

An empirical evaluation of the impact scenario of pooling bodies of evidence from randomized controlled trials and cohort studies in nutrition research.

Schwingshackl Lukas et al.

"Online Supplementary Material"

Supplemental data

Supplementary Appendices A: Search strategy for systematic reviews of RCTs in the Cochrane Database of Systematic Reviews

ID	Search	Hits
#1	MeSH descriptor: [Diet, Carbohydrate-Restricted] explode all trees	385
#2	MeSH descriptor: [Healthy Diet] explode all trees	336
#3	MeSH descriptor: [Diet, Mediterranean] this term only	434
#4	MeSH descriptor: [Dietary Approaches To Stop Hypertension] explode all trees	15
#5	MeSH descriptor: [Micronutrients] explode all trees	4,992
#6	MeSH descriptor: [Dietary Supplements] explode all trees	11,620
#7	(mediterranean or dash diet or low-carb* or low-fat* or grain* or vegetable* or fruit* or milk or dairy or meat or processed meat* or fish or eggs or nuts or chocolate or oil*):ti,ab,kw	40,401
#8	(carbohydrate* or fructose or glucose or starch or sucrose or fibre or psyllium or inulin or cellulose or prebiotic* or probiotic* or synbiotic* or n-3 or omega 3 or omega-3 or n3 or n6 or n-6 or omega 6 or omega-6 or unsaturated or monounsaturated or polyunsaturated or EPA or DHA or linoleic acid or protein or amino acid*):ti,ab,kw	167,040
#9	(vitamin* or beta-carot* or ascorbic acid or cholecalciferol* or ergocalciferol or thiamine or riboflavin or niacin or pyridoxine or cobalamin or folic acid or magnesium or calcium or selenium or sodium or potassium or iron or zinc or copper or iodine):ti,ab,kw	118,402
#10	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9	283,530
#11	(diet* or nutrition or eat* or consum* or intake):ti,ab,kw	163,651
#12	#10 and #11	83,677
#13	(mortal* or cancer or diabetes or dementia or macular degeneration or body weight or blood pressure or glucose or cholester*):ti,ab,kw	448,002
#14	#12 and #13	48,529
#15	Cochrane Reviews published between "2010 - 2019"	333

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Supplementary Appendices B: Search strategy for systematic reviews of cohort studies in Ovid MEDLINE

ID	Search	Hits
#1	(non-randomised or non-randomized or nrs or observational* or cohort or prospective or longitudinal* or follow* or case-cohort or nested case-control or epidemio*).ti,ab,kf.	4,466,200
#2	(meta-analys* or metaanalys* or "systematic review" or systematic-review).ti,ab.	238,477
#3	(Systematic Review or Meta-Analysis).pt.	177,170
#4	#1 and (#2 or #3)	104,427
#5	Diet, Mediterranean/ or Diet, Carbohydrate-Restricted/ or Healthy Diet/ or Dietary Approach to Stop Hypertension/ or Micronutrients/ or Dietary Supplements/	65,391
#6	(mediterranean or dash diet or low-carb* or low-fat* or grain* or vegetable* or fruit* or milk or dairy or meat or processed meat* or fish or eggs or nuts or chocolate or oil*).ti,ab.	733,079
#7	(carbohydrate* or fructose or glucose or starch or sucrose or fibre or psyllium or inulin or cellulose or prebiotic* or probiotic* or synbiotic* or n-3 or omega 3 or omega-3 or n3 or n6 or n-6 or omega 6 or omega-6 or unsaturated or monounsaturated or polyunsaturated or EPA or DHA or linoleic acid or protein or amino acid*).ti,ab.	3,445,283
#8	(vitamin* or beta-carot* or ascorbic acid or cholecalciferol* or ergocalciferol or thiamine or riboflavin or niacin or pyridoxine or cobalamin or folic acid or magnesium or calcium or selenium or sodium or potassium or iron or zinc or copper or iodine).ti,ab.	1,391,454
#9	(diet* or nutrition or eat* or consum* or intake).ti,ab.	1,173,600
#10	(#5 or #6 or #7 or #8) and #9	502,160
#11	#4 and #10	3,809
#12	limit #11 to yr="2010 - 2019"	3,118

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Supplementary Table 1: Explanation and definition for Population (P), Intervention/Exposure (I/E), Comparator (C), Outcome (O) similarities.

	Patients/population	Intervention/Exposure	Comparator	Outcome
1 = more or less identical	Both bodies of evidence include primary or secondary prevention.	Both bodies of evidence use intake, supplements or status.	Both bodies of evidence use (no) intake, supplements/placebo or status.	Same outcome.
	e.g. people with cardiovascular disease in BoE from RCTs and CSs.	e.g. Folate supplements in BoE from RCTs and BoE from CSs.	e.g. see Intervention/Exposure.	e.g. Cardiovascular disease in BoE from RCTs and BoE from CSs.
2 = similar but not identical	Both bodies of evidence include primary and secondary prevention or mixed population vs. primary or secondary prevention.	<ul style="list-style-type: none"> - Intake vs. supplements. - Enriched / modified foods vs. intake. - Intake vs. urinary excretion. - Intake + supplements vs. intake. - Intake vs. intake on similar but not identical intervention /exposure - Supplements vs. supplements on similar but not identical intervention /exposure 	see Intervention/Exposure.	Same cluster of outcomes.
	e.g. healthy people and people with cardiovascular disease in RCTs vs. general healthy population in CSs.	<ul style="list-style-type: none"> e.g. - Vitamin C supplements vs. Vitamin C intake. - Margarine enriched with α-Linolenic acid vs. α-Linolenic acid intake. - Substituted salt intake (with 65% sodium) vs. sodium intake. - Sodium intake vs. sodium intake and urinary sodium. - Fruit and vegetables intake vs. fruit or vegetables intake. - Low-fat intake vs. High-carbohydrate intake. - Increased fruit and vegetable intake + decreased fat intake vs. flavonoids intake. - Multi-micronutrient supplements vs. Multivitamin supplements. 	e.g. see Intervention/Exposure.	<ul style="list-style-type: none"> e.g. - Cardiovascular disease vs. coronary heart disease. - Mortality vs. incidence.
3 = broadly similar	Secondary (BoE from RCTs) vs. primary prevention (BoE from CSs), which means no healthy population in the BoE from RCTs.	<ul style="list-style-type: none"> - Intake or supplements vs. status. - Supplements vs. intake on broadly similar intervention/exposure. 	see Intervention/Exposure.	Broadly similar outcomes. Continuous vs. dichotomous outcome (see also supplementary table 4).
	e.g. people with	e.g.	e.g. see Intervention/Exposure.	e.g. Colorectal adenoma vs.

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	cardiovascular disease in RCTs vs. general healthy population in CSs.	- Vitamin D supplements vs. Vitamin D status. - Vitamin A supplements vs. β -carotene intake		colorectal cancer.
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BoE: bodies of evidence; CS: cohort study; RCT: randomized controlled trial.

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Supplementary Table 2: Population (P), Intervention/Exposure (I/E), Comparator (C), Outcome (O) matching similarities for all identified diet-disease associations.

Bodies of evidence from randomized controlled trials (Cochrane Reviews)			Bodies of evidence from cohort studies			PI/ECO similarities					Included in the pooling scenario (Yes/ No)
Author, year (Supplementary Reference)	Intervention (as defined by the authors)	Outcome (as defined by the authors)	Author, year (Supplementary Reference)	Exposure (as defined by the authors)	Outcome (as defined by the authors)	Patients / population	Intervention / Exposure	Comparator	Outcome	Overall	
Abdelhamid et al. 2018a (1)	Omega-3 fatty acids intake + supplements	Cardiovascular mortality	Chowdhury et al. 2014a (2)	Omega-3 fatty acids intake	Coronary heart disease mortality	3	2	2	2	3	N
Abdelhamid et al. 2018a (1)	Omega-3 fatty acids intake + supplements	Cardiovascular disease	Chowdhury et al. 2014a (2)	Omega-3 fatty acids intake	Coronary heart disease	2	2	2	2	2	Y
Abdelhamid et al. 2018a (1)	α -Linolenic acid intake (Supplementary/enriched foods)	Cardiovascular disease	Pan et al. 2012 (3)	α -Linolenic acid intake	Cardiovascular disease	2	2	2	1	2	Y
Abdelhamid et al. 2018a (1)	Omega-3 fatty acids intake + supplements	Body weight	Schlesinger et al. 2019 (4)	Fish intake	Weight gain	3	2	2	1	3	N
Abdelhamid et al. 2018a (1)	Omega-3 fatty acids intake + supplements	All-cause mortality	Wan et al. 2017 (5)	Omega-3 fatty acids intake	All-cause mortality	2	2	2	1	2	Y
Abdelhamid et al. 2018a (1)	α -Linolenic acid intake (Supplementary/enriched foods)	Cardiovascular mortality	Wei et al. 2018 (6)	α -Linolenic acid intake	Coronary heart disease mortality	2	2	2	2	2	Y
Abdelhamid et al. 2018a (1)	α -Linolenic acid intake (Supplementary/enriched foods)	Coronary heart disease	Wei et al. 2018 (6)	α -Linolenic acid intake	Coronary heart disease	2	2	2	1	2	Y
Abdelhamid et al. 2018b (7)	Polyunsaturated fat intake + supplements	All-cause mortality	Li et al. 2020 (8)	Omega-3 fatty acids intake	All-cause mortality	2	2	2	1	2	Y
Abdelhamid et al. 2018b(7)	Polyunsaturated fat intake + supplements	Coronary heart disease	Chowdhury et al. 2014a (2)	Omega-6 fatty acids intake	Coronary heart disease	2	2	2	1	2	Y
Abdelhamid et al. 2018b(7)	Polyunsaturated fat intake	Major cardiovascular events	Zhu et al. 2019 (9)	Polyunsaturated fat intake	Cardiovascular disease	2	1	1	1	2	Y
Adler et al. 2014 (10)	Low sodium intake	All-cause mortality	Aburto et al. 2013 (11)	Low sodium intake	All-cause mortality	2	2	2	1	2	Y
Adler et al. 2014 (10)	Low sodium intake	Cardiovascular mortality	Aburto et al. 2013 (11)	Low sodium intake	Cardiovascular mortality	2	2	2	1	2	Y
Adler et al. 2014 (10)	Low sodium intake	Cardiovascular disease	Aburto et al. 2013 (11)	Low sodium intake	Cardiovascular disease	2	2	2	1	2	Y

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Adler et al. 2014 (10)	Low sodium intake	Systolic blood pressure	Leyvraz et al. 2018 (12)	Low sodium intake + status	Systolic blood pressure	3	2	2	1	3	Y
Adler et al. 2014 (10)	Low sodium intake	Diastolic blood pressure	Leyvraz et al. 2018 (12)	Low sodium intake + status	Diastolic blood pressure	3	2	2	1	3	Y
Al-Khudairy et al. 2017 (13)	Vitamin C supplements	Major cardiovascular events	Aune et al. 2018 (14)	Vitamin C intake	Cardiovascular disease	2	2	2	1	2	Y
Al-Khudairy et al. 2017 (13)	Vitamin C supplements	Cardiovascular mortality	Aune et al. 2018 (14)	Vitamin C intake	Cardiovascular mortality	2	2	2	1	2	N
Al-Khudairy et al. 2017 (13)	Vitamin C supplements	All-cause mortality	Aune et al. 2018 (14)	Vitamin C intake	All-cause mortality	2	2	2	1	2	Y
Avenell et al. 2014 (15)	Vitamin D supplements	Hip fracture	Feng et al. 2017 (16)	Vitamin D status	Hip fracture	2	3	3	1	3	Y
Avenell et al. 2014 (15)	Vitamin D supplements	Any fracture	Feng et al. 2017 (16)	Vitamin D status	Any fracture	2	3	3	1	3	Y
Bjelakovic et al. 2012 (17)	β -carotene supplements	All-cause mortality	Aune et al. 2018 (14)	β -carotene intake	All-cause mortality	2	2	2	1	2	Y
Bjelakovic et al. 2012 (17)	Vitamin E supplements	All-cause mortality	Aune et al. 2018 (14)	Vitamin E intake	All-cause mortality	2	2	2	1	2	Y
Bjelakovic et al. 2012 (17)	Vitamin C supplements	All-cause mortality	Aune et al. 2018 (14)	Vitamin C intake	All-cause mortality	2	2	2	1	2	Y
Bjelakovic et al. 2012 (17)	Vitamin A supplements	All-cause mortality	Aune et al. 2018 (14)	β -carotene intake	All-cause mortality	2	3	3	1	3	Y
Bjelakovic et al. 2014a (18)	Vitamin D supplements	All-cause mortality	Chowdhury et al. 2014b (19)	Vitamin D status	All-cause mortality	2	3	3	1	3	Y
Bjelakovic et al. 2014a (18)	Vitamin D supplements	Cardiovascular mortality	Chowdhury et al. 2014b (19)	Vitamin D status	Cardiovascular mortality	2	3	3	1	3	Y
Bjelakovic et al. 2014a (18)	Vitamin D supplements	Cancer mortality	Han et al. 2019 (20)	Vitamin D status	Cancer mortality	2	3	3	1	3	Y
Bjelakovic et al. 2014b (21)	Vitamin D supplements	Cancer occurrence	Han et al. 2019 (20)	Vitamin D status	Cancer incidence	2	3	3	1	3	Y
Bjelakovic et al. 2014b (21)	Vitamin D3 supplements	Breast cancer	Hossain et al. 2019 (22)	Vitamin D supplements	Breast cancer	2	1	1	1	2	Y
Bjelakovic et al. 2014b (21)	Vitamin D3 supplements	Lung cancer	Zhang et al. 2015 (23)	Vitamin D intake	Lung cancer	2	2	2	1	2	Y
Cormick et al. 2015 (24)	Calcium supplements	Systolic blood pressure	Jayedi et al. 2019 (25)	Calcium intake + supplements	Hypertension	2	2	2	3	3	N
Cormick et al. 2015 (24)	Calcium supplements	Diastolic blood pressure	Jayedi et al. 2019 (25)	Calcium intake + supplements	Hypertension	2	2	2	3	3	N
De-Regil et al. 2015 (26)	Folate supplements	Neural tube defect	Blencowe et al. 2010 (27)	Folate supplements	Neural tube defect	2	1	1	1	2	Y
De-Regil et al. 2015 (26)	Folate supplements	Congenital cardiovascular anomalies	Feng et al. 2015 (28)	Folate supplements	Congenital heart defect	1	1	1	2	2	Y
El Dib et al. 2015 (29)	Zinc supplements	HOMA-IR	Fernandez-Cao et al. 2019 (30)	Zinc supplements	Type 2 diabetes	2	1	1	3	3	N
Hartley et al. 2013 (31)	Fruit & Vegetables intake	Systolic blood pressure	Schwingshackl et al. 2017 (32)	Fruit intake	Hypertension	2	2	2	3	3	N

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Hartley et al. 2013 (31)	Fruit & Vegetables intake	Diastolic blood pressure	Schwingshackl et al. 2017 (32)	Vegetables intake	Hypertension	2	2	2	3	3	N
Hartley et al. 2016 (33)	Fibre intake + supplements	Systolic blood pressure	Schwingshackl et al. 2017 (32)	Whole grain intake	Hypertension	2	2	2	3	3	N
Hartley et al. 2016 (33)	Fibre intake + supplements	Diastolic blood pressure	Schwingshackl et al. 2017 (32)	Whole grain intake	Hypertension	2	2	2	3	3	N
Hemmingsen et al. 2017 (34)	Healthy diet (intake)	Type 2 diabetes	Schwingshackl et al. 2018 (35)	Diet quality (intake)	Type 2 diabetes	2	1	1	1	2	Y
Hemmingsen et al. 2017 (34)	Healthy diet (intake)	All-cause mortality	Schwingshackl et al. 2018 (35)	Diet quality (intake)	All-cause mortality	2	1	1	1	2	Y
Hofmeyr et al. 2018 (36)	Calcium supplements	Pre-eclampsia	Newberry et al. 2014 (37)	Calcium intake	Pre-eclampsia	2	2	2	1	2	Y
Hofmeyr et al. 2018 (36)	Calcium supplements	High blood pressure	Newberry et al. 2014 (37)	Calcium intake	High blood pressure	2	2	2	1	2	Y
Hooper et al. 2012 (38)	Low fat / modified fat (intake + supplements)	Cardiovascular mortality	Noto et al. 2013 (39)	High-carbohydrate intake	Cardiovascular mortality	2	2	2	1	2	Y
Hooper et al. 2012 (38)	Low fat / modified fat (intake + supplements)	All-cause mortality	Seidelmann et al. 2018 (40)	High-carbohydrate intake	All-cause mortality	2	2	2	1	2	Y
Hooper et al. 2012 (38)	Low fat / modified fat (intake + supplements)	Combined cardiovascular events	Zhu et al. 2019 (9)	Low fat intake	Cardiovascular disease	2	2	2	1	2	Y
Hooper et al. 2012 (38)	Low fat intake	Body weight	Sartorius et al. 2018 (41)	High-carbohydrate intake	Obesity	2	2	2	3	3	N
Hooper et al. 2015a (42)	Low fat intake	Body weight	Sartorius et al. 2018 (41)	High-carbohydrate intake	Obesity	2	2	2	3	3	N
Hooper et al. 2015b (43)	Low saturated fat intake	All-cause mortality	de Souza et al. 2015 (44)	Low saturated fat intake	All-cause mortality	2	1	1	1	2	Y
Hooper et al. 2015b (43)	Low saturated fat intake	Cardiovascular mortality	de Souza et al. 2015 (44)	Low saturated fat intake	Cardiovascular mortality	2	1	1	1	2	Y
Hooper et al. 2015b (43)	Low saturated fat intake	Combined cardiovascular events	de Souza et al. 2015 (44)	Low saturated fat intake	Coronary heart disease	2	1	1	1	2	Y
Hooper et al. 2018 (45)	Omega-6 fatty acids intake + supplements	Combined cardiovascular events	Chowdhury et al. 2014a (2)	Omega-6 fatty acids intake	Coronary heart disease	2	2	2	2	2	Y
Hooper et al. 2018 (45)	Omega-6 fatty acids intake + supplements	All-cause mortality	Li et al. 2020 (8)	Linoleic acid intake	All-cause mortality	2	2	2	1	2	Y
Hooper et al. 2018 (45)	Omega-6 fatty acids intake + supplements	Cardiovascular mortality	Li et al. 2020 (8)	Linoleic acid intake	Cardiovascular mortality	2	2	2	1	2	Y
Jin et al. 2012 (46)	Total flavonoids intake (+co-dietary intervention)	Colorectal adenoma	Jin et al. 2012 (46)	Total flavonoids intake	Colorectal cancer	3	2	2	3	3	Y

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Jin et al. 2012 (46)	Isoflavonoes intake (+co-dietary intervention)	Colorectal adenoma	Jin et al. 2012 (46)	Isoflavonoes intake	Colorectal cancer	3	2	2	3	3	Y
Jin et al. 2012 (46)	Flavonols intake (+co-dietary intervention)	Colorectal adenoma	Jin et al. 2012 (46)	Flavonols intake	Colorectal cancer	3	2	2	3	3	Y
Keats et al. 2019 (47)	Micronutrients supplements (folic acid + iron)	Preterm birth	Wolf et al. 2017 (48)	Multivitamin supplements	Preterm birth	1	2	2	1	2	Y
Keats et al. 2019 (47)	Micronutrients supplements (folic acid + iron)	Low birth weight	Wolf et al. 2017 (48)	Multivitamin supplements	Low birth weight	1	2	2	1	2	Y
Keats et al. 2019 (47)	Micronutrients supplements (folic acid + iron)	Small gestational age	Wolf et al. 2017 (48)	Multivitamin supplements	Small gestational age	1	2	2	1	2	Y
Kelly et al. 2017 (49)	Whole grains intake	Systolic blood pressure	Schwingshackl et al. 2017 (32)	Whole grain intake	Hypertension	2	1	1	3	3	N
Kelly et al. 2017 (49)	Whole grains intake	Diastolic blood pressure	Schwingshackl et al. 2017 (32)	Whole grain intake	Hypertension	2	1	1	3	3	N
Kelly et al. 2017 (49)	Whole grains intake	Body weight	Ye et al. 2012 (50)	Whole grain intake	Body weight	2	1	1	1	2	Y
Mathew et al. 2012 (51)	β -carotene supplements	Cataract	Jiang et al. 2019 (52)	β -carotene intake	Cataract	2	2	2	1	2	Y
Mathew et al. 2012 (51)	Vitamin E supplements	Cataract	Jiang et al. 2019 (52)	Vitamin E intake	Cataract	2	2	2	1	2	Y
Mathew et al. 2012 (51)	Vitamin C supplements	Cataract	Jiang et al. 2019 (52)	Vitamin C intake	Cataract	2	2	2	1	2	Y
Palacios et al. 2019 (53)	Vitamin D supplements	Gestational diabetes	Hu et al. 2018 (54)	Vitamin D status	Gestational diabetes	1	3	3	1	3	Y
Palacios et al. 2019 (53)	Vitamin D supplements	Preterm birth	Tous et al. 2020 (55)	Vitamin D status	Preterm birth	1	3	3	1	3	Y
Palacios et al. 2019 (53)	Vitamin D supplements	Birth length	Tous et al. 2020 (55)	Vitamin D status	Birth length	2	3	3	1	3	Y
Palacios et al. 2019 (53)	Vitamin D supplements	Birth weight	Tous et al. 2020 (55)	Vitamin D status	Birth weight	2	3	3	1	3	Y
Palacios et al. 2019 (53)	Vitamin D supplements	Head circumference at birth	Tous et al. 2020 (55)	Vitamin D status	Head circumference at birth	2	3	3	1	3	Y
Palacios et al. 2019 (53)	Vitamin D supplements	Pre-eclampsia	Yuan et al. 2019 (56)	Vitamin D status	Pre-eclampsia	1	3	3	1	3	Y
Rees et al. 2013a (57)	Healthy diet (intake)	Systolic blood pressure	Kastorini et al. 2011 (58)	Mediterranean diet (intake)	Systolic blood pressure	2	1	1	1	2	Y
Rees et al. 2013a (57)	Healthy diet (intake)	Diastolic blood pressure	Kastorini et al. 2011 (58)	Mediterranean diet (intake)	Diastolic blood pressure	2	1	1	1	2	Y
Rees et al. 2013b (59)	Selenium supplements	All-cause mortality	Jayed et al. 2018 (60)	Selenium intake	All-cause mortality	2	2	2	1	2	Y
Rees et al. 2013b (59)	Selenium supplements	Cardiovascular mortality	Xiang et al. 2019 (61)	Selenium status	Cardiovascular mortality	2	3	3	1	3	Y

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Rees et al. 2013b (59)	Selenium supplements	Combined cardiovascular events	Zhang et al. 2016a (62)	Selenium status	Cardiovascular disease	2	3	3	1	3	Y
Rees et al. 2019 (63)	Mediterranean diet (intake)	High Density Lipoprotein	Kastorini et al. 2011 (58)	Mediterranean diet (intake)	High Density Lipoprotein	2	1	1	1	2	Y
Rees et al. 2019 (63)	Mediterranean diet (intake)	Triglycerides	Kastorini et al. 2011 (58)	Mediterranean diet (intake)	Triglycerides	2	1	1	1	2	Y
Rees et al. 2019 (63)	Mediterranean diet (intake)	Systolic blood pressure	Kastorini et al. 2011 (58)	Mediterranean diet (intake)	Systolic blood pressure	2	1	1	1	2	Y
Rees et al. 2019 (63)	Mediterranean diet (intake)	Cardiovascular mortality	Rosato et al. 2019 (64)	Mediterranean diet (intake)	Cardiovascular mortality	2	1	1	1	2	Y
Rees et al. 2019 (63)	Mediterranean diet (intake)	Combined cardiovascular events	Rosato et al. 2019 (64)	Mediterranean diet (intake)	Cardiovascular disease	2	1	1	1	2	Y
Rees et al. 2019 (63)	Mediterranean diet (intake)	All-cause mortality	Soltani et al. 2019 (65)	Mediterranean diet (intake)	All-cause mortality	2	1	1	1	2	Y
Rutjes et al. 2018 (66)	B-Vitamin supplements	Dementia /MCI	Doets et al. 2013 (67)	Vitamin B12 intake	Dementia	3	2	2	2	3	Y
Rutjes et al. 2018 (66)	Vitamin D3 supplements	Dementia	Goodwill et al. 2017 (68)	Vitamin D status	Dementia / MCI	1	3	3	3	3	Y
Sydenham et al. 2012 (69)	Omega-3 fatty acids supplements	Mini-Mental State Examination	Zhang et al. 2016b (70)	Omega-3 fatty acids intake	Dementia	1	2	2	3	3	N
Tieu et al. 2017 (71)	Healthy diet (intake)	Preterm birth	Chia et al. 2019 (72)	Healthy diet (intake)	Preterm birth	2	1	1	1	2	Y
Tieu et al. 2017 (71)	Healthy diet (intake)	Small gestational age	Chia et al. 2019 (72)	Healthy diet (intake)	Small gestational age	2	1	1	1	2	Y
Tieu et al. 2017 (71)	Healthy diet (intake)	Birth weight	Chia et al. 2019 (72)	Healthy diet (intake)	Birth weight	2	1	1	1	2	Y
Tieu et al. 2017 (71)	Healthy diet (intake)	Gestational diabetes	Mijatovic-Vukas et al. 2018 (73)	Mediterranean diet (intake)	Gestational diabetes	2	1	1	1	2	Y
Usinger et al. 2012 (74)	Fermented milk intake + supplements	Systolic blood pressure	Soedamah-Muthu et al. 2012 (75)	Fermented milk intake	Hypertension	2	2	2	3	3	N
Usinger et al. 2012 (74)	Fermented milk intake + supplements	Diastolic blood pressure	Soedamah-Muthu et al. 2012 (75)	Fermented milk intake	Hypertension	2	2	2	3	3	N
Vinceti et al. 2018 (76)	Selenium supplements	Cancer	Vinceti et al. 2018 (76)	Selenium status	Cancer	2	3	3	1	3	Y
Vinceti et al. 2018 (76)	Selenium supplements	Cancer mortality	Vinceti et al. 2018 (76)	Selenium intake	Cancer mortality	2	2	2	1	2	Y
Vinceti et al. 2018 (76)	Selenium supplements	Colorectal cancer	Vinceti et al. 2018 (76)	Selenium supplements	Colorectal cancer	2	1	1	1	2	Y
Yao et al. 2017 (77)	Fibre intake	Colorectal cancer	Aune et al. 2011 (78)	Fibre intake	Colorectal cancer	2	1	1	1	2	Y
Yao et al. 2017 (77)	Fibre intake	Colorectal adenoma	Ben et al. 2014 (79)	Fibre intake	Colorectal adenoma	3	1	1	1	3	Y

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HOMA-IR: homeostasis model assessment-insulin resistance; MCI: mild cognitive impairment; PI/ECO: population – intervention/exposure – comparator – outcome;

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Supplementary Table 3: Differences between published (original reported) effect estimates and re-calculated effect estimates.

Original reported				Re-calculated
Author, year (Supplementary Reference)	Intervention / Exposure (as defined by the authors)	Outcome (as defined by the authors)	RR/HR/OR or MD (95% CI)	RR/HR/OR or MD (95% CI)
Abdelhamid et al. 2018b (7)	Polyunsaturated fat intake	Major cardiovascular events	RR: 0.84 (0.59; 1.20)	RR: 0.84 (0.60; 1.20)
Adler et al. 2014 (10)	Low sodium intake	All-cause mortality	RR: 0.96 (0.83; 1.10)	RR: 0.96 (0.84; 1.11)
Adler et al. 2014 (10)	Low sodium intake	Cardiovascular disease	RR: 0.76 (0.57; 1.01)	RR: 0.76 (0.57; 1.02)
Aune et al. 2018 (14)	Vitamin C intake	Cardiovascular disease	RR: 0.84 (0.77; 0.91)	RR: 0.84 (0.78; 0.91)
Aune et al. 2018 (14)	Vitamin E intake	All-cause mortality	RR: 0.98 (0.93; 1.04)	RR: 0.98 (0.92; 1.04)
Avenell et al. 2014 (15)	Vitamin D supplements	Any fracture	RR: 1.04 (0.96; 1.12)	RR: 1.04 (0.95; 1.15)
Ben et al. 2014 (79)	Fibre intake	Colorectal adenoma	RR: 0.92 (0.76; 1.10)	RR: 0.92 (0.76; 1.11)
Bjelakovic et al. 2014a (18)	Vitamin D supplements	All-cause mortality	RR: 0.97 (0.94; 0.99)	RR: 0.97 (0.94; 1.00)
Chowdhury et al. 2014a (2)	Omega-6 fatty acids intake	Coronary heart disease	RR: 0.98 (0.90; 1.06)	RR: 0.98 (0.90; 1.07)
Chowdhury et al. 2014b (19)	Vitamin D status	All-cause mortality	RR: 0.69 (0.65; 0.75)	RR: 0.70 (0.65; 0.75)
Chowdhury et al. 2014b (19)	Vitamin D status	Cardiovascular mortality	RR: 0.70 (0.61; 0.80)	RR: 0.69 (0.60; 0.79)
de Souza et al. 2015 (44)	Low saturated fat intake	Cardiovascular mortality	RR: 1.03 (0.89; 1.19)	RR: 1.03 (0.89; 1.18)
de Souza et al. 2015 (44)	Low saturated fat intake	Coronary heart disease	RR: 0.94 (0.85; 1.05)	RR: 0.95 (0.86; 1.05)
Feng et al. 2017 (16)	Vitamin D status	Hip fracture	RR: 0.68 (0.60; 0.78)	RR: 0.62 (0.53; 0.71)
Feng et al. 2017 (16)	Vitamin D status	Any fracture	RR: 0.80 (0.68; 0.94)	RR: 0.71 (0.58; 0.86)
Goodwill et al. 2017 (68)	Vitamin D status	Dementia / MCI	OR: 0.88 (0.81; 0.95)	OR: 0.88 (0.82; 0.95)
Hofmeyr et al. 2018 (36)	Calcium supplements	Pre-eclampsia	RR: 0.45 (0.31; 0.65)	RR: 0.47 (0.33; 0.68)
Jiang et al. 2019 (52)	Vitamin E intake	Cataract	RR: 0.90 (0.80; 1.00)	RR: 0.88 (0.75; 1.03)
Jiang et al. 2019 (52)	Vitamin C intake	Cataract	RR: 0.80 (0.72; 0.88)	RR: 0.74 (0.59; 0.95)
Kastorini et al. 2011 (58)	Mediterranean diet (intake)	High Density Lipoprotein (mmol/L)	MD: 0.01 (-0.046; 0.061)	MD: 0.01 (-0.04; 0.06)
Kastorini et al. 2011 (58)	Mediterranean diet (intake)	Triglycerides (mmol/L)	MD: -0.023 (-0.076; 0.031)	MD: -0.02 (-0.07; 0.03)
Keats et al. 2019 (47)	Micronutrients supplements	Preterm birth	RR: 0.95 (0.90; 1.01)	RR: 0.95 (0.89; 1.01)
Keats et al. 2019 (47)	Micronutrients supplements	Small gestational age	RR: 0.92 (0.88; 0.97)	RR: 0.92 (0.87; 0.97)
Leyvraz et al. 2018 (12)	Low sodium intake + status	Diastolic blood pressure (mmHg)	MD: 1.20 (1.00; 1.50)	MD: 1.20 (0.95; 1.45)
Li et al. 2020 (8)	Linoleic acid intake	Cardiovascular mortality	RR: 0.87 (0.82; 0.92)	RR: 0.86 (0.81; 0.92)
Noto et al. 2013 (39)	High-carbohydrate intake	Cardiovascular mortality	RR: 0.91 (0.81; 1.02)	RR: 0.91 (0.81; 1.03)
Rees et al. 2013b (59)	Selenium supplements	Cardiovascular mortality	RR: 0.97 (0.79; 1.20)	RR: 1.02 (0.74; 1.41)
Rees et al. 2019 (63)	Mediterranean diet (intake)	Triglycerides (mmol/L)	MD: -0.09 (-0.16; -0.01)	MD: -0.09 (-0.17; -0.01)
Rosato et al. 2019 (64)	Mediterranean diet (intake)	Cardiovascular mortality	RR: 0.73 (0.67; 0.81)	RR: 0.74 (0.67; 0.81)
Seidemann et al. 2018 (40)	High-carbohydrate intake	All-cause mortality	RR: 0.83 (0.76; 0.92)	RR: 0.83 (0.75; 0.92)
Soltani et al. 2019 (65)	Mediterranean diet (intake)	All-cause mortality	RR: 0.90 (0.89; 0.91)	RR: 0.90 (0.89; 0.92)
Tieu et al. 2017 (71)	Healthy diet (intake)	Preterm birth	RR: 0.51 (0.21; 1.25)	RR: 0.52 (0.21; 1.28)

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Tieu et al. 2017 (71)	Healthy diet (intake)	Gestational diabetes	RR: 0.60 (0.35; 1.04)	RR: 0.61 (0.36; 1.04)
Tous et al. 2020 (55)	Vitamin D status	Preterm birth	OR: 0.78 (0.65; 0.93)	OR: 0.77 (0.65; 0.92)
Yao et al. 2017 (77)	Fibre intake	Colorectal cancer	RR: 2.7 (1.07; 6.85)	RR: 2.69 (1.06; 6.82)
Yao et al. 2017 (77)	Fibre intake	Colorectal adenoma	RR: 1.04 (0.95; 1.13)	RR: 1.04 (0.94; 1.14)
Yuan et al. 2019 (56)	Vitamin D status	Pre-eclampsia	OR: 0.62 (0.50; 0.78)	OR: 0.62 (0.50; 0.77)
Zhang et al. 2015 (23)	Vitamin D intake	Lung cancer	RR: 0.89 (0.74; 1.06)	RR: 0.89 (0.77; 1.03)
Zhang et al. 2016a (62)	Selenium status	Cardiovascular disease	RR: 0.87 (0.76; 0.99)	RR: 0.87 (0.76; 1.00)
Zhu et al. 2019 (9)	Polyunsaturated fat intake	Cardiovascular disease	RR: 0.97 (0.93; 1.00)	RR: 0.97 (0.93; 1.01)
Zhu et al. 2019 (9)	Low fat intake	Cardiovascular disease	RR: 1.03 (0.99; 1.08)	RR: 1.03 (0.99; 1.07)

CI: confidence interval; HR: hazard ratio; MCI: mild cognitive impairment; MD: mean difference; OR: odds ratio; RR: risk ratio.

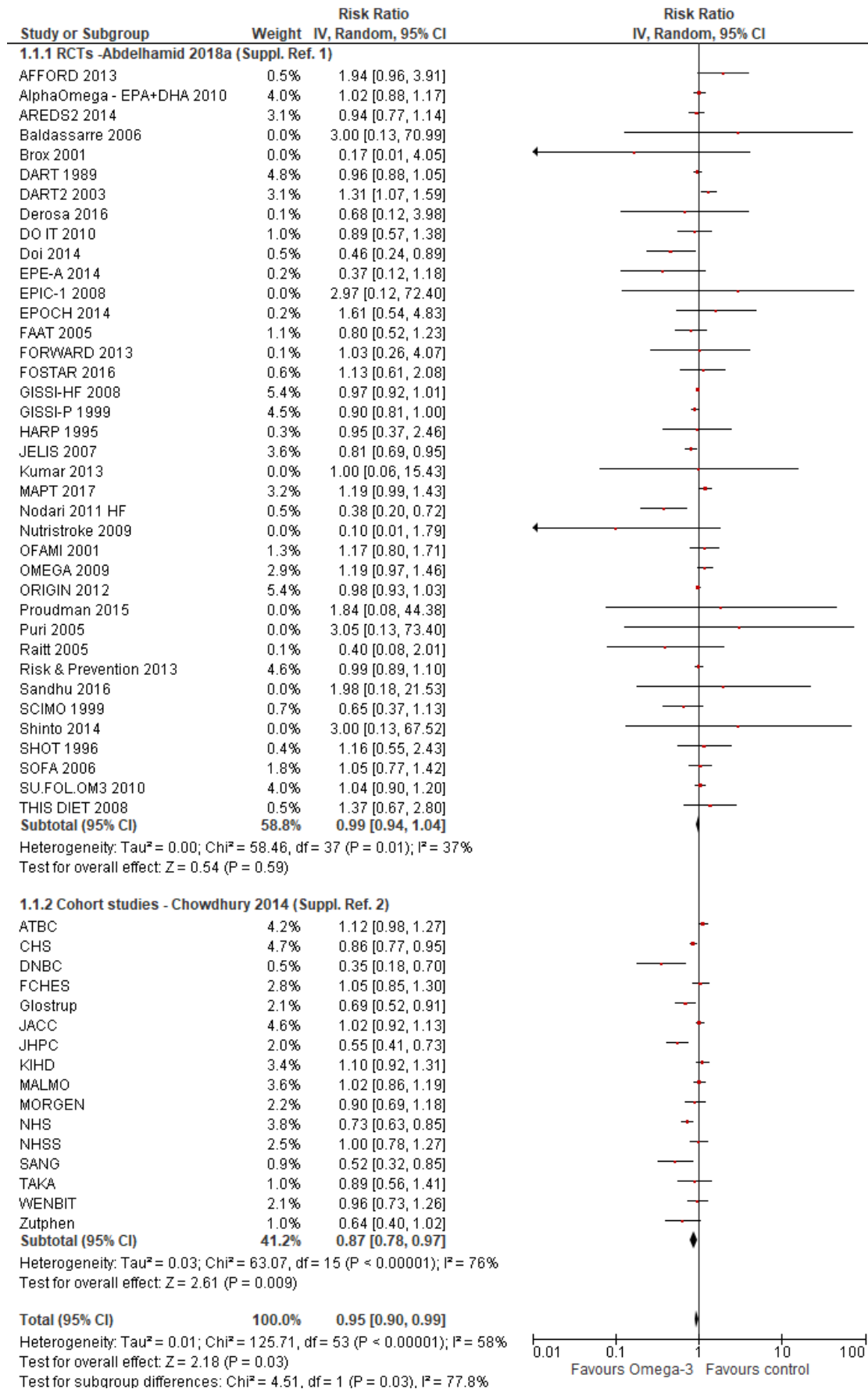
Supplemental data

Supplementary Table 4: Reason for exclusion form the pooling scenario

Systematic reviews of RCTs		Systematic reviews of cohort studies		Reason for exclusion
Author, year (Supplementary Reference)	Outcome	Reference	Outcome	
Abdelhamid et al. 2018a (1)	Body weight (MD)	Schlesinger et al. (4)	Weight gain (RR)	Body weight on continuous scale vs. weight gain on binary scale
Abdelhamid et al. 2018a (1)	Cardiovascular mortality (RR)	Chowdhury et al. 2014a (2)	CHD mortality (RR)	Forest plot of Chowdhury et al. 2014a (2) not available
Al-Khudairy et al. 2017 (13)	Cardiovascular mortality (RR)	Aune et al. 2018 (14)	Cardiovascular mortality (RR)	Forest plot of Aune et al. 2018 (14) not available
Cormick et al. 2015 (24)	SBP (MD)	Jayedí et al. 2019 (25)	Hypertension (RR)	Impossibility to convert one outcome to the other one
Cormick et al. 2015 (24)	DBP (MD)	Jayedí et al. 2019 (25)	Hypertension (RR)	
El Dib et al. 2015 (29)	HOMA-IR (MD)	Fernandez-Cao et al. 2019 (30)	T2D (RR)	Impossibility to convert one outcome to the other one
Hartley et al. 2013 (31)	SBP (MD)	Schwingshackl et al. 2017 (32)	Hypertension (RR)	Impossibility to convert one outcome to the other one
Hartley et al. 2013 (31)	DBP (MD)	Schwingshackl et al. 2017 (32)	Hypertension (RR)	
Hartley et al. 2016 (33)	SBP (MD)	Schwingshackl et al. 2017 (32)	Hypertension (RR)	Impossibility to convert one outcome to the other one
Hartley et al. 2016 (33)	DBP (MD)	Schwingshackl et al. 2017 (32)	Hypertension (RR)	
Hooper et al. 2012 (38)	Body weight (MD) (the intervention is “dietary fat reduction”)	Sartorius et al. 2018 (41)	Obesity (RR) (the intervention is “high-carbohydrate intake”)	Impossibility to convert one outcome to the other one (moreover intervention in the RCTs meta-analysis too different from the intervention in the CSs meta-analysis)
Hooper et al. 2015a (42)	Body weight (MD) (the intervention is “dietary fat reduction”)	Sartorius et al. 2018 (41)	Obesity (RR) (the intervention is “high-carbohydrate intake”)	
Kelly et al. 2017 (49)	SBP (MD)	Schwingshackl et al. 2017 (32)	Hypertension (RR)	Impossibility to convert one outcome to the other one
Kelly et al. 2017 (49)	DBP (MD)	Schwingshackl et al. 2017 (32)	Hypertension (RR)	
Sydenham et al. 2012 (69)	MMSE (MD)	Zhang 2016b et al. (70)	Dementia (RR)	Impossibility to convert one outcome to the other one
Usinger et al. 2012 (74)	SBP (MD)	Soedamah-Muthu et al. 2012 (75)	Hypertension (RR)	Impossibility to convert one outcome to the other one
Usinger et al. 2012 (74)	DBP (MD)	Soedamah-Muthu et al. 2012 (75)	Hypertension (RR)	

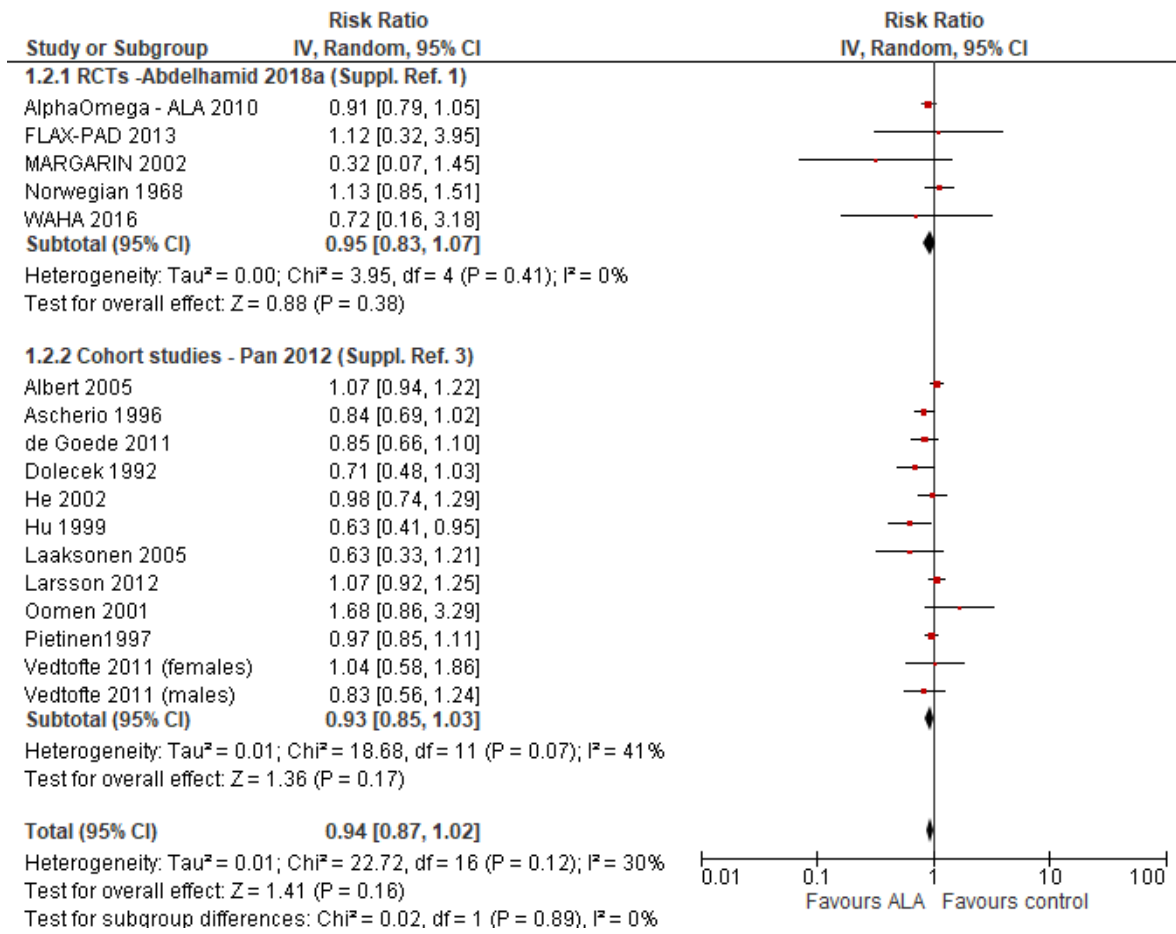
CS: cohort studies; DBP: diastolic blood pressure; HOMA-IR: homeostasis model assessment-insulin resistance; MD: mean difference; MMSE: Mini-Mental State Examination; RCTs: randomized controlled trials; RR: risk ratio; SBP: systolic blood pressure; T2D: type 2 diabetes.

Supplemental data



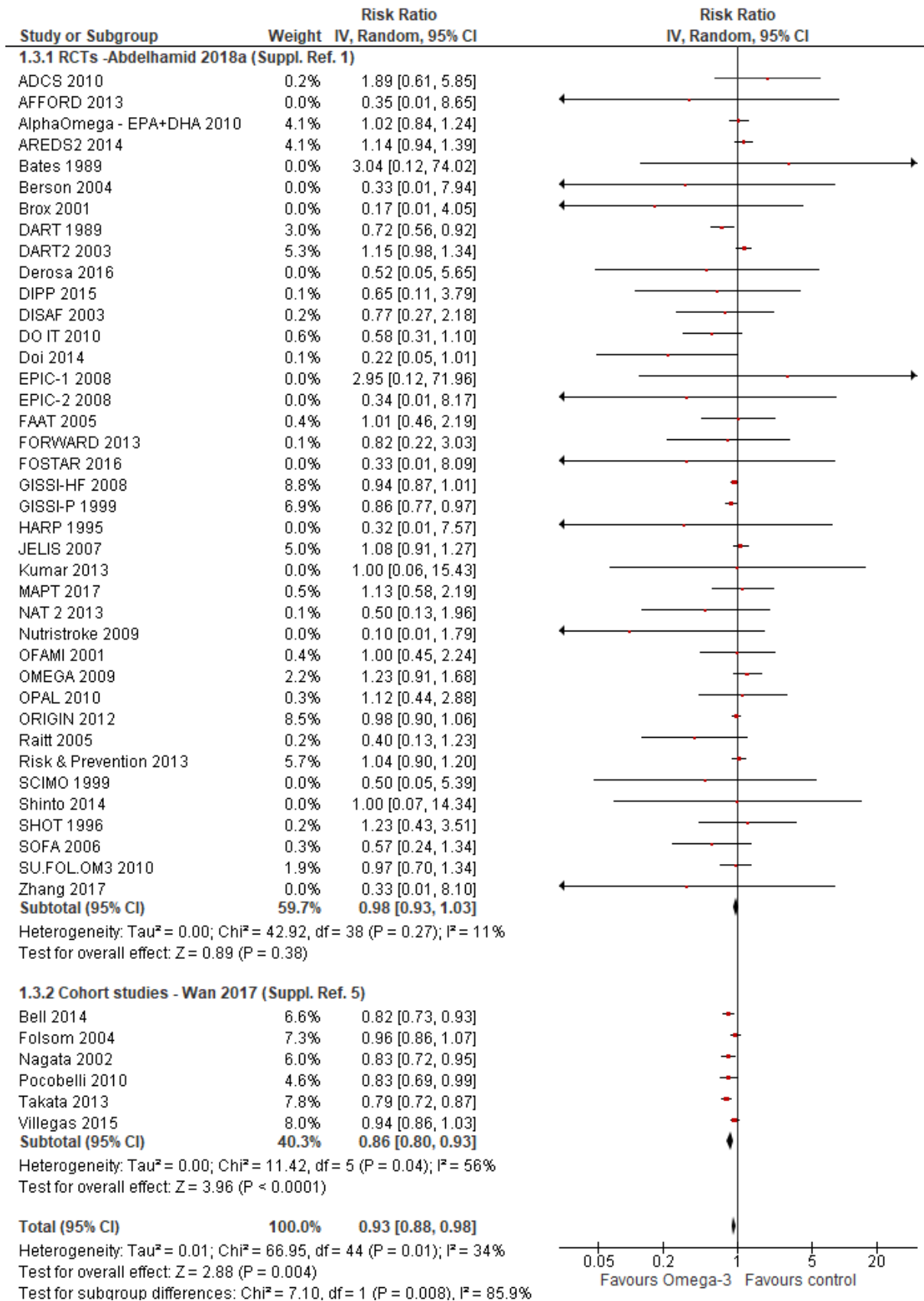
Supplementary Figure 1: Abdelhamid et al. 2018a (1) / Chowdhury et al. 2014a (2); Intervention/ Exposure: Omega-3 fatty acids; Outcome: Cardiovascular disease/ Coronary heart disease

Supplemental data



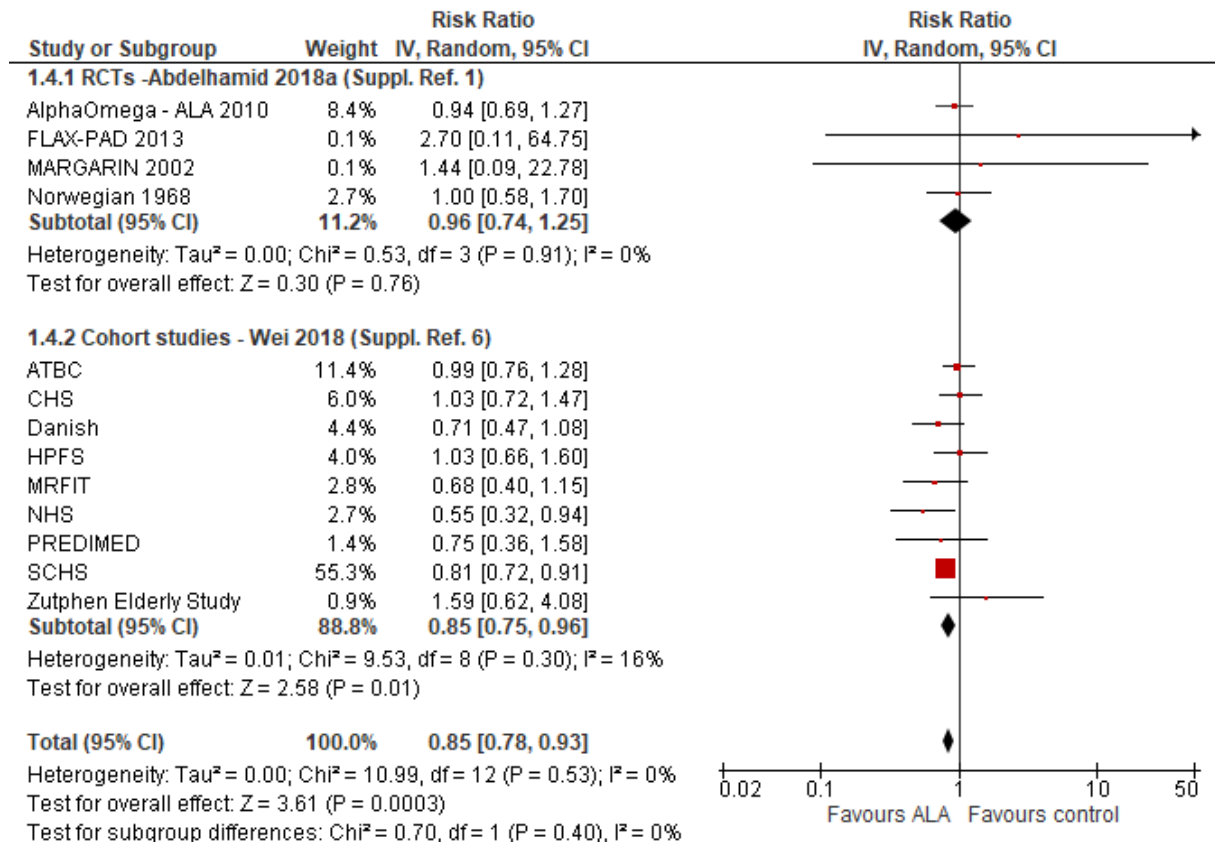
Supplementary Figure 2: Abdelhamid et al. 2018a (1) / Pan et al. et al. 2012 (3); Intervention/ Exposure: α -Linolenic acid (ALA); Outcome: Cardiovascular disease

Supplemental data



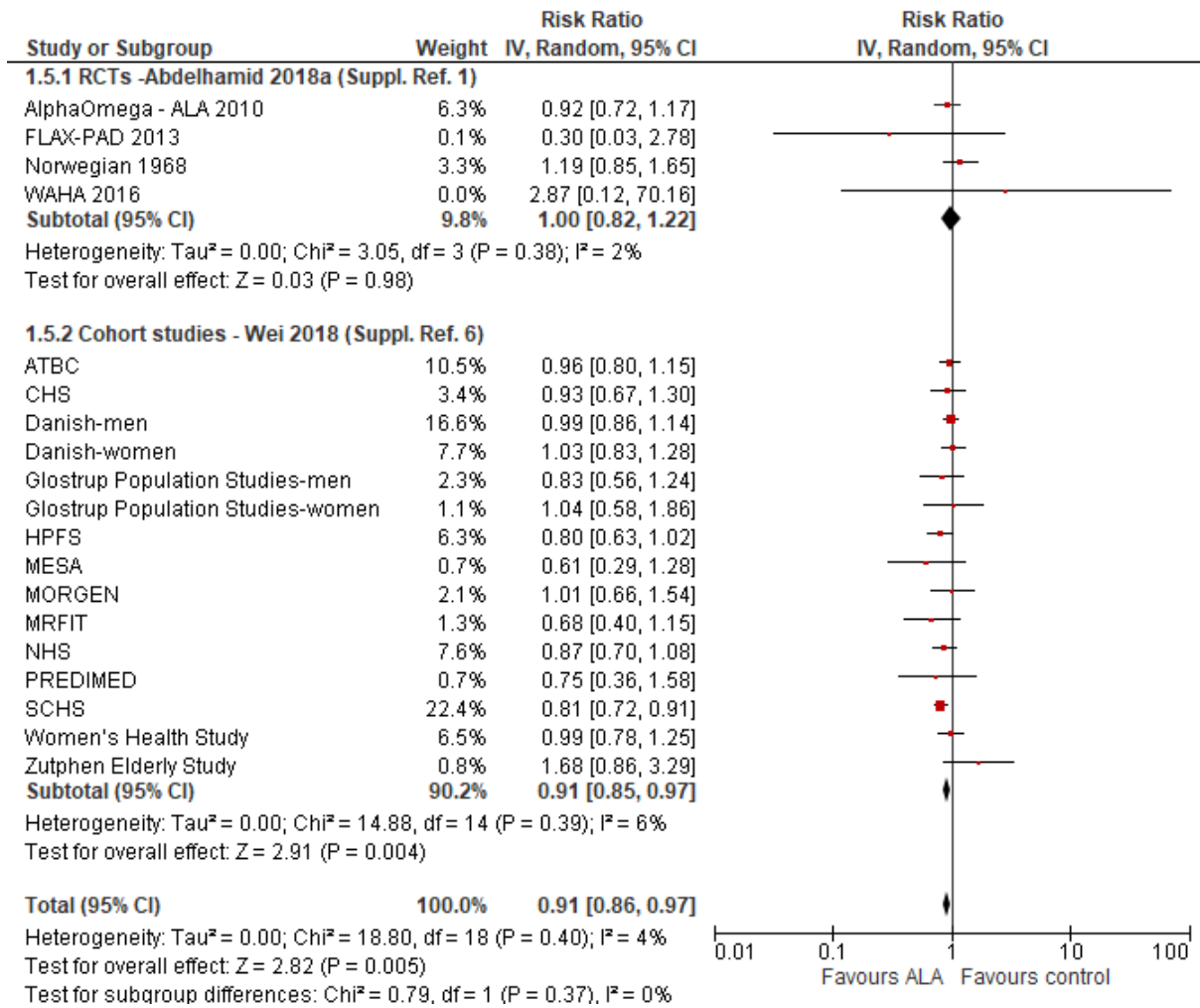
Supplementary Figure 3: Abdelhamid et al. 2018a (1) / Wan et al. 2017 (5); Intervention/ Exposure: Omega-3 fatty acids; Outcome: All-cause mortality

Supplemental data



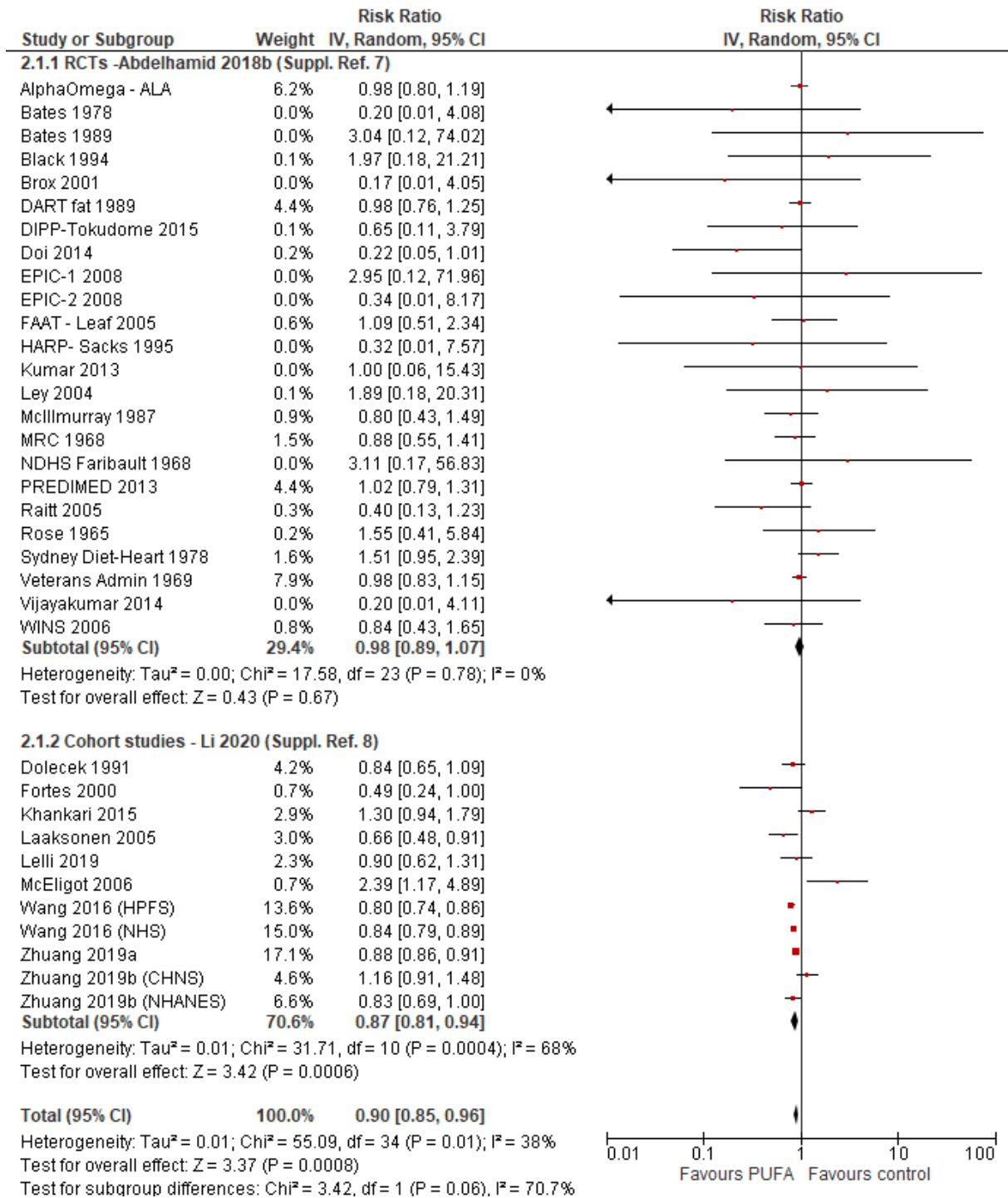
Supplementary Figure 4: Abdelhamid et al. 2018a (1) / Wei et al. 2018 (6); Intervention/ Exposure: α -Linolenic acid (ALA); Outcome: Cardiovascular mortality/ Coronary heart disease mortality

Supplemental data



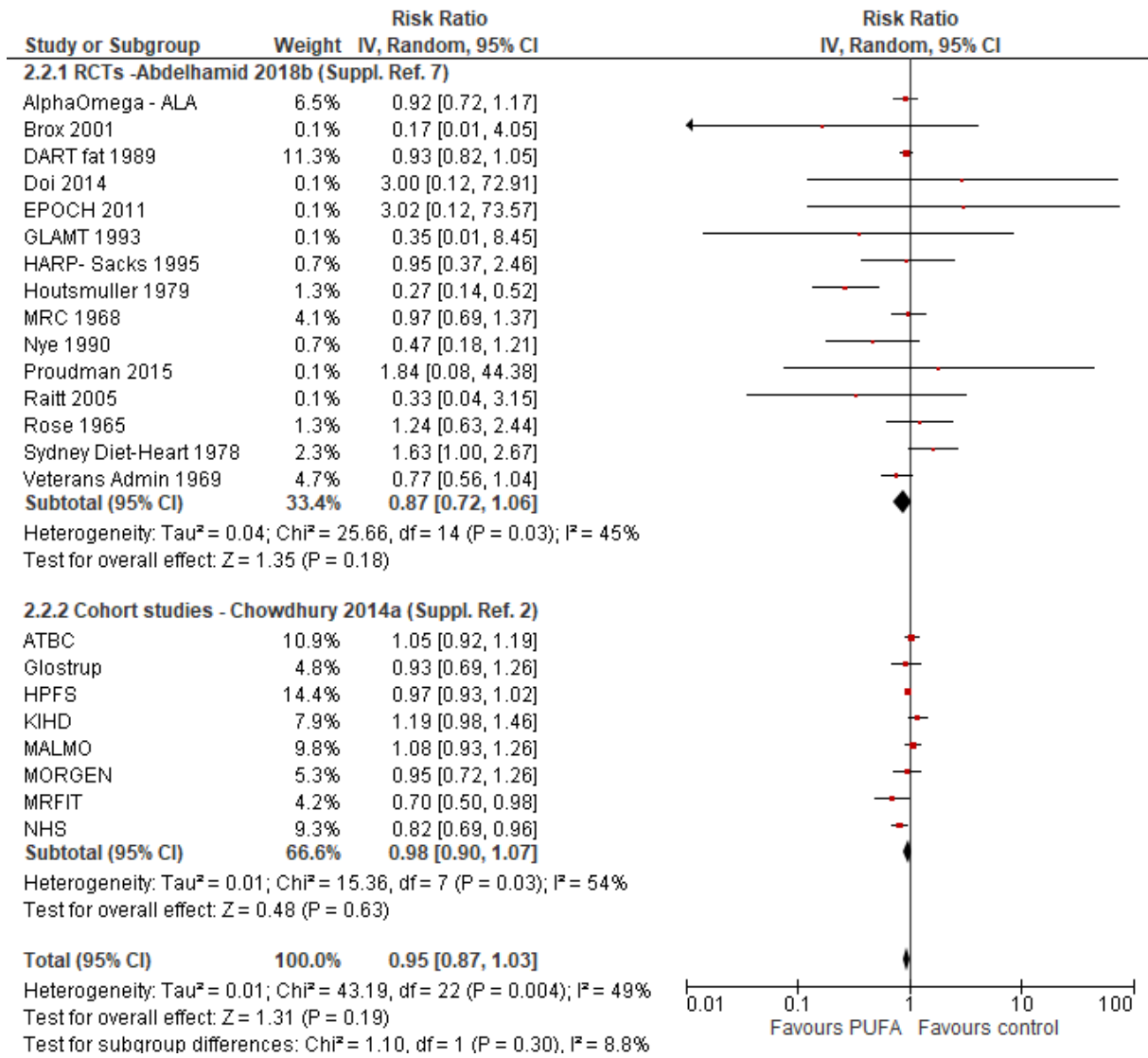
Supplementary Figure 5: Abdelhamid et al. 2018a (1) / Wei et al. 2018 (6); Intervention/ Exposure: α -Linolenic acid (ALA); Outcome: Coronary heart disease

Supplemental data



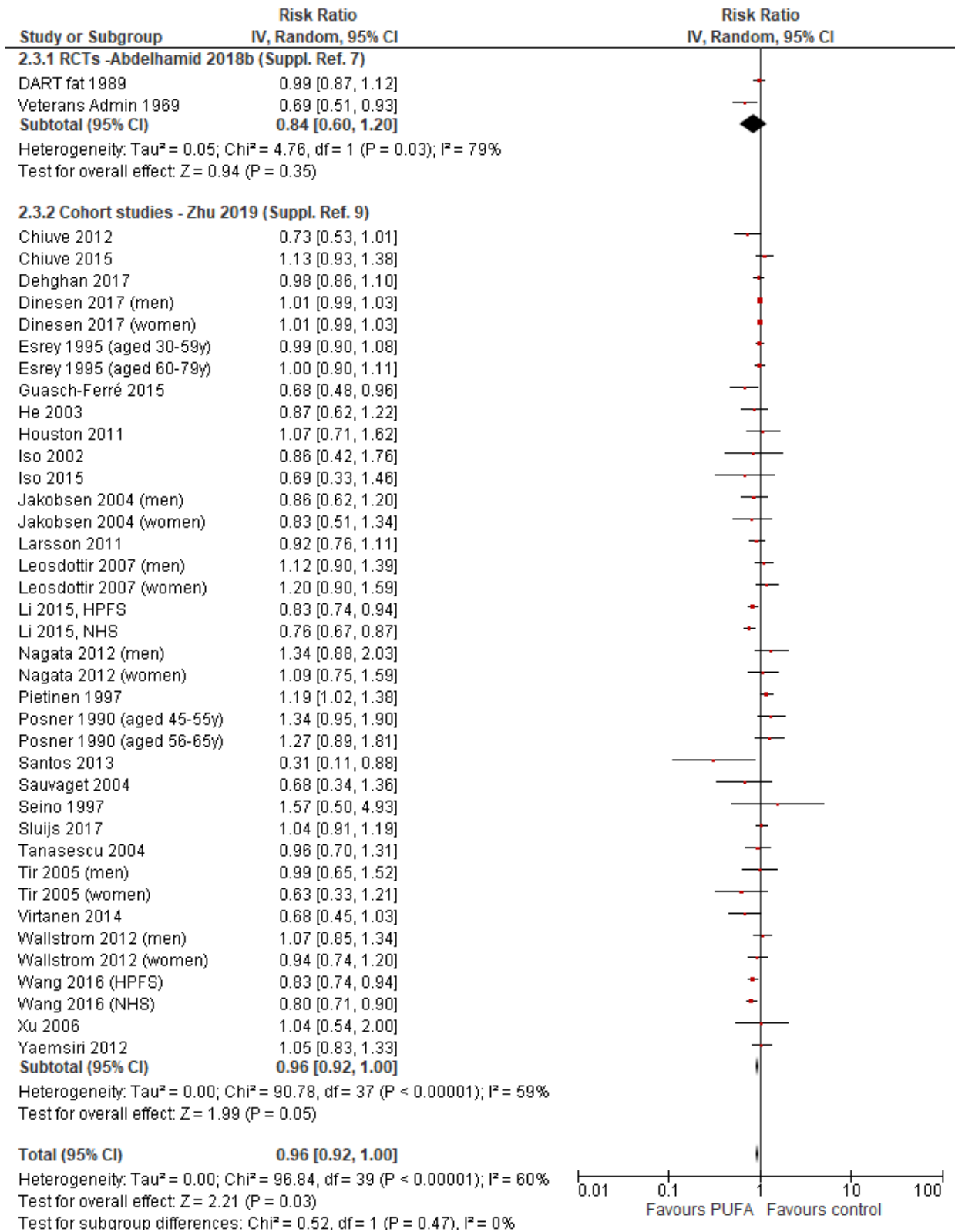
Supplementary Figure 6: Abdelhamid et al. 2018b (7) / Li et al. 2020 (8); Intervention/ Exposure: Polyunsaturated fat/ Omega-3 fatty acids; Outcome: All-cause mortality

Supplemental data



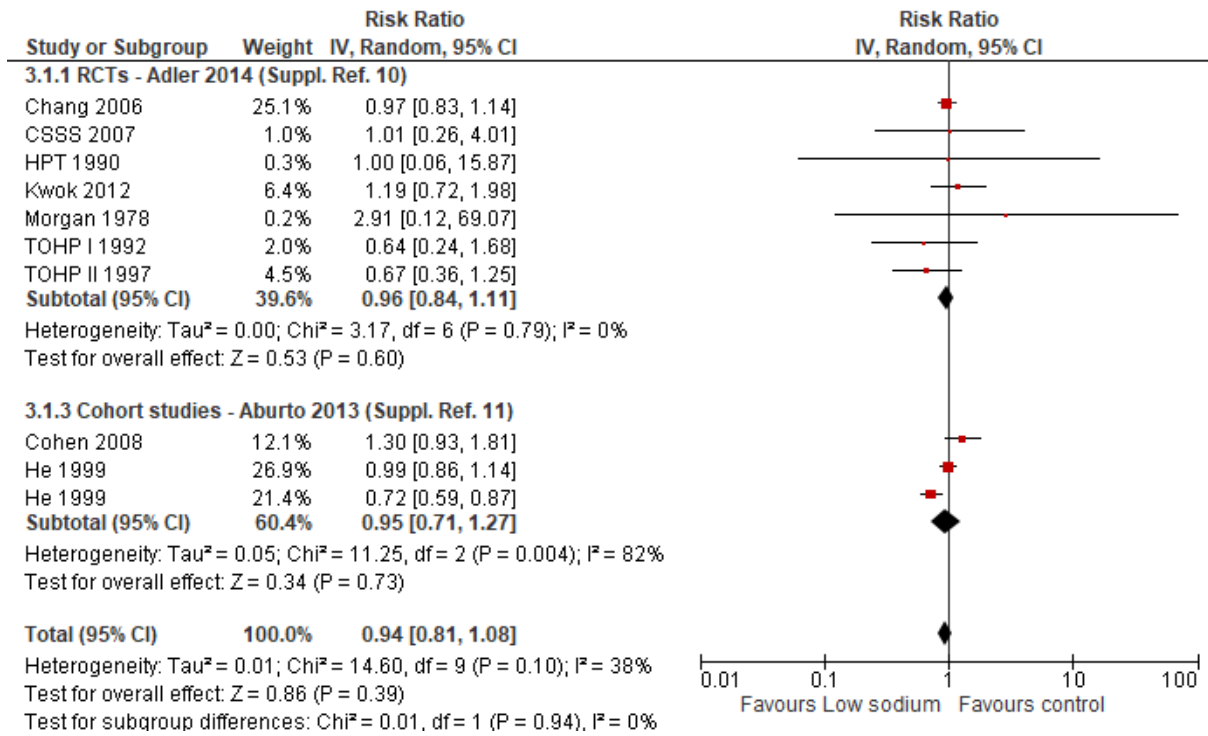
Supplementary Figure 7: Abdelhamid et al. 2018b (7) / Chowdhury et al. 2014a (2); Intervention/ Exposure: Polyunsaturated fat/ Omega-6 fatty acids; Outcome: Coronary heart disease

Supplemental data



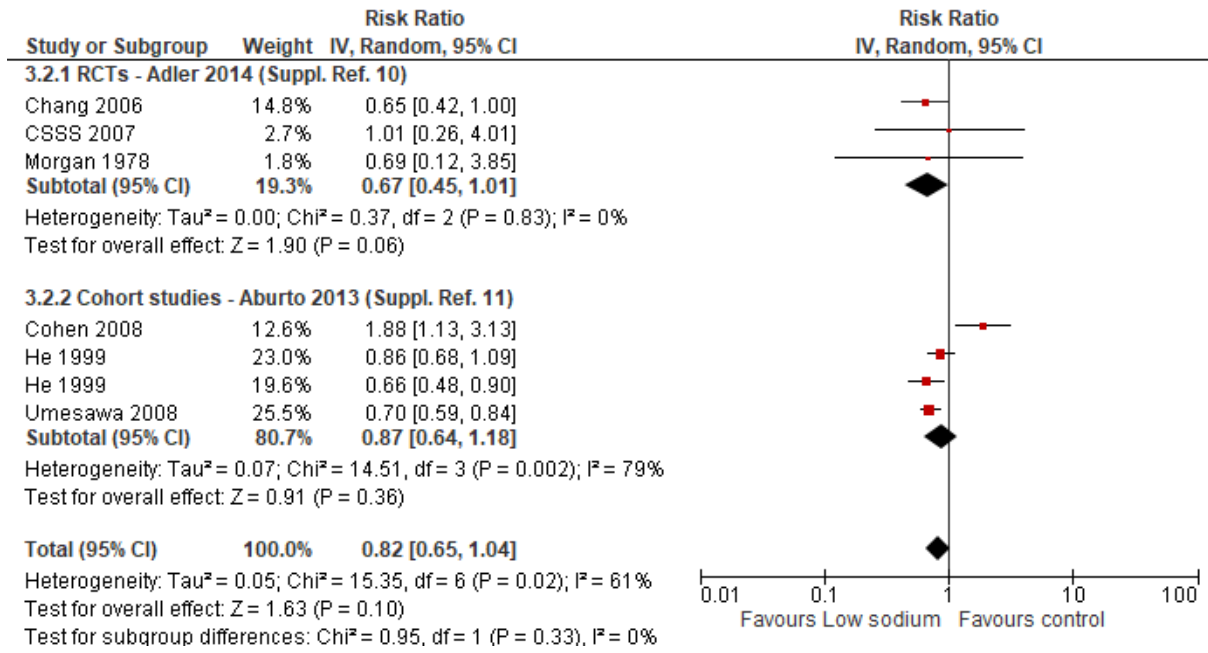
Supplementary Figure 8: Abdelhamid et al. 2018b (7) / Zhu et al. 2019 (9); Intervention/ Exposure: Polyunsaturated fat; Outcome: Major cardiovascular events/ Cardiovascular disease

Supplemental data



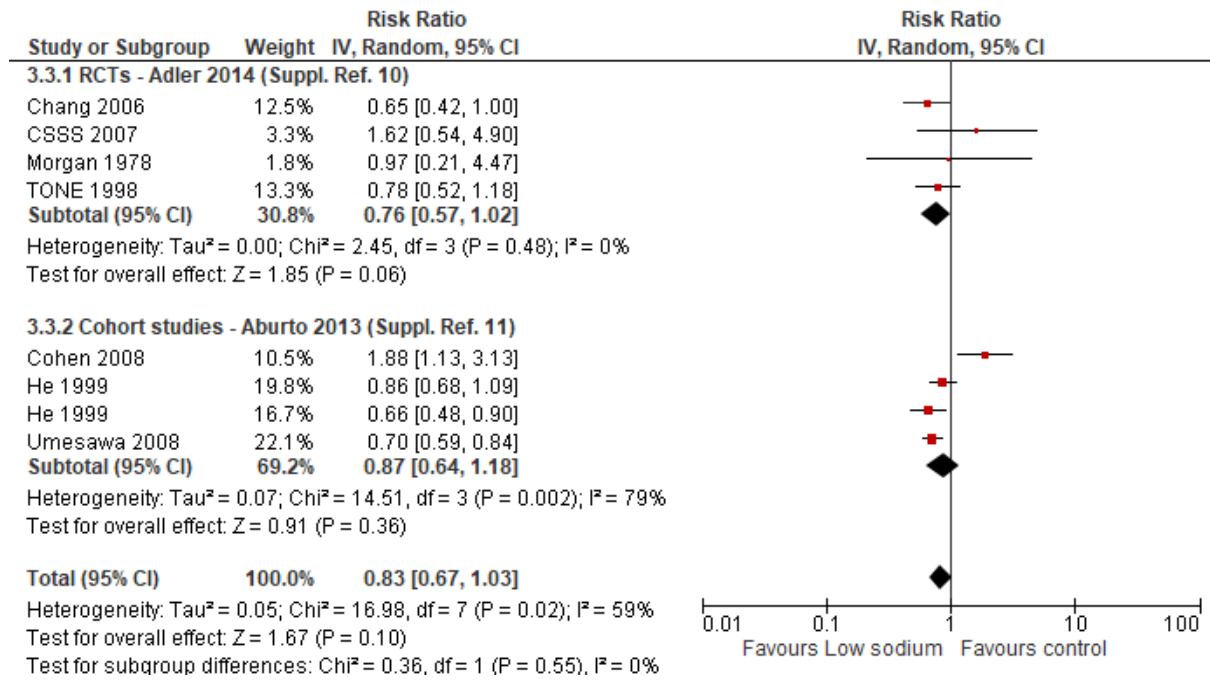
Supplementary Figure 9: Adler et al. 2014 (10) / Aburto et al. 2013 (11); Intervention/ Exposure: Low sodium; Outcome: All-cause mortality

Supplemental data



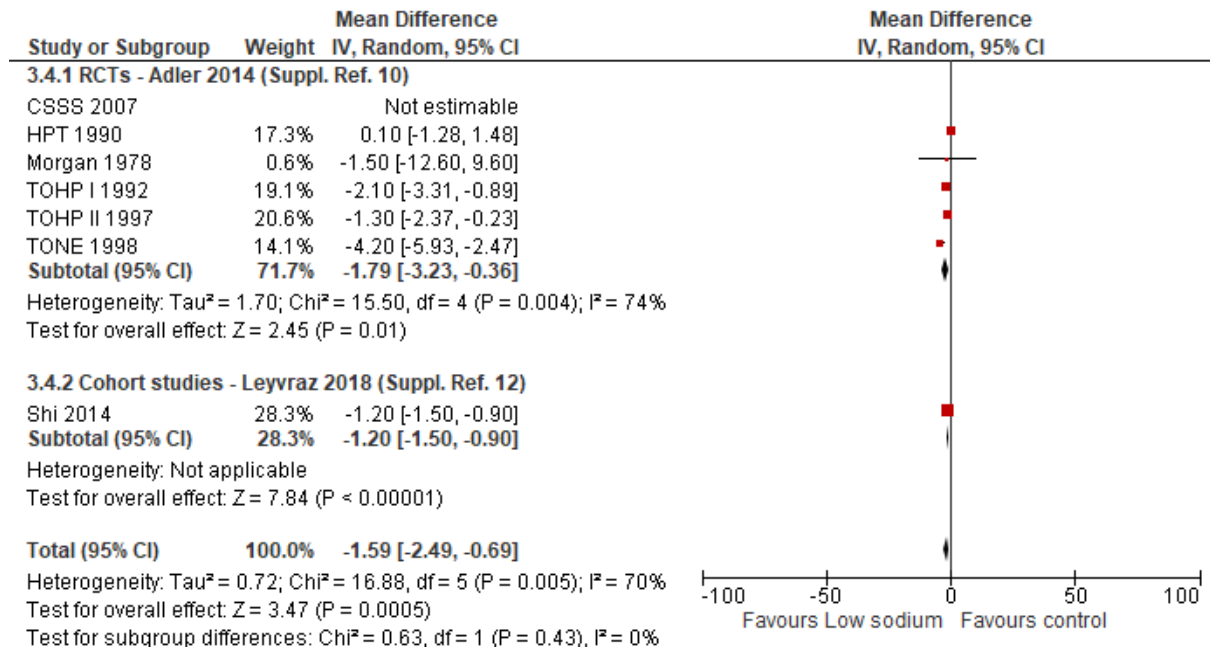
Supplementary Figure 10: Adler et al. 2014 (10) / Aburto et al. 2013 (11); Intervention/ Exposure: Low sodium; Outcome: Cardiovascular mortality

Supplemental data



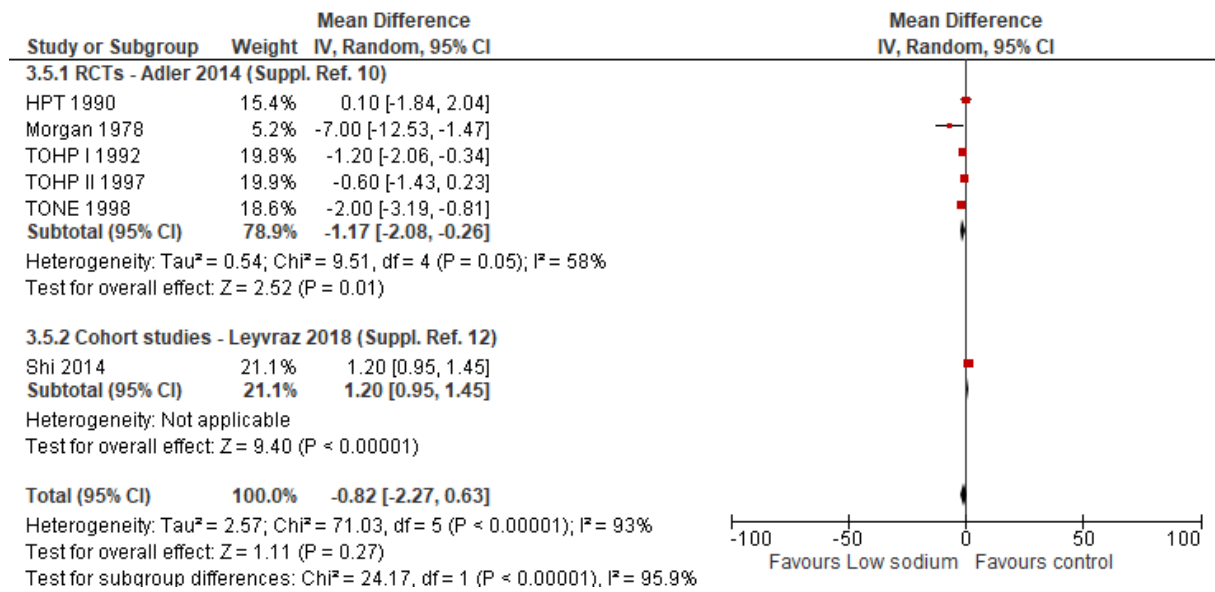
Supplementary Figure 11: Adler et al. 2014 (10) / Aburto et al. 2013 (11); Intervention/ Exposure: Low sodium; Outcome: Cardiovascular disease

Supplemental data



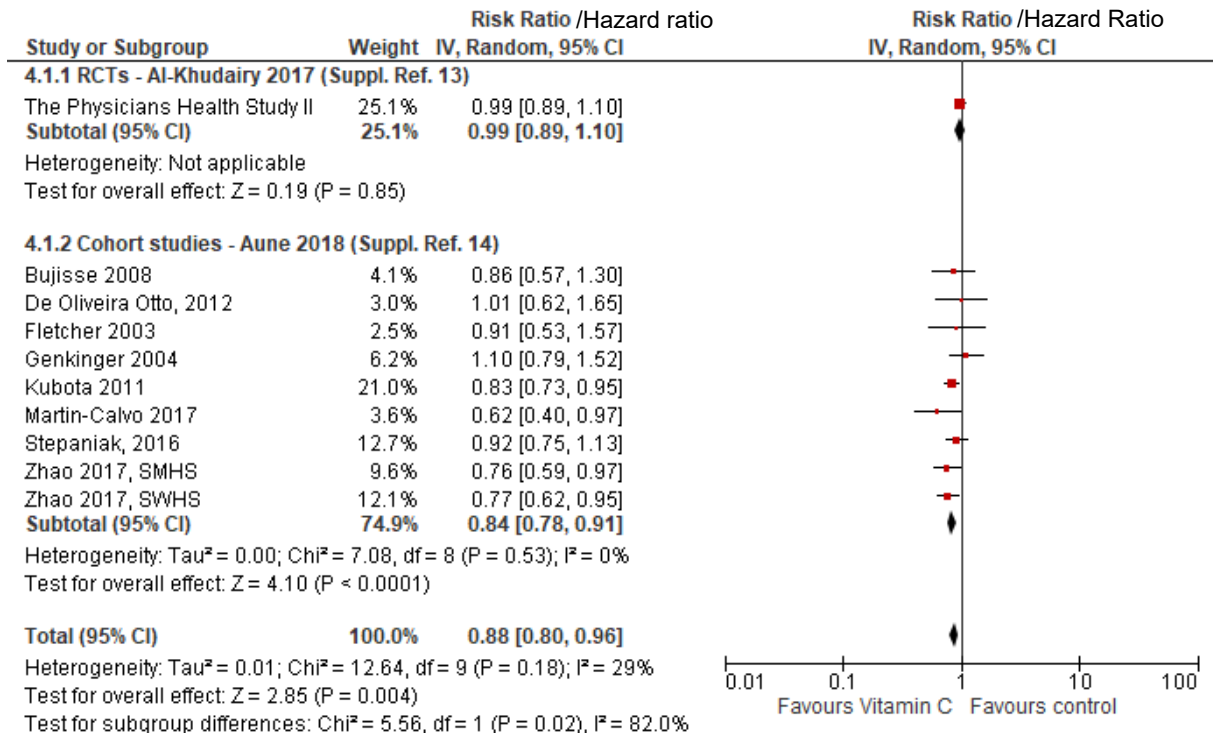
Supplementary Figure 12: Adler et al. 2014 (10) / Leyvraz et al. 2018 (12); Intervention/ Exposure: Low sodium; Outcome: Systolic blood pressure (mmHG)

Supplemental data



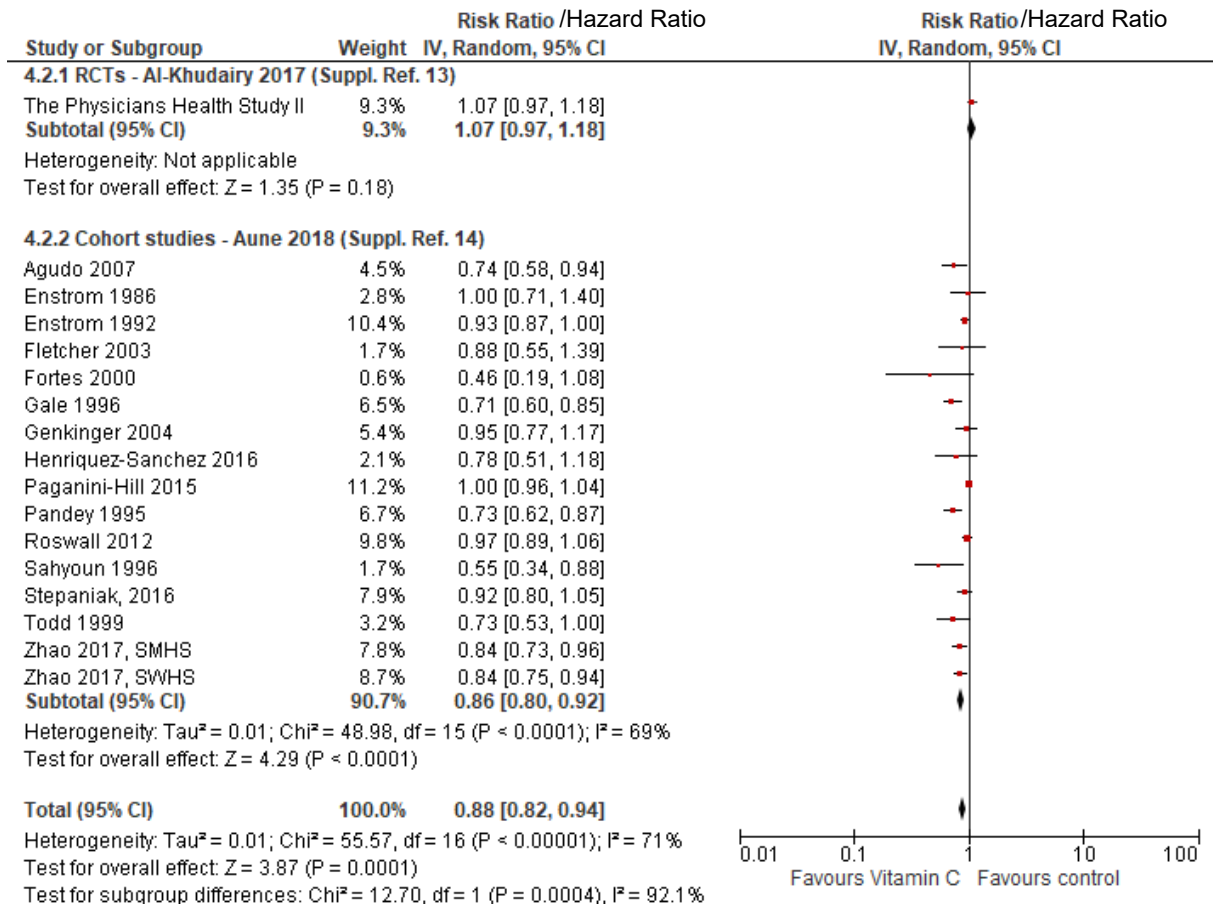
Supplementary Figure 13: Adler et al. 2014 (10) / Leyvraz et al. 2018(12); Intervention/ Exposure: Low sodium; Outcome: Diastolic blood pressure (mmHG)

Supplemental data



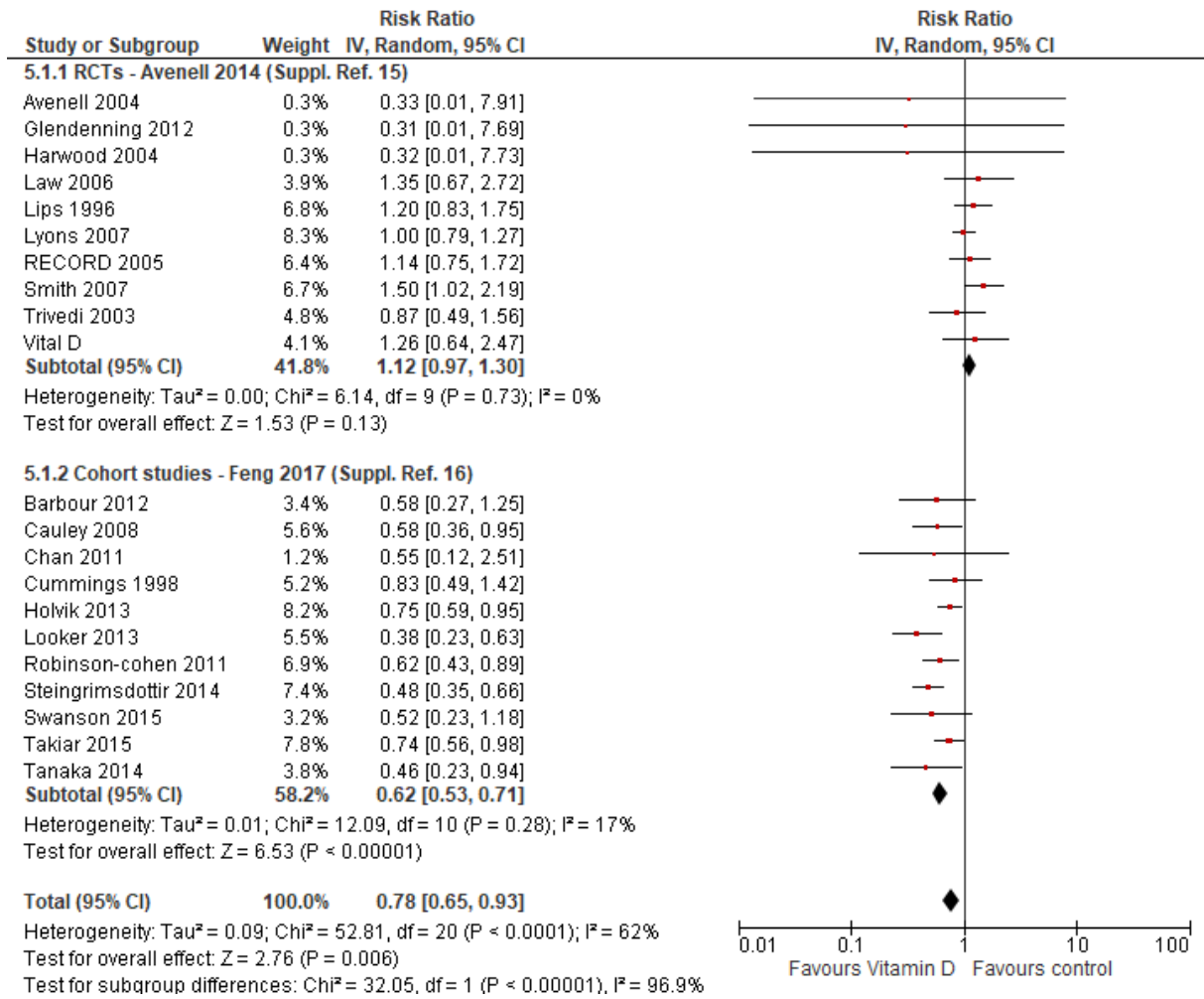
Supplementary Figure 14: Al-Khudairy et al. 2017 (13) / Aune et al. 2018 (14); Intervention/ Exposure: Vitamin C; Outcome: Major cardiovascular events/ Cardiovascular disease.

Supplemental data



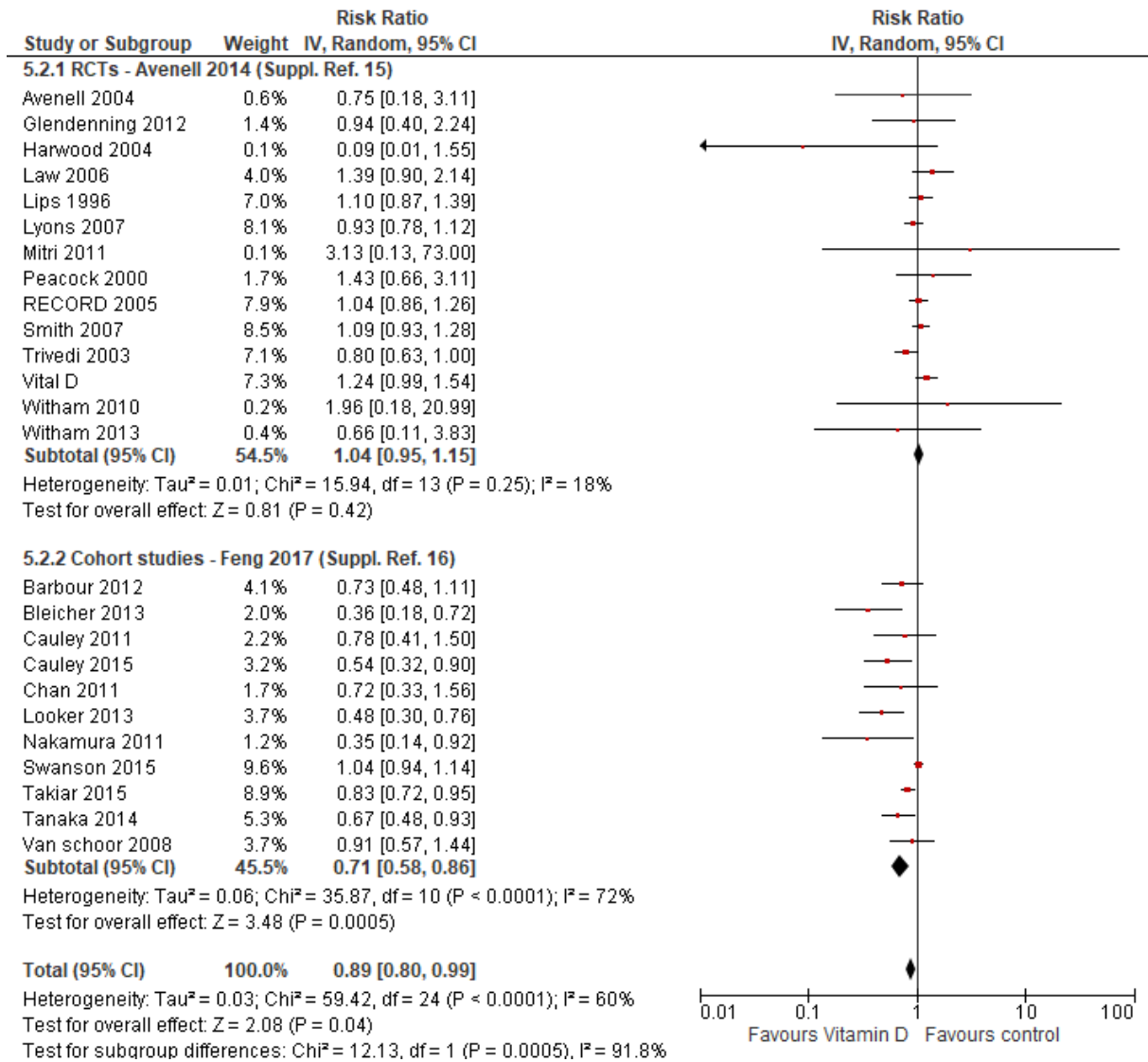
Supplementary Figure 15: Al-Khudairy et al. 2017 (13) / Aune et al. 2018 (14); Intervention/
Exposure: Vitamin C; Outcome: All-cause mortality

Supplemental data



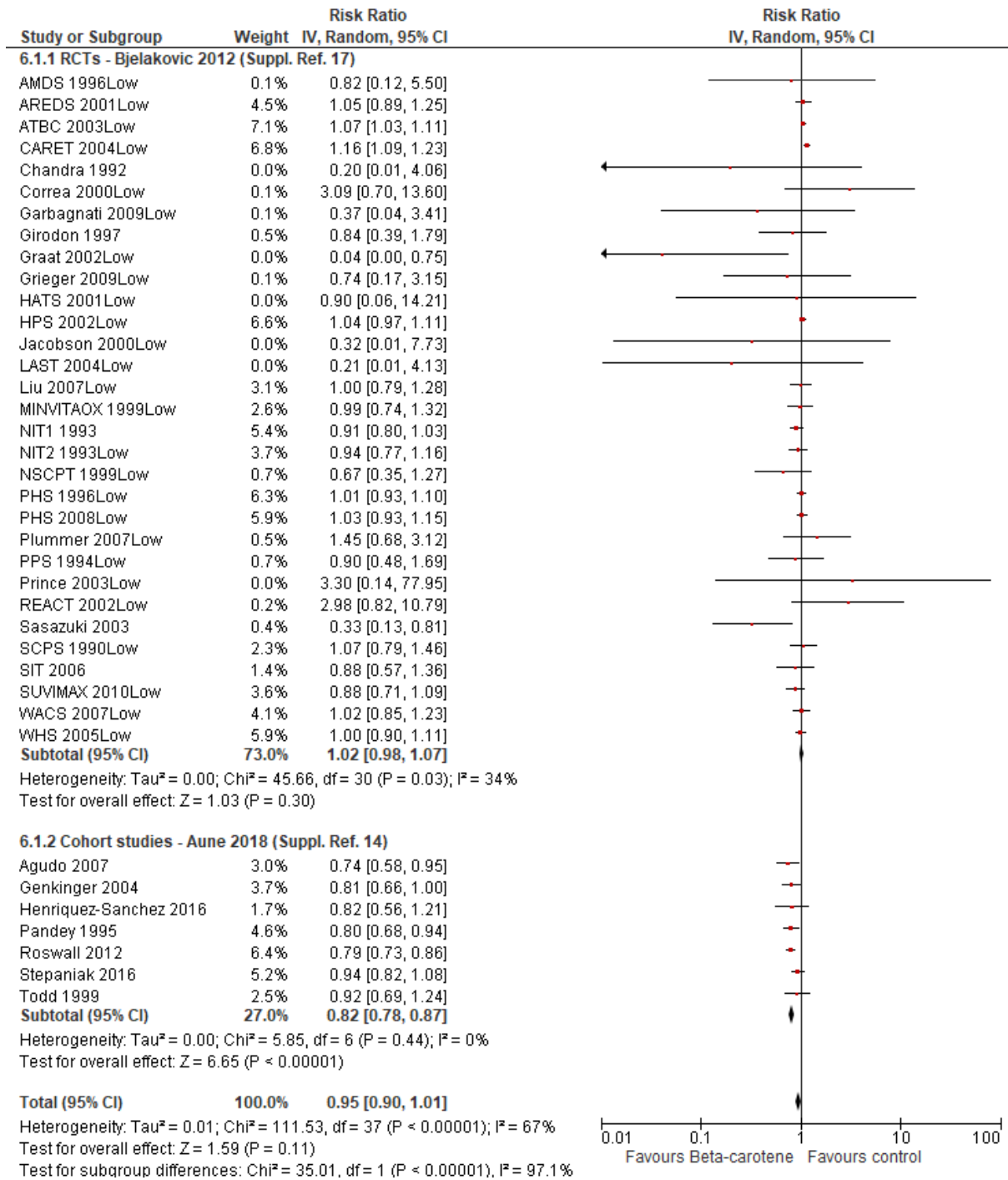
Supplementary Figure 16: Avenell et al. 2014 (15) / Feng et al. 2017 (16); Intervention/ Exposure: Vitamin D; Outcome: Hip fracture

Supplemental data



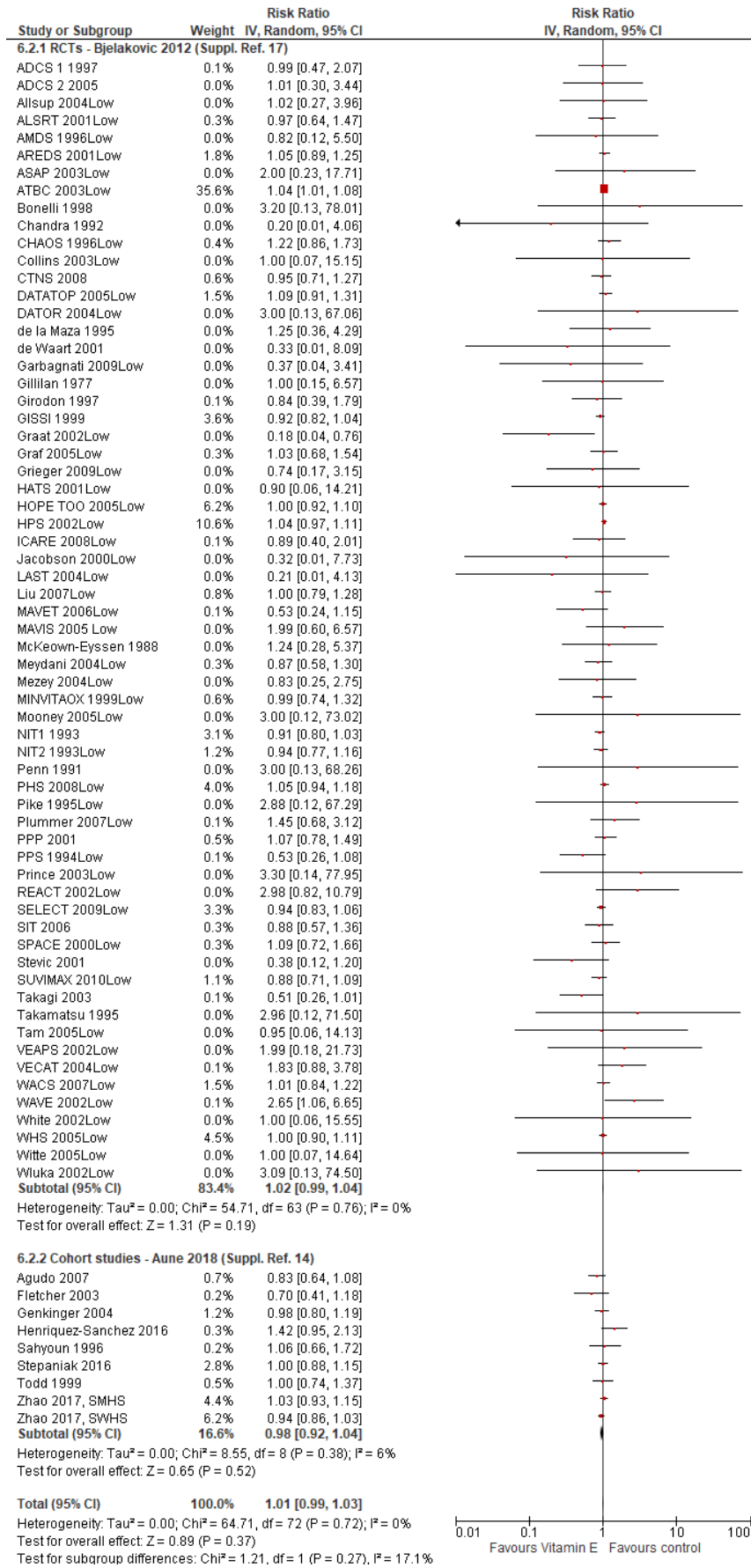
Supplementary Figure 17: Avenell et al. 2014 (15) / Feng et al. 2017 (16); Intervention/ Exposure: Vitamin D; Outcome: Any fracture

Supplemental data



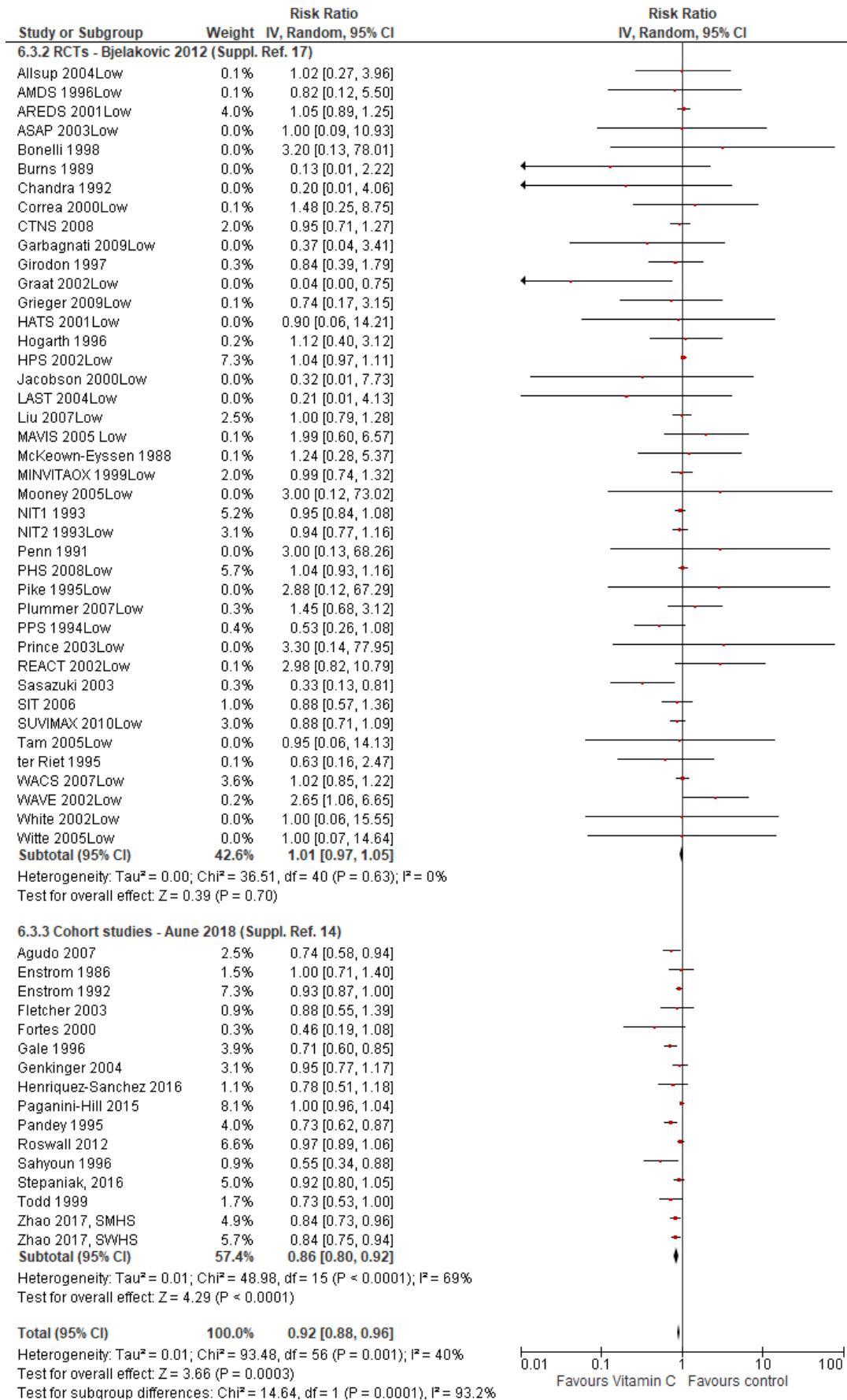
Supplementary Figure 18: Bjelakovic et al. 2012 (17) / Aune et al. 2018 (14); Intervention/ Exposure: β -carotene; Outcome: All-cause mortality

Supplemental data



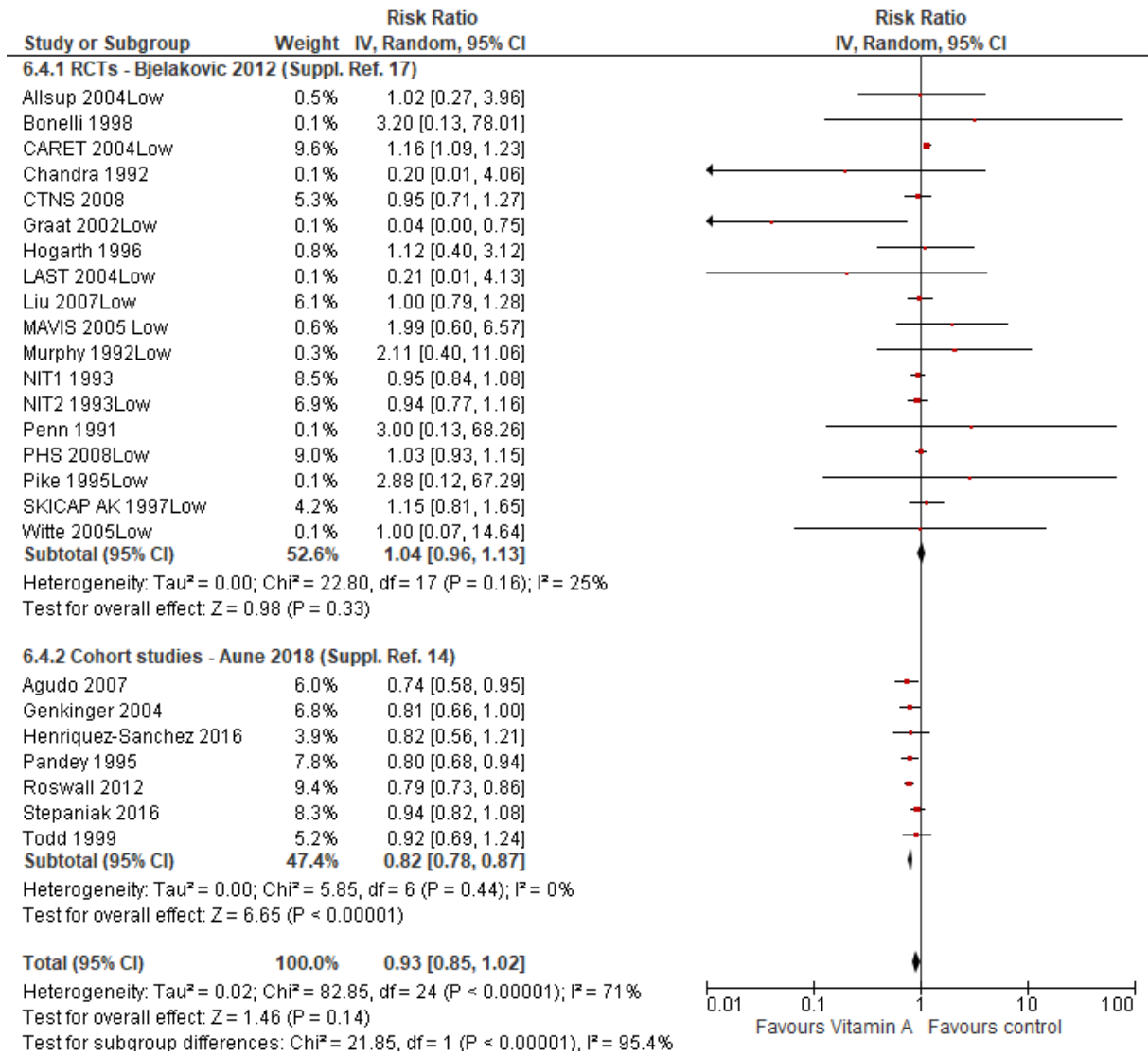
Supplementary Figure 19: Bjelakovic et al. 2012 (17) / Aune et al. 2018 (14); Intervention/ Exposure: Vitamin E; Outcome: All-cause mortality

Supplemental data



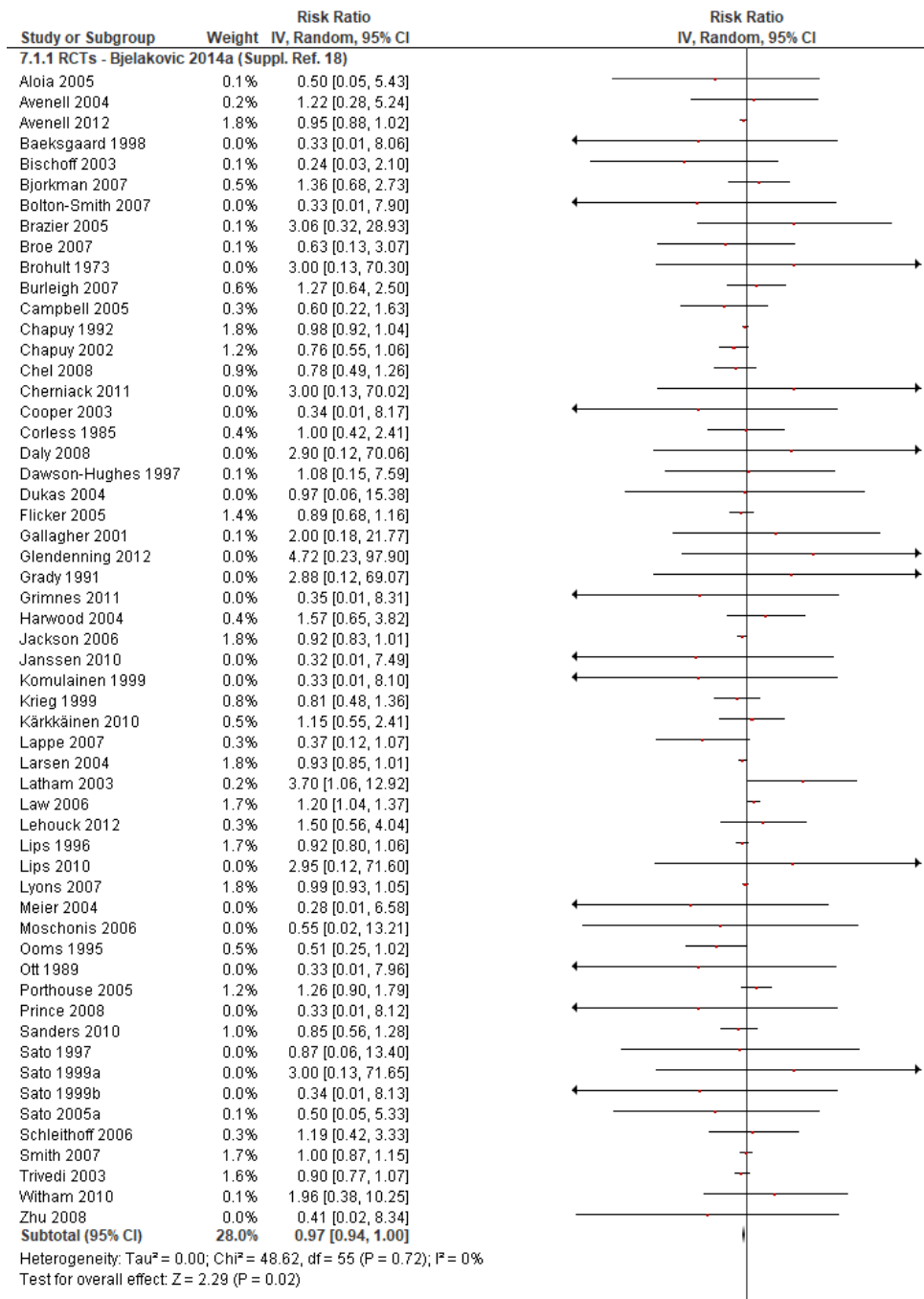
Supplementary Figure 20: Bjelakovic et al. 2012 (17) / Aune et al. 2018 (14); Intervention/ Exposure: Vitamin C; Outcome: All-cause mortality

Supplemental data



Supplementary Figure 21: Bjelakovic et al. 2012 (17) / Aune et al. 2018 (14); Intervention/ Exposure: Vitamin A/ β -carotene; Outcome: All-cause mortality

Supplemental data



Supplementary Figure 22a (Subtotal RCTs): Bjelakovic et al. 2014a (18); Intervention: Vitamin D; Outcome: All-cause mortality

Supplemental data

7.1.2 Cohort studies - Chowdhury 2014b (Suppl. Ref. 19)

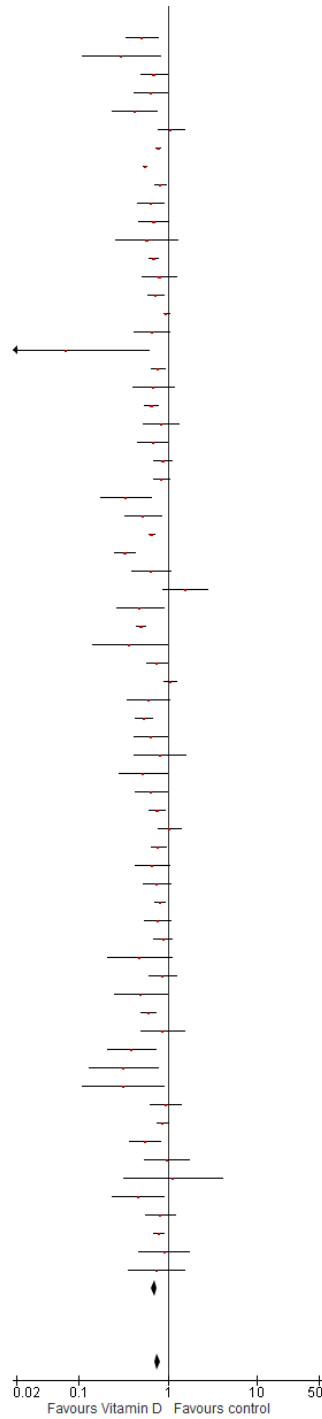
4D	1.0%	0.51 [0.34, 0.77]
Amiens	0.3%	0.30 [0.11, 0.82]
ArMORR	1.2%	0.69 [0.49, 0.97]
ARNOS	1.0%	0.65 [0.42, 1.00]
ARRA-RACS	0.7%	0.43 [0.24, 0.76]
Auckland	1.2%	1.08 [0.77, 1.52]
CCHS	1.8%	0.78 [0.74, 0.83]
CHS-Israel	1.8%	0.55 [0.53, 0.58]
CHS-US	1.7%	0.83 [0.71, 0.96]
Cleveland	1.2%	0.65 [0.46, 0.91]
COACH	1.1%	0.69 [0.47, 1.01]
CopD	0.4%	0.58 [0.26, 1.30]
Copenhagen	1.7%	0.69 [0.61, 0.79]
DOPS	0.9%	0.81 [0.51, 1.27]
EPIC	1.5%	0.73 [0.59, 0.91]
ESTHER	1.8%	0.96 [0.89, 1.03]
Goodwin	0.9%	0.66 [0.42, 1.04]
Gracia-Iguacel	0.1%	0.07 [0.01, 0.61]
Gugatschka	1.6%	0.78 [0.66, 0.92]
Heal	0.8%	0.69 [0.41, 1.17]
Health ABC	1.6%	0.65 [0.54, 0.79]
Holmgaard	0.9%	0.84 [0.53, 1.32]
Hoorn	1.1%	0.68 [0.46, 1.00]
HOST	1.4%	0.88 [0.69, 1.12]
HPFS/ PHS	1.5%	0.84 [0.69, 1.03]
Hvidore	0.6%	0.34 [0.17, 0.66]
InCHIANTI	0.9%	0.53 [0.33, 0.84]
Intermountain	1.8%	0.66 [0.61, 0.71]
JANUS	1.3%	0.33 [0.25, 0.43]
Jia	0.8%	0.65 [0.39, 1.08]
Karola	0.7%	1.57 [0.88, 2.78]
KIHD	0.7%	0.48 [0.26, 0.89]
Krause	1.7%	0.50 [0.45, 0.56]
Kuroda	0.3%	0.37 [0.14, 0.98]
LASA	1.4%	0.76 [0.58, 0.98]
Linxian	1.6%	1.06 [0.90, 1.25]
LMC	0.8%	0.60 [0.35, 1.03]
LURIC	1.5%	0.53 [0.43, 0.67]
MARIE	1.0%	0.65 [0.42, 1.00]
Mezawa	0.6%	0.82 [0.42, 1.58]
MIDSPAN	0.6%	0.52 [0.28, 0.97]
MINOS	1.0%	0.65 [0.43, 0.98]
MONICA/ INTER99	1.5%	0.76 [0.62, 0.94]
MrOS	1.3%	1.04 [0.78, 1.39]
NDNS	1.6%	0.78 [0.64, 0.94]
NECOSAD	0.9%	0.67 [0.43, 1.04]
NHANES 2001-4	1.1%	0.75 [0.52, 1.09]
NHANES III	1.7%	0.82 [0.72, 0.93]
NSCLC	1.2%	0.77 [0.55, 1.08]
Pardisani	1.4%	0.88 [0.70, 1.12]
Pecovnik-Balon	0.4%	0.48 [0.21, 1.10]
Quebec	1.1%	0.87 [0.61, 1.23]
Ravani	0.6%	0.50 [0.25, 1.00]
SCCS	1.5%	0.60 [0.49, 0.74]
SOF	0.7%	0.87 [0.50, 1.53]
SPORE	0.6%	0.39 [0.21, 0.72]
SPORE (2)	0.4%	0.32 [0.13, 0.78]
STENO	0.3%	0.31 [0.11, 0.90]
TNT	1.0%	0.94 [0.62, 1.41]
Tromso Heart	1.7%	0.87 [0.75, 1.00]
ULSAM	1.0%	0.55 [0.37, 0.82]
VADT	0.7%	0.97 [0.54, 1.72]
Wang	0.2%	1.14 [0.32, 4.09]
WHAS	0.6%	0.46 [0.24, 0.91]
WHI	1.1%	0.83 [0.56, 1.21]
Whitehall	1.7%	0.79 [0.70, 0.89]
Yamato	0.6%	0.91 [0.47, 1.75]
Zittermann	0.5%	0.75 [0.36, 1.56]
Subtotal (95% CI)	72.0%	0.70 [0.65, 0.75]

Heterogeneity: Tau² = 0.05; Chi² = 387.75, df = 67 (P < 0.00001); I² = 83%
 Test for overall effect: Z = 10.08 (P < 0.00001)

Total (95% CI) 100.0% 0.76 [0.72, 0.81]

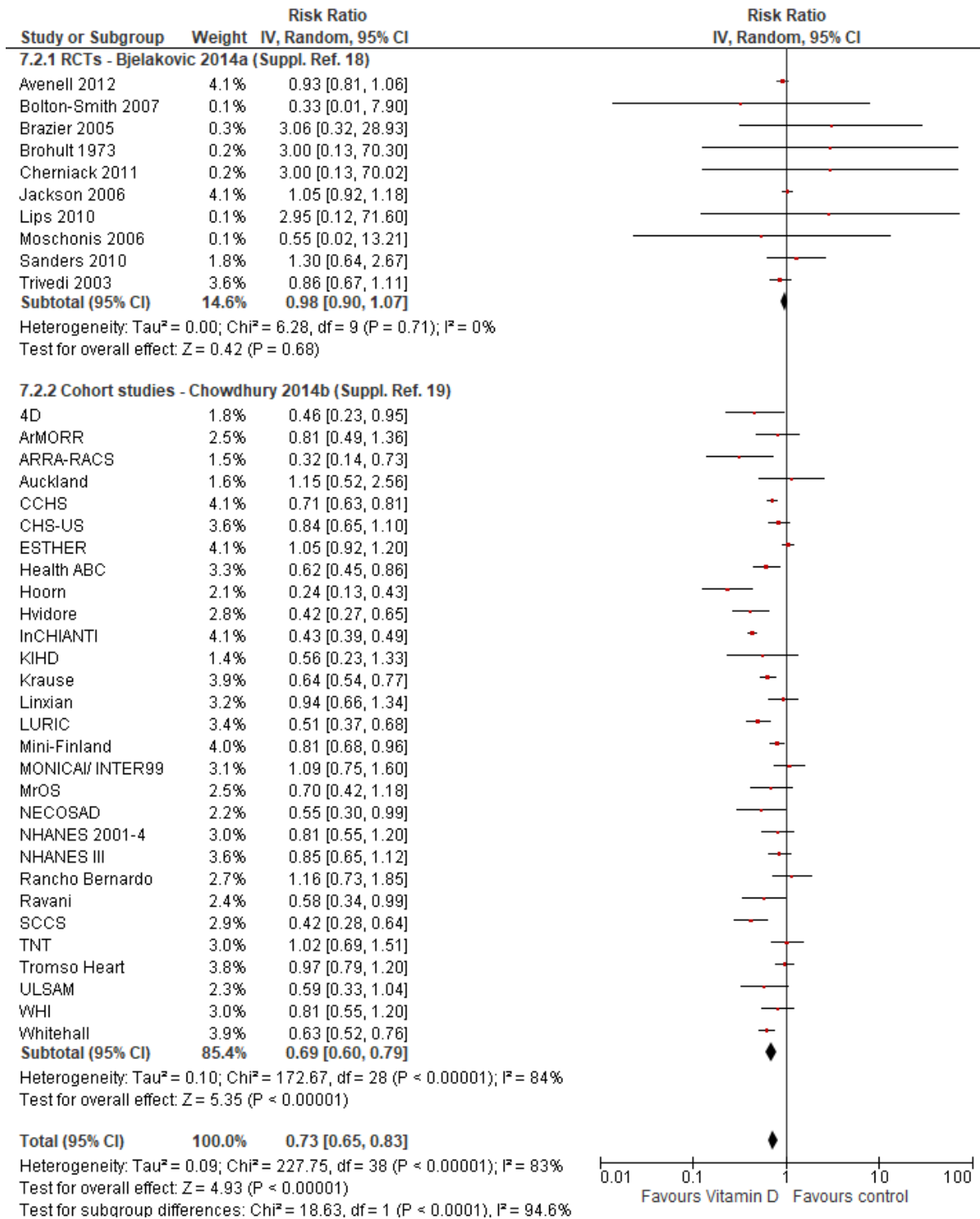
Heterogeneity: Tau² = 0.05; Chi² = 749.23, df = 123 (P < 0.00001); I² = 84%
 Test for overall effect: Z = 8.57 (P < 0.00001)

Test for subgroup differences: Chi² = 70.80, df = 1 (P < 0.00001), I² = 98.6%



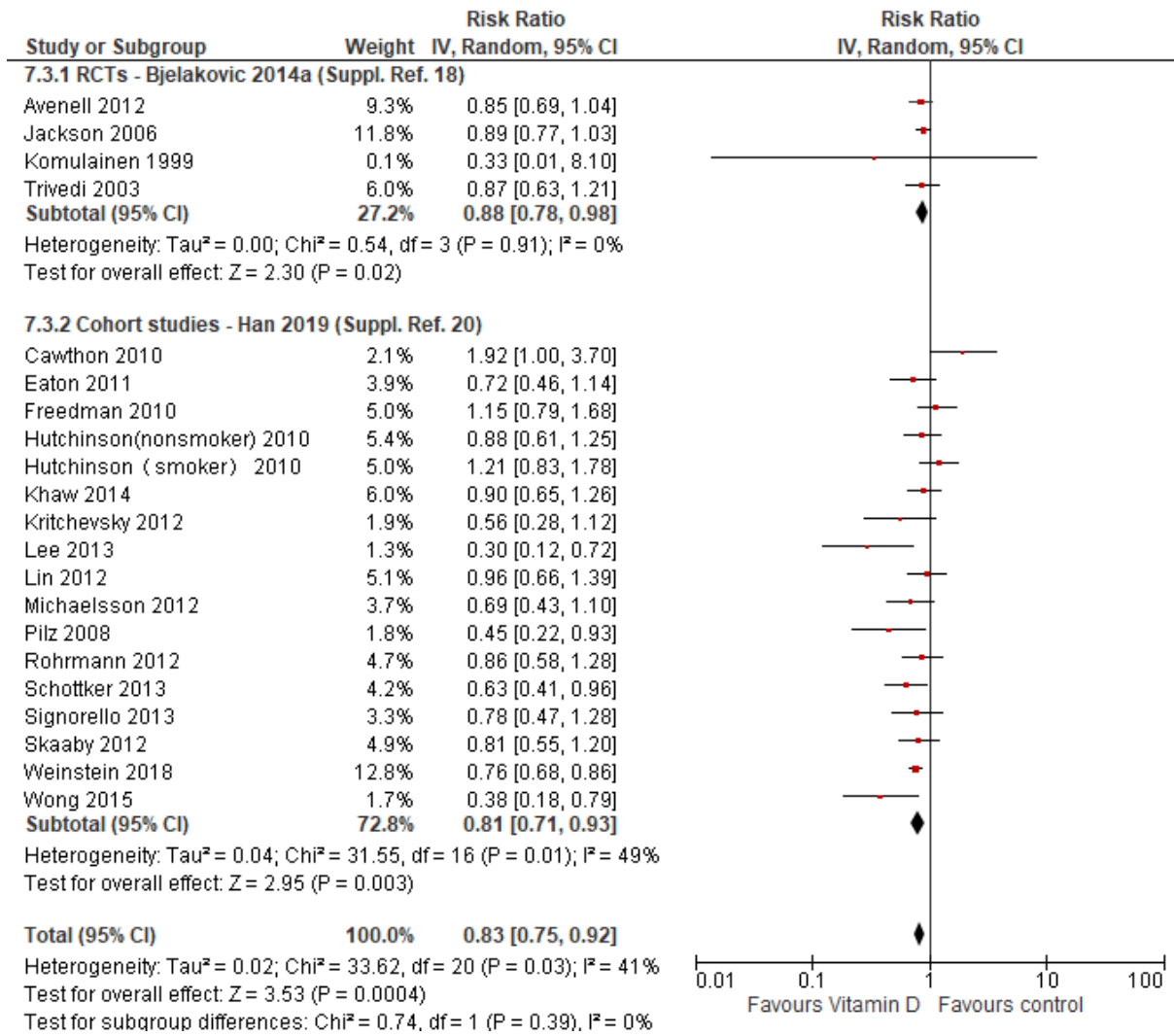
Supplementary Figure 22b (Subtotal Cohort studies / Total): Chowdhury et al. 2014b (19); Exposure: Vitamin D; Outcome: All-cause mortality

Supplemental data



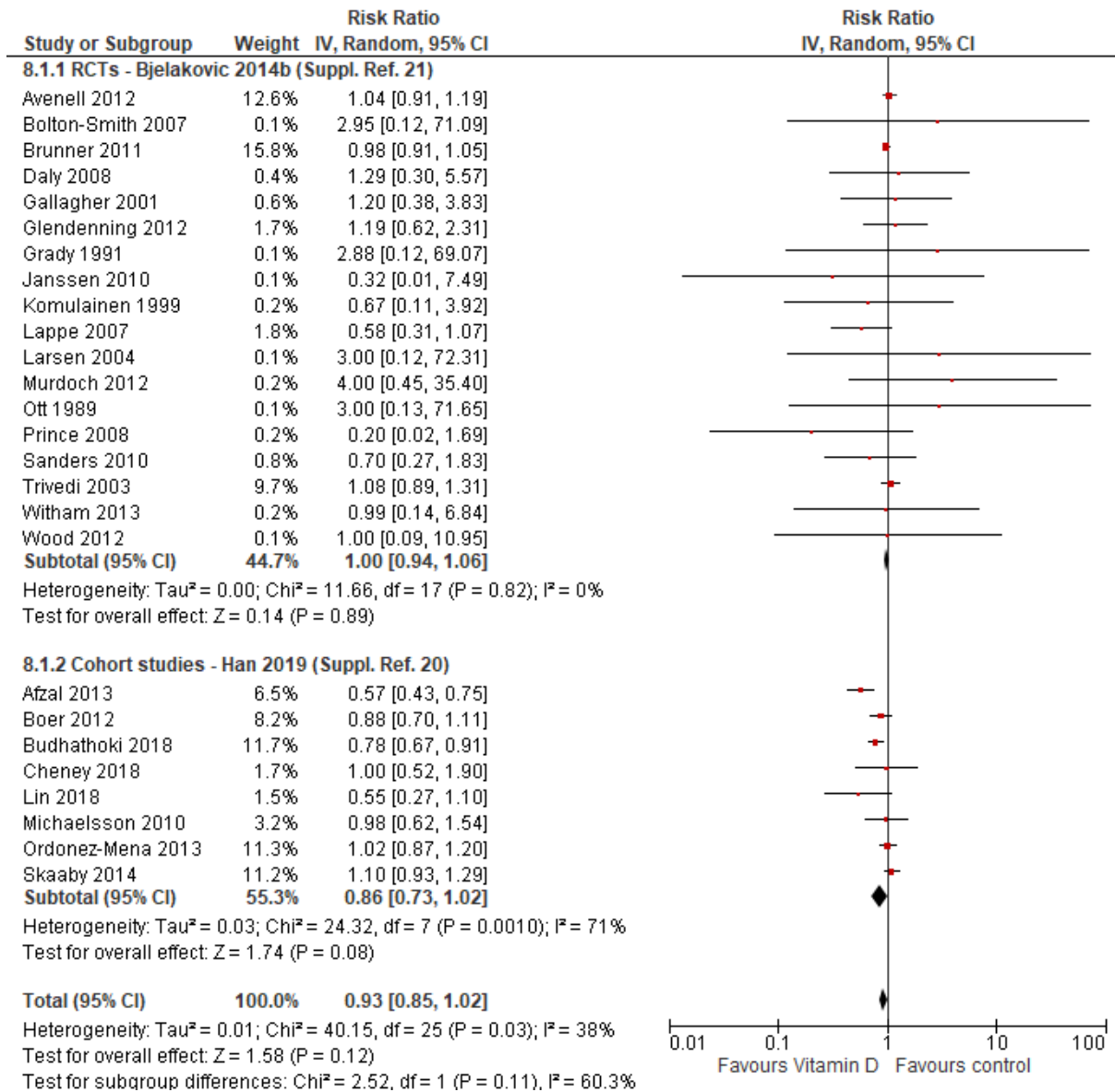
Supplementary Figure 23: Bjelakovic et al. 2014a (18) / Chowdhury et al. 2014b (19); Intervention/ Exposure: Vitamin D; Outcome: Cardiovascular mortality

Supplemental data



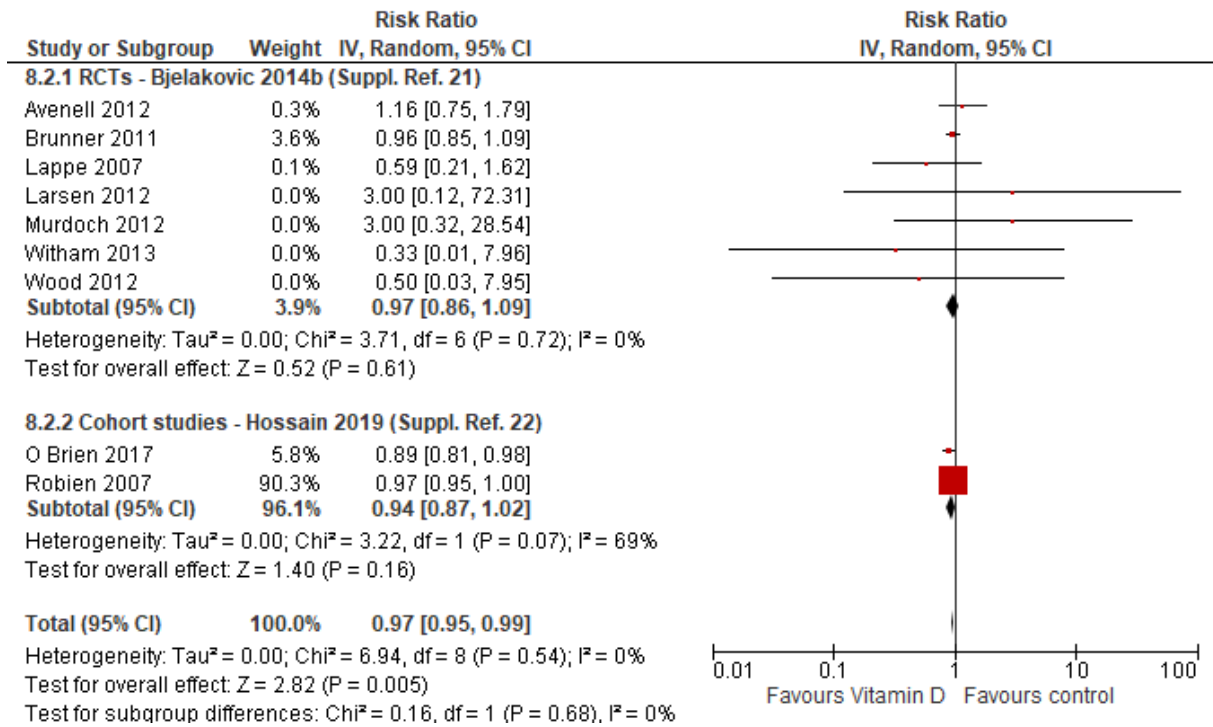
Supplementary Figure 24: Bjelakovic et al. 2014a (18) / Han et al. 2019 (20); Intervention/ Exposure: Vitamin D; Outcome: Cancer mortality

Supplemental data



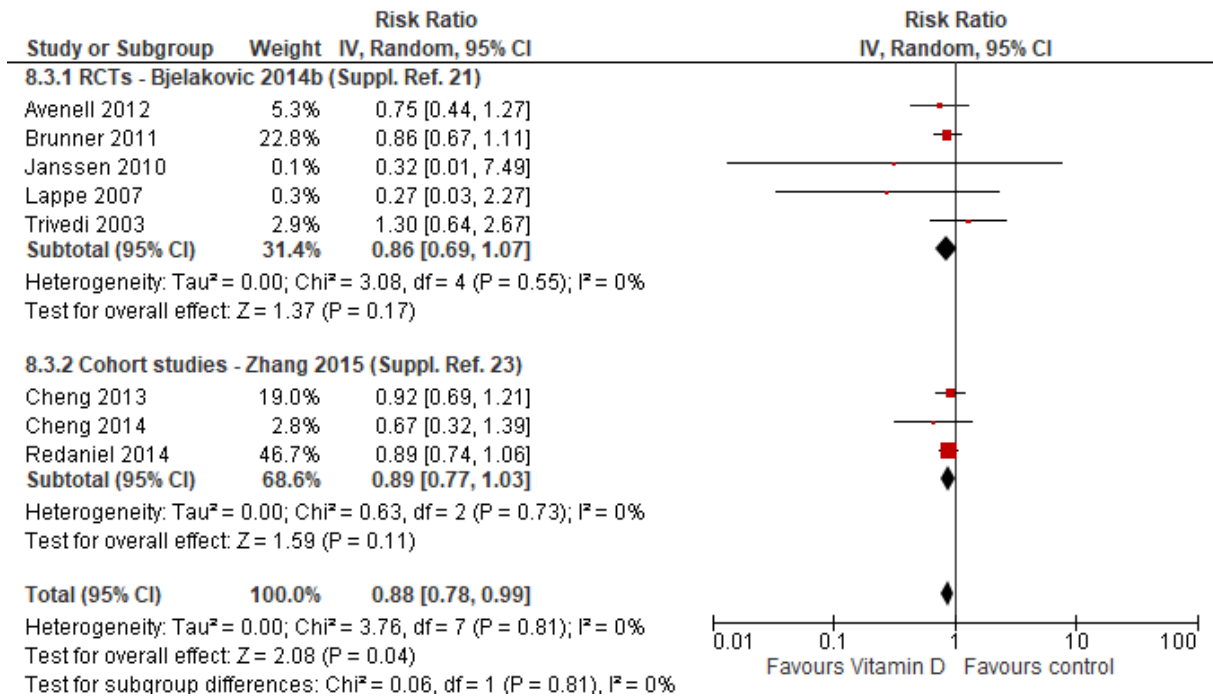
Supplementary Figure 25: Bjelakovic et al. 2014b (21) / Han et al. 2019 (20); Intervention/ Exposure: Vitamin D; Outcome: Cancer occurrence/ Cancer incidence

Supplemental data



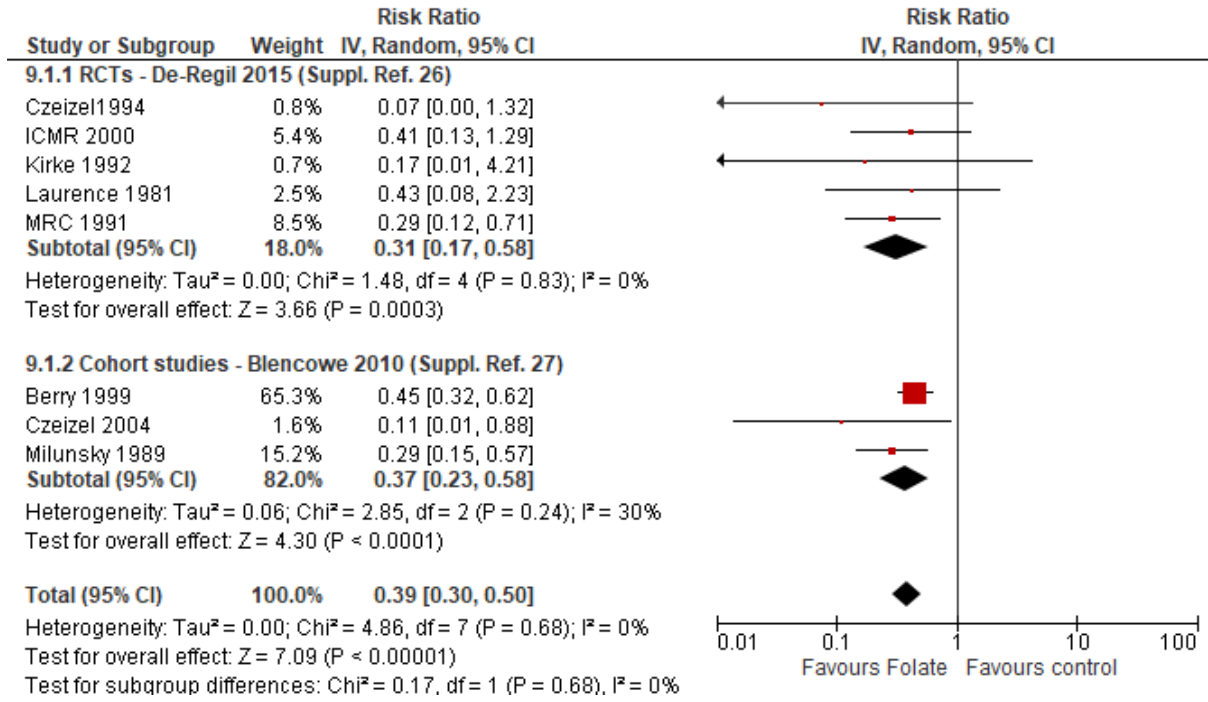
Supplementary Figure 26: Bjelakovic et al. 2014b (21) / Hossain et al. 2019 (22); Intervention/
Exposure: Vitamin D3/ Vitamin D; Outcome: Breast cancer

Supplemental data



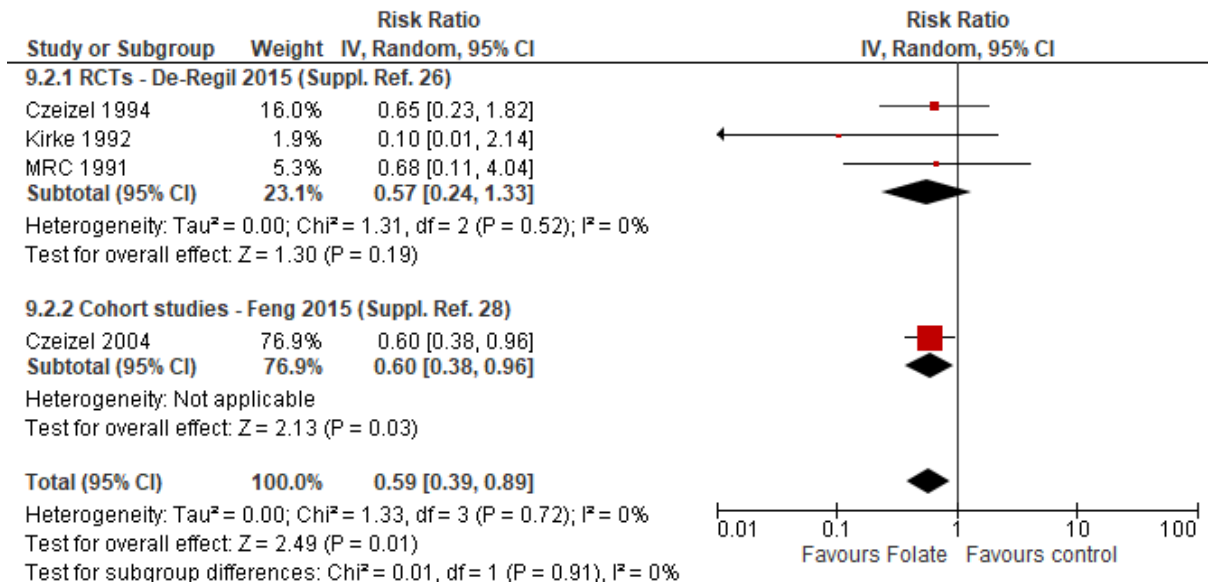
Supplementary Figure 27: Bjelakovic et al. 2014b (21) / Zhang et al. 2015 (23); Intervention/ Exposure: Vitamin D3/ Vitamin D; Outcome: Lung cancer

Supplemental data



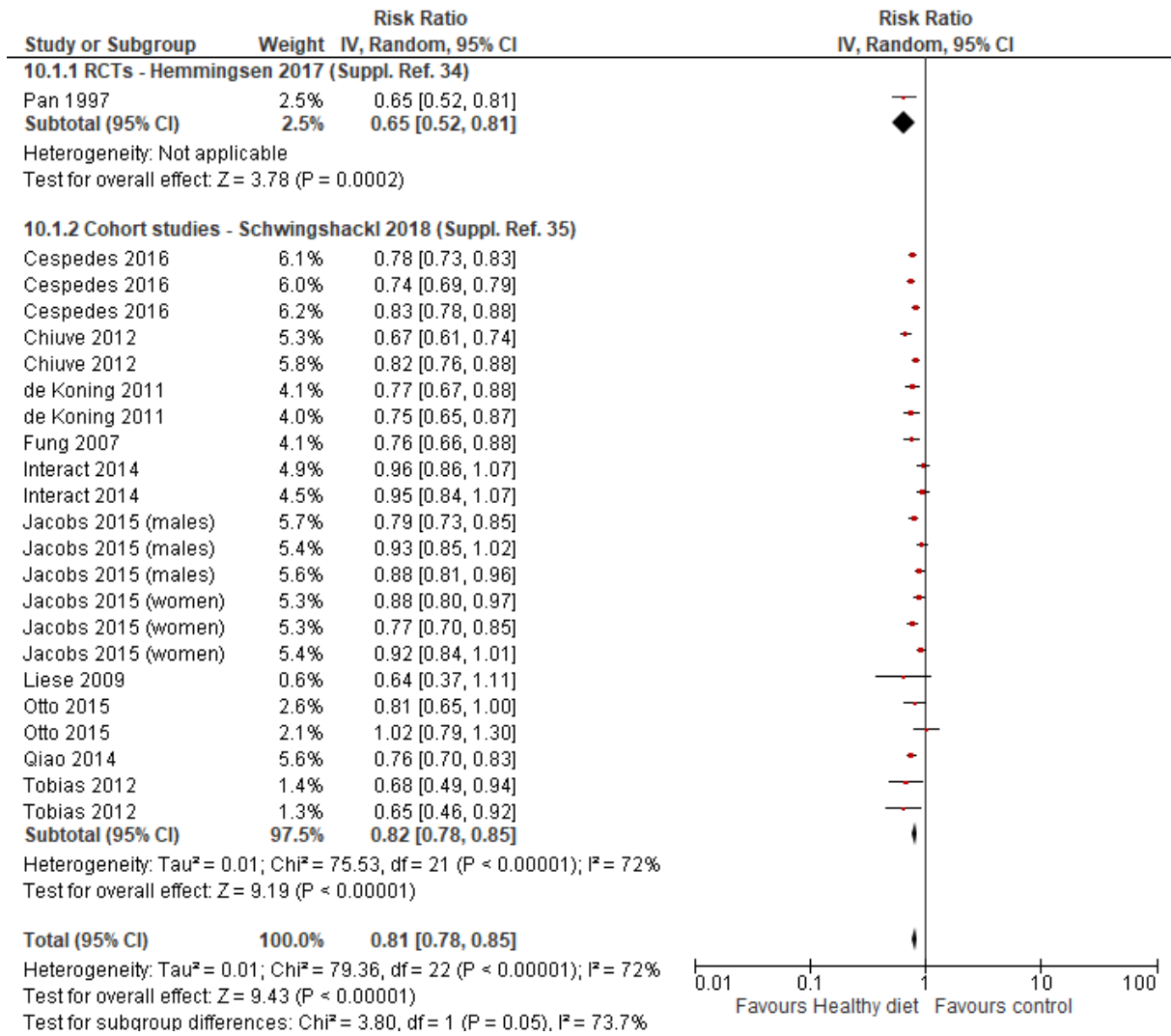
Supplementary Figure 28: De-Regil 2015 (26) / Blencowe et al. 2010 (27); Intervention/ Exposure: Folate; Outcome: Neural tube defect

Supplemental data



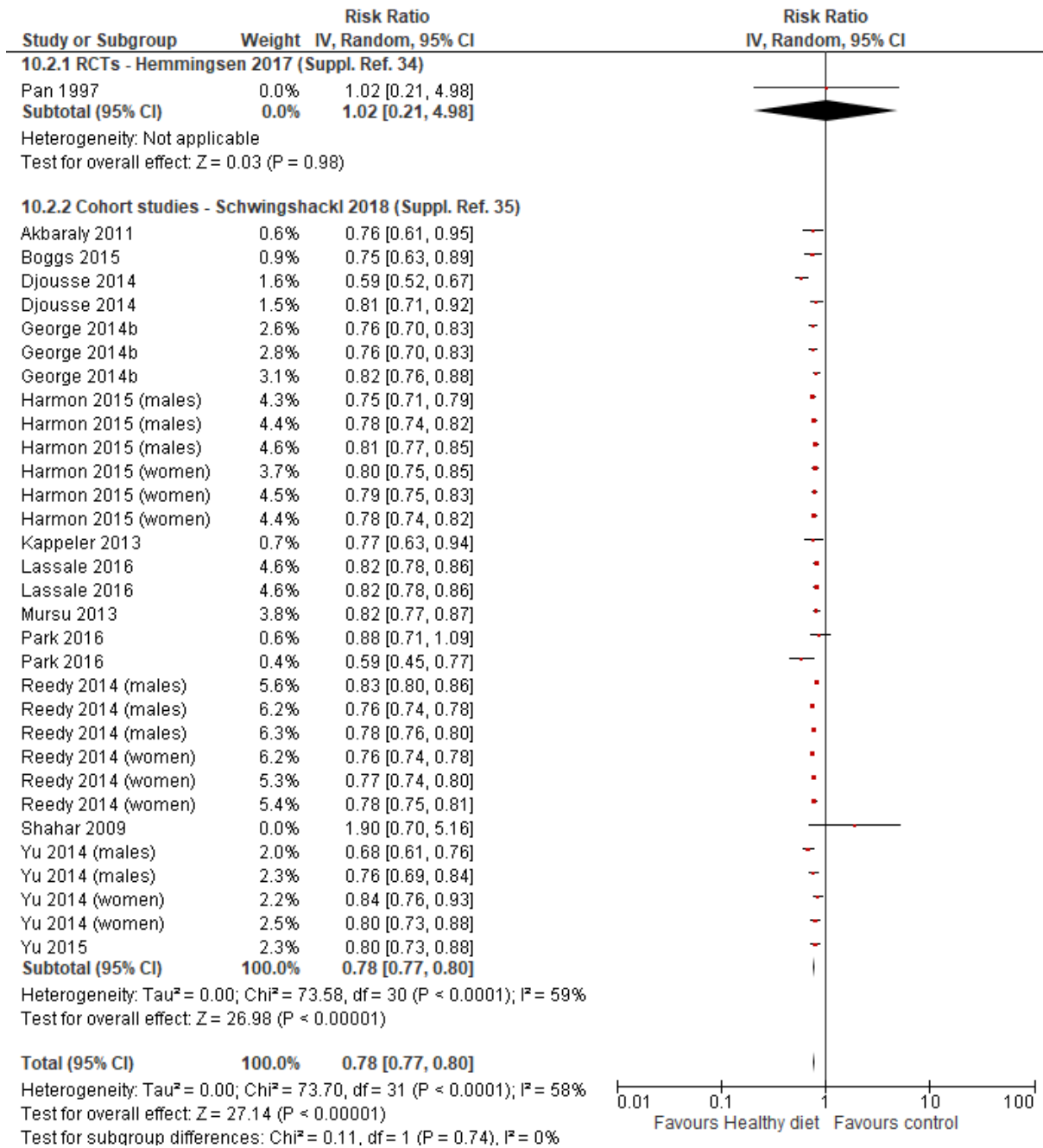
Supplementary Figure 29: De-Regil et al. 2015 (26) / Feng et al. 2015 (28); Intervention/ Exposure: Folate; Outcome: Congenital cardiovascular anomalies/ Congenital heart defect

Supplemental data



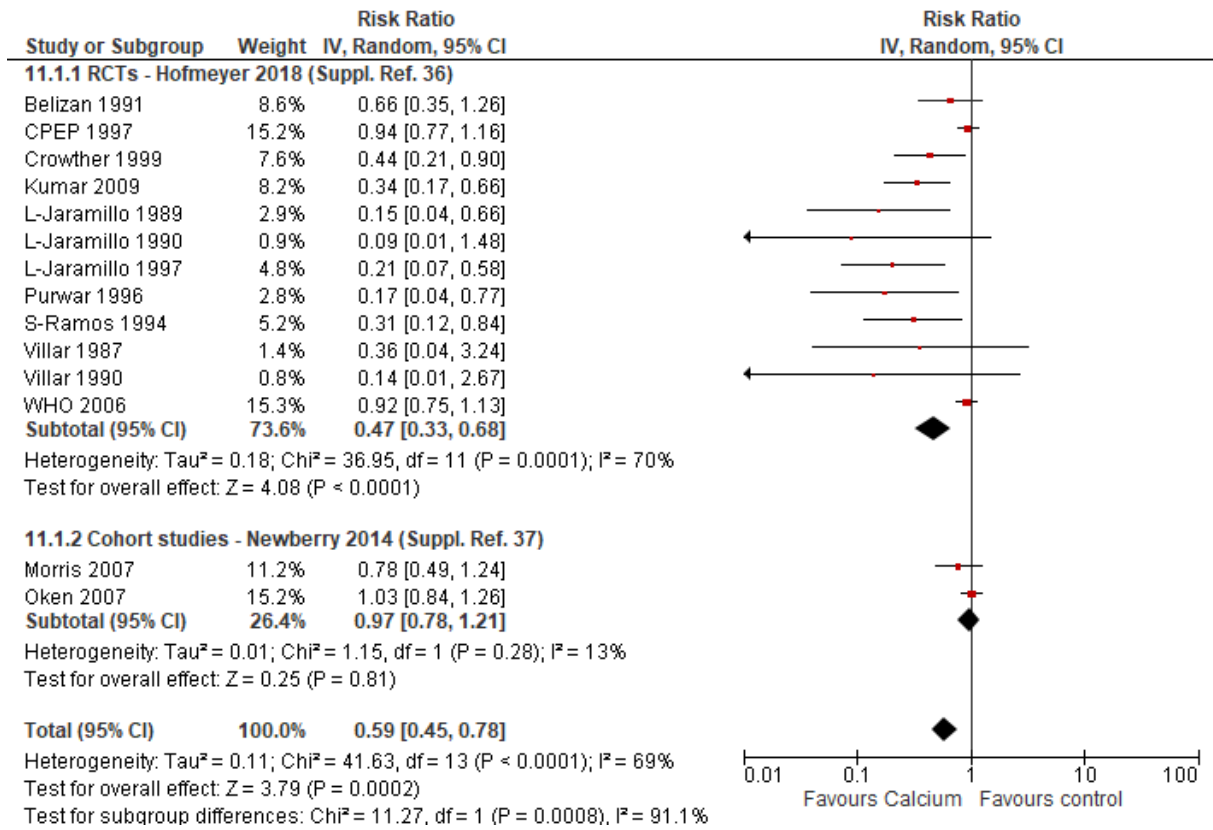
Supplementary Figure 30: Hemmingsen et al. 2017 (34) / Schwingshackl et al. 2018 (35);
Intervention/ Exposure: Healthy diet/ Diet quality; Outcome: Type 2 diabetes

Supplemental data



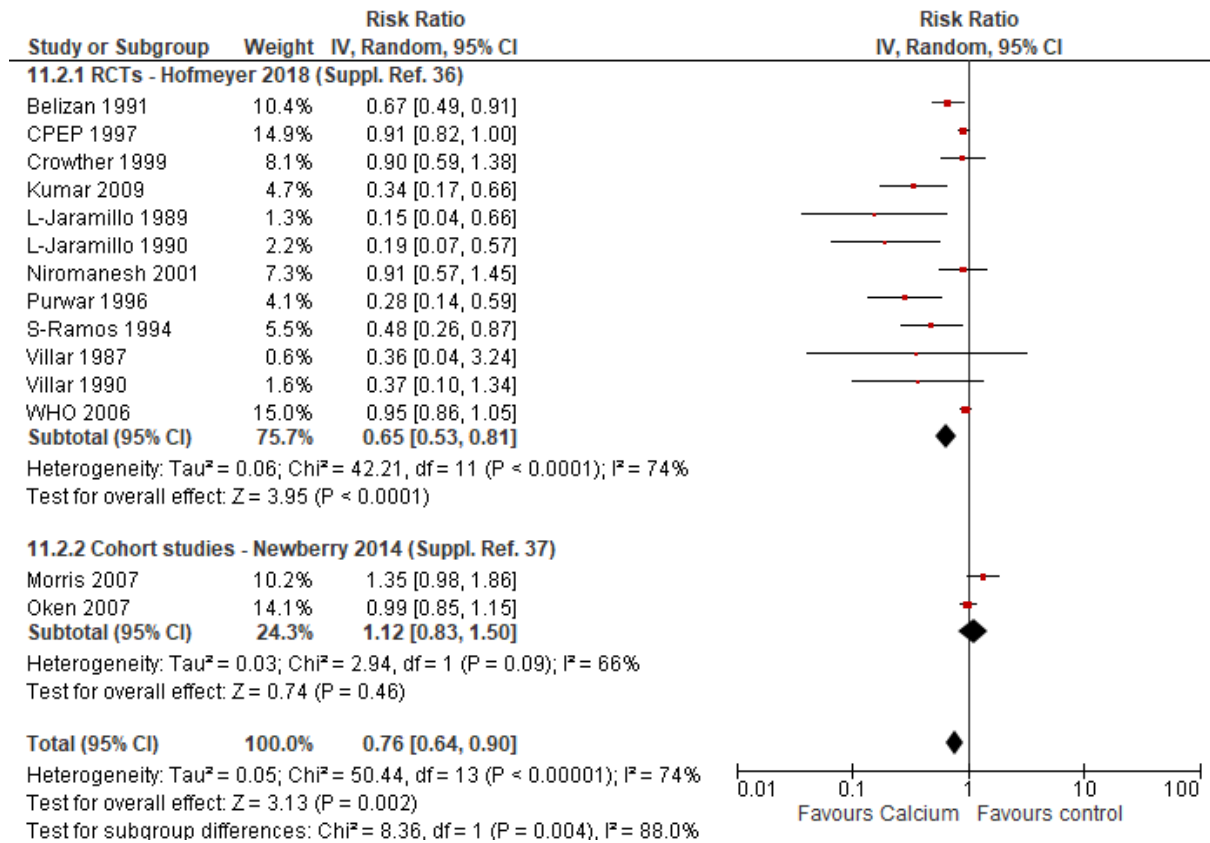
Supplementary Figure 31: Hemmingsen 2017 (34) / Schwingshackl et al. 2018 (35); Intervention/ Exposure: Healthy diet/ Diet quality; Outcome: All-cause mortality

Supplemental data



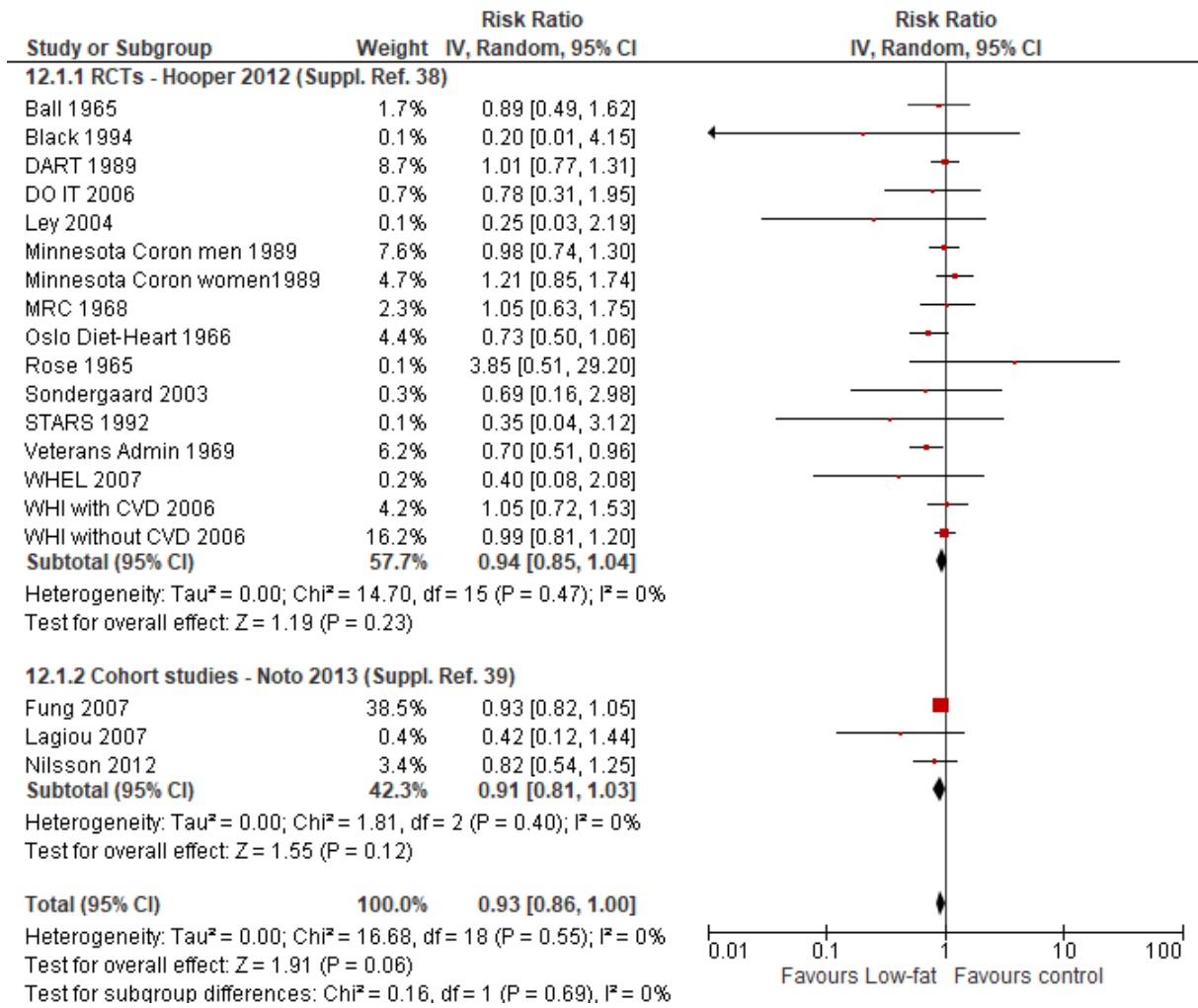
Supplementary Figure 32: Hofmeyer et al. 2018 (36) / Newberry et al. 2014 (37); Intervention/
Exposure: Calcium; Outcome: Pre-eclampsia

Supplemental data



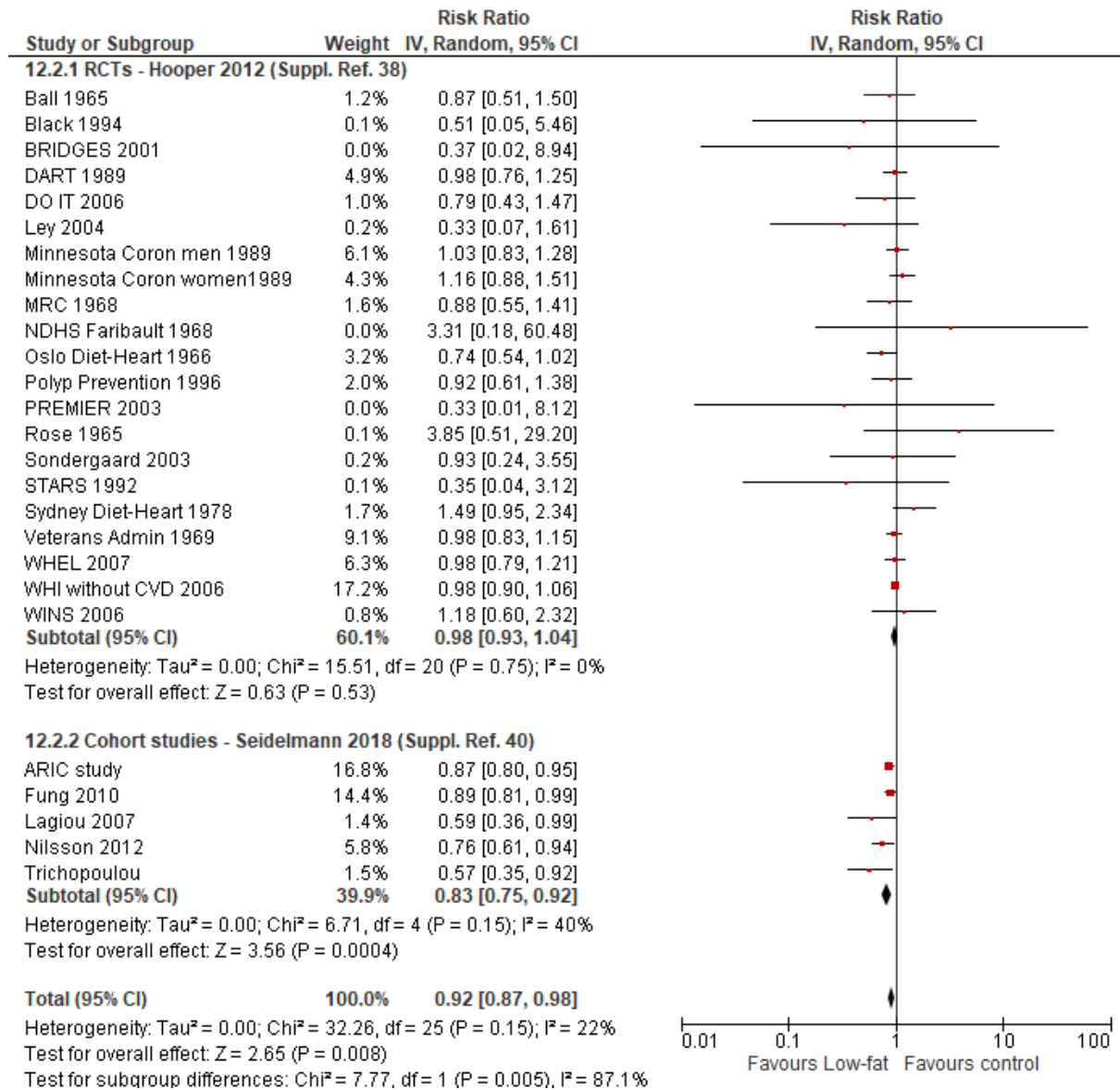
Supplementary Figure 33: Hofmeyer et al. 2018 (36) / Newberry et al. 2014 (37); Intervention/
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Supplemental data



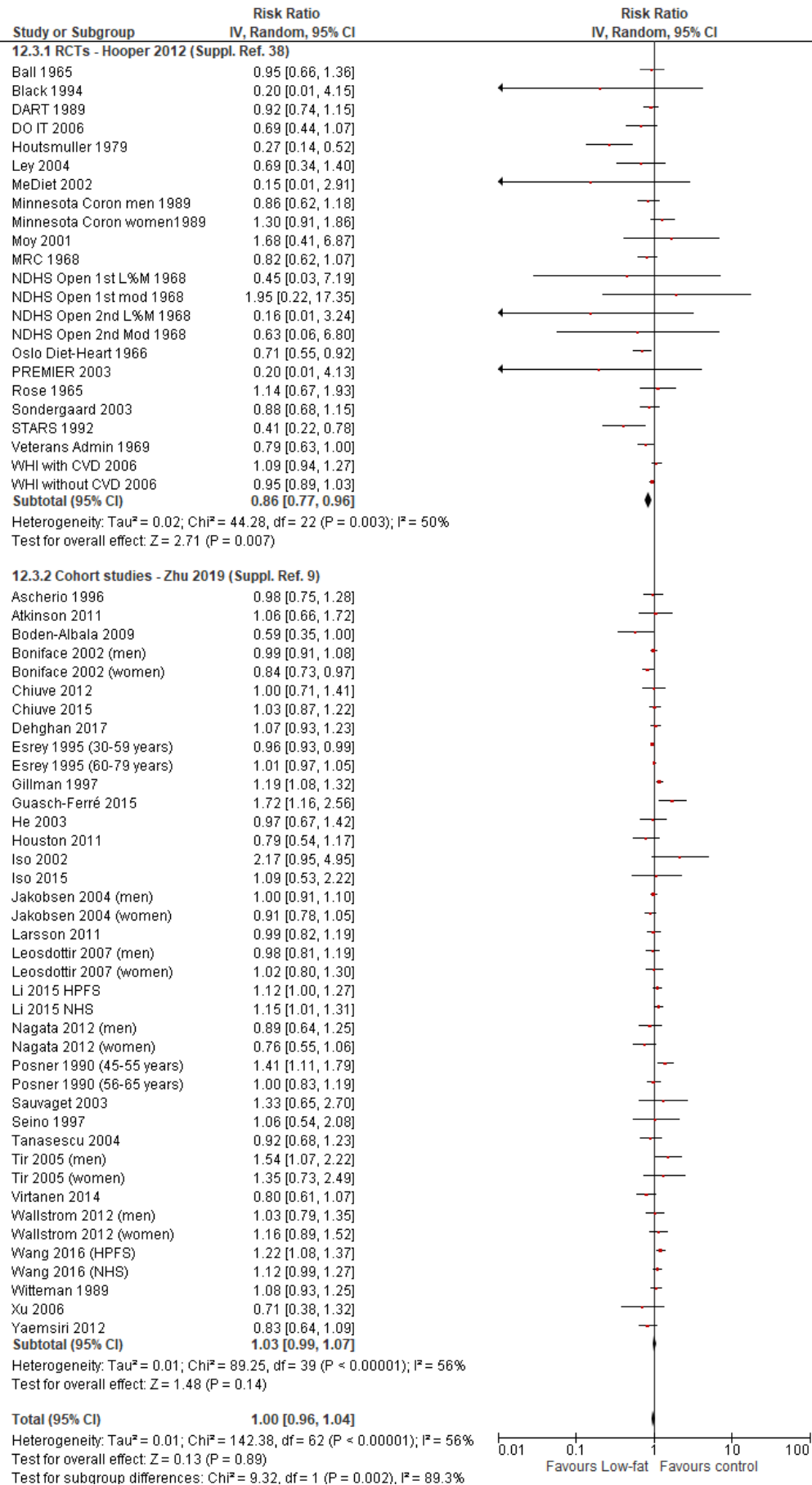
Supplementary Figure 34: Hooper et al. 2012 (38) / Noto et al. 2013 (39); Intervention/ Exposure: Low fat or modified fat/ High carb; Outcome: Cardiovascular mortality

Supplemental data



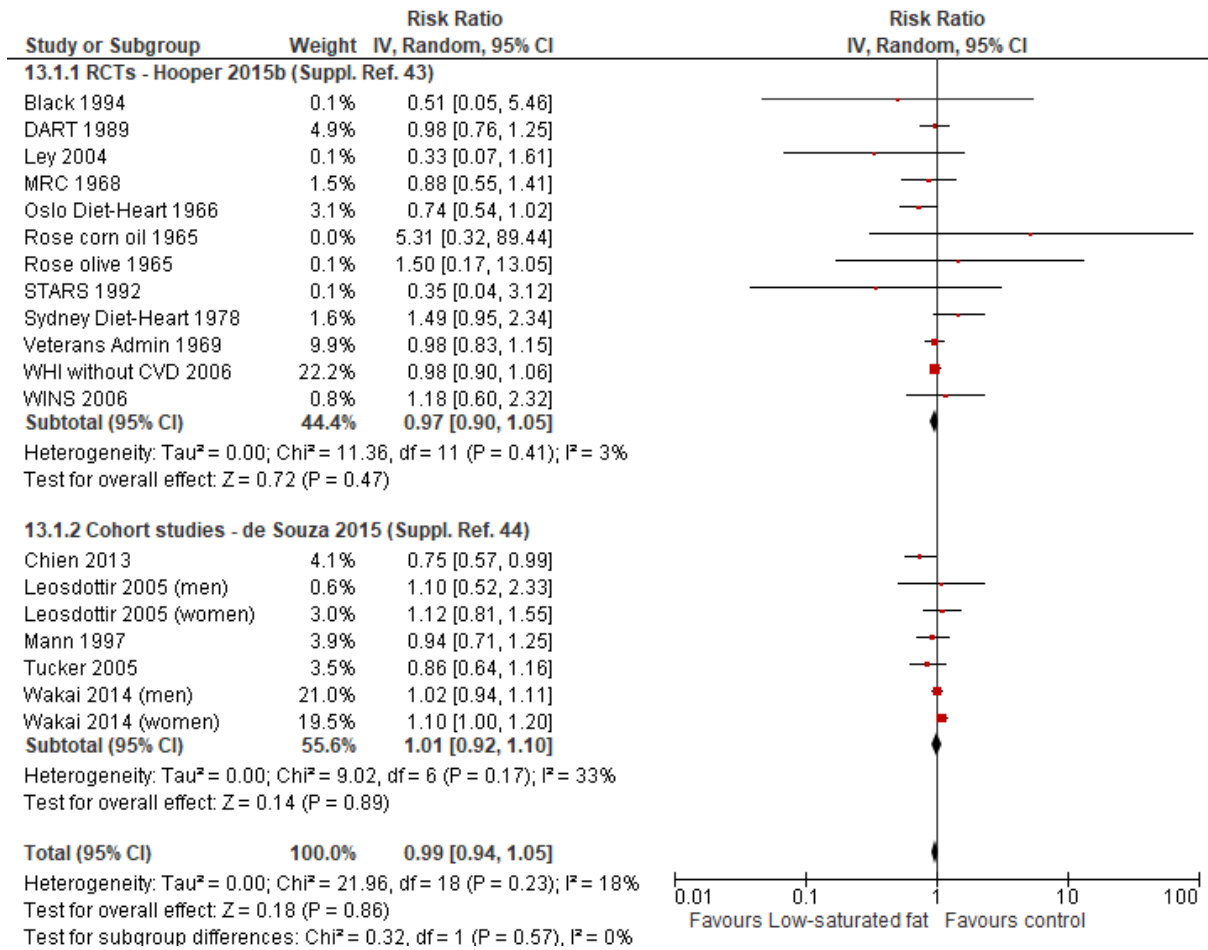
Supplementary Figure 35: Hooper et al. 2012 (38) / Seidelmann et al. 2018 (40); Intervention/ Exposure: Low fat or modified fat/ High carb; Outcome: All-cause mortality

Supplemental data



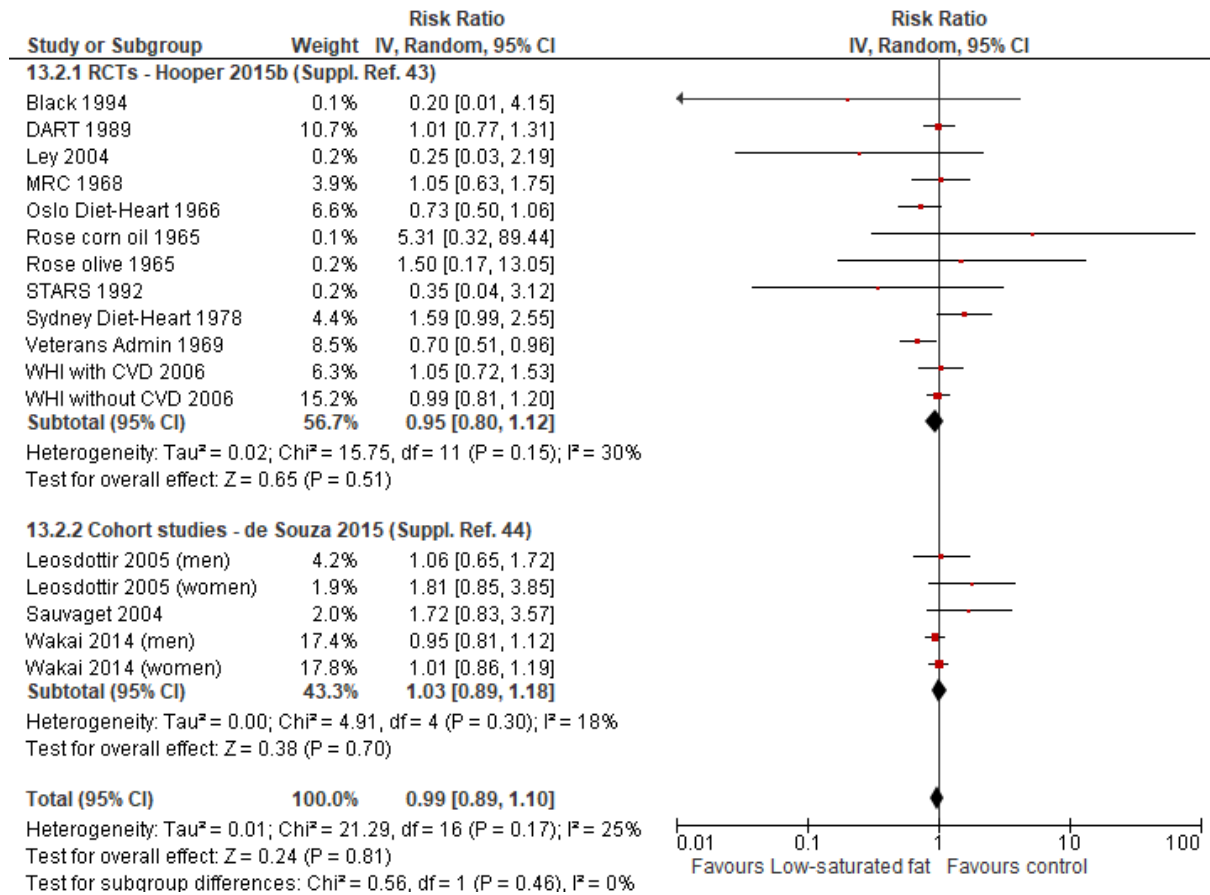
Supplementary Figure 36: Hooper et al. 2012 (38) / Zhu et al. 2019 (9); Intervention/ Exposure: Low fat or modified fat/ Low fat; Outcome: Combined cardiovascular events/ Cardiovascular disease

Supplemental data



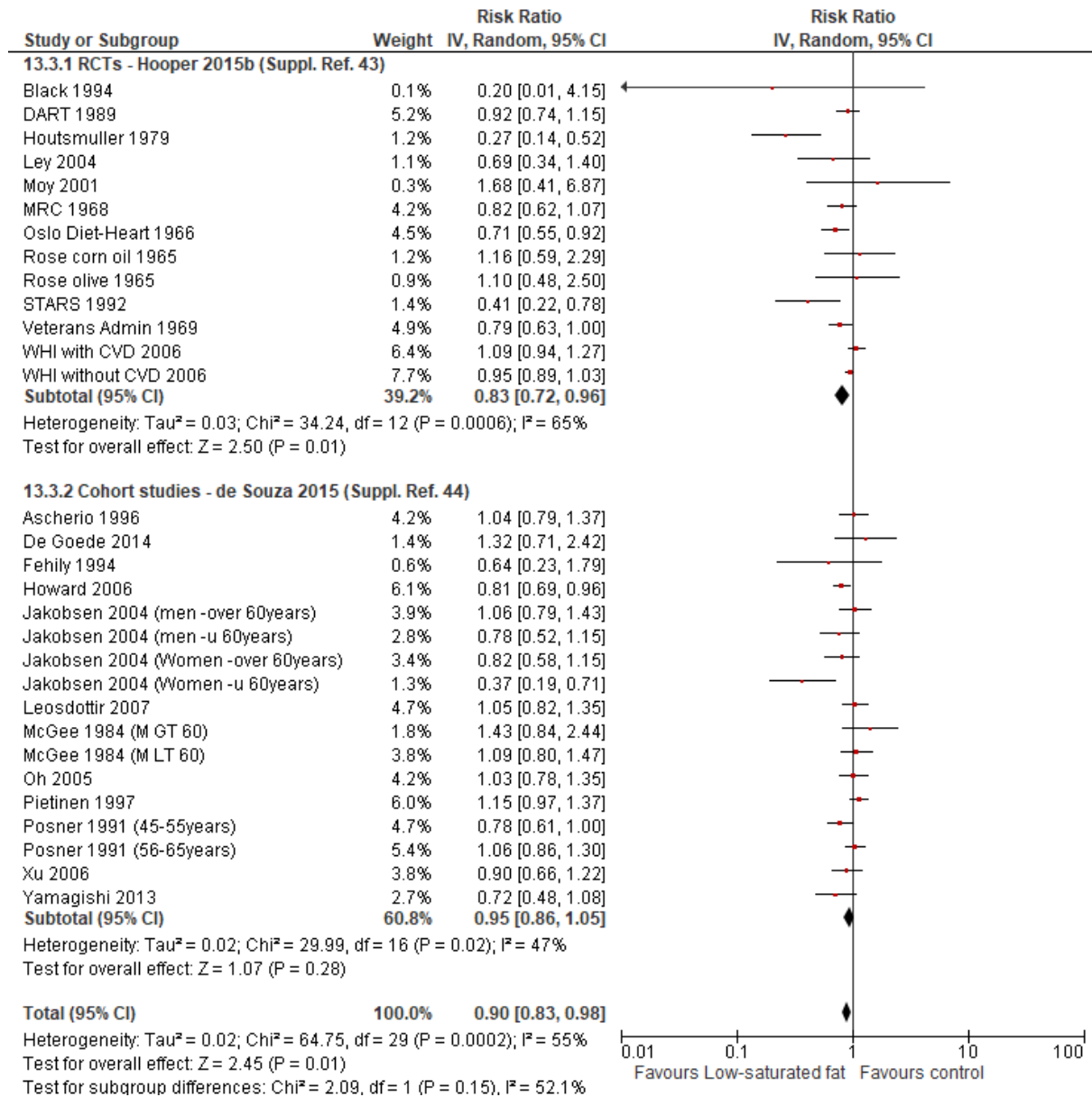
Supplementary Figure 37: Hooper et al. 2015b (43) / de Souza et al. 2015 (44); Intervention/ Exposure: Low saturated fat; Outcome: All-cause mortality

Supplemental data



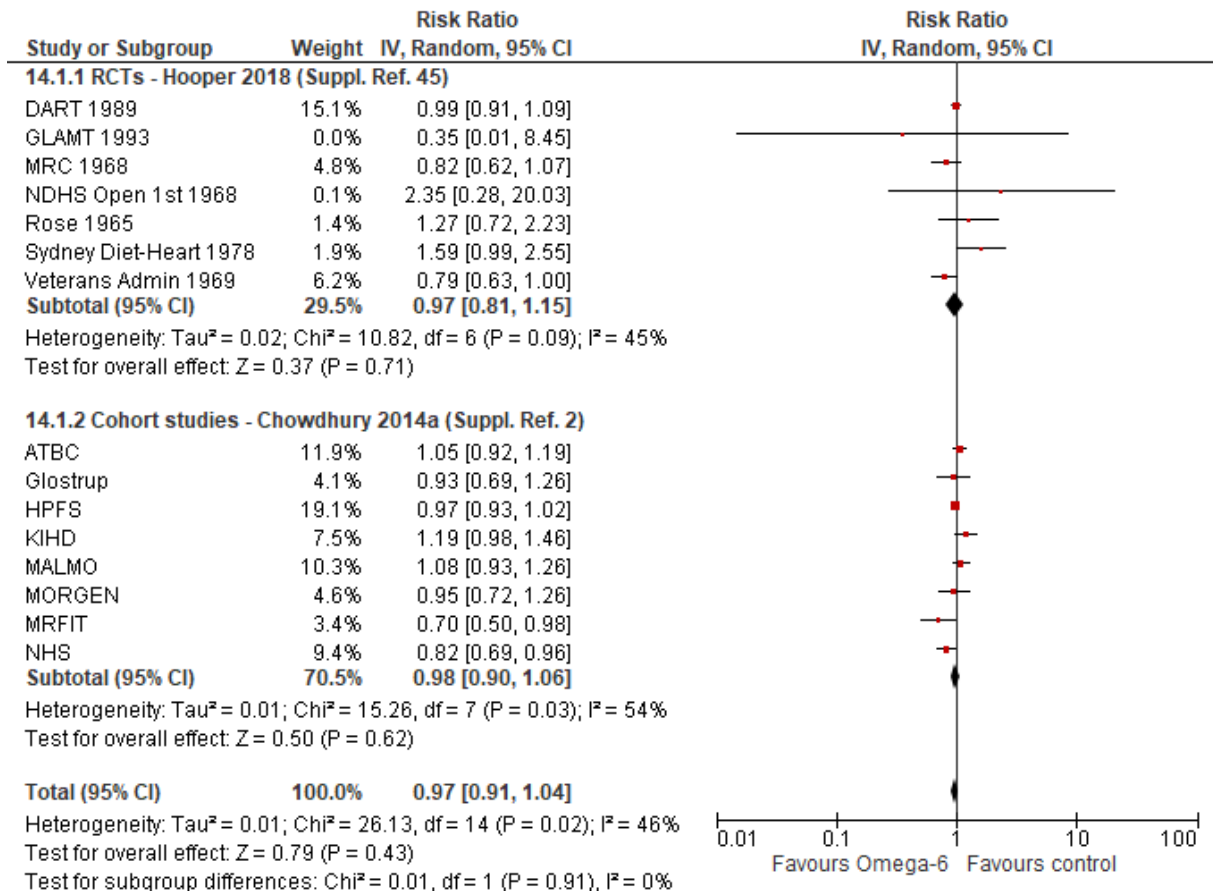
Supplementary Figure 38: Hooper et al. 2015b (43) / de Souza et al. 2015 (44); Intervention/ Exposure: Low saturated fat; Outcome: Cardiovascular mortality

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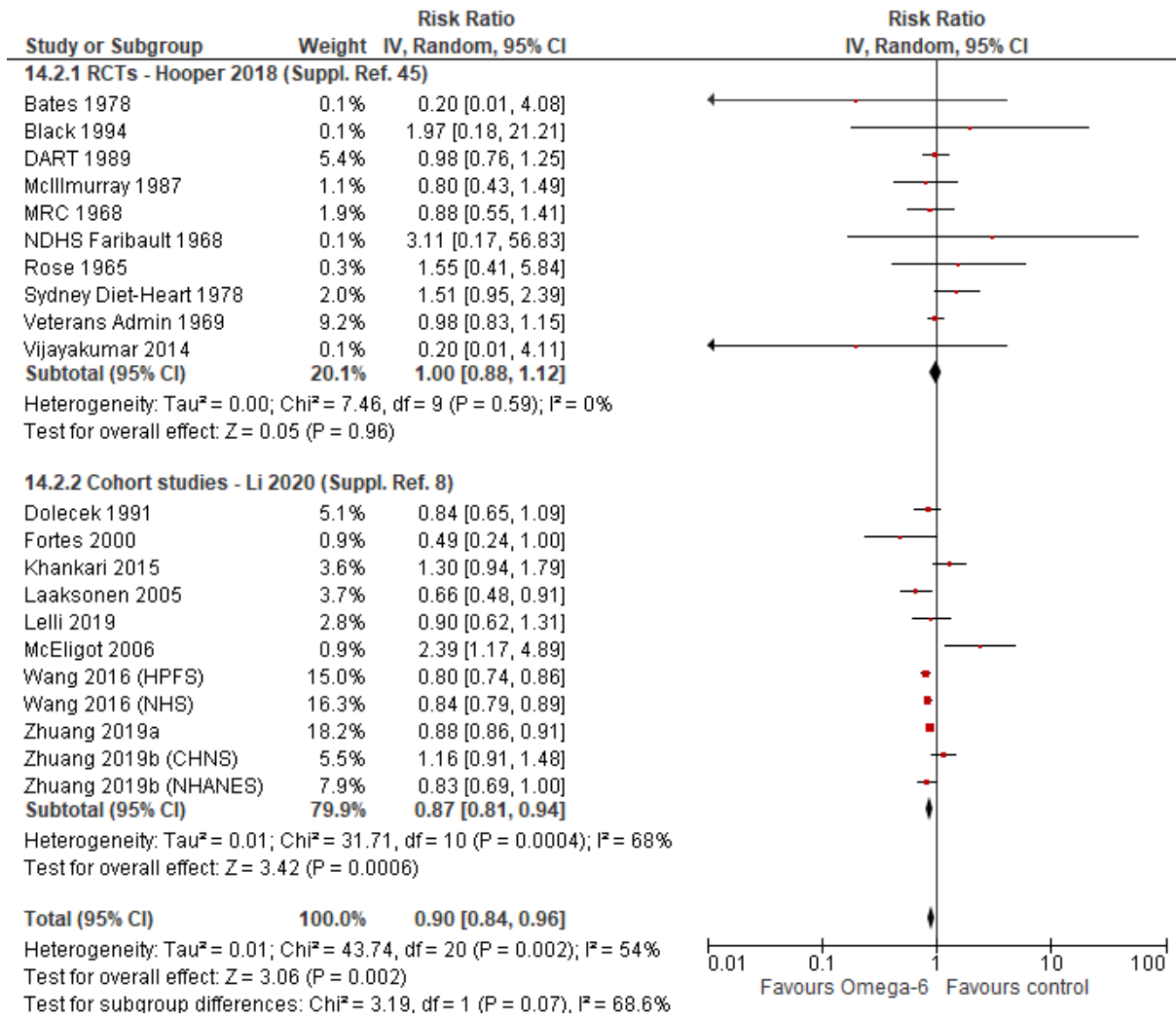
Supplementary Figure 39: Hooper et al. 2015b (43) / de Souza et al. 2015 (44); Intervention/ Exposure: Low saturated fat; Outcome: Combined cardiovascular events/ Coronary heart disease

Supplemental data



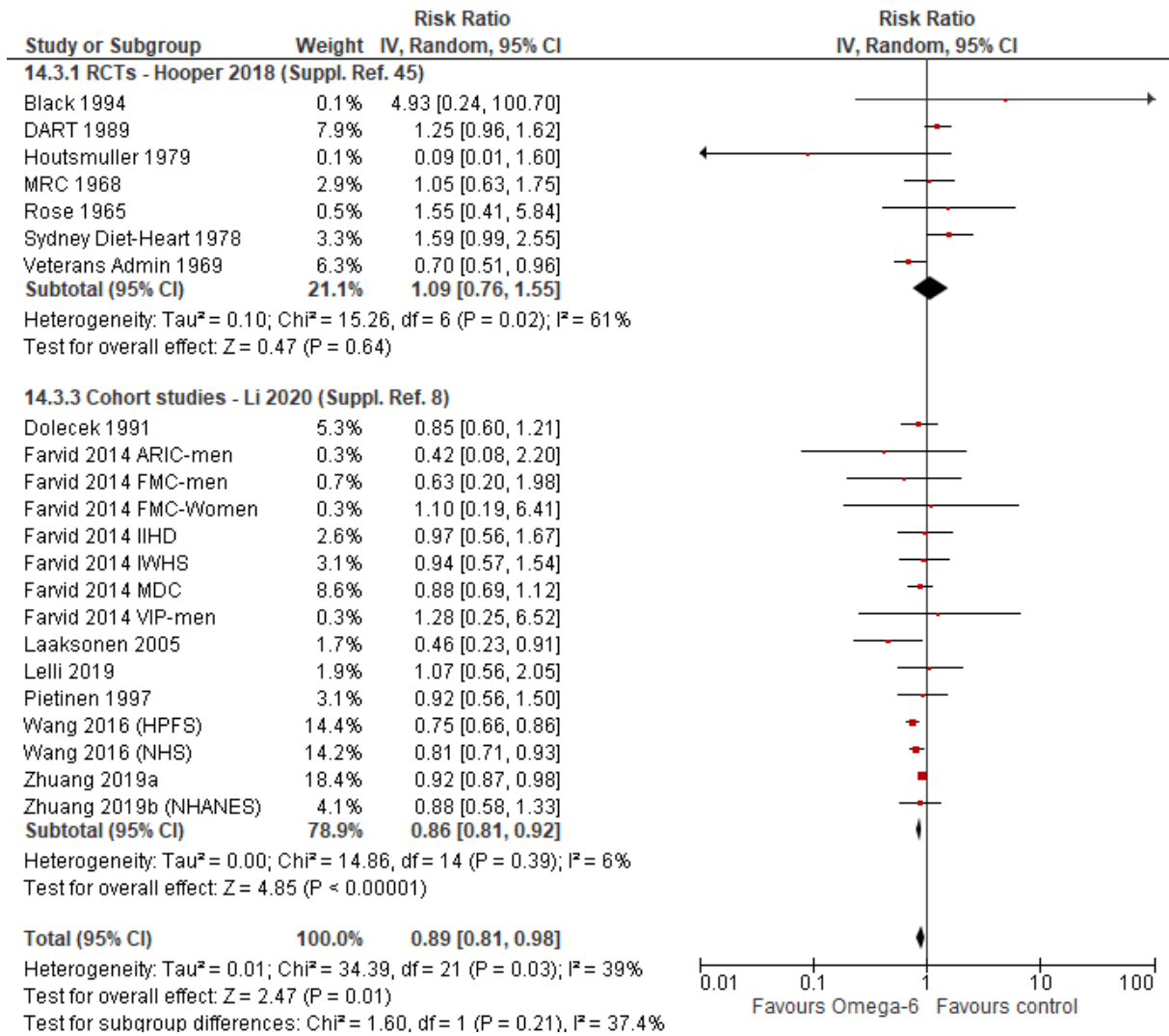
Supplementary Figure 40: Hooper et al. 2018 (45) / Chowdhury et al. 2014a (2); Intervention/ Exposure: Omega-6 fatty acids; Outcome: Combined cardiovascular events/ Coronary heart disease

Supplemental data



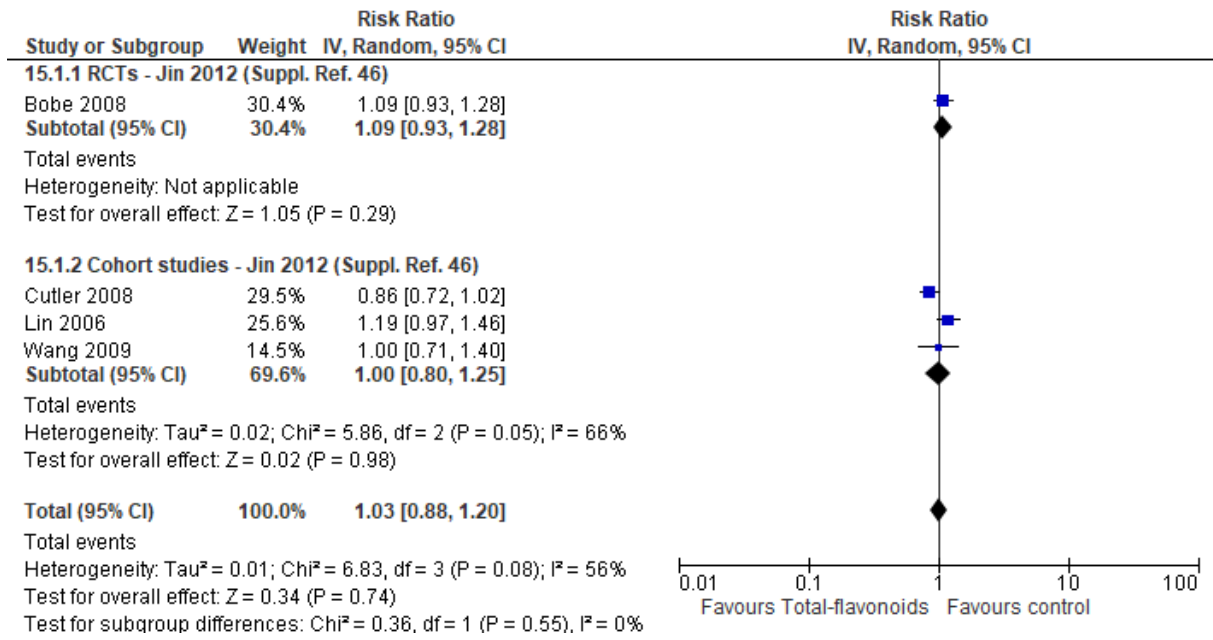
Supplementary Figure 41: Hooper et al. 2018 (45) / Li et al. 2020 (8); Intervention/ Exposure: Omega-6 fatty acids/ Linoleic acid; Outcome: All-cause mortality

Supplemental data



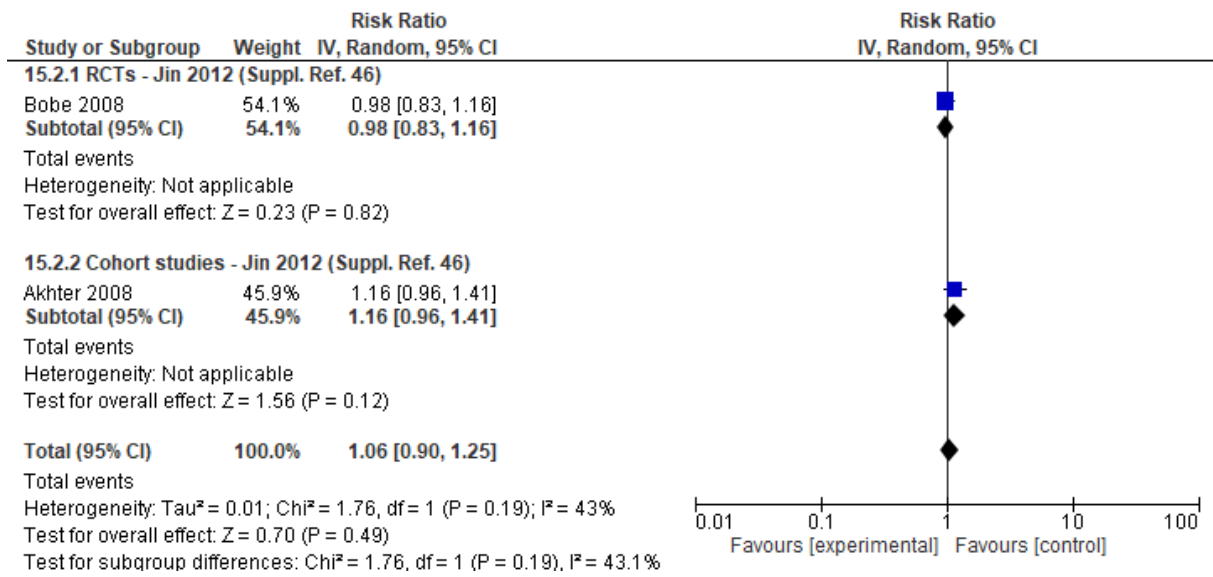
Supplementary Figure 42: Hooper et al. 2018 (45) / Li et al. 2020 (8); Intervention/ Exposure: Omega-6 fatty acids/ Linoleic acid; Outcome: Cardiovascular mortality

Supplemental data



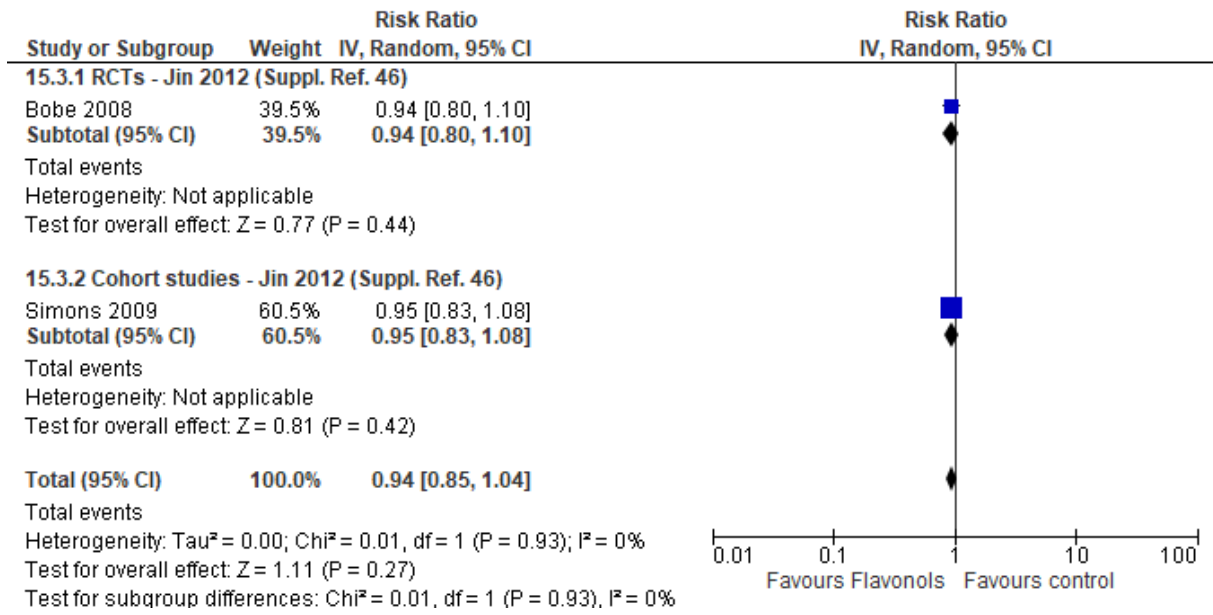
Supplementary Figure 43: Jin et al. 2012 (46) / Jin et al. 2012 (46); Intervention/ Exposure: Total flavonoids; Outcome: Colorectal adenoma/ Colorectal cancer

Supplemental data



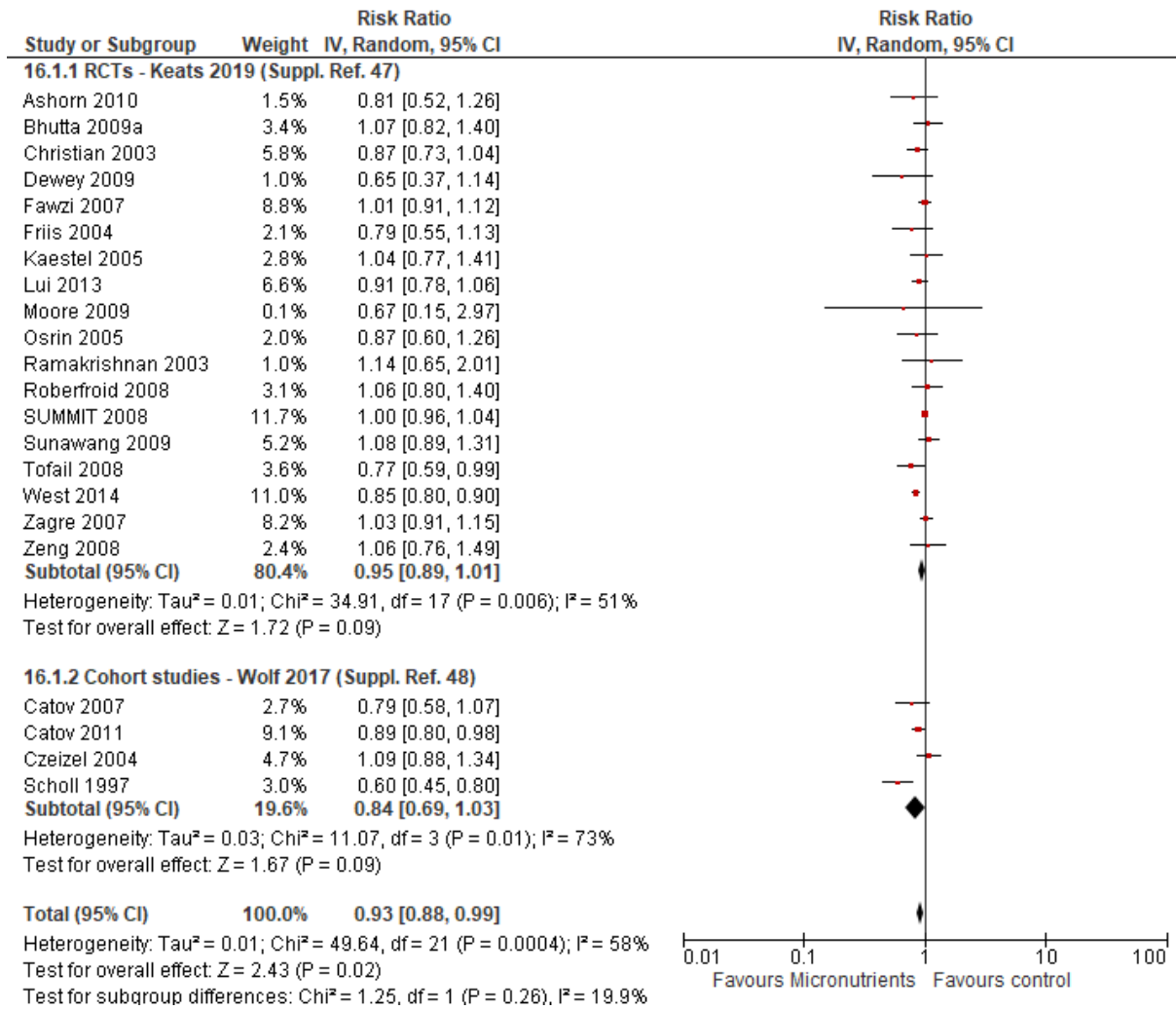
Supplementary Figure 44: Jin et al. 2012 (46) / Jin et al. 2012 (46); Intervention/ Exposure: Isoflavonoes; Outcome: Colorectal adenoma/ Colorectal cancer

Supplemental data



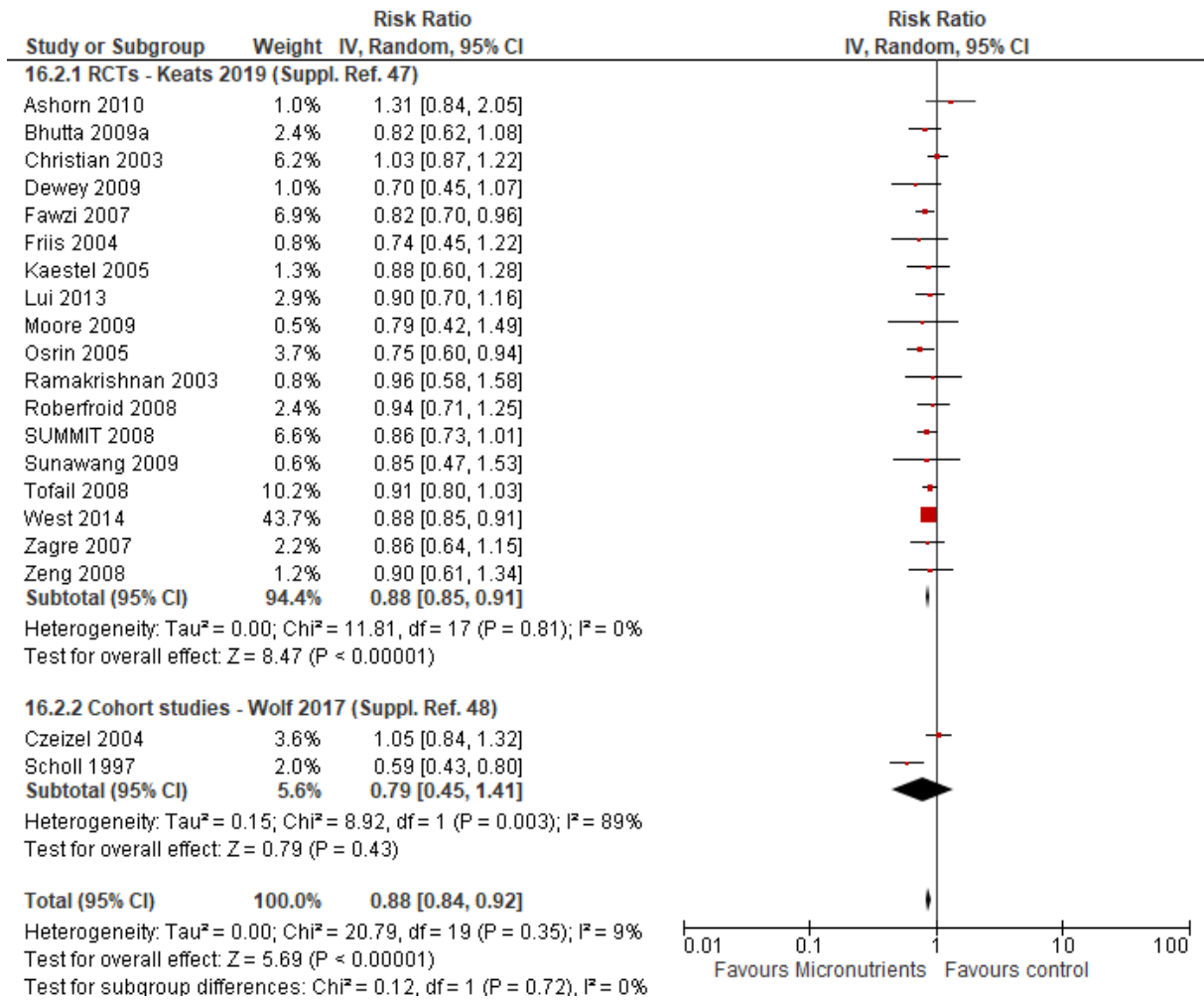
Supplementary Figure 45: Jin et al. 2012 (46) / Jin et al. 2012 (46); Intervention/ Exposure: Flavonols; Outcome: Colorectal adenoma/ Colorectal cancer

Supplemental data



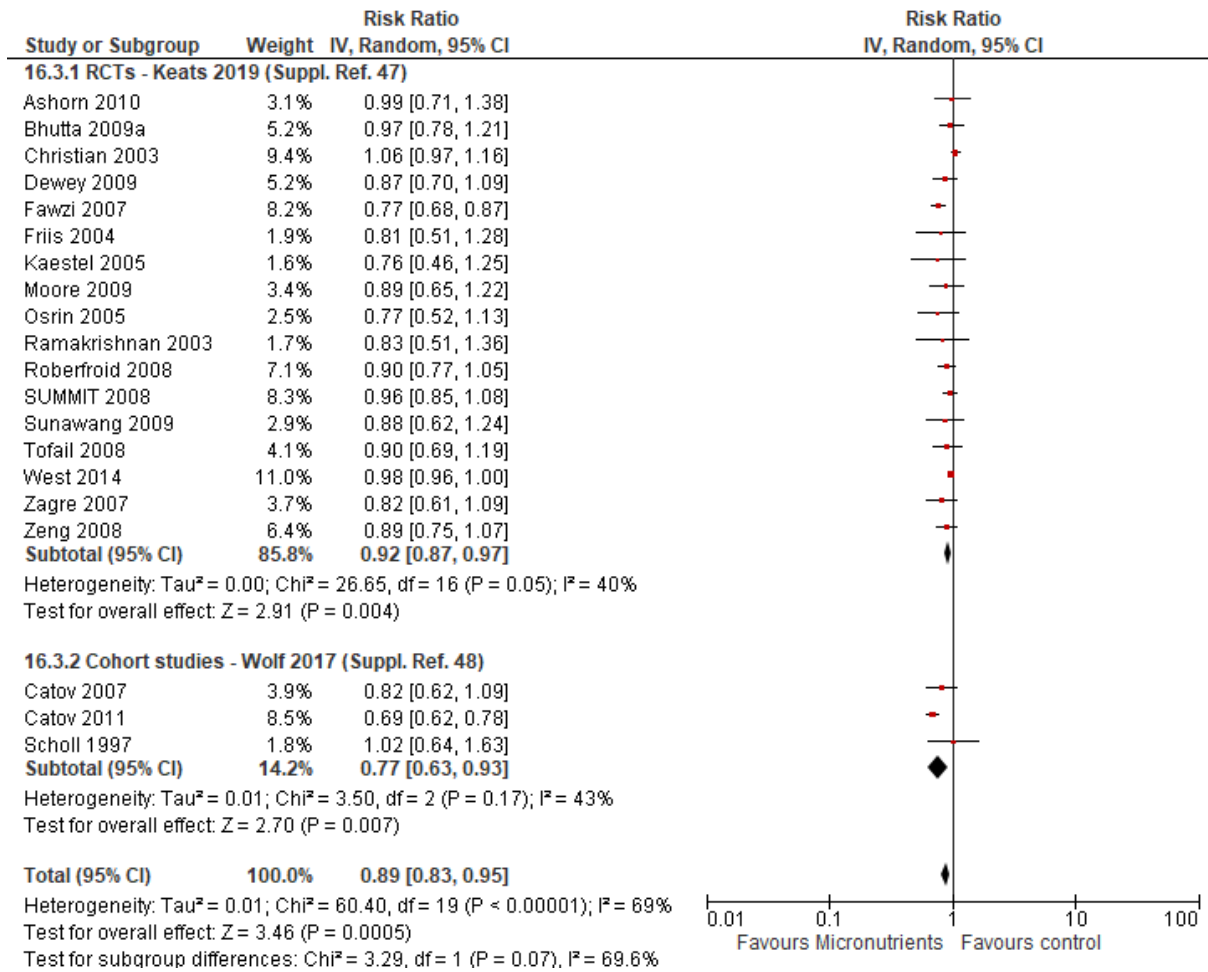
Supplementary Figure 46: Keats et al. 2019 (47) / Wolf et al. 2017 (48); Intervention/ Exposure: Micronutrients/ Multivitamin; Outcome: Preterm birth

Supplemental data



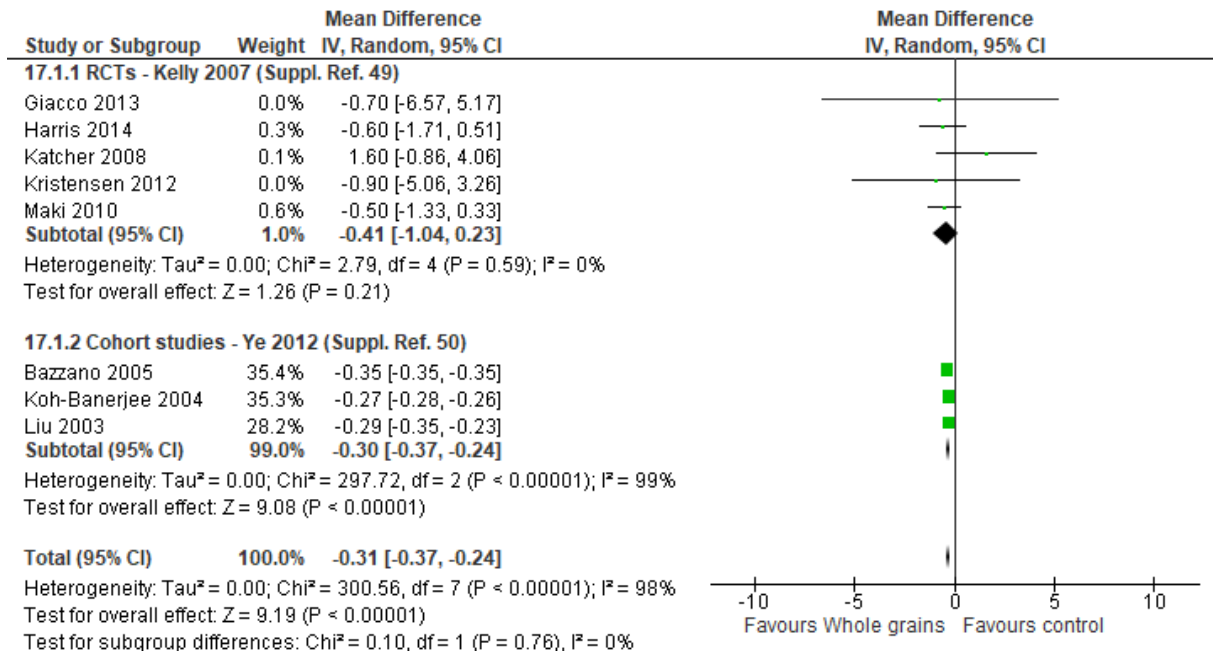
Supplementary Figure 47: Keats et al. 2019 (47) / Wolf et al. 2017 (48); Intervention/ Exposure: Micronutrients/ Multivitamin; Outcome: Low birth weight

Supplemental data



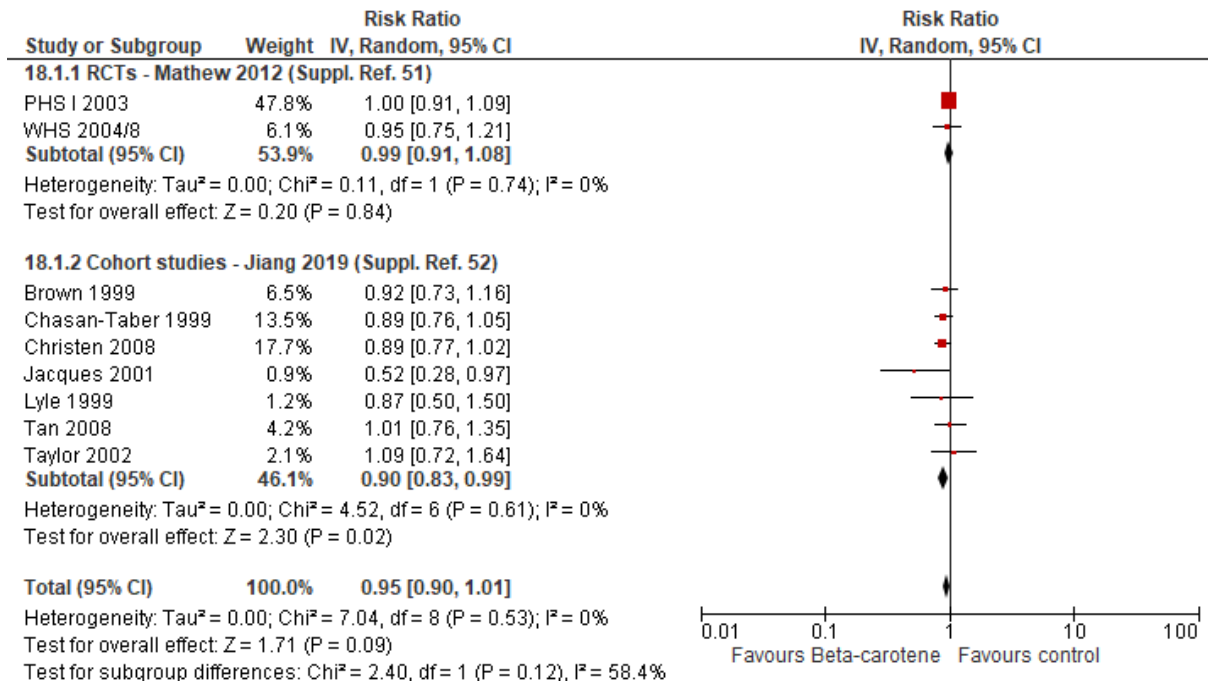
Supplementary Figure 48: Keats et al. 2019 (47) / Wolf et al. 2017 (48); Intervention/ Exposure: Micronutrients/ Multivitamin; Outcome: Small gestational age

Supplemental data



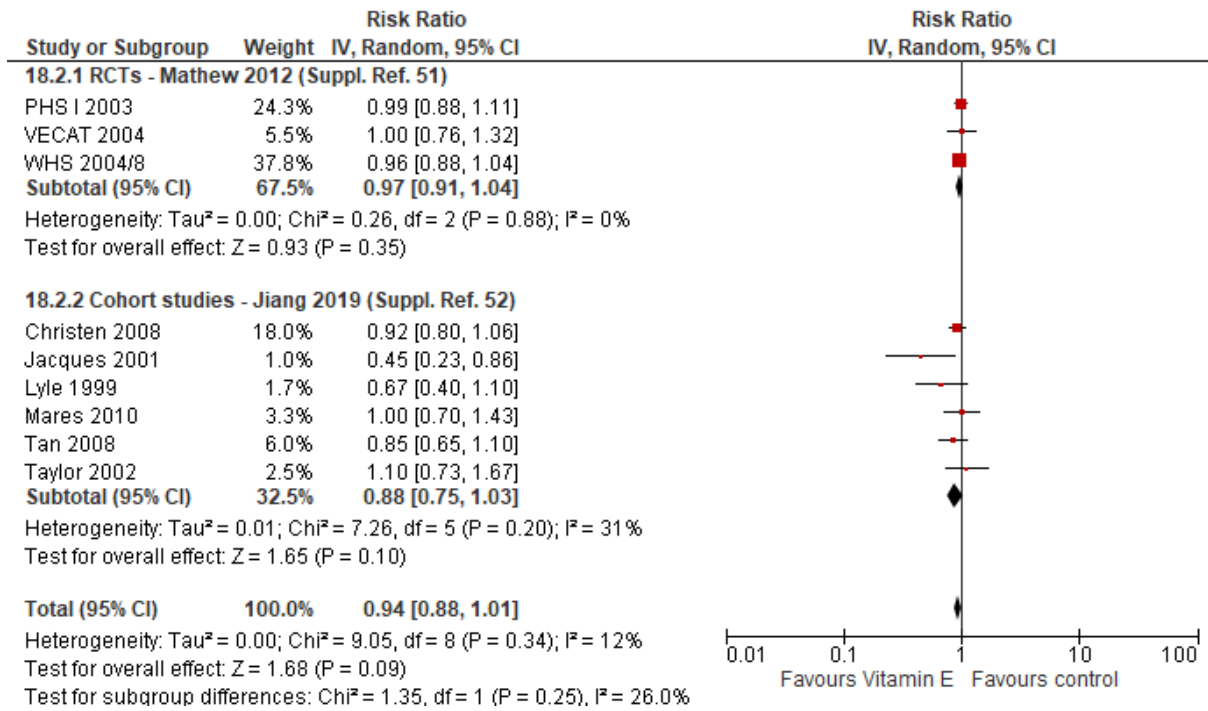
Supplementary Figure 49: Kelly et al. 2017 (49) / Ye et al. 2012 (50); Intervention/ Exposure: Whole grains; Outcome: Body weight (kg)

Supplemental data



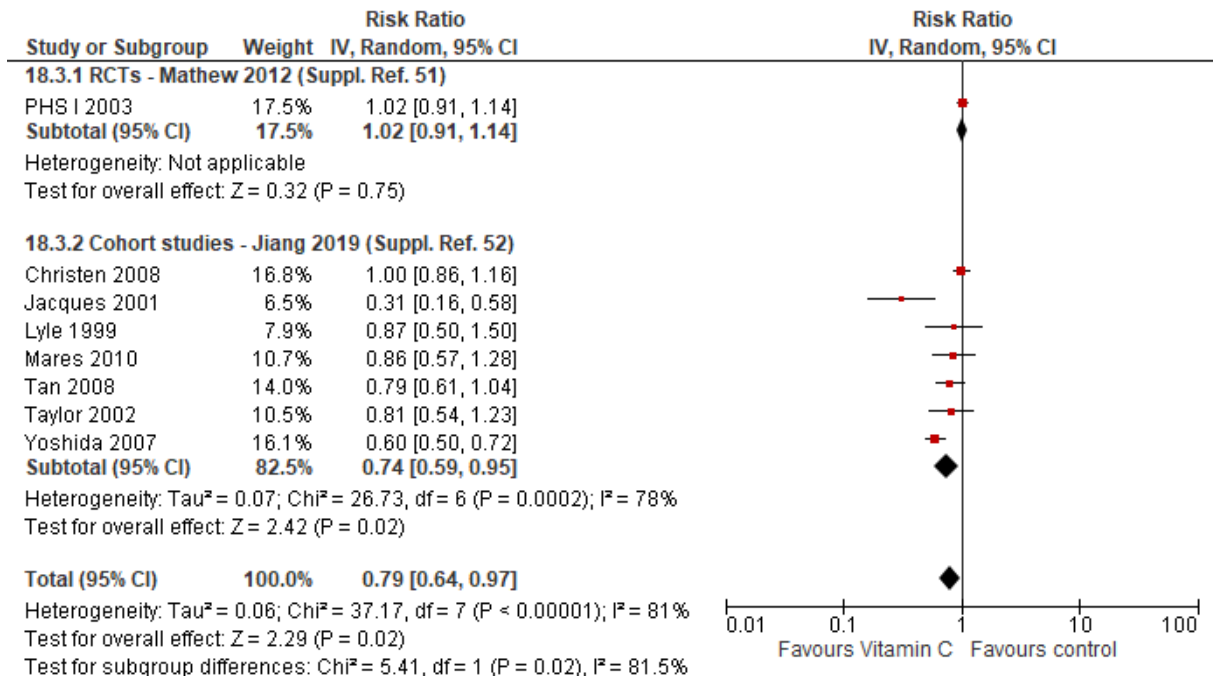
Supplementary Figure 50: Mathew et al. 2012 (51) / Jiang et al. 2019 (52); Intervention/ Exposure: Beta-carotene; Outcome: Cataract

Supplemental data



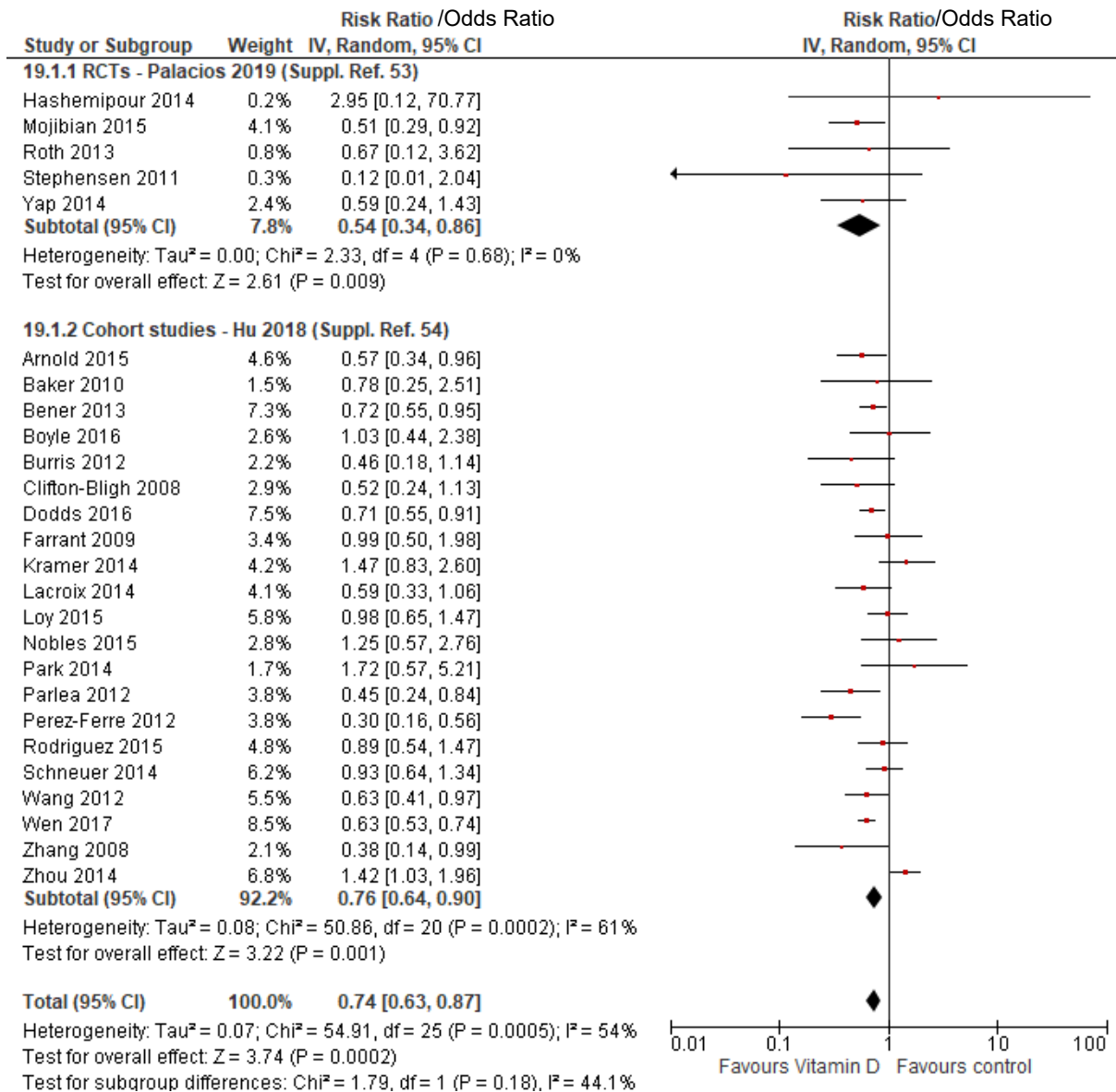
Supplementary Figure 51: Mathew et al. 2012 (51) / Jiang et al. 2019 (52); Intervention/ Exposure: Vitamin E; Outcome: Cataract

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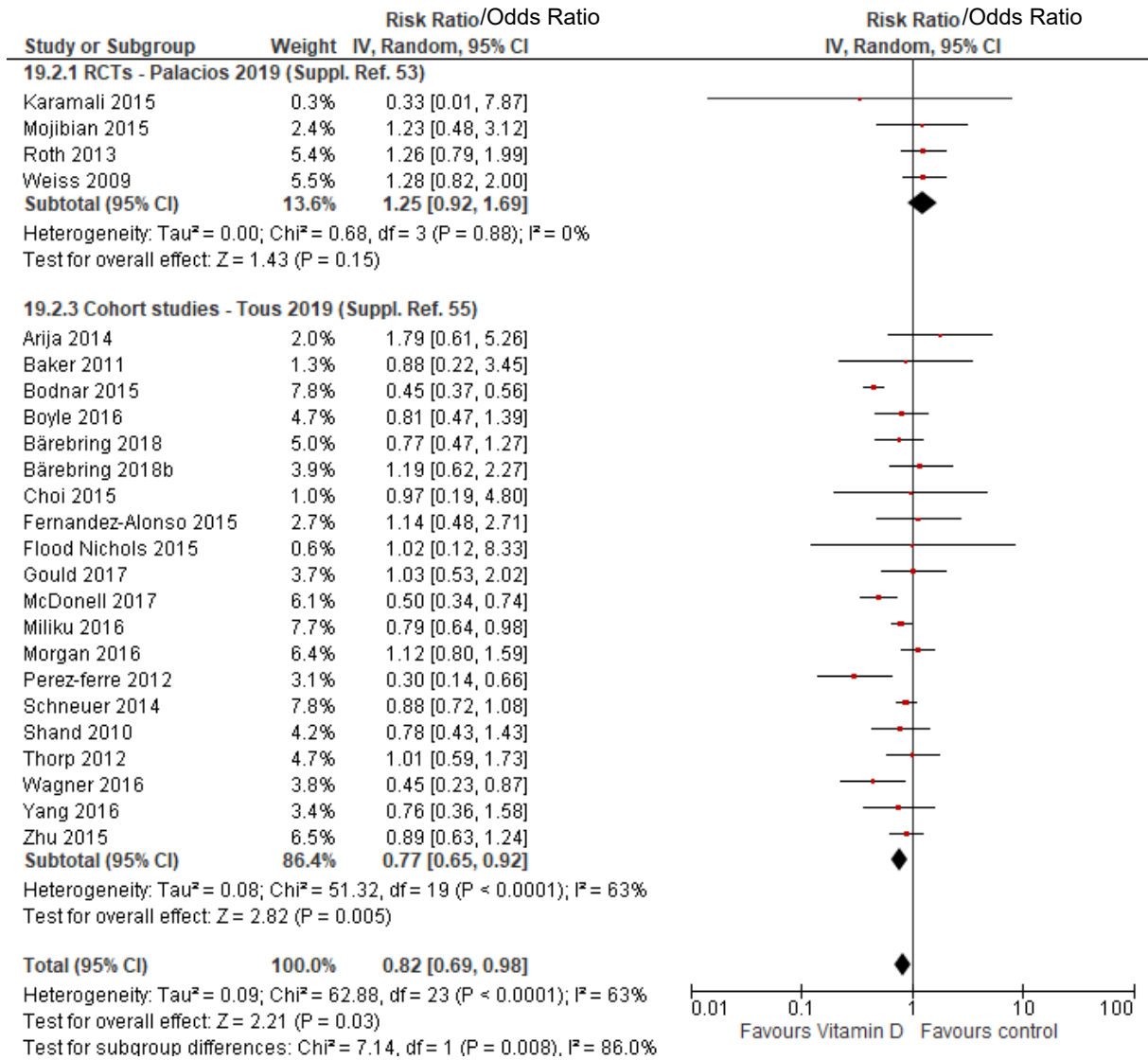
Supplementary Figure 52: Mathew et al. 2012 (51) / Jiang et al. 2019 (52); Intervention/ Exposure: Vitamin C; Outcome: Cataract

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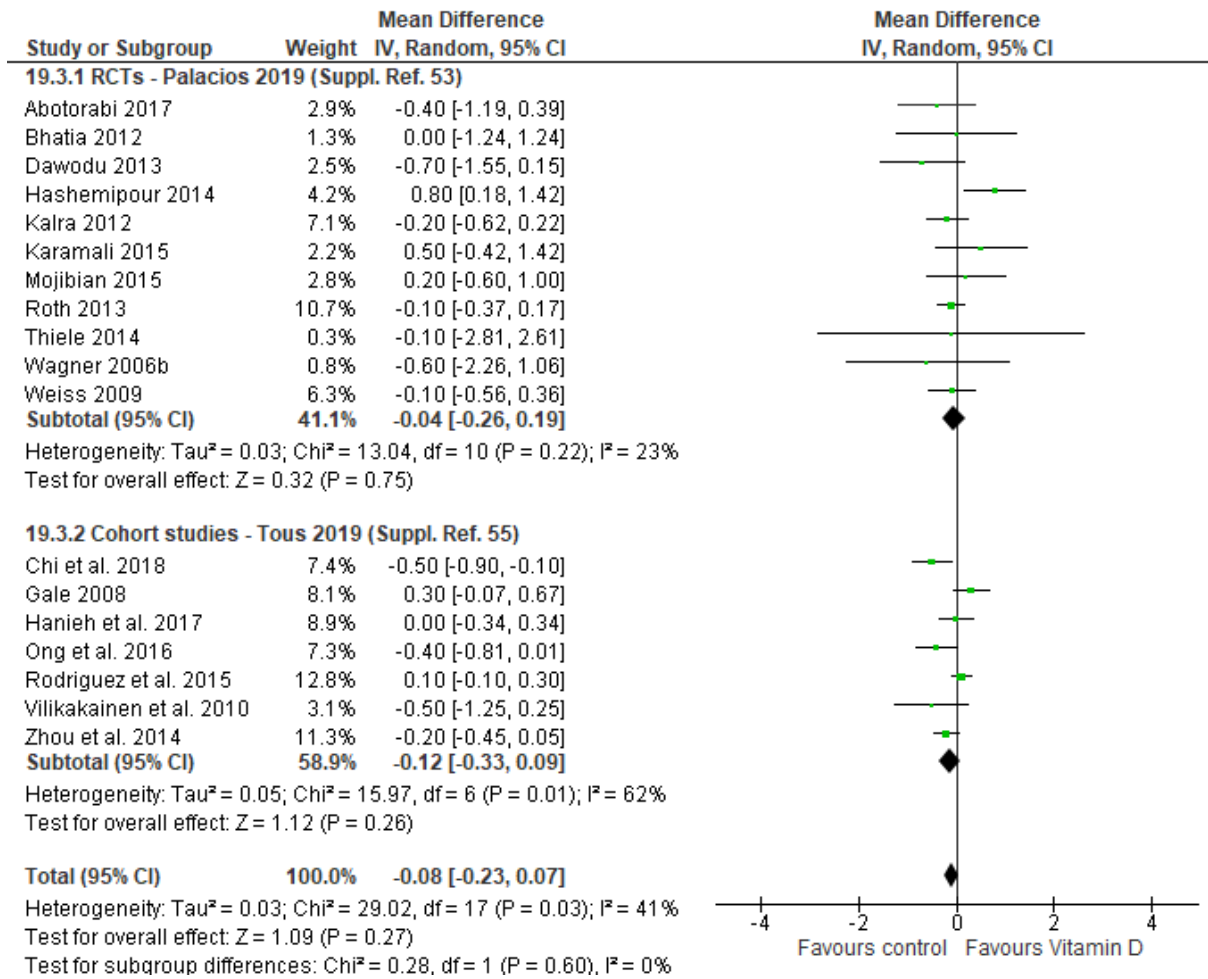
Supplementary Figure 53: Palacios et al. 2019 (53) / Hu et al. 2018 (54); Intervention/ Exposure: Vitamin D; Outcome: Gestational diabetes

Supplemental data



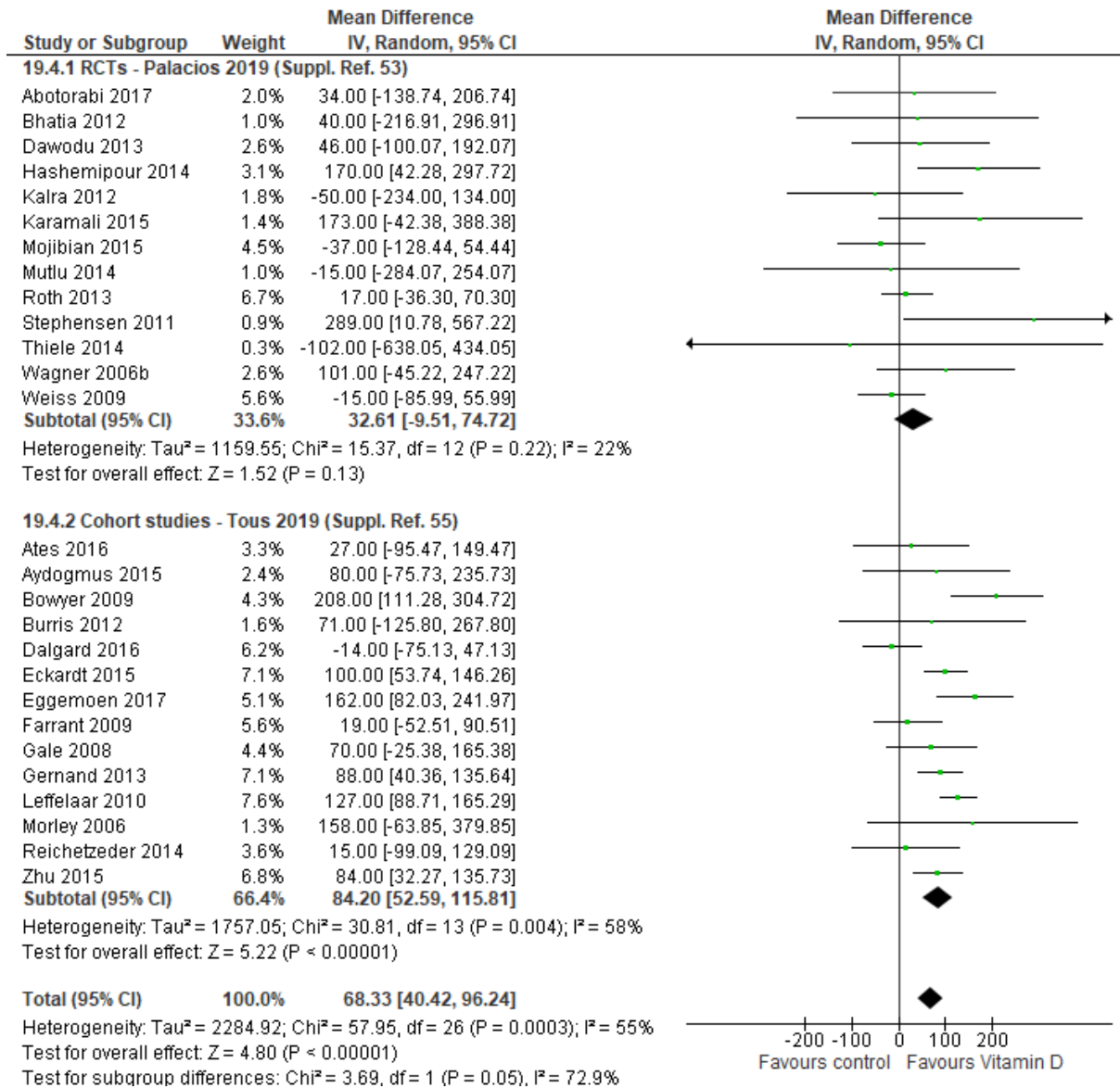
Supplementary Figure 54: Palacios et al. 2019 (53) / Tous et al. 2020 (55); Intervention/ Exposure: Vitamin D; Outcome: Preterm birth

Supplemental data



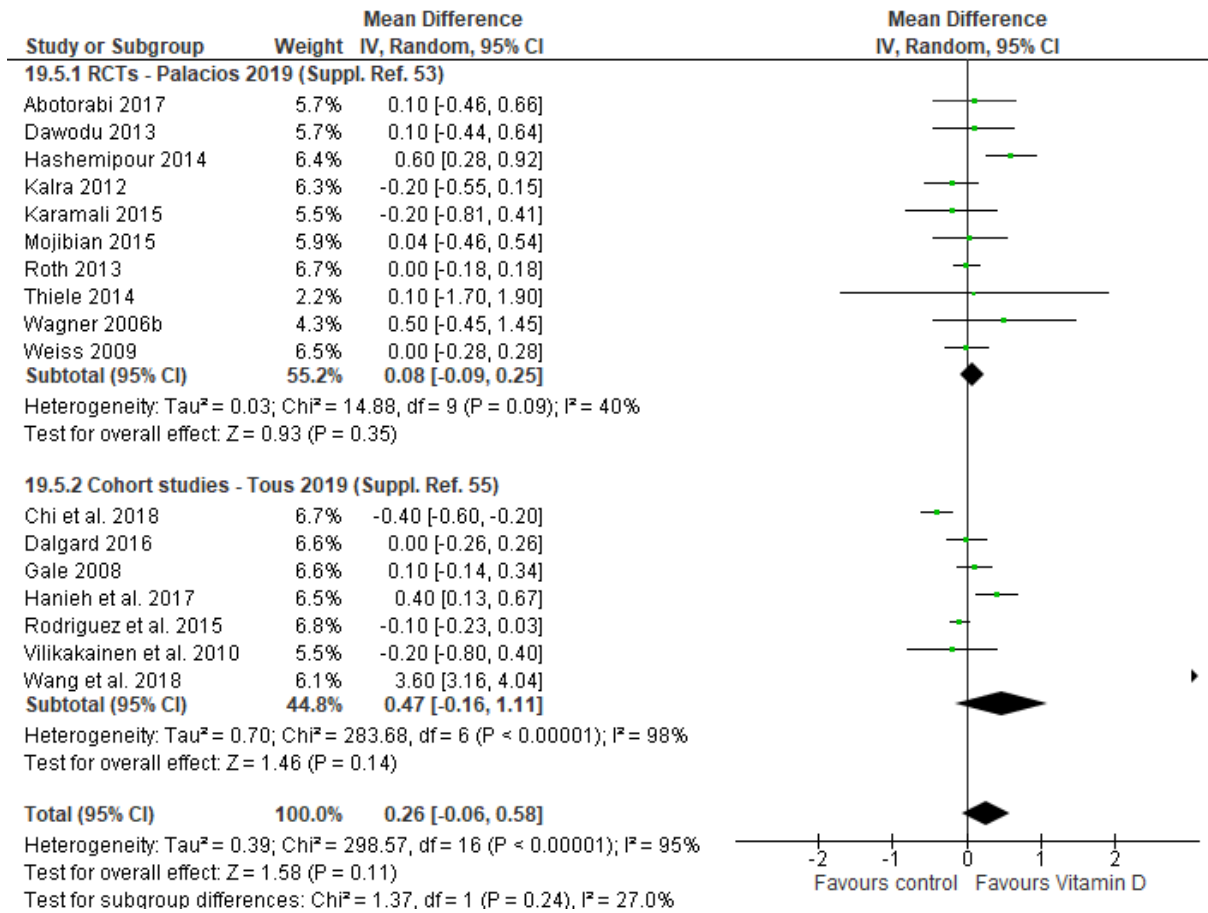
Supplementary Figure 55: Palacios et al. 2019 (53) / Tous et al. 2020 (55); Intervention/ Exposure: Vitamin D; Outcome: Birth length (cm)

Supplemental data



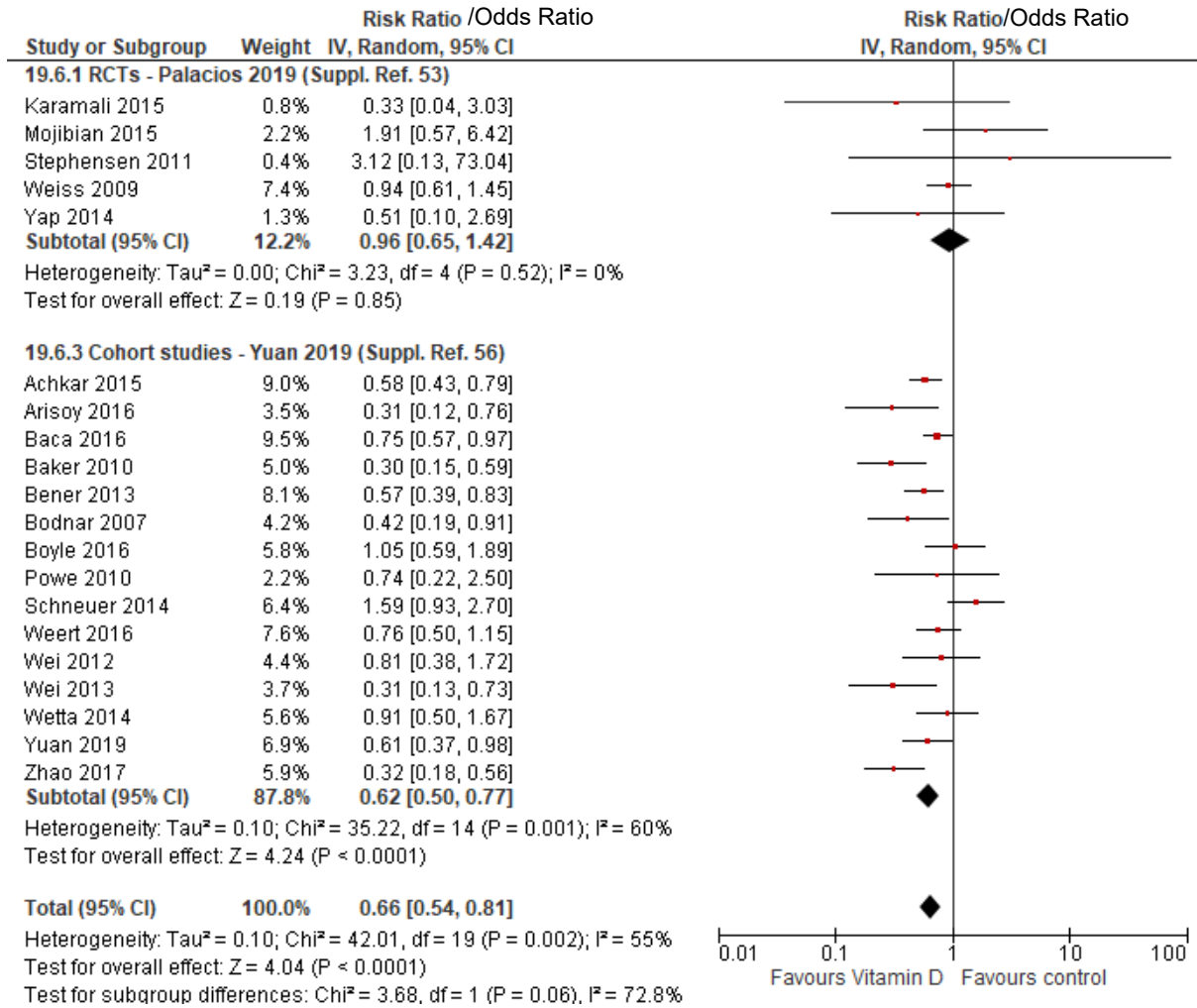
Supplementary Figure 56: Palacios et al. 2019 (53) / Tous et al. 2020 (55); Intervention/ Exposure: Vitamin D; Outcome: Birth weight (g)

Supplemental data



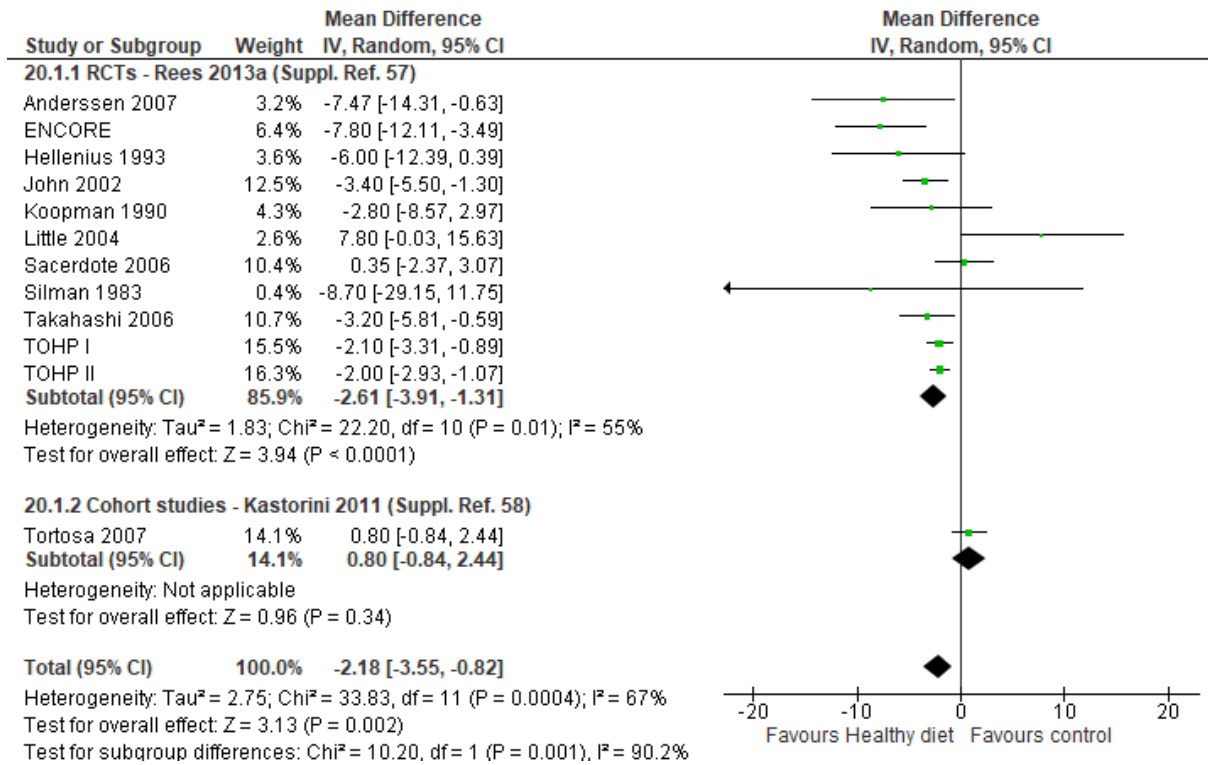
Supplementary Figure 57: Palacios et al. 2019 (53) / Tous et al. 2020 (55); Intervention/ Exposure: Vitamin D; Outcome: Head circumference at birth (cm)

Supplemental data



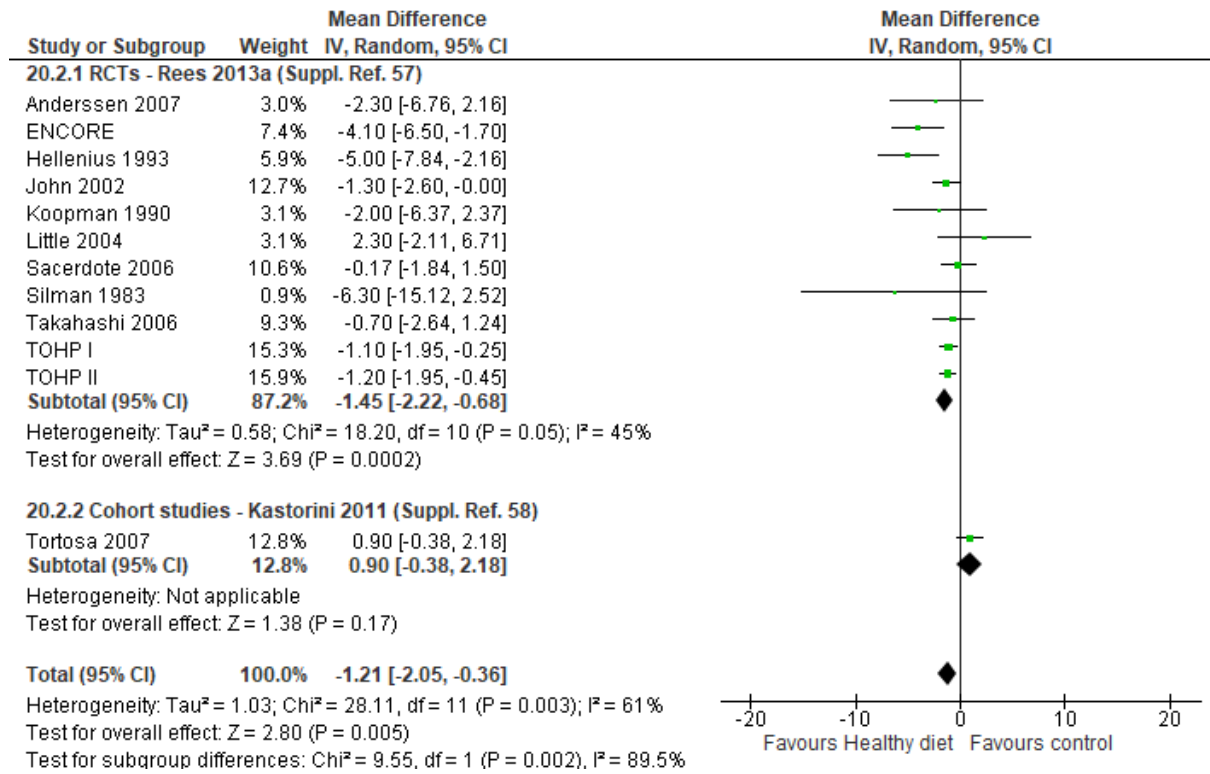
Supplementary Figure 58: Palacios et al. 2019 (53) / Yuan et al. 2019 (56); Intervention/ Exposure: Vitamin D; Outcome: Pre-eclampsia

Supplemental data



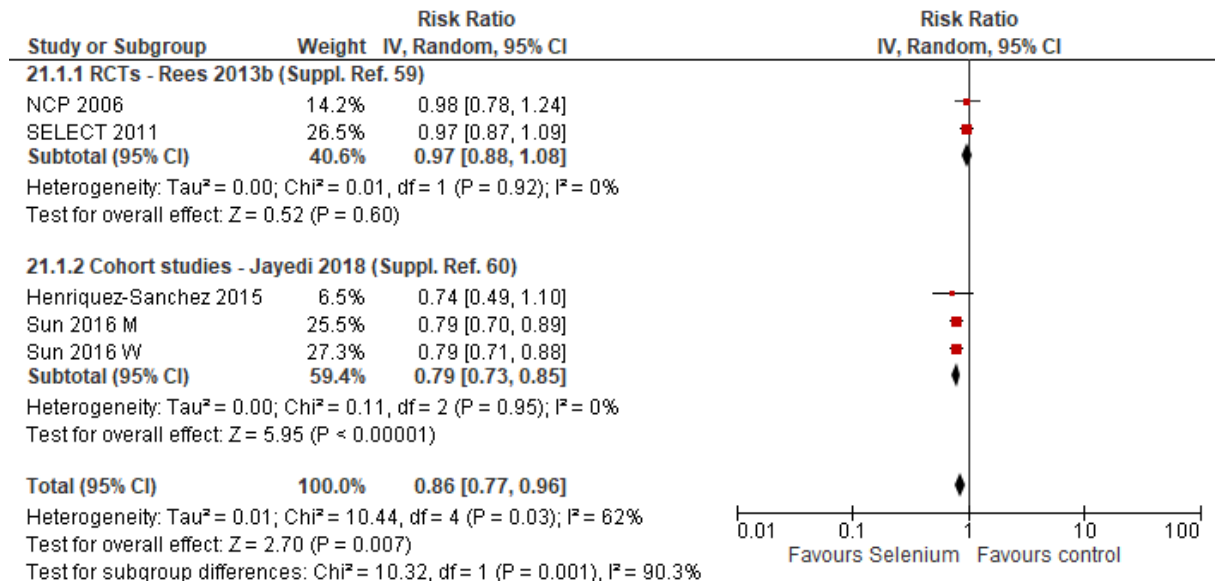
Supplementary Figure 59: Rees et al. 2013a (57) / Kastorini et al. 2011 (58); Intervention/ Exposure: Healthy diet/ Mediterranean diet; Outcome: Systolic blood pressure (mmHG)

Supplemental data



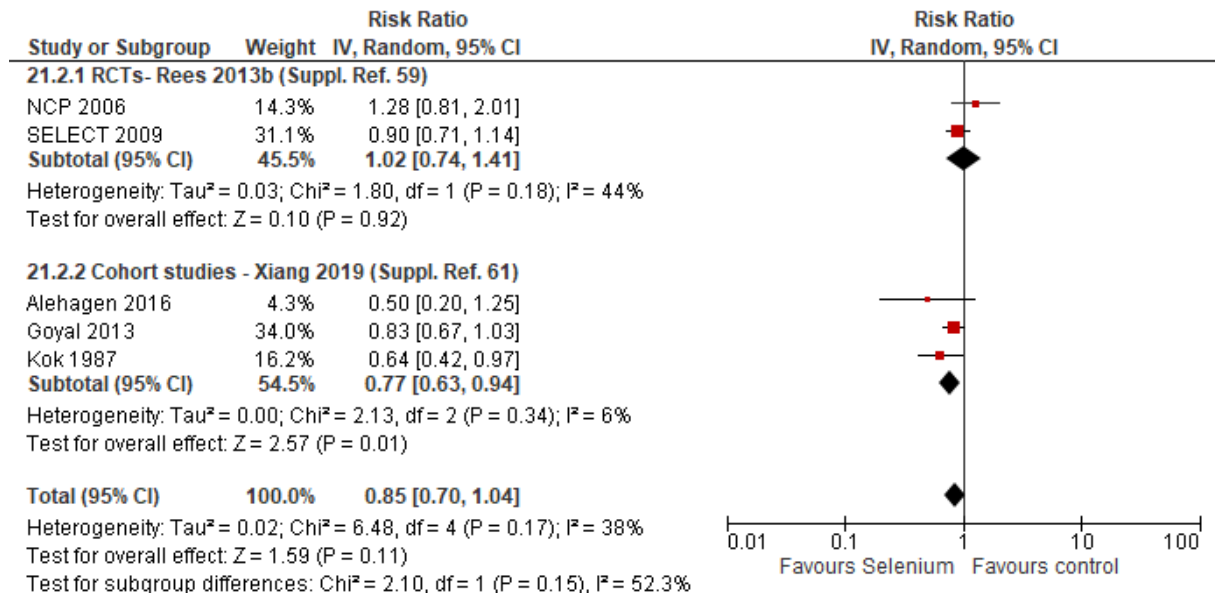
Supplementary Figure 60: Rees et al. 2013a (57) / Kastorini et al. 2011 (58); Intervention/ Exposure: Healthy diet/ Mediterranean diet; Outcome: Diastolic blood pressure (mmHG)

Supplemental data



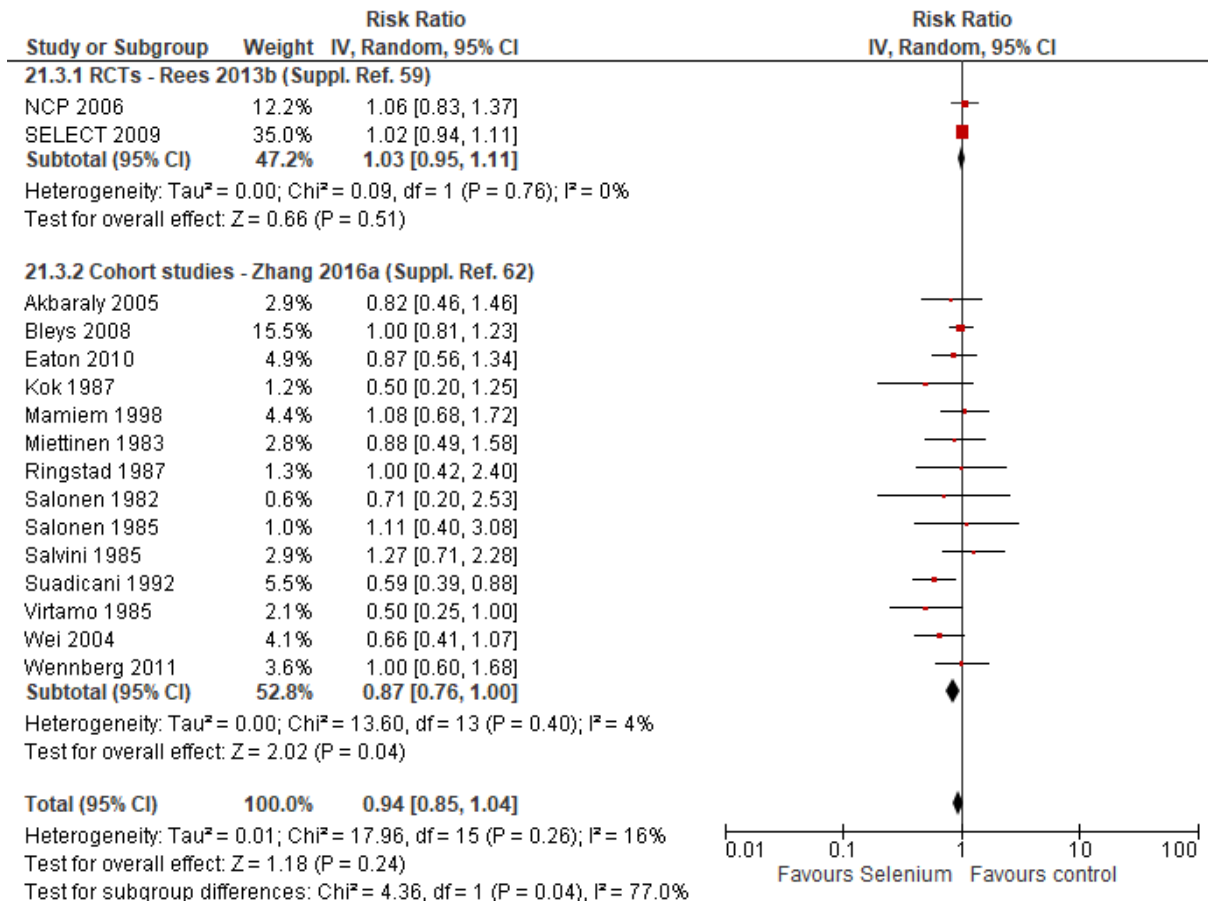
Supplementary Figure 61: Rees et al. 2013b (59) / Jayedi et al. 2018 (60); Intervention/ Exposure: Selenium; Outcome: All-cause mortality

Supplemental data



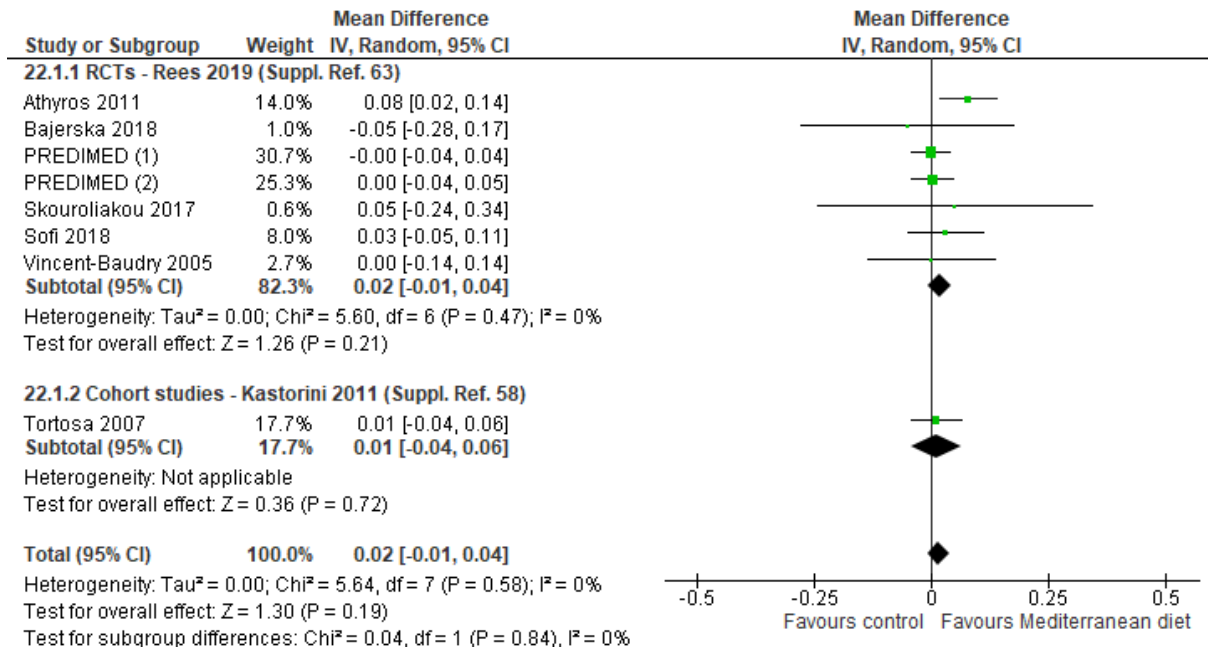
Supplementary Figure 62: Rees et al. 2013b (59) / Xiang et al. 2019 (61); Intervention/ Exposure: Selenic acid; Outcome: Cardiovascular mortality

Supplemental data



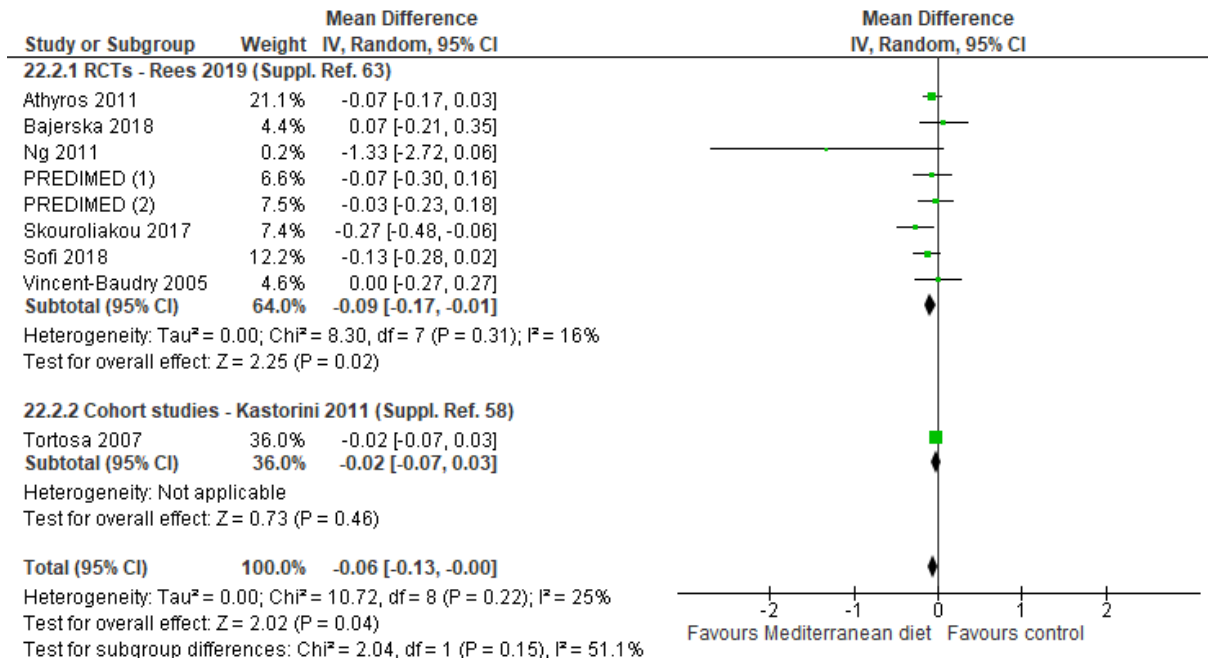
Supplementary Figure 63: Rees et al. 2013b (59) / Zhang et al. 2016a (62); Intervention/ Exposure: Selenium; Outcome: Combined cardiovascular events/ Cardiovascular disease

Supplemental data



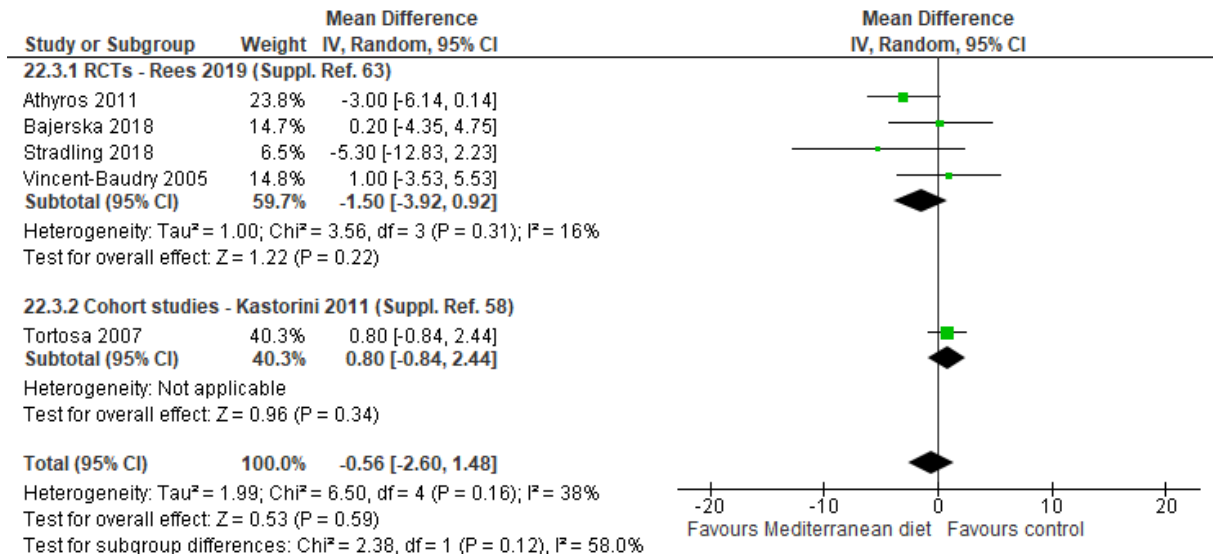
Supplementary Figure 64: Rees et al. 2019 (63) / Kastorini et al. 2011 (58); Intervention/ Exposure: Mediterranean diet; Outcome: High Density Lipoprotein (mmol/L)

Supplemental data



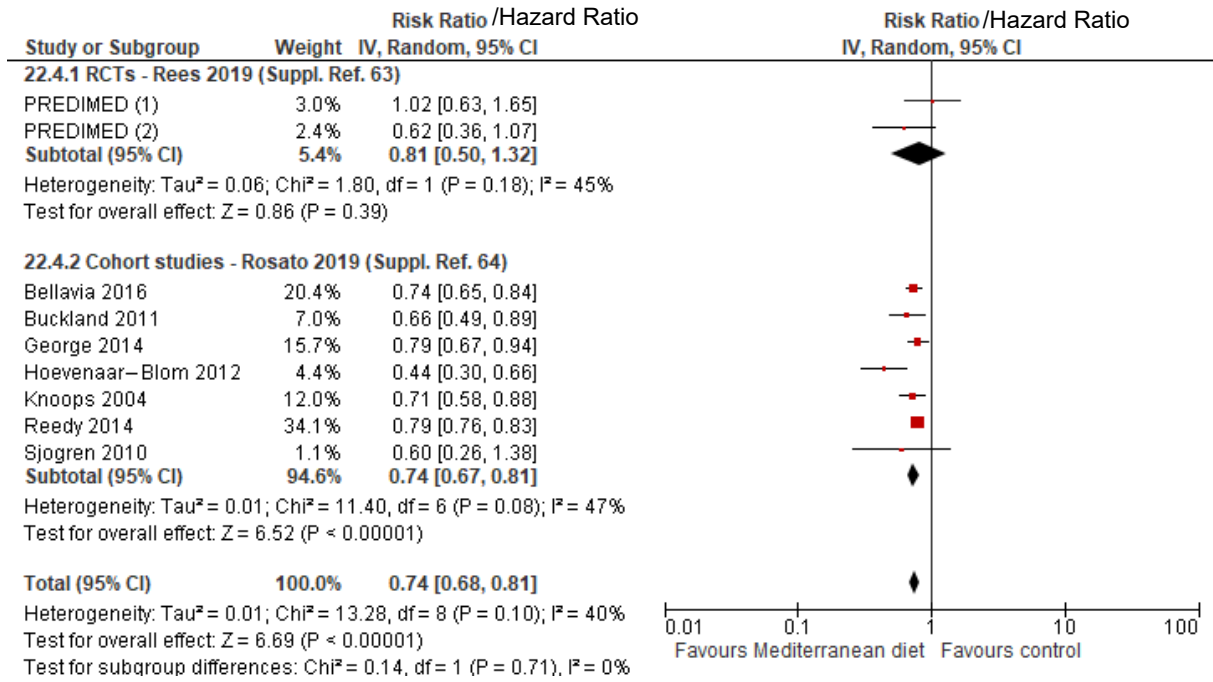
Supplementary Figure 65: Rees et al. 2019 (63) / Kastorini et al. 2011 (58); Intervention/ Exposure: Mediterranean diet; Outcome: Triglycerides (mmol/L)

Supplemental data



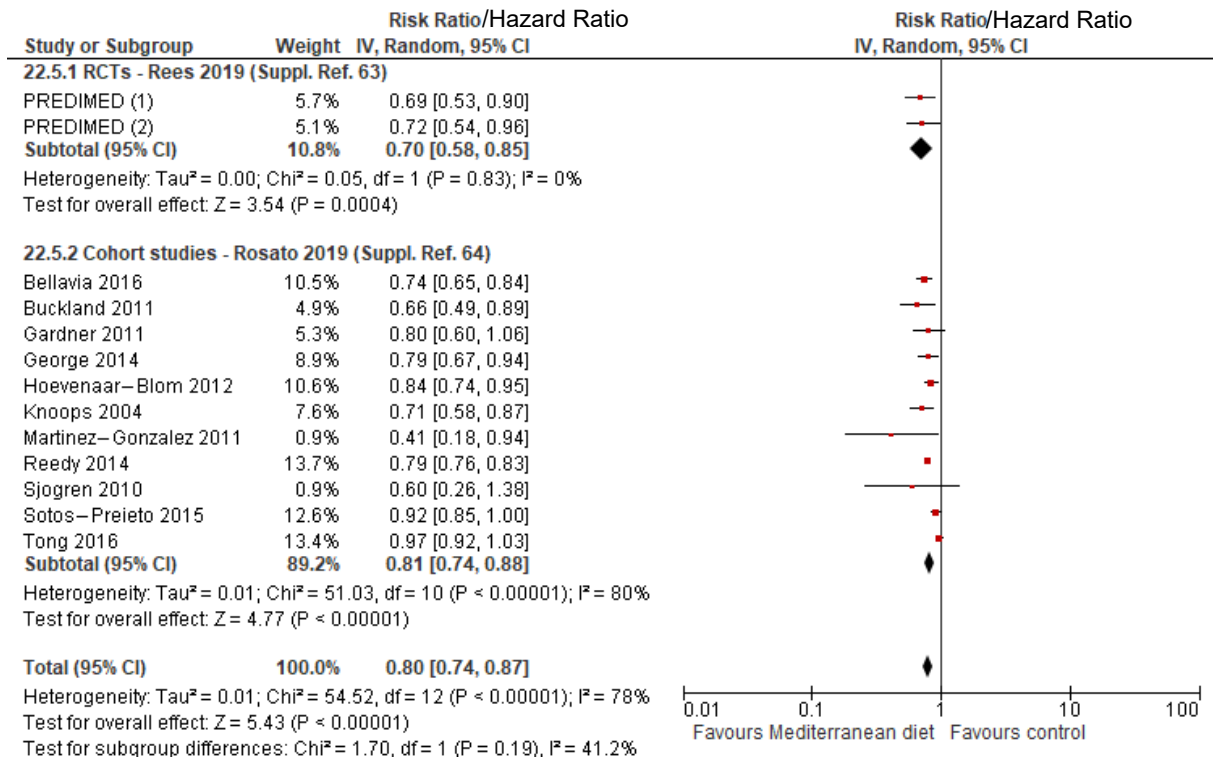
Supplementary Figure 66: Rees et al. 2019 (63) / Kastorini et al. 2011 (58); Intervention/ Exposure: Mediterranean diet; Outcome: Systolic blood pressure (mmHG)

Supplemental data



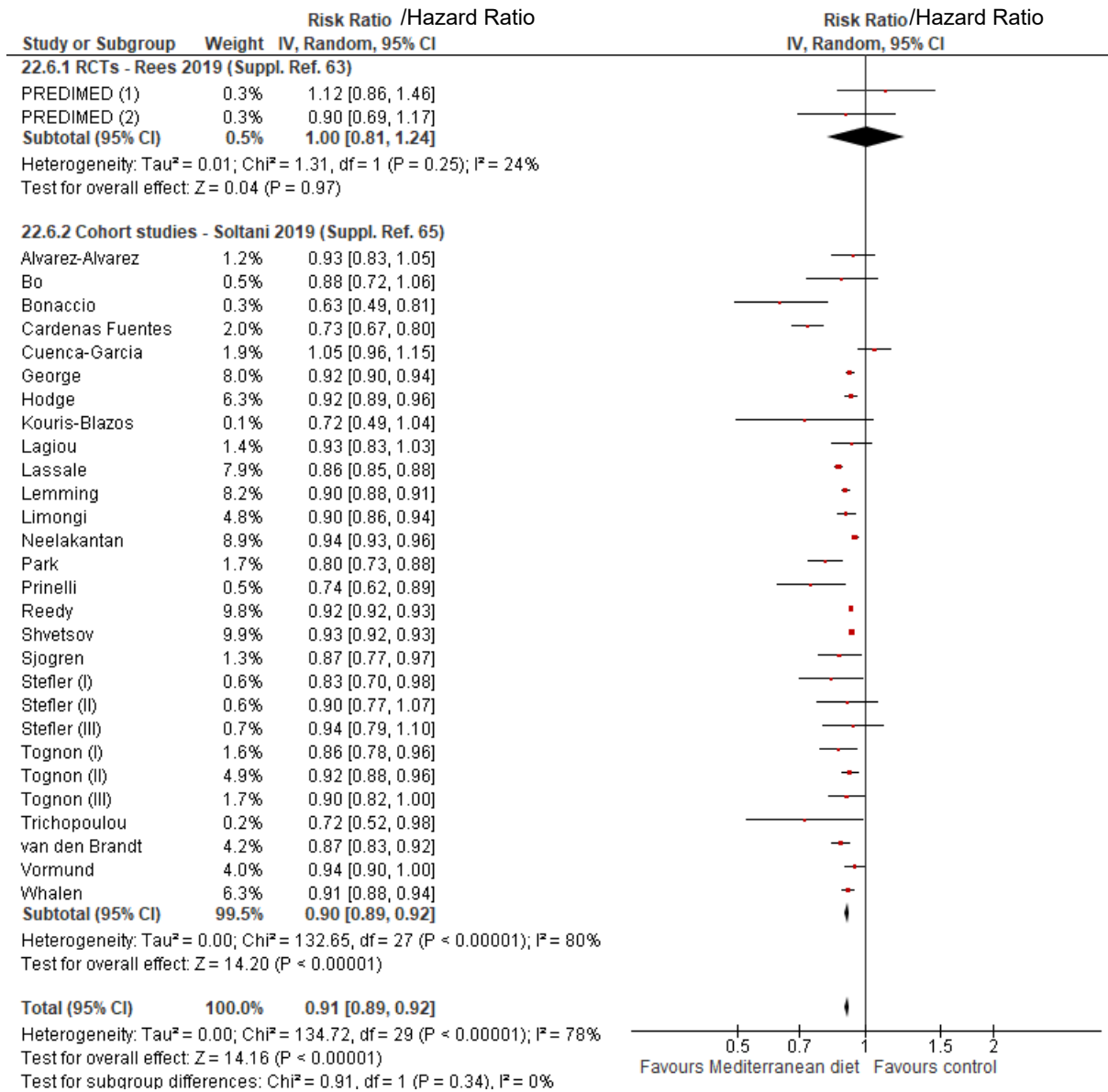
Supplementary Figure 67: Rees et al. 2019 (63) / Rosato et al. 2019 (64); Intervention/ Exposure: Mediterranean diet; Outcome: Cardiovascular mortality

Supplemental data



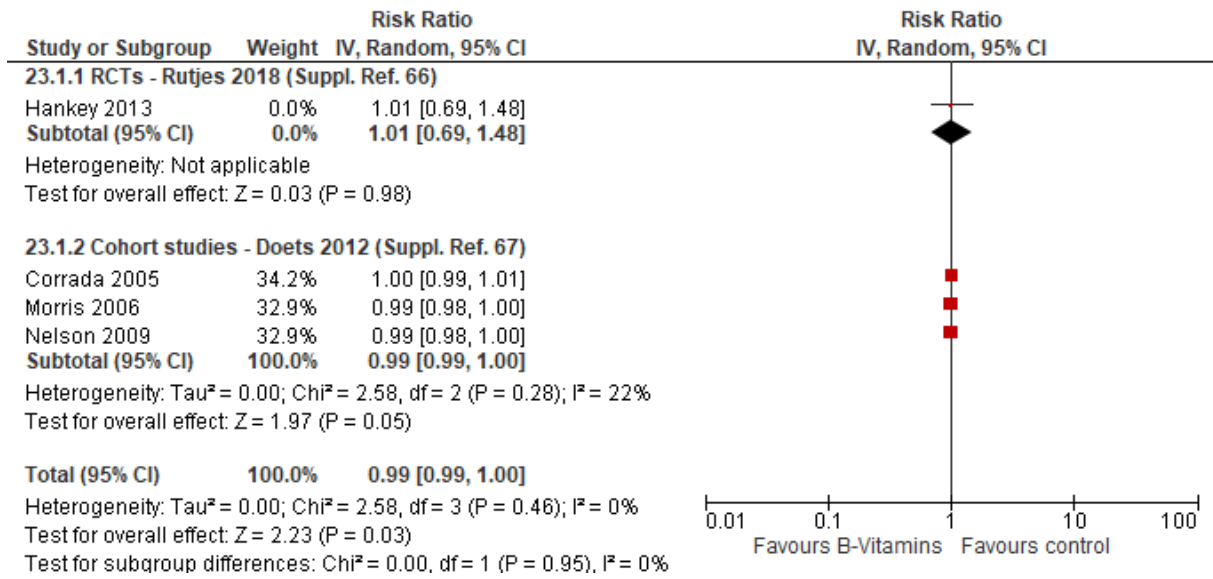
Supplementary Figure 68: Rees et al. 2019 (63) / Rosato et al. 2019 (64); Intervention/ Exposure: Mediterranean diet; Outcome: Combined cardiovascular events/ Cardiovascular disease

Supplemental data



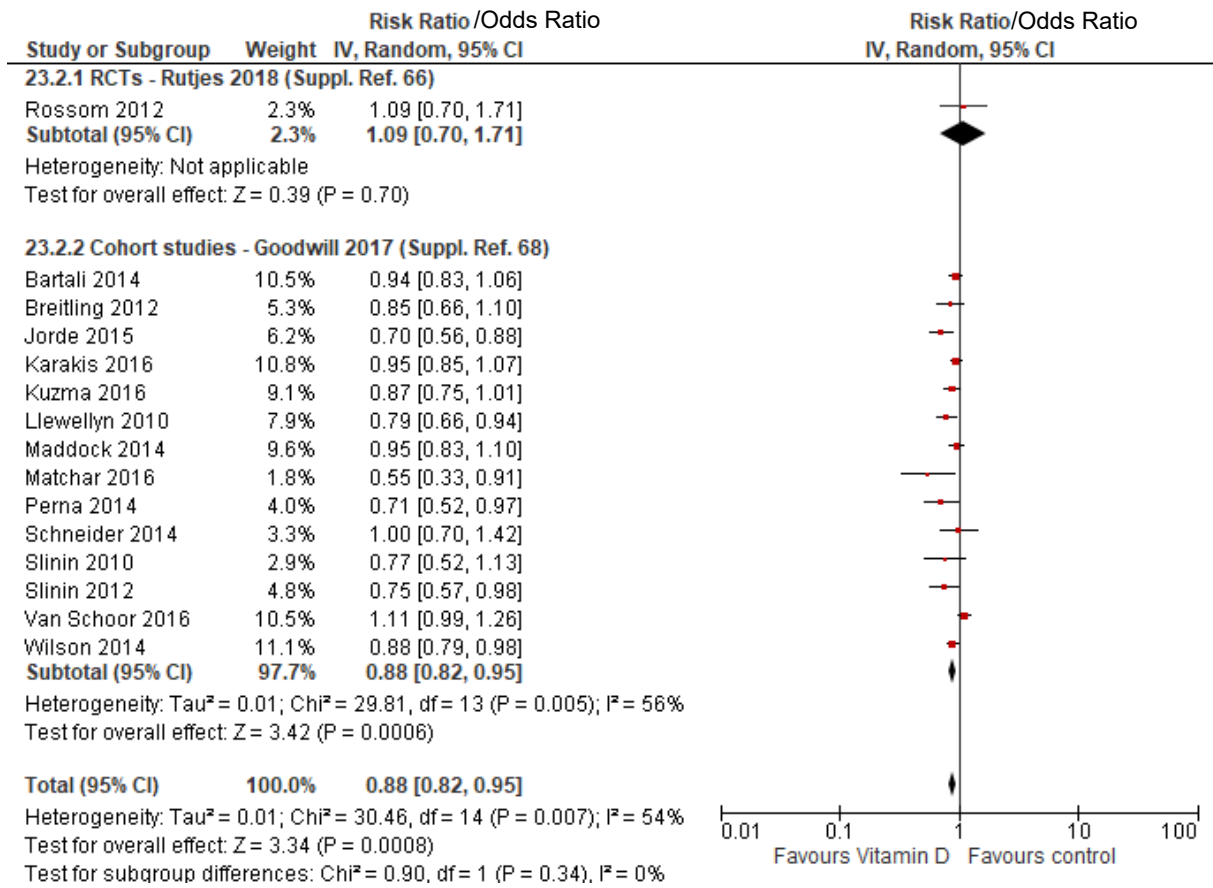
Supplementary Figure 69: Rees et al. 2019 (63) / Soltani et al. 2019 (65); Intervention/ Exposure: Mediterranean diet; Outcome: All-cause mortality

Supplemental data



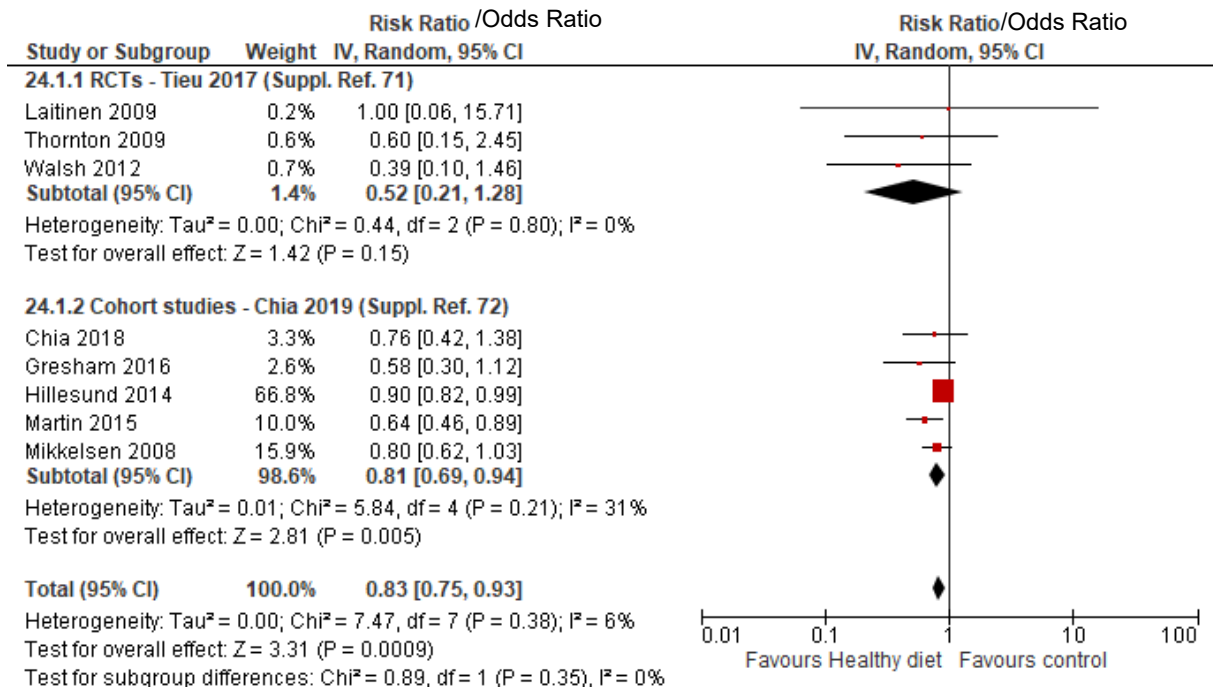
Supplementary Figure 70: Rutjes et al. 2018 (66) / Doets et al. 2013 (67); Intervention/ Exposure: B-vitamins/ Vitamin B12; Outcome: Dementia or MCI/ Dementia

Supplemental data



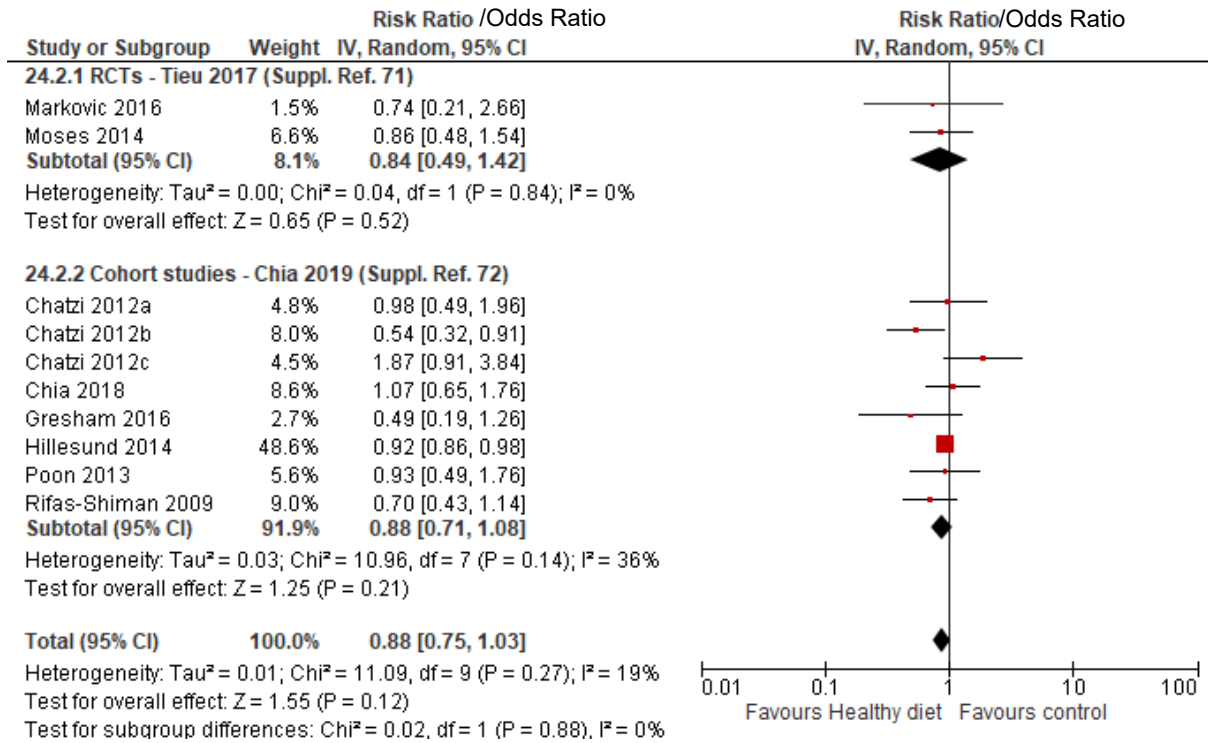
Supplementary Figure 71: Rutjes et al. 2018 (66) / Goodwill et al. 2017 (68); Intervention/ Exposure: Vitamin D3/ Vitamin D; Outcome: Dementia/ Dementia or MCI

Supplemental data



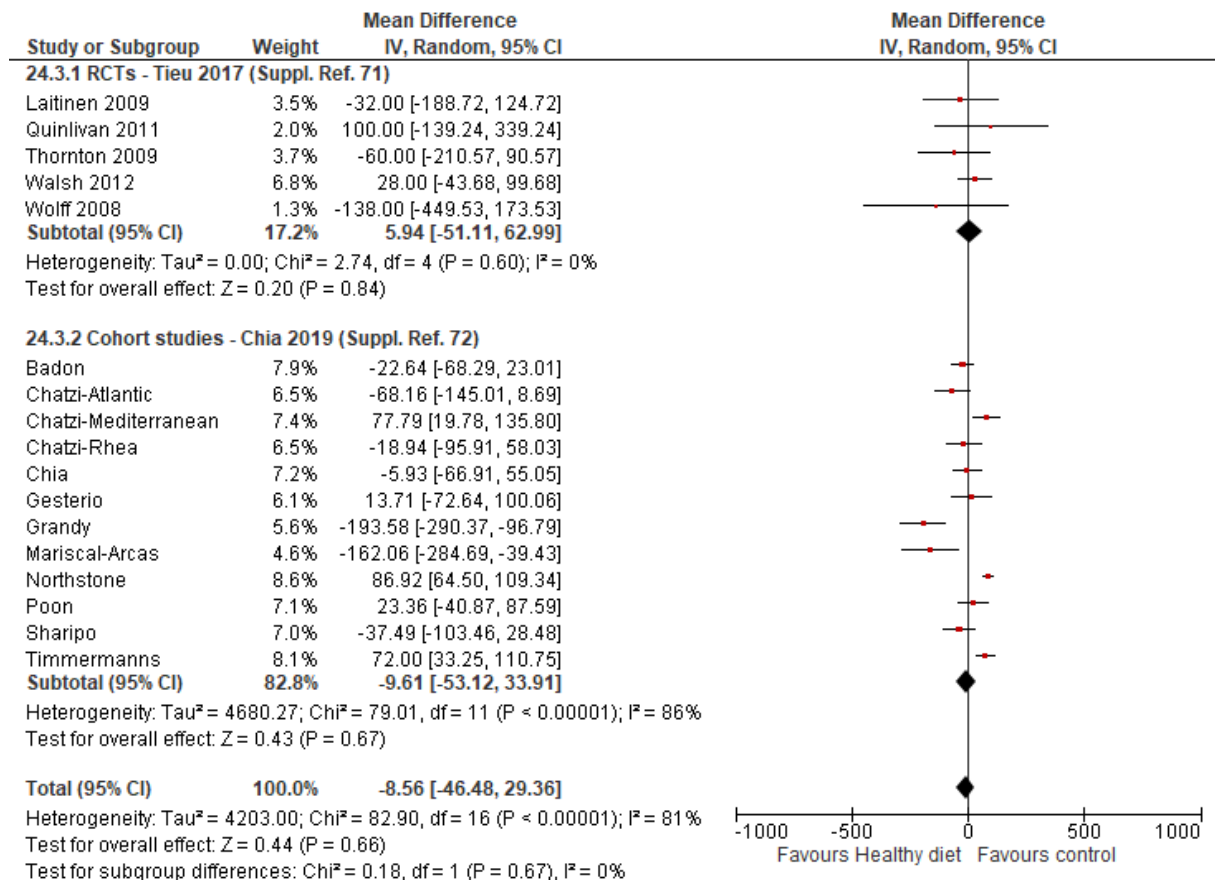
Supplementary Figure 72: Tieu et al. 2017 (71) / Chia et al. 2019 (72); Intervention/ Exposure: Healthy diet; Outcome: Preterm birth

Supplemental data



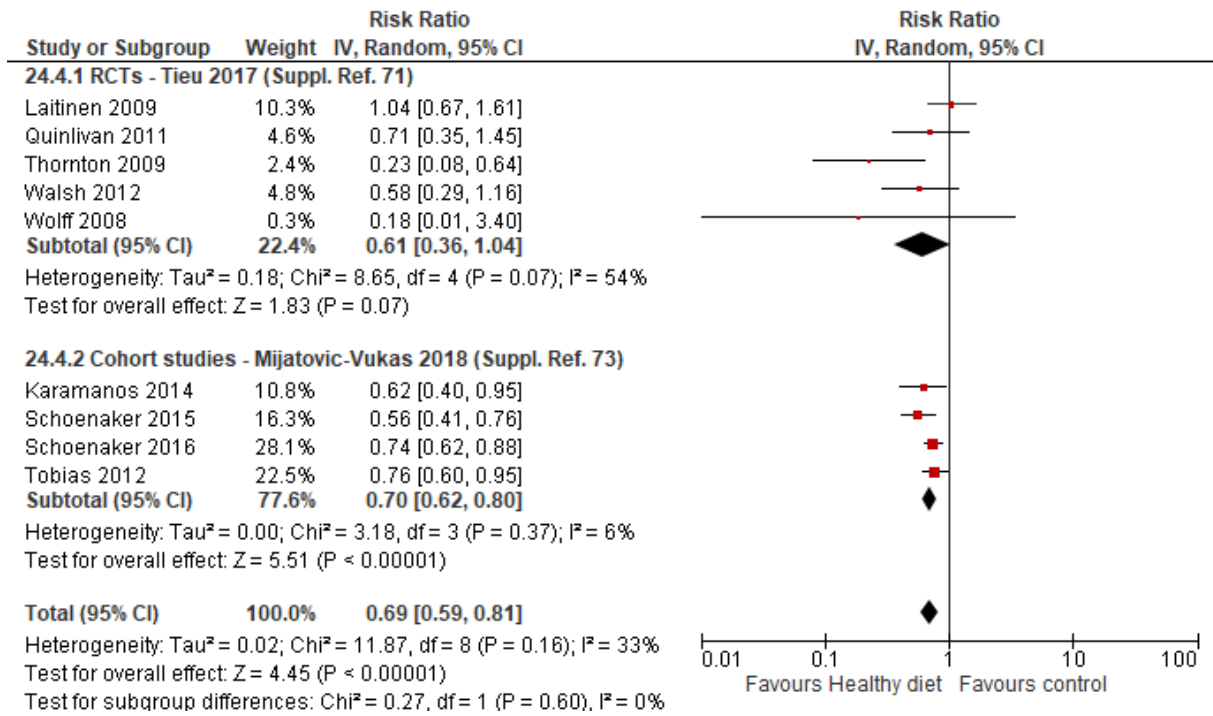
Supplementary Figure 73: Tieu et al. 2017 (71) / Chia et al. 2019 (72); Intervention/ Exposure: Healthy diet; Outcome: Small gestational age

Supplemental data



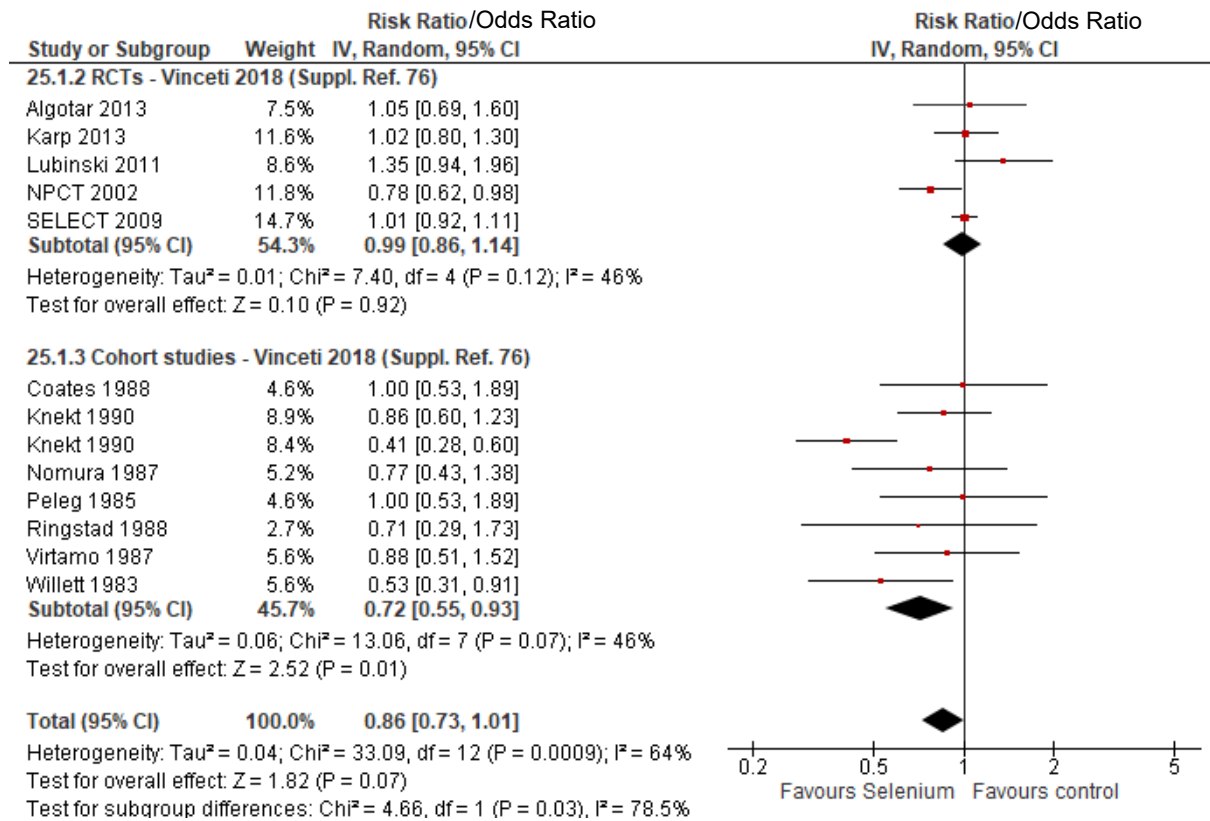
Supplementary Figure 74: Tieu et al. 2017 (71) / Chia et al. 2019 (72); Intervention/ Exposure: Healthy diet; Outcome: Birth weight (g)

Supplemental data



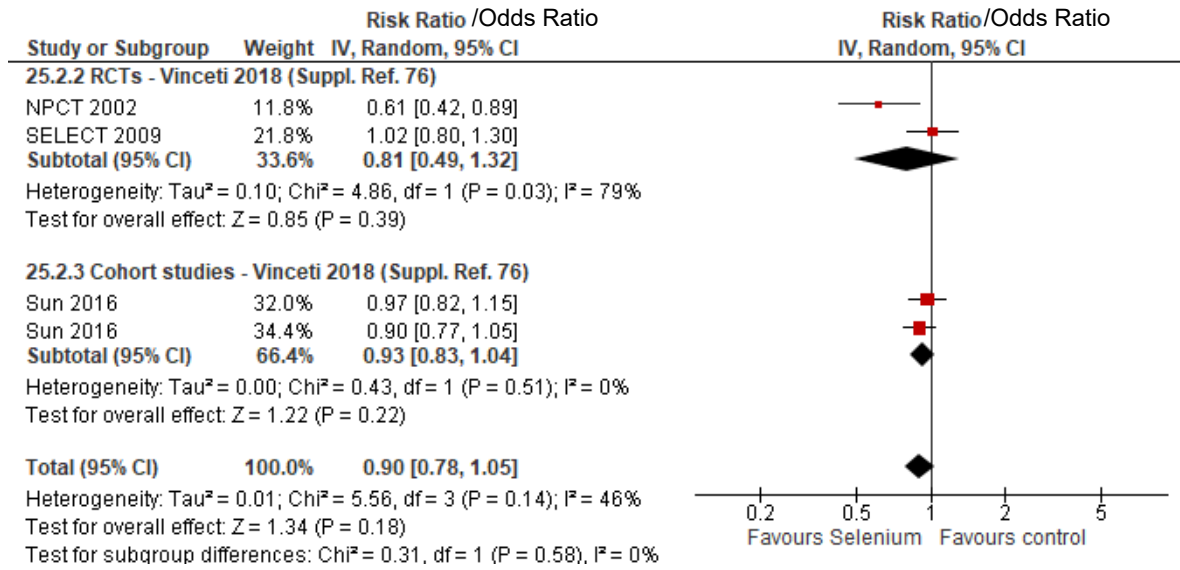
Supplementary Figure 75: Tieu et al. 2017 (71) / Mijatovic-Vukas et al. 2018 (73); Intervention/ Exposure: Healthy diet/ Mediterranean diet; Outcome: Gestational diabetes

Supplemental data



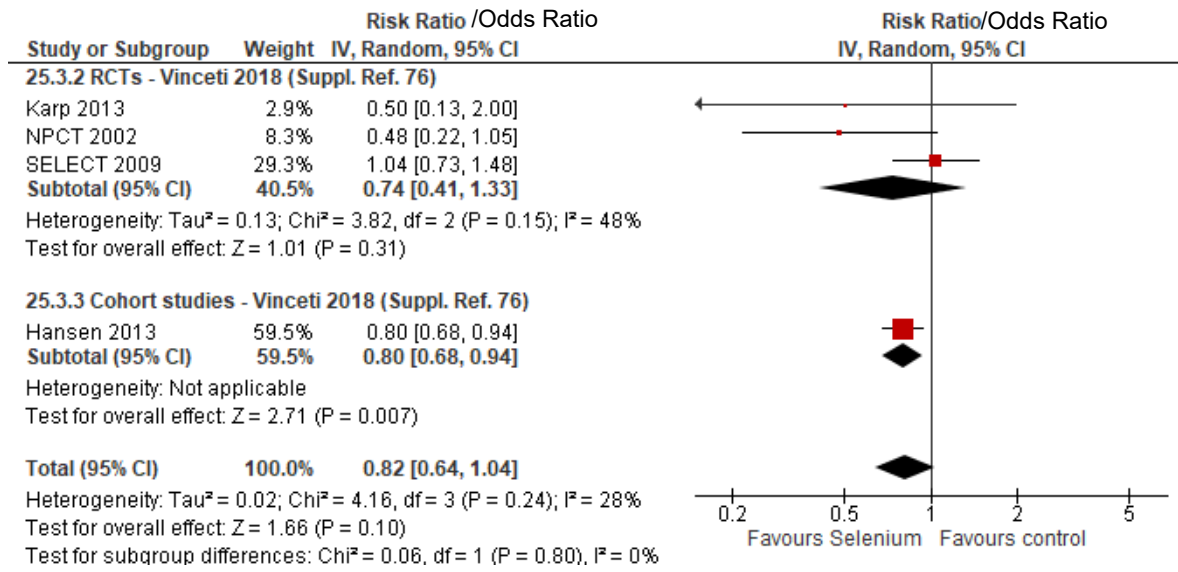
Supplementary Figure 76: Vinceti et al. 2018 (76) / Vinceti et al. 2018 (76); Intervention/ Exposure: Selenium; Outcome: Cancer

Supplemental data



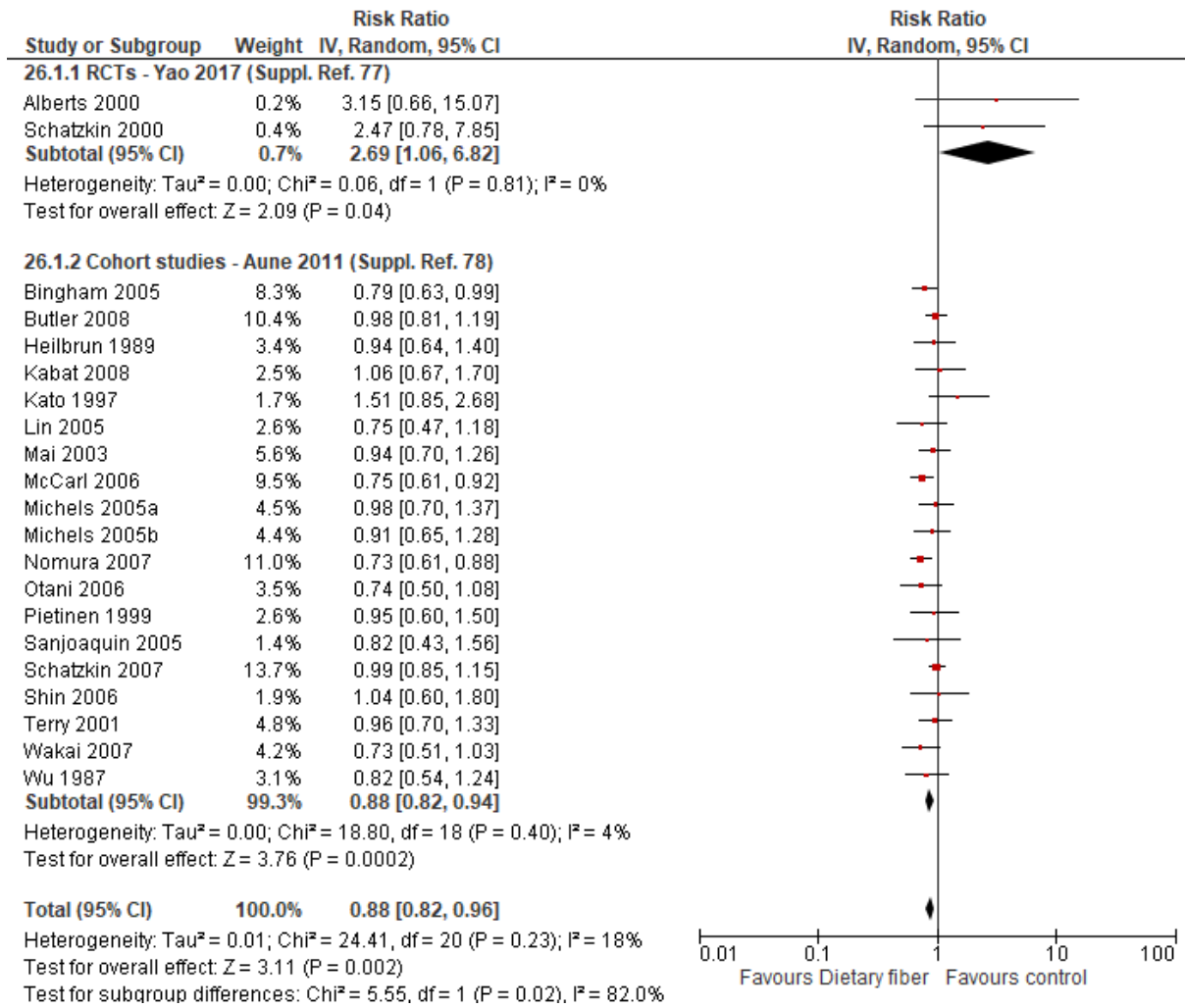
Supplementary Figure 77: Vinceti et al. 2018 (76) / Vinceti et al. 2018 (76); Intervention/ Exposure: Selenia; Outcome: Cancer mortality

Supplemental data



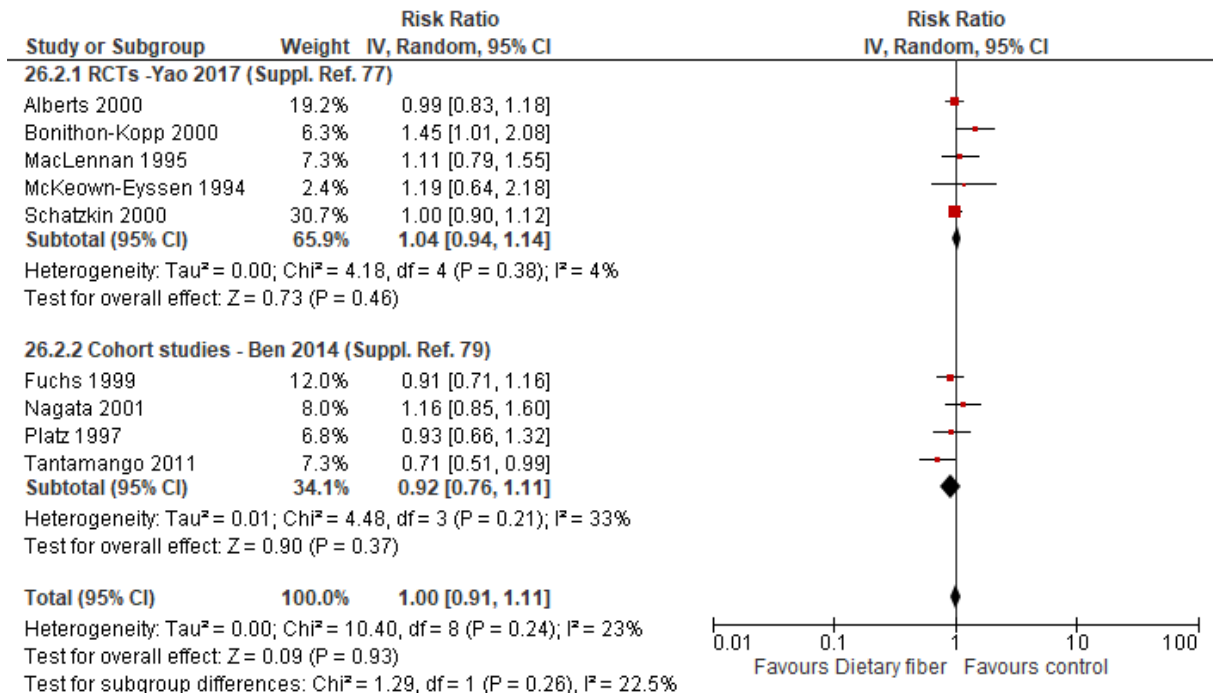
Supplementary Figure 78: Vinceti et al. 2018 (76) / Vinceti et al. 2018 (76); Intervention/ Exposure: Selenium; Outcome: Colorectal cancer

Supplemental data



Supplementary Figure 79: Yao et al. 2017 (77) / Aune et al. 2011 (78); Intervention/ Exposure: Dietary fiber; Outcome: Colorectal cancer

Supplemental data



Supplementary Figure 80: Yao et al. 2017 (77) / Ben et al. 2014 (79); Intervention/ Exposure: Dietary fiber; Outcome: Colorectal adenoma

Supplementary References

1. Abdelhamid AS, Brown TJ, Brainard JS, Biswas P, Thorpe GC, Moore HJ, Deane KH, AlAbdulghafoor FK, Summerbell CD, Worthington HV, et al. Omega-3 fatty acids for the primary and secondary prevention of cardiovascular disease. *Cochrane Database Syst Rev* 2018a;11:Cd003177. doi: 10.1002/14651858.CD003177.pub4.
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