.67, df=41(P<0.0001); I^2=98.56%							
Test for overall effect: Z=1.78(P=0.07)							
34.4.11 Trauma surgery							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.12 Ortopaedics							
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Subtotal * **	**343**		**354**			**8.94%**	**2.62[1.21,4.02]**
Heterogeneity: Tau^2=2.13; Chi^2=23.73, df=6(P=0); I^2=74.72%							
Test for overall effect: Z=3.66(P=0)							
34.4.13 Plastic, reconstructive, and aesthetic surgery							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.14 Vascular surgery							
Subtotal * **	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.15 Transplant surgery							
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Subtotal * **	**14**		**15**			**0.29%**	**-4.6[-15.21,6.01]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.85(P=0.4)							
34.4.16 Urology							



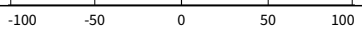
Favours control — Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.17 Thoracic surgery							
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Subtotal ***	**270**		**278**			**3.28%**	**0.06[-2.39,2.51]**
Heterogeneity: Tau^2=3.09; Chi^2=100.34, df=1(P<0.0001); I^2=99%							
Test for overall effect: Z=0.05(P=0.96)							
34.4.18 Neurological surgery							
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Subtotal ***	**24**		**24**			**1.02%**	**10.53[6.72,14.34]**
Heterogeneity: Not applicable							
Test for overall effect: Z=5.41(P<0.0001)							
34.4.19 Oro-maxillo-facial surgery							
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Subtotal ***	**15**		**17**			**1.47%**	**0.6[-1.1,2.3]**
Heterogeneity: Not applicable							
Test for overall effect: Z=0.69(P=0.49)							
34.4.20 Anaesthesiology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.21 Emergency medicine							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.22 Psychiatry							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.23 Neurology							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Subtotal ***	**159**		**152**			**4.13%**	**1.72[0.19,3.25]**
Heterogeneity: Tau^2=0; Chi^2=1.83, df=4(P=0.77); I^2=0%							
Test for overall effect: Z=2.21(P=0.03)							
34.4.24 Oncology							
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Subtotal ***	**12**		**11**			**0.6%**	**-1[-7.41,5.41]**



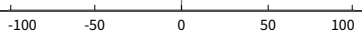
Favours control — Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Heterogeneity: Not applicable							
Test for overall effect: Z=0.31(P=0.76)							
34.4.25 Dermatology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.26 Gynaecology							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.4.27 Mixed							
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Subtotal ***	**449**		**393**			**6.76%**	**0.22[-0.58,1.02]**
Heterogeneity: Tau^2=0.33; Chi^2=7.35, df=4(P=0.12); I^2=45.55%							
Test for overall effect: Z=0.54(P=0.59)							
Total ***	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau^2=6.15; Chi^2=3287.24, df=85(P<0.0001); I^2=97.41%							
Test for overall effect: Z=3.54(P=0)							
Test for subgroup differences: Chi^2=38.25, df=1 (P<0.0001), I^2=71.24%							

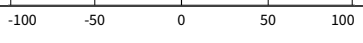


Analysis 34.5. Comparison 34 Weight - maximum follow-up, Outcome 5 Weight - based on adequacy of the amount of nutrition.

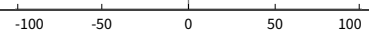
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.5.1 Clearly adequate in intervention and clearly inadequate in control							
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Subtotal * **	**1097**		**836**			**21.56%**	**1.03[-0.41,2.46]**
Heterogeneity: Tau^2=7.24; Chi^2=1227.44, df=18(P<0.0001); I^2=98.53%							
Test for overall effect: Z=1.4(P=0.16)							
34.5.2 Inadequate in the experimental or adequate in the control							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Subtotal * **	**994**		**998**			**22.47%**	**0.86[0.16,1.57]**
Heterogeneity: Tau^2=1.33; Chi^2=76.52, df=17(P<0.0001); I^2=77.78%							
Test for overall effect: Z=2.4(P=0.02)							
34.5.3 Experimental group is overfed							
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Subtotal * **	**77**		**74**			**4.68%**	**0.64[-0.87,2.14]**
Heterogeneity: Tau^2=0.5; Chi^2=4.63, df=4(P=0.33); I^2=13.57%							
Test for overall effect: Z=0.83(P=0.41)							
34.5.4 Unclear intake in control or experimental							
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal * **	**1523**		**1317**			**51.29%**	**1.34[0.35,2.33]**
Heterogeneity: Tau²=8.4; Chi²=1941.32, df=43(P<0.0001); I²=97.79%							
Test for overall effect: Z=2.65(P=0.01)							
Total * **	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau²=6.15; Chi²=3287.24, df=85(P<0.0001); I²=97.41%							
Test for overall effect: Z=3.54(P=0)							



Favours control

Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Test for subgroup differences: Chi²=0.81, df=1 (P=0.85), I²=0%							

Favours control -100 -50 0 50 100 Favours nutrition support

Analysis 34.6. Comparison 34 Weight - maximum follow-up, Outcome 6 Weight - different screening tools.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.6.1 NRS 2002							
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Subtotal ***	**184**		**169**			**5.44%**	**1.12[-0.29,2.53]**
Heterogeneity: Tau²=1.36; Chi²=12.71, df=3(P=0.01); I²=76.39%							
Test for overall effect: Z=1.55(P=0.12)							
34.6.2 MUST							
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Subtotal ***	**33**		**31**			**1.45%**	**2.1[0.3,3.9]**
Heterogeneity: Not applicable							
Test for overall effect: Z=2.29(P=0.02)							
34.6.3 MNA							
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Subtotal ***	**54**		**50**			**2.2%**	**1.56[0.09,3.03]**
Heterogeneity: Tau²=0; Chi²=0.05, df=1(P=0.82); I²=0%							
Test for overall effect: Z=2.08(P=0.04)							
34.6.4 SGA							
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Subtotal ***	**656**		**435**			**6.16%**	**-1.03[-2.12,0.06]**
Heterogeneity: Tau²=0.98; Chi²=31.02, df=3(P<0.0001); I²=90.33%							
Test for overall effect: Z=1.85(P=0.07)							
34.6.5 Other means							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]

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Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]

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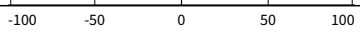
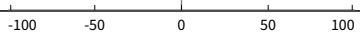
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal ***	**2764**		**2540**			**84.75%**	**1.26[0.56,1.95]**
Heterogeneity: Tau²=6.52; Chi²=3064.73, df=74(P<0.0001); I²=97.59%							
Test for overall effect: Z=3.55(P=0)							
Total ***	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau²=6.15; Chi²=3287.24, df=85(P<0.0001); I²=97.41%							
Test for overall effect: Z=3.54(P=0)							
Test for subgroup differences: Chi²=15.55, df=1 (P=0), I²=74.28%							



Analysis 34.7. Comparison 34 Weight - maximum follow-up, Outcome 7 Weight - participants characterised as 'at nutritional risk' due to one of the following conditions.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.7.1 Major surgery							
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal * **	**1714**		**1336**			**53.71%**	**1.08[0.08,2.09]**
Heterogeneity: Tau²=9.09; Chi²=2985.8, df=44(P<0.0001); I²=98.53%							
Test for overall effect: Z=2.11(P=0.03)							
34.7.2 Stroke							
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Subtotal * **	**126**		**119**			**3.62%**	**1.68[0.12,3.24]**
Heterogeneity: Tau²=0; Chi²=1.77, df=3(P=0.62); I²=0%							
Test for overall effect: Z=2.11(P=0.03)							
34.7.3 ICU participants including trauma							
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]

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Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Subtotal ***	**19**		**24**			**1.61%**	**-1.6[-2.37,-0.83]**
Heterogeneity: Not applicable							
Test for overall effect: Z=4.08(P<0.0001)							
34.7.4 Frail elderly participants with less severe conditions known to increase protein requirements							
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Subtotal ***	**761**		**797**			**8.22%**	**1.61[0.59,2.64]**
Heterogeneity: Tau^2=0.8; Chi^2=15.5, df=6(P=0.02); I^2=61.29%							
Test for overall effect: Z=3.08(P=0)							
34.7.5 Participants do not fall into one of the categories above							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Subtotal ***	**1071**		**949**			**32.84%**	**0.85[0.33,1.38]**

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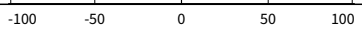
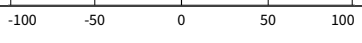
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Heterogeneity: Tau²=0.88; Chi²=102.14, df=28(P<0.0001); I²=72.59%							
Test for overall effect: Z=3.17(P=0)							
Total ***	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau²=6.15; Chi²=3287.24, df=85(P<0.0001); I²=97.41%							
Test for overall effect: Z=3.54(P=0)							
Test for subgroup differences: Chi²=38.34, df=1 (P<0.0001), I²=89.57%							

Analysis 34.8. Comparison 34 Weight - maximum follow-up, Outcome 8 Weight - participants characterised as 'at nutritional risk' due to one of the following criteria.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.8.1 BMI less than 20.5 kg/m2							
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Subtotal ***	**171**		**138**			**1.91%**	**3.97[1.06,6.89]**
Heterogeneity: Tau²=0; Chi²=0.03, df=1(P=0.87); I²=0%							
Test for overall effect: Z=2.67(P=0.01)							
34.8.2 Weight loss of at least 5% during the last three months							
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Subtotal ***	**20**		**10**			**0.39%**	**-5.83[-15.15,3.48]**
Heterogeneity: Tau²=0; Chi²=0.84, df=1(P=0.36); I²=0%							
Test for overall effect: Z=1.23(P=0.22)							
34.8.3 Weight loss of at least 10% during the last six months							
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Subtotal ***	**38**		**41**			**3.08%**	**0.3[-0.36,0.96]**
Heterogeneity: Tau²=0; Chi²=0.14, df=1(P=0.71); I²=0%							
Test for overall effect: Z=0.9(P=0.37)							
34.8.4 Insufficient food intake during the last week (50% of requirements or less)							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.8.5 Participants characterised as 'at nutritional risk' by other means							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]



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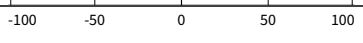
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal * **	**3462**		**3036**			**94.62%**	**1.12[0.48,1.77]**
Heterogeneity: Tau^2=6.26; Chi^2=3276.97, df=79(P<0.0001); I^2=97.59%							
Test for overall effect: Z=3.41(P=0)							
Total * **	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau^2=6.15; Chi^2=3287.24, df=85(P<0.0001); I^2=97.41%							
Test for overall effect: Z=3.54(P=0)							
Test for subgroup differences: Chi^2=9.65, df=1 (P=0.02), I^2=68.92%							

Analysis 34.9. Comparison 34 Weight - maximum follow-up, Outcome 9 Weight - participants characterised as 'at nutritional risk' due to biomarkers or anthropometrics.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.9.1 Biomarkers							
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
Subtotal * **	**379**		**371**			**13.04%**	**4.37[2.16,6.58]**
Heterogeneity: Tau^2=10.44; Chi^2=1058.9, df=8(P<0.0001); I^2=99.24%							
Test for overall effect: Z=3.87(P=0)							
34.9.2 Anthropometric measures							
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Subtotal * **	**527**		**469**			**12.79%**	**0.87[-0.3,2.04]**
Heterogeneity: Tau^2=2.18; Chi^2=50.37, df=10(P<0.0001); I^2=80.15%							
Test for overall effect: Z=1.46(P=0.15)							
34.9.3 Characterised by other means							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]



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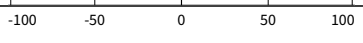
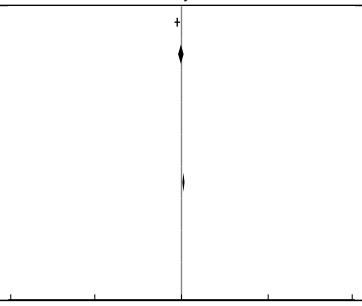
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal * **	**2755**		**2355**			**69.55%**	**0.49[0.01,0.96]**
Heterogeneity: Tau²=1.9; Chi²=713.12, df=62(P<0.0001); I²=91.31%							
Test for overall effect: Z=1.99(P=0.05)							
34.9.4 Mixed							
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]



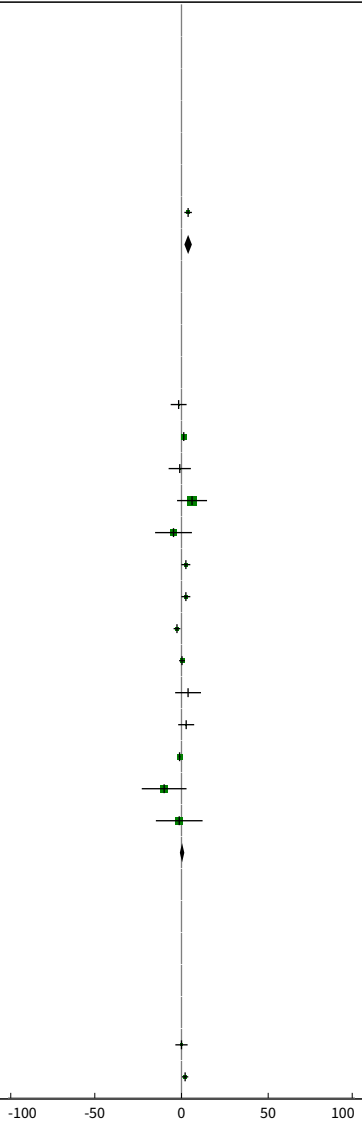
Favours control — Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Subtotal ***	**30**		**30**			**4.62%**	**-0.37[-1.95,1.22]**
Heterogeneity: Tau^2=1.58; Chi^2=10.84, df=2(P=0); I^2=81.54%							
Test for overall effect: Z=0.45(P=0.65)							
Total ***	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau^2=6.15; Chi^2=3287.24, df=85(P<0.0001); I^2=97.41%							
Test for overall effect: Z=3.54(P=0)							
Test for subgroup differences: Chi^2=13.01, df=1 (P=0), I^2=76.94%							



Analysis 34.10. Comparison 34 Weight - maximum follow-up, Outcome 10 Weight - randomisation year.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.10.1 Before 1960							
Subtotal ***	**0**		**0**				**Not estimable**
Heterogeneity: Not applicable							
Test for overall effect: Not applicable							
34.10.2 1960 to 1979							
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		5.59%	3.83[1.66,6]
Subtotal ***	**12**		**9**			**5.59%**	**3.83[1.66,6]**
Heterogeneity: Not applicable							
Test for overall effect: Z=3.46(P=0)							
34.10.3 1980 to 1999							
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		2.69%	-1.64[-6.22,2.94]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		8.09%	1.3[1.11,1.49]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		1.64%	-1[-7.41,5.41]
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.99%	6.09[-2.55,14.73]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.69%	-4.6[-15.21,6.01]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		4.99%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		4.99%	2.53[-0.02,5.08]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		5.97%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		6.4%	0.3[-1.37,1.97]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		1.28%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		2.67%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		7.94%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.48%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.44%	-1.3[-14.77,12.17]
Subtotal ***	**213**		**159**			**49.27%**	**0.34[-0.95,1.64]**
Heterogeneity: Tau^2=2.61; Chi^2=106.86, df=13(P<0.0001); I^2=87.83%							
Test for overall effect: Z=0.52(P=0.6)							
34.10.4 After 1999							
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Gariballa 2006	119	69 (14)	106	69 (13)		3.7%	0[-3.53,3.53]
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		6.2%	2.1[0.3,3.9]

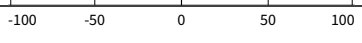


Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		7.83%	0.46[-0.16,1.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		7.68%	-1.6[-2.37,-0.83]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		7.95%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		7.93%	-1.4[-1.89,-0.91]
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		3.86%	7.39[4,10.78]
Subtotal * **	**883**		**664**			**45.14%**	**0.01[-1.09,1.12]**
Heterogeneity: Tau²=1.63; Chi²=67.76, df=6(P<0.0001); I²=91.15%							
Test for overall effect: Z=0.03(P=0.98)							
Total * **	**1108**		**832**			**100%**	**0.48[-0.44,1.39]**
Heterogeneity: Tau²=2.71; Chi²=321.79, df=21(P<0.0001); I²=93.47%							
Test for overall effect: Z=1.01(P=0.31)							
Test for subgroup differences: Chi²=9.75, df=1 (P=0.01), I²=79.5%							

Analysis 34.11. Comparison 34 Weight - maximum follow-up, Outcome 11 Weight - trials where the intervention lasts fewer than three days compared with trials where the intervention lasts three days or more.

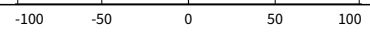
Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
34.11.1 Three days or more							
Abalan 1992	15	48.9 (9.2)	14	46.3 (10.7)		0.51%	2.6[-4.69,9.89]
Aquilani 2008	24	64.4 (9)	24	65.9 (8.8)		0.79%	-1.5[-6.54,3.54]
Arias 2008	149	56 (11.4)	149	58.3 (11.7)		1.27%	-2.34[-4.96,0.28]
Bastow 1983a	39	2.8 (1.9)	35	1.2 (3.1)		1.55%	1.6[0.41,2.79]
Bastow 1983b	25	4.9 (2.3)	23	0.7 (2.6)		1.52%	4.2[2.81,5.59]
Bokhorst-de 2000	15	0.5 (2.3)	17	-0.1 (2.6)		1.47%	0.6[-1.1,2.3]
Brown 1992	5	-1.2 (3.6)	5	-4.2 (1.1)		1.12%	3.01[-0.31,6.33]
Bunout 1989	17	-6.3 (6.2)	19	-4.6 (7.8)		0.87%	-1.64[-6.22,2.94]
Carr 1996	14	-0.5 (0.2)	14	-1.8 (0.3)		1.64%	1.3[1.11,1.49]
Carver 1995	20	50.1 (7.1)	20	45.9 (5.5)		0.99%	4.2[0.26,8.14]
Chen 1995a	8	1.3 (0.1)	4	-6.7 (0.4)		1.64%	8[7.6,8.4]
Chen 1995b	8	-4.2 (0.3)	4	-6.7 (0.4)		1.63%	2.5[2.06,2.94]
Chen 2000a	10	-0.8 (0.6)	10	-5.9 (0.1)		1.64%	5.1[4.72,5.48]
Chen 2000b	10	-1.1 (0.7)	10	-5.9 (0.1)		1.63%	4.8[4.36,5.24]
De Sousa 2012	20	52.1 (11.1)	15	49.9 (5.6)		0.7%	2.2[-3.43,7.83]
Ding 2009	21	-3.2 (1.8)	21	-5.6 (1.4)		1.58%	2.36[1.38,3.34]
Dong 1996	256	51.8 (1.3)	264	53 (3.5)		1.63%	-1.2[-1.65,-0.75]
Drott 1988	12	68.8 (5.9)	11	69.8 (9.3)		0.6%	-1[-7.41,5.41]
Duncan 2006	145	-1 (0)	157	0 (0)			Not estimable
Elbers 1997	10	68.3 (12.1)	10	62.2 (6.9)		0.4%	6.09[-2.55,14.73]
Fan 1994	64	55 (0)	60	55 (0)			Not estimable
Førli 2001	18	1.2 (0)	19	0 (0)			Not estimable
Gariballa 1998	18	57.5 (9)	13	56.3 (8.4)		0.63%	1.2[-4.98,7.38]
Gariballa 2006	119	69 (14)	106	69 (13)		1.08%	0[-3.53,3.53]
Gazzotti 2003	34	0.3 (3.8)	35	-1.2 (2.5)		1.5%	1.51[-0.01,3.03]
Ha 2010	33	-0.8 (3.4)	31	-2.9 (3.9)		1.45%	2.1[0.3,3.9]
Hickson 2004	292	-0.9 (0)	300	-0.9 (0)			Not estimable
Hoffmann 1988	43	-1 (0)	16	-3.8 (0)			Not estimable

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Holyday 2012	71	-0.9 (0.6)	72	-0.9 (0.4)		1.64%	0[-0.17,0.17]
Huynh 2015	77	1 (2.3)	70	0.6 (1.4)		1.62%	0.46[-0.16,1.08]
Hwang 1991	12	51.9 (10)	12	53 (7.3)		0.53%	-1.1[-8.11,5.91]
Jensen 1982	10	1.5 (2.2)	10	-2.9 (1.7)		1.46%	4.4[2.68,6.12]
Ji 1999	20	59.5 (8.3)	10	49.7 (7.6)		0.66%	9.83[3.9,15.76]
Jiang 2006a	24	2.4 (0.2)	22	6.3 (1.3)		1.63%	-3.9[-4.45,-3.35]
Jiang 2006b	23	5.7 (0.7)	22	6.3 (1.3)		1.62%	-0.6[-1.21,0.01]
Johansen 2004	53	-0.2 (3.9)	42	0.1 (2)		1.55%	-0.32[-1.53,0.89]
Kearns 1992	16	72 (20)	15	72 (16)		0.21%	0[-12.71,12.71]
Keele 1997	38	64 (11.6)	39	66.1 (13)		0.72%	-2.1[-7.6,3.4]
Li 1998	10	59.9 (3.5)	10	58.8 (4.5)		1.08%	1.1[-2.43,4.63]
Lidder 2013a	32	71.1 (16.9)	30	72.8 (14.2)		0.46%	-1.69[-9.45,6.07]
Lidder 2013b	27	72.3 (17)	31	71.5 (12.1)		0.47%	0.79[-6.9,8.48]
Liu 1990	6	2 (0.7)	6	4.1 (1.7)		1.51%	-2.1[-3.53,-0.67]
Liu 2008	24	60.8 (7.9)	24	50.3 (5.4)		1.02%	10.53[6.72,14.34]
Lough 1990	14	56.2 (7.7)	15	60.8 (19.4)		0.29%	-4.6[-15.21,6.01]
Luo 2011	22	2.4 (0.7)	24	0.9 (1.7)		1.61%	1.5[0.78,2.22]
MacFie 2000	27	63 (7.9)	25	67 (5.4)		1.05%	-4[-7.64,-0.36]
Malhotra 2004	98	3.1 (0)	97	5.1 (0)			Not estimable
McEvoy 1982	26	-0.2 (2.6)	25	1.5 (2.4)		1.52%	-1.7[-3.07,-0.33]
McWhirter 1996a	35	2.9 (0)	13	-2.5 (0)			Not estimable
McWhirter 1996b	25	3.3 (0)	13	-2.5 (0)			Not estimable
Miller 2006a	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Miller 2006b	23	-6.2 (5.4)	25	-5.2 (9.6)		0.91%	-1[-5.34,3.34]
Moreno 2016	24	-4.7 (6.8)	25	-6.3 (5.1)		1.11%	1.6[-1.76,4.96]
Munk 2014	44	0.4 (2.6)	40	-0.4 (2)		1.58%	0.8[-0.19,1.79]
Neelemaat 2012	73	64.7 (14.4)	73	61 (12.2)		0.92%	3.7[-0.63,8.03]
Page 2002	20	69.3 (13.8)	20	65.7 (18.2)		0.31%	3.6[-6.41,13.61]
Potter 2001	142	0.4 (2.6)	151	-0.5 (2.9)		1.62%	0.9[0.27,1.53]
Rabadi 2008	51	68.8 (12.6)	51	66.9 (14.7)		0.75%	1.9[-3.41,7.21]
Ryan 1993	6	2.4 (14.4)	4	-0.6 (12.2)		0.13%	3[-13.6,19.6]
Saluja 2002a	10	2.6 (0.5)	10	2.5 (0.7)		1.63%	0.1[-0.45,0.65]
Saluja 2002b	10	3.4 (0.9)	10	2.4 (2.1)		1.51%	1[-0.44,2.44]
Saluja 2002c	10	2.2 (1)	10	4.6 (2.4)		1.48%	-2.45[-4.06,-0.84]
Saudny-Unterberger 1997	14	0.2 (2.5)	10	0.1 (0.6)		1.53%	0.13[-1.24,1.5]
Starke 2011	66	68.1 (15.9)	66	64.7 (16)		0.73%	3.4[-2.04,8.84]
Summerbell 1993	7	47.1 (9.2)	7	37.8 (7.8)		0.38%	9.3[0.36,18.24]
Thompson 1981	12	0.1 (2.2)	9	-3.8 (2.7)		1.37%	3.83[1.66,6]
Tong 2006a	45	62 (5.4)	18	58.1 (6)		1.15%	3.87[0.67,7.07]
Tong 2006b	45	61.9 (4.9)	18	58.1 (6)		1.17%	3.83[0.71,6.95]
Vaithiswaran 2008	30	-0 (1)	31	-0.1 (0.6)		1.63%	0.06[-0.37,0.49]
Vermeeren 2004	23	1.4 (1.3)	24	1.1 (1.2)		1.61%	0.25[-0.47,0.97]
Wang 1996a	12	2.9 (0.7)	12	4.6 (0.5)		1.63%	-1.64[-2.14,-1.14]
Wang 1996b	12	3.3 (1)	12	4.6 (0.5)		1.62%	-1.31[-1.94,-0.68]
Wang 1997a	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 1997b	20	58.4 (4.1)	10	55.9 (3)		1.29%	2.53[-0.02,5.08]
Wang 2007	19	2.3 (0.8)	24	3.9 (1.7)		1.61%	-1.6[-2.37,-0.83]
Whittaker 1990	6	2.4 (2)	4	-0.6 (0.8)		1.45%	3[1.22,4.78]
Williams 1983	7	-0.6 (1.5)	7	-2.8 (1.2)		1.52%	2.19[0.77,3.61]
Woolfson 1989	50	67.2 (10.2)	45	66.9 (13.2)		0.84%	0.3[-4.48,5.08]
Wu 2007a	215	2.5 (1.7)	108	4.1 (2.2)		1.63%	-1.6[-2.07,-1.13]
Wu 2007b	215	2.7 (2)	108	4.1 (2.2)		1.63%	-1.4[-1.89,-0.91]



Favours control — Favours nutrition support

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Xie 2014	60	54.7 (10.1)	60	47.3 (8.8)		1.11%	7.39[4,10.78]
Xu 1998a	16	56.4 (10.8)	16	52.6 (10.7)		0.49%	3.8[-3.65,11.25]
Yang 1996	10	53.5 (6.2)	10	50.8 (4.1)		0.87%	2.71[-1.9,7.32]
Yie 1996	30	0.9 (0.9)	19	2 (0.8)		1.63%	-1.1[-1.58,-0.62]
Zeiderman 1989a	10	51.9 (11.4)	5	61.9 (12.3)		0.2%	-10[-22.91,2.91]
Zeiderman 1989b	10	60.6 (13)	5	61.9 (12.3)		0.19%	-1.3[-14.77,12.17]
Zheng 2001a	30	-2.1 (0.9)	10	-3.3 (1.7)		1.57%	1.2[0.1,2.3]
Zheng 2001b	26	-2.5 (1.1)	10	-3.3 (1.7)		1.56%	0.8[-0.34,1.94]
Zhong 2006a	21	64.2 (9.3)	21	63.4 (7.7)		0.77%	0.8[-4.36,5.96]
Subtotal * **	**3602**		**3156**			**94.05%**	**1.18[0.54,1.83]**
Heterogeneity: Tau²=6.21; Chi²=3268.17, df=80(P<0.0001); I²=97.55%							
Test for overall effect: Z=3.58(P=0)							
34.11.2 Less than three days							
Kawaguchi 2008	18	-0.8 (1.6)	11	-0.9 (1.1)		1.58%	0.15[-0.83,1.13]
Ljunggren 2012	19	0.3 (16.3)	20	0.4 (12.8)		0.36%	-0.1[-9.33,9.13]
Wood 1989a	15	-5.1 (2.7)	8	-2.5 (2)		1.42%	-2.6[-4.54,-0.66]
Wood 1989b	15	-2.2 (1.9)	7	-2.5 (1.9)		1.47%	0.3[-1.37,1.97]
Zelic 2012	22	-0.9 (5.6)	23	-5.2 (5.9)		1.12%	4.3[0.96,7.64]
Subtotal * **	**89**		**69**			**5.95%**	**0.15[-1.62,1.92]**
Heterogeneity: Tau²=2.39; Chi²=13.49, df=4(P=0.01); I²=70.35%							
Test for overall effect: Z=0.17(P=0.87)							
Total * **	**3691**		**3225**			**100%**	**1.13[0.5,1.75]**
Heterogeneity: Tau²=6.15; Chi²=3287.24, df=85(P<0.0001); I²=97.41%							
Test for overall effect: Z=3.54(P=0)							
Test for subgroup differences: Chi²=1.14, df=1 (P=0.29), I²=12.31%							

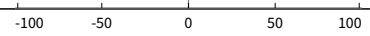


Comparison 35. Hand-grip strength - end of intervention

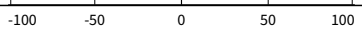
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Hand-grip strength - overall	14	783	Mean Difference (IV, Random, 95% CI)	1.47 [0.58, 2.37]

Analysis 35.1. Comparison 35 Hand-grip strength - end of intervention, Outcome 1 Hand-grip strength - overall.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Bokhorst-de 2000	15	-0.7 (0)	17	0.4 (0)			Not estimable
Carr 1996	14	-6.7 (3.2)	14	-9.6 (2.1)		11.21%	2.9[0.9,4.9]
Huynh 2015	77	1.4 (4.1)	70	0.8 (2.9)		18.14%	0.57[-0.56,1.69]
Kaur 2005	50	18.1 (2.4)	50	16.4 (2.4)		19.9%	1.65[0.71,2.59]
Lidder 2013a	32	27.2 (10.2)	30	23.7 (9.3)		3.01%	3.5[-1.35,8.35]
Lidder 2013b	27	31.2 (12.2)	31	25 (9.6)		2.25%	6.2[0.49,11.91]



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Munk 2014	44	-1 (2.9)	40	-4 (4.3)		14.19%	3[1.42,4.58]
Neelemaat 2012	65	2 (5.6)	53	1 (6.7)		9.73%	1[-1.26,3.26]
Saluja 2002a	10	0 (0)	10	0 (0)			Not estimable
Saluja 2002b	10	0 (0)	10	0 (0)			Not estimable
Saluja 2002c	10	0 (0)	10	0 (0)			Not estimable
Saudny-Unterberger 1997	14	-0.9 (3.8)	10	0 (2.7)		8.13%	-0.87[-3.47,1.73]
Vermeeren 2004	20	0 (3)	22	0 (3)		12.46%	0[-1.82,1.82]
Watters 1997	13	35 (12)	15	33 (12)		0.97%	2[-6.91,10.91]
Total ***	**401**		**382**			**100%**	**1.47[0.58,2.37]**
Heterogeneity: Tau²=0.82; Chi²=17.22, df=9(P=0.05); I²=47.74%							
Test for overall effect: Z=3.22(P=0)							

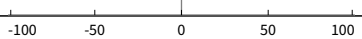


Comparison 36. Hand-grip strength - maximum follow-up

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Hand-grip strength - overall	18	1240	Mean Difference (IV, Random, 95% CI)	0.96 [0.15, 1.76]

Analysis 36.1. Comparison 36 Hand-grip strength - maximum follow-up, Outcome 1 Hand-grip strength - overall.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Bokhorst-de 2000	15	-0.7 (0)	17	0.4 (0)			Not estimable
Carr 1996	14	-6.7 (3.2)	14	-9.6 (2.1)		9.67%	2.9[0.9,4.9]
Duncan 2006	145	2 (0)	157	0 (0)			Not estimable
Ha 2010	56	2.3 (4)	65	-0.3 (5)		12.32%	2.6[1,4.2]
Huynh 2015	73	2.1 (4.3)	78	1.7 (3.4)		15.4%	0.38[-0.85,1.61]
Kaur 2005	50	18.5 (2.2)	50	17.4 (2.5)		18.44%	1.07[0.16,1.98]
Lidder 2013a	32	27.2 (10.2)	30	23.7 (9.3)		2.48%	3.5[-1.35,8.35]
Lidder 2013b	27	31.2 (12.2)	31	25 (9.6)		1.84%	6.2[0.49,11.91]
Munk 2014	44	-0.1 (2.9)	40	-0.4 (4.3)		12.48%	0.3[-1.28,1.88]
Neelemaat 2012	65	0.2 (5.6)	53	1 (6.7)		8.33%	-0.8[-3.06,1.46]
Saluja 2002a	10	0 (0)	10	0 (0)			Not estimable
Saluja 2002b	10	0 (0)	10	0 (0)			Not estimable
Saluja 2002c	10	0 (0)	10	0 (0)			Not estimable
Saudny-Unterberger 1997	14	-0.9 (3.8)	10	0 (2.7)		6.89%	-0.87[-3.47,1.73]
Vermeeren 2004	20	0 (3)	22	0 (3)		10.83%	0[-1.82,1.82]
Watters 1997	13	35 (12)	15	33 (12)		0.79%	2[-6.91,10.91]
Zeiderman 1989a	10	27.7 (6.6)	5	33 (11.7)		0.52%	-5.3[-16.35,5.75]
Zeiderman 1989b	10	33.5 (1107)	5	33.8 (11.7)		0%	-0.3[-686.49,685.89]
Total ***	**618**		**622**			**100%**	**0.96[0.15,1.76]**
Heterogeneity: Tau²=0.7; Chi²=20.06, df=12(P=0.07); I²=40.18%							



Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Test for overall effect: Z=2.33(P=0.02)							

Favours control -100 -50 0 50 100 Favours nutrition support

Comparison 37. Six-minute walking distance - end of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Six-minute walking distance - overall	1	102	Mean Difference (IV, Random, 95% CI)	133.27 [24.32, 242.22]

Analysis 37.1. Comparison 37 Six-minute walking distance - end of intervention, Outcome 1 Six-minute walking distance - overall.

Study or subgroup	Experimental N	Experimental Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI	Weight	Mean Difference Random, 95% CI
Rabadi 2008	51	396.4 (276.5)	51	263.1 (284.9)		100%	133.27[24.32,242.22]
Total ***	**51**		**51**			**100%**	**133.27[24.32,242.22]**
Heterogeneity: Not applicable							
Test for overall effect: Z=2.4(P=0.02)							

Favours control -100 -50 0 50 100 Favours nutrition support

ADDITIONAL TABLES

Table 1. Interventions by medical specialty

Medical speciality	Experimental group	Control group
Emergency medicine	3 trials used enteral nutrition	7 trials used no intervention
	8 trials used parenteral nutrition	4 trials used treatment as usual
Endocrinology	1 trial used parenteral nutrition	1 trial used no intervention
Gastroenterological surgery	36 trials used enteral nutrition	32 trials used no intervention
	13 trials used oral nutrition	4 trials used placebo
	40 trials used parenteral nutrition	56 trials used treatment as usual
	3 trials used mixed nutrition	
General surgery	2 trials used parenteral nutrition	1 trial used no intervention
		1 trial used treatment as usual
Geriatrics	1 trial used fortified foods	9 trials used no intervention

Table 1. Interventions by medical specialty *(Continued)*

	2 trials used general nutrition support	2 trials used placebo
	13 trials used oral nutrition	5 trials used treatment as usual
Gynaecology	1 trial used parenteral nutrition	1 trial used treatment as usual
Haematology	1 trial used parenteral nutrition	1 trial used placebo
Infectious diseases	2 trials used enteral nutrition	2 trials used treatment as usual
Medical gastroenterology and hepatology	9 trials used enteral nutrition	9 trials used no intervention
	3 trials used oral nutrition	9 trials used treatment as usual
	5 trials used parenteral nutrition	
	1 trial used mixed nutrition	
Mixed medical speciality	2 trials used enteral nutrition	5 trials used no intervention
	1 trial used fortified foods	1 trial used placebo
	1 trial used general nutrition	3 trials used treatment as usual
	4 trials used oral nutrition	
	1 trial used mixed nutrition	
Neprohology	1 trial used general nutrition	1 trial used treatment as usual
Neurological surgery	1 trial used parenteral nutrition	1 trial used treatment as usual
Neurology	3 trials used enteral nutrition	4 trials used no intervention
	1 trial used general nutrition	6 trials used treatment as usual
	5 trials used oral nutrition	
	1 trial used mixed nutrition	
Oncology	3 trials used enteral nutrition	9 trials used no intervention
	1 trial used general nutrition	7 trials used treatment as usual
	11 trials used parenteral nutrition	
	1 trial used mixed nutrition	
Oro-maxillo-facial surgery	1 trial used enteral nutrition	2 trials used no intervention
	1 trial used oral nutrition	
Orthopaedics	5 trials used enteral nutrition	7 trials used no intervention
	4 trials used oral nutrition	2 trials used placebo
	1 trial used general nutrition	5 trials used treatment as usual
	1 trial used parenteral nutrition	
	3 trials used mixed nutrition	
Pulmonary diseases	2 trials used enteral nutrition	1 trial used no intervention

Table 1. Interventions by medical specialty *(Continued)*

	3 trials used oral nutrition	3 trials used placebo
	3 trials used parenteral nutrition	4 trials used treatment as usual
Thoracic surgery	2 enteral nutrition	1 trial used placebo
	1 parenteral nutrition	3 trials used treatment as usual
	1 mixed nutrition	
Trauma surgery	8 trials used enteral nutrition	6 trial used no intervention
	3 trials used parenteral nutrition	5 trial used treatment as usual
Transplant surgery	1 trial used enteral nutrition	4 trials used treatment as usual
	1 trial used oral nutrition	
	2 trials used parenteral nutrition	
Vascular surgery	1 trial used enteral nutrition	4 trials used treatment as usual
	3 trials used parenteral nutrition	

Table 2. Serious adverse events (end of intervention)

Trial	Experimental intervention	Type and number of participants with a serious adverse events (Experimental group)	Proportion of participants with a serious adverse event (Experimental group)	Type and number of participants with a serious adverse events (Control group)	Proportion of participants with a serious adverse event (Control group)
Bellantone 1988	Parenteral nutrition	1 sepsis	1 out of 54	10 sepsis	10 out of 46
Bozzetti 2000	Parenteral nutrition	1 anastomotic leak, 3 respiratory infections, 2 respiratory insufficiency	6 out of 43	2 anastomotic leaks, 1 renal failure, 2 abdominal abscesses, 4 respiratory infections, 3 respiratory insufficieny	12 out of 47
Brennan 1994	Parenteral nutrition	7 anastomotic leaks, 5 pneumonias, 1 GI haemorrhages, 8 GI fistula, 4 ileus, 2 myocardial infarction, 12 abscess, 4 deep infection, 7 peritonitis	50 out of 60	3 anastomotic leaks, 6 pneumonias, 1 pulmonary embolism, 2 GI haemorrhages, 5 GI fistula, 1 myocardial infarction, 2 abscess, 4 deep infection, 2 peritonitis	26 out of 57
Chen 1995a	Enteral nutrition	no serious adverse events reported	0 out of 16	1 anastomotic leak	1 out of 8
Chen 2000a	Enteral nutrition	1 anastomotic leak	1 out of 10	no serious adverse events reported	0 out of 10
Chen 2006	Enteral nutrition	no serious adverse events reported	0 out of 21	1 septic complication	1 out of 20

Table 2. Serious adverse events (end of intervention) *(Continued)*

Dennis 2005	Oral nutrition	50 strokes, 23 pulmonary embolisms, 43 DVTs, 28 GI haemorrhages, 28 ACS'	172 out of 2012	43 strokes, 18 pulmonary embolism, 29 DVTs, 18 GI haemorrhage, 22 ACS	130 out of 2000
Dennis 2006	Enteral nutrition	15 strokes, 6 pulmonary embolisms, 11 DVTs, 22 GI haemorrhages, 7 ACS'	61 out of 429	23 strokes, 8 pulmonary embolisms, 13 DVTs, 11 GI haemorrhages, 13 ACS'	68 out of 428
Doglietto 1990	Parenteral nutrition	3 sepsis	3 out of 9	7 sepsis	7 out of 12
Doglietto 1996	Oral nutrition	20 anastomotic leaks, 14 pneumonias, 2 pulmonary embolisms, 2 renal failure, 6 abdominal abscess, 3 unspecific infection, 10 wound dehiscences, 1 pulmonary failure, 11 gastrointestinal complications, 6 cardiovascular complications, 4 haemoperitoneum	79 out of 338	18 anastomotic leaks, 9 pneumonias, 1 pulmonary embolisms, 3 renal failure, 1 abdominal abscess, 2 unspecific infection, 3 wound dehiscences, 2 pulmonary failure, 6 bacteraemia, 23 gastrointestinal complications, 6 cardiovascular complications, 5 haemoperitoneum	79 out of 340
Ding 2009	Parenteral nutrition	1 respiratory infection	1 out of 21	2 respiratory infection	2 out of 21
Dong 1996	Enteral nutrition	no serious adverse events reported	0 out of 256	6 anastomotic leaks	6 out of 264
Fan 1994	Parenteral nutrition	4 GI haemorrhages, 4 GI fistulas, 4 hepatic comas	12 out of 64	1 GI haemorrhages, 5 GI fistulas, 4 hepatic comas	10 out of 60
Hartgrink 1998	Enteral nutrition	25 pressure sores	25 out of 48	30 pressure sores	30 out of 53
Hoffmann 1988	Enteral nutrition	no serious adverse events reported	0 out of 43	3 anastomotic leaks, 2 myocardial infarction	5 out of 16
Ji 1999	Enteral nutrition	2 abdominal abscess	2 out of 20	no serious adverse events reported	0 out of 10
Johansen 2004	General nutrition	4 pneumonia, 1 DVTs, 4 sepsis, 2 empyemas, 0 gastroenteritis, 1 GI complications,	12 out of 108	4 pneumonia, 1 stroke, 2 sepsis, 1 gastroenteritis, 2 GI complications	10 out of 104
Kearns 1992	Enteral nutrition	2 renal failures	2 out of 16	2 renal failures	2 out of 15
Keele 1997	Oral nutrition	no serious adverse events reported	0 out of 43	1 GI perforation	1 out of 43
Larsson 1990a	Oral nutrition	20 pressure sores	20 out of 197	29 pressure sores	29 out of 328
Ledinghen 1997	Enteral nutrition	4 variceal bleedings, 1 peritonitis	5 out of 12	1 peritonitis	1 out of 10
Liu 1996	Parenteral nutrition	no serious adverse events reported	0 out of 14	1 anastomotic leak, 1 GI fistula	2 out of 15

Table 2. Serious adverse events (end of intervention) *(Continued)*

Malhotra 2004	Enteral nutrition	21 Pneumonia, Wound infection 27, Wound dehiscence 4, anastomotic Leak 7, Septicaemia 20	27 out of 98	Pneumonia 30, Wound infection 31, Wound dehiscence 9, Leak 13, Septicaemia 30.	31 out of 97
Maude 2011	Enteral nutrition	8 sepsis	8 out of 27	7 sepsis	7 out of 29
Neuvonen 1984	Parenteral nutrition	no serious adverse events reported	0 out of 9	1 sepsis	1 out of 12
Page 2002	Enteral nutrition	no serious adverse events reported	0 out of 20	1 pulmonary embolism	1 out of 20
Pupelis 2000	Enteral nutrition	2 peritonitis	2 out of 11	5 peritonitis	5 out of 18
Pupelis 2001	Enteral nutrition	no serious adverse events reported	0 out of 30	4 GI fistulas	4 out of 30
Reissman 1995	Oral nutrition	no serious adverse events reported	0 out of 80	1 anastomotic leak	1 out of 81
Rimbau 1989	Parenteral nutrition	1 pneumonia	1 out of 10	2 pneumonias	2 out of 10
Sabin 1998	Parenteral nutrition	2 pneumoperitoneum's	2 out of 40	2 anastomotic leaks, 2 pneumoperitoneum's	4 out of 40
Samuels 1981	Parenteral nutrition	2 pneumonias, 5 sepsis	7 out of 16	2 sepsis	2 out of 14
Schroeder 1991	Enteral nutrition	1 myocardial infarction	1 out of 16	1 myocardial infarction	1 out of 16
Simon 1988	Parenteral nutrition	no serious adverse events reported	0 out of 15	2 hepatic encephalopathies	2 out of 17
Smith 1988	Parenteral nutrition	no serious adverse events reported	0 out of 17	2 respiratory infection	2 out of 17
Starke 2011	General nutrition	no serious adverse events reported	0 out of 66	1 stroke, 1 DVT, 1 septic arthritis, 2 myocardial infarction	5 out of 66
Thompson 1981	Parenteral nutrition	1 empyema, 1 pelvic abscess	2 out of 12	1 intraabdominal abscess	1 out of 9
Tong 2006a	Mixed nutrition	1 hepatic encephalopathy	1 out of 90	4 anastomotic leak, 5 hepatic encephalopathies	9 out of 36
Vicic 2013	Enteral nutrition	2 sepsis, 2 multi organ failure,	4 out of 52	6 sepsis, 3 multi organ failure	9 out of 49
Watters 1997	Enteral nutrition	1 anastomotic leak	1 out of 13	3 anastomotic leaks	3 out of 15

Table 2. Serious adverse events (end of intervention) *(Continued)*

Wu 2007a	Mixed nutrition	11 anastomotic leaks, 6 DVT, 15 sepsis	32 out of 430	10 anastomotic leaks, 15 sepsis	25 out of 216
Yamada 1983	Parenteral nutrition	1 wound dehiscence	1 out of 18	1 anastomotic leak, 2 pneumonias, 1 sepsis, 1 ileus	5 out of 16
Zhang 2013	Enteral nutrition	2 GI haemorrhage	2 out of 50	4 GI haemorrhage	4 out of 50

Table 3. Serious adverse events (maximum follow-up)

Trial	Experimental intervention	Type and number of participants with a serious adverse events (Experimental group)	Proportion of participants with a serious adverse event (Experimental group)	Type and number of participants with a serious adverse events (Control group)	Proportion of participants with a serious adverse event (Control group)
Barlow 2011	Enteral nutrition	2 anastomotic leaks	2 out of 64	7 anastomotic leaks, 2 GI haemorrhage, 1 myocardial infarction	10 out of 57
Beier-Holgersen 1999	Enteral nutrition	2 anastomotic leak, 3 wound dehiscence, 1 myocardial infarction,	6 out of 30	4 anastomotic leak, 1 pulmonary failure	5 out of 30
Bellantone 1988	Parenteral nutrition	1 sepsis	1 out of 54	10 sepsis	10 out of 46
Bozzetti 2000	Parenteral nutrition	1 anastomotic leak, 3 respiratory infections, 2 respiratory insufficiencies	6 out of 43	2 anastomotic leaks, 1 renal failure, 2 abdominal abscesses, 4 respiratory infections, 3 respiratory insufficiencies	12 out of 47
Brennan 1994	Parenteral nutrition	7 anastomotic leaks, 5 pneumonias, 1 GI haemorrhages, 8 GI fistula, 4 ileus, 2 myocardial infarction, 12 abscess, 4 deep infection, 7 peritonitis	50 out of 60	3 anastomotic leaks, 6 pneumonias, 1 pulmonary embolism, 2 GI haemorrhages, 5 GI fistula, 1 myocardial infarction, 2 abscess, 4 deep infection, 2 peritonitis	26 out of 57
Chen 1995a	Enteral nutrition	no serious adverse events reported	0 out of 16	1 anastomotic leak	1 out of 8
Chen 2000a	Enteral nutrition	1 anastomotic leak	1 out of 10	no serious adverse events reported	0 out of 10
Chen 2006	Enteral nutrition	no serious adverse events reported	0 out of 21	1 septic complication	1 out of 20
Chourdakis 2012	Enteral nutrition	2 CNS infections, 13 ventilator associated pneumonias	15 out of 34	2 CNS infections, 12 ventilator associated pneumonias	14 out of 25

Table 3. Serious adverse events (maximum follow-up) *(Continued)*

Dennis 2005	Oral nutrition	50 strokes, 23 pulmonary embolisms, 43 DVTs, 28 GI haemorrhages, 28 ACS'	172 out of 2012	43 strokes, 18 pulmonary embolism, 29 DVTs, 18 GI haemorrhage, 22 ACS'	130 out of 2000
Dennis 2006	Enteral nutrition	15 strokes, 6 pulmonary embolisms, 11 DVTs, 22 GI haemorrhages, 7 ACS'	61 out of 429	23 strokes, 8 pulmonary embolisms, 13 DVTs, 11 GI haemorrhages, 13 ACS'	68 out of 428
Ding 2009	Parenteral nutrition	1 respiratory infection	1 out of 21	2 respiratory infection	2 out of 21
Doglietto 1990	Parenteral nutrition	3 sepsis	3 out of 9	7 sepsis	7 out of 12
Doglietto 1996	Oral nutrition	20 anastomotic leaks, 14 pneumonias, 2 pulmonary embolisms, 2 renal failure, 6 abdominal abscess, 3 unspecific infection, 10 wound dehiscences, 1 pulmonary failure, 11 gastrointestinal complications, 6 cardiovascular complications, 4 haemoperitoneum	79 out of 338	18 anastomotic leaks, 9 pneumonias, 1 pulmonary embolisms, 3 renal failure, 1 abdominal abscess, 2 unspecific infection, 3 wound dehiscences, 2 pulmonary failure, 6 bacteraemia, 23 gastrointestinal complications, 6 cardiovascular complications, 5 haemoperitoneum	79 out of 340
Dong 1996	Enteral nutrition	no serious adverse events reported	0 out of 256	6 anastomotic leaks	6 out of 264
Fan 1994	Parenteral nutrition	4 GI haemorrhages, 4 GI fistulas, 4 hepatic comas	12 out of 64	1 GI haemorrhages, 5 GI fistulas, 4 hepatic comas	10 out of 60
Hartgrink 1998	Enteral nutrition	25 pressure sores	25 out of 48	30 pressure sores	30 out of 53
Henriksen 2003a	Oral nutrition	1 anastomotic leak, 2 wound infections, 1 pulmonary embolism	4 out of 16	1 anastomotic leak,	1 out of 8
Hoffmann 1988	Enteral nutrition	no serious adverse events reported	0 out of 43	3 anastomotic leaks, 2 myocardial infarction	5 out of 16
Ji 1999	Enteral nutrition	2 abdominal abscess	2 out of 20	no serious adverse events reported	0 out of 10
Johansen 2004	General nutrition	4 pneumonia, 1 DVTs, 4 sepsis, 2 empyemas, 0 gastroenteritis, 1 GI complications,	12 out of 108	4 pneumonia, 1 stroke, 2 sepsis, 1 gastroenteritis, 2 GI complications	10 out of 104
Kaur 2005	Enteral nutrition	3 septic complications, 3 wound dehiscence	6 out of 50	8 septic complications, 4 wound dehiscence	12 out of 50
Kearns 1992	Enteral nutrition	2 renal failures	2 out of 16	2 renal failures	2 out of 15
Keele 1997	Oral nutrition	no serious adverse events reported	0 out of 43	1 GI perforation	1 out of 43

Table 3. Serious adverse events (maximum follow-up) *(Continued)*

Larsson 1990a	Oral nutrition	20 pressure sores	20 out of 197	29 pressure sores	29 out of 328
Ledinghen 1997	Enteral nutrition	4 variceal bleedings, 1 peritonitis	5 out of 12	1 peritonitis	1 out of 10
Lidder 2013a	Oral nutrition	2 anastomotic leaks, 2 sepsis	4 out of 59	7 anastomotic leaks, 1 stroke, 1 DVT, 3 sepsis, 3 myocardial infarctions	15 out of 61
Liu 1996	Parenteral nutrition	no serious adverse events reported	0 out of 14	1 anastomotic leak, 1 GI fistula	2 out of 15
Maude 2011	Enteral nutrition	8 sepsis	8 out of 27	7 sepsis	7 out of 29
Neuvonen 1984	Parenteral nutrition	no serious adverse events reported	0 out of 9	1 sepsis	1 out of 12
Page 2002	Enteral nutrition	no serious adverse events reported	0 out of 20	1 pulmonary embolism	1 out of 20
Pupelis 2000	Enteral nutrition	2 peritonitis	2 out of 11	5 peritonitis	5 out of 18
Pupelis 2001	Enteral nutrition	no serious adverse events reported	0 out of 30	4 GI fistulas	4 out of 30
Reissman 1995	Oral nutrition	no serious adverse events reported	0 out of 80	1 anastomotic leak	1 out of 81
Rimbau 1989	Parenteral nutrition	1 pneumonia	1 out of 10	2 pneumonias	2 out of 10
Sabin 1998	Parenteral nutrition	2 pneumoperitoneums	2 out of 40	2 anastomotic leaks, 2 pneumoperitoneums	4 out of 40
Samuels 1981	Parenteral nutrition	2 pneumonias, 5 sepsis	7 out of 16	2 sepsis	2 out of 14
Schroeder 1991	Enteral nutrition	1 myocardial infarction	1 out of 16	1 myocardial infarction	1 out of 16
Simon 1988	Parenteral nutrition	no serious adverse events reported	0 out of 15	2 hepatic encephalopathies	2 out of 17
Smith 1988	Parenteral nutrition	1 anastomotic leak, 1 respiratory infection, 1 pancreatitis	3 out of 17	2 pulmonary embolisms, 1 septic complication, 4 respiratory infections,	7 out of 17
Soop 2004	Enteral nutrition	2 wound infections, 1 pneumonia	3 out of 9	1 anastomotic leak, 2 wound infections, 1 pneumonia, 1 peptic ulcer, 1 wound dehiscence,	6 out of 9
Starke 2011	General nutrition	no serious adverse events reported	0 out of 66	1 stroke, 1 DVT, 1 septic arthritis, 2 myocardial infarction	5 out of 66

Table 3. Serious adverse events (maximum follow-up) *(Continued)*

Thompson 1981	Parenteral nutrition	1 empyema, 1 pelvic abscess	2 out of 12	1 intraabdominal abscess	1 out of 9
Tong 2006a	Mixed nutrition	1 hepatic encephalopathy	1 out of 90	4 anastomotic leak, 5 hepatic encephalopathies	9 out of 36
Vicic 2013	Enteral nutrition	2 sepsis, 2 multi organ failure,	4 out of 52	6 sepsis, 3 multi organ failure	9 out of 49
Watters 1997	Enteral nutrition	1 anastomotic leak	1 out of 13	3 anastomotic leaks	3 out of 15
Williford 1991	Parenteral nutrition	6 anastomotic leaks, 16 pneumonias, 1 pressure sore, 2 abdominal abscess, 1 wound dehiscence, 13 pulmonary failure, 7 bacteraemia, 10 GI complications, 15 cardiac complications, 3 bronchopleurocutaneous fistulas	74 out of 231	6 anastomotic leaks, 9 pneumonias, 1 pulmonary embolism, 1 pressure sore, 3 renal failure, 2 abdominal abscess, 1 septic complication, 1 wound dehiscence, 11 pulmonary failure, 5 bacteraemia, 10 GI complications, 15 cardiac complications, 6 bronchopleurocutaneous fistulas	80 out of 228
Wu 2007a	Mixed nutrition	11 anastomotic leaks, 6 DVT, 15 sepsis	32 out of 430	10 anastomotic leaks, 15 sepsis	25 out of 216
Yamada 1983	Parenteral nutrition	1 wound dehiscence	1 out of 18	1 anastomotic leak, 2 pneumonias, 1 sepsis, 1 ileus	5 out of 16
Zhang 2013	Enteral nutrition	2 GI haemorrhage	2 out of 50	4 GI haemorrhage	4 out of 50

APPENDICES

Appendix 1. Search strategies

Database	Time span	Search strategy
Cochrane Central Register of Controlled Trials (CENTRAL) in the Cochrane Library	2016, issue 1	#1 MeSH descriptor: [Feeding Methods] explode all trees #2 MeSH descriptor: [Nutrition Therapy] explode all trees #3 MeSH descriptor: [Enterostomy] explode all trees #4 MeSH descriptor: [Fat Emulsions, Intravenous] explode all trees #5 MeSH descriptor: [Food, Formulated] explode all trees #6 MeSH descriptor: [Gastrostomy] explode all trees #7 MeSH descriptor: [Nutrition Disorders] explode all trees #8 MeSH descriptor: [Protein Hydrolysates] explode all trees

(Continued)

		#9 alimentation or branched chain amino acids or BCAA or Dietary disorder* or Enteral nutrition or Enterostom* or Fat emulsion or formulated food* or Gastrostom* or Hyperalimentation* or Hypocaloric alimentation* or Hypocaloric nutrition or Intragastric feed* or Intragastric nutrition or Nutrition or Nutrition diseases or Nutrition disorders or Nutrition supplement* or Parenteral nutrition or Percutaneous endoscopic gastrostom* or Peripheral parenteral nutrition or Permissive underfeeding or Post-pyloric feeding or Post-pyloric nutrition or Protein hydrolysate or Supplemental feed* or Total parenteral nutrition #10 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9
MEDLINE (Ovid SP)	1946 to February 2016.	1. exp Feeding Methods/ 2. exp Nutrition Therapy/ 3. exp Enterostomy/ 4. exp Fat Emulsions, Intravenous/ 5. exp Food, Formulated/ 6. exp Gastrostomy/ 7. exp Nutrition Disorders/ 8. exp Protein Hydrolysates/ 9. (alimentation or branched chain amino acids or BCAA or Dietary disorder$ or Enteral nutrition or Enterostom$ or Fat emulsion or formulated food $ or Gastrostom$ or Hyperalimentation$ or Hypocaloric alimentation$ or Hypocaloric nutrition or Intragastric feed$ or Intragastric nutrition or Nutrition or Nutrition diseases or Nutrition disorders or Nutrition supplement$ or Parenteral nutrition or Percutaneous endoscopic gastrostom$ or Peripheral parenteral nutrition or Permissive underfeeding or Post-pyloric feeding or Post-pyloric nutrition or Protein hydrolysate or Supplemental feed$ or Total parenteral nutrition).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier] 10. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 11. (random$ or blind$ or placebo$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier] 12. 10 and 11 13. (animals not (humans and animals)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier] 14. 12 not 13
Embase (Ovid SP)	1974 to February 2016	1. exp Diet Therapy/ 2. exp Artificial Feeding/ 3. exp Enterostomy/ 4. exp Lipid Emulsion/ 5. exp Gastrostomy/

(Continued)

		6. exp Nutrition/ 7. exp Nutritional Disorder/ 8. exp Diet Supplementation/ 9. exp Percutaneous Endoscopic Gastrostomy/ 10. exp Protein Hydrolysate/ 11. (alimentation or branched chain amino acids or BCAA or Dietary disorder$ or Enteral nutrition or Enterostom$ or Fat emulsion or formulated food $ or Gastrostom$ or Hyperalimentation$ or Hypocaloric alimentation$ or Hypocaloric nutrition or Intragastric feed$ or Intragastric nutrition or Nutrition or Nutrition diseases or Nutrition disorders or Nutrition supplement$ or Parenteral nutrition or Percutaneous endoscopic gastrostom$ or Peripheral parenteral nutrition or Permissive underfeeding or Post-pyloric feeding or Post-pyloric nutrition or Protein hydrolysate or Supplemental feed$ or Total parenteral nutrition).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] 12. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 13. limit 12 to human 14. (random$ or blind$ or placebo$).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] 15. 13 and 14 16. limit 15 to exclude medline journals
Science Citation Index Expanded (Web of Science)	1900 to February 2016	#3 #2 AND #1 #2 TS=(random* OR blind* OR placebo* OR meta-analysis) #1 TS=(alimentation OR 'branched chain amino acids' OR BCAA OR 'Dietary disorder*' OR 'Enteral nutrition' OR Enterostom* OR 'Fat emulsion' or 'formulated food*' OR Gastrostom* OR Hyperalimentation* OR 'Hypocaloric alimentation*' OR 'Hypocaloric nutrition' OR 'Intragastric feed*' OR 'Intragastric nutrition' OR Nutrition OR 'Nutrition diseases' OR 'Nutrition disorders' OR 'Nutrition supplement*' OR 'Parenteral nutrition' OR 'Percutaneous endoscopic gastrostom*' OR 'Peripheral parenteral nutrition' OR 'Permissive underfeeding' OR 'Post-pyloric feeding' OR 'Post-pyloric nutrition' OR 'Protein hydrolysate' OR 'Supplemental feed*' OR 'Total parenteral nutrition')
BIOSIS (Web of Science)	2012 to February 2016	#3 #2 AND #1 Indexes=BIOSIS Previews Timespan=2012-2016 #2 (TS=(random* OR blind* OR placebo*)) AND TAXA NOTES: (Humans) Indexes=BIOSIS Previews Timespan=2012-2016 #1 (TS=(alimentation OR 'branched chain amino acids' OR BCAA OR 'Dietary disorder*' OR 'Enteral nutrition' OR Enterostom* OR 'Fat emulsion' or 'formulated food*' OR Gastrostom* OR Hyperalimentation* OR 'Hypocaloric alimentation*' OR 'Hypocaloric nutrition' OR 'Intragastric feed*' OR 'Intragastric nutrition' OR Nutrition OR 'Nutrition diseases' OR 'Nutrition disorders' OR 'Nutrition supplement*' OR 'Parenteral nutrition' OR 'Percutaneous endoscopic gastrostom*' OR 'Peripheral parenteral nutrition' OR 'Permissive underfeeding' OR 'Post-pyloric feeding' OR 'Post-pyloric nutrition' OR 'Protein hydrolysate'

(Continued)

		OR 'Supplemental feed*' OR 'Total parenteral nutrition')) AND TAXA NOTES: (Humans) Indexes=BIOSIS Previews Timespan=2012-2016
LILACS (Bireme)	1982 to February 2016	(alimentation or branched chain amino acids or BCAA or Dietary disorder$ or Enteral nutrition or Enterostom$ or Fat emulsion or formulated food$ or Gastrostom$ or Hyperalimentation$ or Hypocaloric alimentation$ or Hypocaloric nutrition or Intragastric feed$ or Intragastric nutrition or Nutrition or Nutrition diseases or Nutrition disorders or Nutrition supplement$ or Parenteral nutrition or Percutaneous endoscopic gastrostom$ or Peripheral parenteral nutrition or Permissive underfeeding or Post-pyloric feeding or Post-pyloric nutrition or Protein hydrolysate or Supplemental feed$ or Total parenteral nutrition) [Words] and (random$ or blind$ or placebo$) [Words]

Appendix 2. List of nutrition collaborations inquired for additional trials

Council for Responsible Nutrition (CRN)
Website: http://www.crnusa.org

Email: nweindruch@crnusa.org

National Association of Food Supplements Industry (ANAISA)
Website: http://www.anaisa.mx

Email: gerencia@anaisa.mx

Federation of Israeli Chambers of Commerce (Food Supplement sector)

Email: yonatk@chamber.org.il

Health Product Association of Southern Africa (HPASA)

Website: http://www.hpasa.co.za

Email: hpasa@hpasa.co.za

Council for Responsible Nutrition (CRN)
Website: http://www.crnuk.org

Email: crnsecretariat@crnuk.org

Integratori Italia - AIIPA
Website: http://www.integratoriitalia.it

Email: integratoriitalia@aiipa.it

Bundesverband der Industrie- und Handelsunternehmen für Arzneimittel, Reformwaren , Nahrungsergänzungsmittel und kosmetische Mittel e.V. (BDIH)
Website: http://www.bdih.de

Email: bdih@bdih.de

Nutraceutisk Industri, Dansk Industri (DI)
Website: http://www.di.dk

Email: mist@di.dk

Health Foods and Dietary Supplements Association (HADSA)
Website: http://www.hadsa.com/

Association of Indonesian Health Supplement Company (APSKI)

Email: apskiasosiasi@yahoo.co.id

Japan Health & Nutrition Food Association (JHNFA)

Email: shogaikouho@jhnfa.org

Malaysian Dietary Supplement Association (MADSA)
Website: http://madsa.org.my

Email: secretariat@madsa.org.my

Natural Products New Zealand Inc
Website: http://www.naturalproducts.nz

Email: info@naturalproducts.nz

Food Supplements Europe (FSE)

Website: http://www.foodsupplementseurope.org

Email: secretariat@foodsupplementseurope.org

Appendix 3. List of events considered for the composite outcome "serious adverse events"

Death Anastomotic leak Sepsis Pneumoperitoneum Stroke Hepatic coma Multiorgan failure

Deep vein thrombosis Gastrointesitnal perforation Pulmonary failure Gastrointestinal haemorrhage

Septic arthritis Peritonitis Acute coronary syndrome Pneumothorax Ventilator associated pneumonia

Gastrointestinal fistula Severe bleeding Bronchopleurocutanous fistula

Toxic hepatitis Hepatic encephalopathy Pancreatitis

CONTRIBUTIONS OF AUTHORS

Joshua Feinberg (JF): drafted the protocol, extracted data, co-ordinated the review, conceived the review, designed the review, interpreted the data providing a methodological view, and revised the review.
Emil Eik Nielsen (EEN): drafted the protocol, extracted data, drafted the review, interpreted the data providing a methodological view, and revised the review.
Steven Kwasi Korang: extracted data and commented on the review.
Kirstine Halberg Engell: extracted data and commented on the review.
Marie Skøtt Rasmussen: extracted data and commented on the review.
Kang Zhang: extracted data, co-ordinated the Chinese data extraction, and commented on the review.
Maria Didriksen: extracted data and commented on the review.
Lisbeth Lund: extracted data and commented on the review.
Niklas Lindahl: extracted data and commented on the review.
Sara Hallum: extracted data and commented on the review.
Xuemei Yang: extracted data and commented on the review.
Ning Liang: extracted data and commented on the review.
Wenjing Xiong: extracted data and commented on the review.
Pernille Brunsgaard: extracted data and commented on the review.
Alexandre Garioud: extracted data and commented on the review.
Sanam Safi: extracted data and commented on the review.
Jane Lindschou: revised the protocol and extracted data.
Jens Kondrup: drafted the Background section of the protocol, interpreted the data by providing a clinical view, and commented on and revised the review.
Christian Gluud: revised the protocol, interpreted the data providing a methodological and clinical view, commented on, and revised the review.
Januc C. Jakobsen: revised the protocol, analysed the data, interpreted the data providing a methodological and clinical view, commented on, and revised the review.

DECLARATIONS OF INTEREST

Joshua Feinberg: no conflict of interest.
Emil Eik Nielsen: no conflict of interest.

Steven Kwasi Korang: no conflict of interest.
Kirstine Halberg Engell: no conflict of interest.
Marie Skøtt Rasmussen: no conflict of interest.
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Ning Liang: no conflict of interest.
Wenjing Xiong: no conflict of interest.
Pernille Brunsgaard: no conflict of interest.
Alexandre Garioud: no conflict of interest.
Sanam Safi: no conflict of interest.
Jane Lindschou: no conflict of interest.
Jens Kondrup has been delivering bi-annual lectures on nutrition support as part of his job at the Rigshospital, Denmark. JK is involved in an ongoing trial on a new enteral formula (developed by Nutricia) for which JK receives no payment.
Christian Gluud: no conflict of interest.
Januc C. Jakobsen: no conflict of interest.

SOURCES OF SUPPORT

Internal sources

- The Copenhagen Trial Unit, Centre for Clinical Intervention Research, Rigshospitalet, Copenhagen, Denmark.

  Salary for the review authors, use of offices and equipment, access to literature.
- The Cochrane Hepato-Biliary Group, Rigshospitalet, Copenhagen, Denmark.

  Salary for the review authors, use of offices and equipment, access to literature.

External sources

- No sources of support supplied

DIFFERENCES BETWEEN PROTOCOL AND REVIEW

- Added 'mixed' as a possibility in the subgroup comparing trials with different types of intervention.
- We only require participants to be blinded for 'low risk of bias' for outcome assessment when assessing participant-reported outcomes such as quality of life.
- Changed the alpha from 3% to 2.5%. We had miscalculated the adjusted alpha according to Jakobsen 2014.
- We performed post hoc Trial Sequential Analyses of the different modes of delivery and major surgery participants.
- Adequate range was changed from '20 kcal/kg to 30 kcal/kg' into '20 kcal/kg to 35 kcal/kg'. In our original definition, participants receiving 30 - 35 kcal/kg were not placed into any category. This did not change any of our results in terms of statistical significance.
- We added that immuno-nutrition include branched chain amino acid-enriched formulas.
- Solutions of dextrose/glucose of 5% to 10% are considered standard care, even if not explicitly stated in the trial.

INDEX TERMS

Medical Subject Headings (MeSH)

*Food, Fortified [statistics & numerical data]; *Nutritional Support [adverse effects] [statistics & numerical data]; Body Weight; Cause of Death; Enteral Nutrition [adverse effects] [statistics & numerical data]; Hospitalization; Malnutrition [mortality] [*prevention & control]; Parenteral Nutrition [adverse effects] [statistics & numerical data]; Quality of Life; Randomized Controlled Trials as Topic

MeSH check words

Adult; Humans