

Comparison of dietary macronutrient patterns based on 14 popular named dietary programmes for weight and cardiovascular risk factor reduction in adults: A systematic review and network meta-analysis of randomized trials

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Text S1: Search strategies

MEDLINE: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, MEDLINE Daily and MEDLINE 1946-Present

#	Searches
1	(atkins and (diet* or weight* or obes*)).mp.
2	(ediet* and (diet* or weight* or obes*)).mp.
3	(dukan and (diet* or weight* or obes*)).mp.
4	(mediterranean and (diet* or weight* or obes*)).mp.
5	((paleolithic or paleo) and (diet* or weight* or obes*)).mp.
6	(zone adj3 (diet* or weight* or obes*)).mp.
7	(south beach and (diet* or weight* or obes*)).mp.
8	(ornish and (diet* or weight* or obes*)).mp.
9	(volumetrics and (diet* or weight* or obes*)).mp.
10	("protein power" and (diet* or weight* or obes*)).mp.
11	(nutrisystem and (diet* or weight* or obes*)).mp.
12	((("weight watcher*" or weightwatcher*) and (diet* or weight* or obes*)).mp.
13	((("jenny craig*" or jennycraig*) and (diet* or weight* or obes*)).mp.
14	((("rosemary conley" or "eat yourself thin") and (diet* or weight* or obes*)).mp.
15	("slimming world" and (diet* or weight* or obes*)).mp.
16	("biggest loser" and (diet* or weight* or obes*)).mp.
17	((dash or "dietary approach* to stop* hypertension") and (diet* or weight* or obes*)).mp.
18	("Lifestyle, Exercise, Attitudes, Relationships, and Nutrition" and (diet* or weight* or obes*)).mp.
19	(learn diet* or learn program*).mp.
20	Diet, Carbohydrate-Restricted/
21	((low carb* or carb* restrict* or restrict* carb*) and diet*).mp.
22	Diet, Sodium-Restricted/
23	((low sodium or low salt or salt restrict* or salt free or saltless or sodium free or sodium restrict* or reduc* salt or reduc* sodium or natrium restrict*) and diet*).mp.
24	Diet, Mediterranean/
25	Diet, Fat-Restricted/
26	((low fat or fat free or fat restrict* or restrict* fat or lipid restrict* or restrict* lipid or low lipid) and diet*).mp.
27	Diet Fads/
28	((fad or fads) adj3 (diet* or food or foods)).mp.
29	("portfolio diet" or "portfolio diets" or "dietary portfolio" or "portfolio of heart risk reducing foods" or "portfolio eating plan").mp.
30	or/1-29
31	randomized controlled trial.pt.
32	controlled clinical trial.pt.
33	randomized.ab.

34	placebo.ab.
35	drug therapy.fs.
36	randomly.ab.
37	trial.ab.
38	groups.ab.
39	or/31-38
40	exp animals/ not humans.sh.
41	39 not 40 [****Cochrane Handbook Highly Sensitive Search Strategy for identifying randomized trials (Box 6.4.c 2008 version)****]
42	30 and 41 [fad diets and Cochrane sensitive randomized search]
43	limit 42 to english language
44	(adult or adults or elderly or aged or middle age).mp.
45	43 and 44
46	(randomized controlled trial or controlled clinical trial).pt.
47	randomized controlled trials/ or random allocation/ or double-blind method/ or single-blind method/
48	clinical trial.pt.
49	exp clinical trials/ or placebos/ or research design/
50	(clinic* adj25 trial*).mp.
51	((singl* or doubl* or trebl* or tripl*) adj (mask* or blind*)).mp.
52	(placebo* or random*).mp.
53	(latin adj square).mp.
54	comparative study/ or exp evaluation studies/ or follow-up studies/ or prospective studies/ or cross-over studies/
55	(control* or prospective* or volunteer*).mp.
56	or/46-55
57	animal/ not human/
58	56 not 57 [Robinson_Dickersin - sensitive strategy for RCTs]
59	30 and 58 [fad diets and Robinson_Dickersin sensitive randomized search]
60	limit 59 to english language
61	44 and 60
62	45 or 61

Embase Classic+Embase 1947 to Present

#	Searches
1	(atkins and (diet* or weight* or obes*)).mp.
2	(ediet* and (diet* or weight* or obes*)).mp.
3	(dukan and (diet* or weight* or obes*)).mp.
4	(mediterranean and (diet* or weight* or obes*)).mp.
5	((paleolithic or paleo) and (diet* or weight* or obes*)).mp.

6	(zone adj3 (diet* or weight* or obes*)).mp.
7	(south beach and (diet* or weight* or obes*)).mp.
8	(ornish and (diet* or weight* or obes*)).mp.
9	(volumetrics and (diet* or weight* or obes*)).mp.
10	("protein power" and (diet* or weight* or obes*)).mp.
11	(nutrisystem and (diet* or weight* or obes*)).mp.
12	((("weight watcher*" or weightwatcher*) and (diet* or weight* or obes*)).mp.
13	((("jenny craig*" or jennycraig*) and (diet* or weight* or obes*)).mp.
14	((("rosemary conley" or "eat yourself thin") and (diet* or weight* or obes*)).mp.
15	("biggest loser" and (diet* or weight* or obes*)).mp.
16	((dash or "dietary approach* to stop* hypertension") and (diet* or weight* or obes*)).mp.
17	("slimming world" and (diet* or weight* or obes*)).mp.
18	("Lifestyle, Exercise, Attitudes, Relationships, and Nutrition" and (diet* or weight* or obes*)).mp.
19	(learn diet or learn program).mp.
20	low carbohydrate diet/
21	((low carb* or carb* restrict*) and diet*).mp.
22	sodium restriction/
23	((low sodium or low salt or salt restrict* or salt free or saltless or sodium free or sodium restrict* or reduc* salt or reduc* sodium or natrium restrict*) and diet*).mp.
24	Mediterranean diet/
25	low fat diet/
26	((low fat or fat free or fat restrict* or restrict* fat or lipid restrict* or restrict* lipid or low lipid) and diet*).mp.
27	((fad or fads) adj3 (diet* or food or foods)).mp.
28	("portfolio diet" or "portfolio diets" or "dietary portfolio" or "portfolio of heart risk reducing foods" or "portfolio eating plan").mp.
29	or/1-28
30	random*.mp.
31	factorial*.mp.
32	crossover*.mp.
33	cross over*.mp.
34	placebo*.mp.
35	(doubl* adj blind*).mp.
36	(singl* adj blind*).mp.
37	assign*.mp.
38	allocat*.mp.
39	volunteer*.mp.
40	crossover-procedure/
41	double-blind procedure/
42	randomized controlled trial/

43	single blind procedure/
44	or/30-43
45	Animals/ not humans/
46	44 not 45 [Modified Cochrane Handbook 6.3.2.2 Recommendation for Embase]
47	29 and 46
48	limit 47 to english language
49	(adult or adults or elderly or aged or middle age).mp.
50	48 and 49
51	ct.fs.
52	randomized controlled trial/ or random allocation/ or double-blind method/ or single-blind method/ or controlled clinical trial/
53	(rct or rcts or sham).mp.
54	exp clinical trials/ or placebo/ or latin square design/
55	(clinic* adj25 trial*).mp.
56	((singl* or doubl* or trebl* or tripl*) adj (mask* or blind*)).mp.
57	(placebo* or random*).mp.
58	(latin adj square).mp.
59	comparative study/ or exp evaluation studies/ or follow-up studies/ or prospective studies/ or cross-over studies/
60	(control* or prospective* or volunteer*).mp.
61	or/51-60
62	Animals/ not humans/
63	61 not 62 [Robinson_Dickersin sensitive randomized trial]
64	29 and 63
65	limit 64 to english language
66	65 and 49
67	50 or 66

Cochrane Central Register of Controlled Trials September 2018

#	Searches
1	(atkins and (diet* or weight* or obes*)).mp.
2	(ediet* and (diet* or weight* or obes*)).mp.
3	(dukan and (diet* or weight* or obes*)).mp.
4	(mediterranean and (diet* or weight* or obes*)).mp.
5	((paleolithic or paleo) and (diet* or weight* or obes*)).mp.
6	(zone adj3 (diet* or weight* or obes*)).mp.
7	(south beach and (diet* or weight* or obes*)).mp.
8	(ornish and (diet* or weight* or obes*)).mp.
9	(volumetrics and (diet* or weight* or obes*)).mp.
10	("protein power" and (diet* or weight* or obes*)).mp.

11	(nutrisystem and (diet* or weight* or obes*)).mp.
12	((("weight watcher*" or weightwatcher*) and (diet* or weight* or obes*)).mp.
13	((("jenny craig*" or jennycraig*) and (diet* or weight* or obes*)).mp.
14	((("rosemary conley" or "eat yourself thin") and (diet* or weight* or obes*)).mp.
15	("biggest loser" and (diet* or weight* or obes*)).mp.
16	((dash or "dietary approach* to stop* hypertension") and (diet* or weight* or obes*)).mp.
17	("slimming world" and (diet* or weight* or obes*)).mp.
18	("Lifestyle, Exercise, Attitudes, Relationships, and Nutrition" and (diet* or weight* or obes*)).mp.
19	(learn diet or learn program).mp.
20	Diet, Carbohydrate-Restricted/
21	((low carb* or carb* restrict* or restrict* carb*) and diet*).mp.
22	Diet, Sodium-Restricted/
23	((low sodium or low salt or salt restrict* or salt free or saltless or sodium free or sodium restrict* or reduc* salt or reduc* sodium or natrium restrict*) and diet*).mp.
24	Diet, Mediterranean/
25	Diet, Fat-Restricted/
26	((low fat or fat free or fat restrict* or restrict* fat or lipid restrict* or restrict* lipid or low lipid) and diet*).mp.
27	Diet Fads/
28	((fad or fads) adj3 (diet* or food or foods)).mp.
29	("portfolio diet" or "portfolio diets" or "dietary portfolio" or "portfolio of heart risk reducing foods" or "portfolio eating plan").mp.
30	or/1-29
31	Humans/
32	30 and 31
33	(adult or adults or elderly or aged or middle age).mp.
34	32 and 33
35	limit 34 to english language

CINAHL

#	Query	Limiters/Expanders
S44	S28 AND S42	Narrow by Language: - english Search modes - Boolean/Phrase
S43	S28 AND S42	Search modes - Boolean/Phrase
S42	S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41	Search modes - Boolean/Phrase

S41	TI (allocat* random*) OR AB (allocat* random*)	Search modes - Boolean/Phrase
S40	(MH "Quantitative Studies")	Search modes - Boolean/Phrase
S39	(MH "Placebos")	Search modes - Boolean/Phrase
S38	TI placebo* OR AB placebo*	Search modes - Boolean/Phrase
S37	TI (random* allocat*) OR AB (random* allocat*)	Search modes - Boolean/Phrase
S36	(MH "Random Assignment")	Search modes - Boolean/Phrase
S35	TI (randomi* control* trial*) OR AB (randomi* control* trial*)	Search modes - Boolean/Phrase
S34	TI ((singl* N1 blind*) OR (singl* N1 mask*)) OR TI ((doubl* N1 blind*) OR (doubl* N1 mask*)) OR TI ((tripl* N1 blind*) OR (tripl* N1 mask*)) OR TI ((trebl* N1 blind*) OR (trebl* N1 mask*)) OR AB ((singl* N1 blind*) OR (singl* N1 mask*)) OR AB ((doubl* N1 blind*) OR (doubl* N1 mask*)) OR AB ((tripl* N1 blind*) OR (tripl* N1 mask*)) OR AB ((trebl* N1 blind*) OR (trebl* N1 mask*))	Search modes - Boolean/Phrase
S33	TI (clinic* N1 trial*) OR AB (clinic* N1 trial*)	Search modes - Boolean/Phrase
S32	PT Clinical trial	Search modes - Boolean/Phrase
S31	(MH "Clinical Trials+")	Search modes - Boolean/Phrase
S30	S28 AND S29	Search modes - Boolean/Phrase
S29	TI (adult OR adults OR elderly OR aged OR middle age) OR AB (adult OR adults OR elderly OR aged OR middle age)	Search modes - Boolean/Phrase
S28	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27	Search modes - Boolean/Phrase
S27	TI ("portfolio diet" or "portfolio diets" or "dietary portfolio" or "portfolio of heart risk reducing foods" or "portfolio eating plan") OR AB ("portfolio diet" or "portfolio diets" or "dietary portfolio" or "portfolio of heart risk reducing foods" or "portfolio eating plan")	Search modes - Boolean/Phrase

S26	TI ((fad N3 diet*) OR (fad N3 food) OR (fad N3 foods)) OR TI ((fads N3 diet*) OR (fads N3 food) OR (fads N3 foods)) OR AB ((fad N3 diet*) OR (fad N3 food) OR (fad N3 foods)) OR AB ((fads N3 diet*) OR (fads N3 food) OR (fads N3 foods))	Search modes - Boolean/Phrase
S25	(MH "Diet Fads")	Search modes - Boolean/Phrase
S24	TI ((low sodium OR low salt OR salt restrict* OR salt free OR saltless OR sodium free OR sodium restrict* OR reduc* salt OR reduc* sodium OR natrium restrict*) AND diet*) OR AB ((low sodium OR low salt OR salt restrict* OR salt free OR saltless OR sodium free OR sodium restrict* OR reduc* salt OR reduc* sodium OR natrium restrict*) AND diet*)	Search modes - Boolean/Phrase
S23	(MH "Diet, Sodium-Restricted")	Search modes - Boolean/Phrase
S22	TI ((low fat OR fat free OR fat restrict* OR restrict* fat OR lipid restrict* OR restrict* lipid OR low lipid) AND diet*) OR AB ((low fat OR fat free OR fat restrict* OR restrict* fat OR lipid restrict* OR restrict* lipid OR low lipid) AND diet*)	Search modes - Boolean/Phrase
S21	(MH "Diet, Fat-Restricted")	Search modes - Boolean/Phrase
S20	TI ((low carb* OR carb* restrict*) AND diet*) OR AB ((low carb* OR carb* restrict*) AND diet*)	Search modes - Boolean/Phrase
S19	(MH "Diet, Low Carbohydrate")	Search modes - Boolean/Phrase
S18	(MH "Mediterranean Diet")	Search modes - Boolean/Phrase
S17	(MH "DASH Diet")	Search modes - Boolean/Phrase
S16	TI (learn diet OR learn program) OR AB (learn diet OR learn program)	Search modes - Boolean/Phrase
S15	TI ("Lifestyle, Exercise, Attitudes, Relationships, AND Nutrition" AND (diet* OR weight* OR obes*)) OR AB ("Lifestyle, Exercise, Attitudes, Relationships, AND Nutrition" AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S14	TI (("slimming world") AND (diet* OR weight* OR obes*)) OR AB (("slimming world") AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase

S13	TI ((dash OR "dietary approach* to stop* hypertension") AND (diet* OR weight* OR obes*)) OR AB ((dash OR "dietary approach* to stop* hypertension") AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S12	TI ("biggest loser" AND (diet* OR weight* OR obes*)) OR AB ("biggest loser" AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S11	TI (("rosemary conley" OR "eat yourself thin") AND (diet* OR weight* OR obes*)) OR AB (("rosemary conley" OR "eat yourself thin") AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S10	TI (("jenny craig*" OR jennycraig*) AND (diet* OR weight* OR obes*)) OR AB (("jenny craig*" OR jennycraig*) AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S9	TI (("weight watcher*" OR weightwatcher*) AND (diet* OR weight* OR obes*)) OR AB (("weight watcher*" OR weightwatcher*) AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S8	TI (nutrisystem AND (diet* OR weight* OR obes*)) OR AB (nutrisystem AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S7	TI ("protein power" AND (diet* OR weight* OR obes*)) OR AB ("protein power" AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S6	TI (volumetrics AND (diet* OR weight* OR obes*)) OR AB (volumetrics AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S5	TI (ornish AND (diet* OR weight* OR obes*)) OR AB (ornish AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S4	TI (south beach AND (diet* OR weight* OR obes*)) OR AB (south beach AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S3	TI ((zone N3 diet*) OR (zone N3 weight*) OR (zone N3 obes*)) OR AB ((zone N3 diet*) OR (zone N3 weight*) OR (zone N3 obes*))	Search modes - Boolean/Phrase
S2	TI ((paleolithic OR paleo) AND (diet* OR weight* OR obes*)) OR AB ((paleolithic OR paleo) AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase
S1	TI (mediterranean AND (diet* OR weight* OR obes*)) OR AB (mediterranean AND (diet* OR weight* OR obes*))	Search modes - Boolean/Phrase

AMED (Allied and Complementary Medicine) 1985 to Present

#	Searches
1	(atkins and (diet* or weight* or obes*).mp.
2	(ediet* and (diet* or weight* or obes*).mp.
3	(dukan and (diet* or weight* or obes*).mp.

4	(mediterranean and (diet* or weight* or obes*)).mp.
5	((paleolithic or paleo) and (diet* or weight* or obes*)).mp.
6	(zone adj3 (diet* or weight* or obes*)).mp.
7	(south beach and (diet* or weight* or obes*)).mp.
8	(ornish and (diet* or weight* or obes*)).mp.
9	(volumetrics and (diet* or weight* or obes*)).mp.
10	("protein power" and (diet* or weight* or obes*)).mp.
11	(nutrisystem and (diet* or weight* or obes*)).mp.
12	((("weight watcher*" or weightwatcher*) and (diet* or weight* or obes*)).mp.
13	((("jenny craig*" or jennycraig*) and (diet* or weight* or obes*)).mp.
14	((("rosemary conley" or "eat yourself thin") and (diet* or weight* or obes*)).mp.
15	("slimming world" and (diet* or weight* or obes*)).mp.
16	("biggest loser" and (diet* or weight* or obes*)).mp.
17	((dash or "dietary approach* to stop* hypertension") and (diet* or weight* or obes*)).mp.
18	("Lifestyle, Exercise, Attitudes, Relationships, and Nutrition" and (diet* or weight* or obes*)).mp.
19	(learn diet* or learn program*).mp.
20	((low carb* or carb* restrict* or restrict* carb*) and diet*).mp.
21	((low sodium or low salt or salt restrict* or salt free or saltless or sodium free or sodium restrict* or reduc* salt or reduc* sodium or natrium restrict*) and diet*).mp.
22	Diet Mediterranean/
23	((low fat or fat free or fat restrict* or restrict* fat or lipid restrict* or restrict* lipid or low lipid) and diet*).mp.
24	Diet Fads/
25	((fad or fads) adj3 (diet* or food or foods)).mp.
26	("portfolio diet" or "portfolio diets" or "dietary portfolio" or "portfolio of heart risk reducing foods" or "portfolio eating plan").mp.
27	or/1-26
28	randomized controlled trials/
29	Randomized Controlled Trial.pt.
30	controlled clinical trial.pt.
31	randomized.ab.
32	placebo.ab.
33	drug therapy/
34	randomly.ab.
35	trial.ab.
36	groups.ab.
37	or/28-36
38	exp animals/ not human.sh.
39	37 not 38 [Modified Cochrane Handbook Highly Sensitive Search Strategy for identifying randomized trials (Box 6.4.c 2008 version)]
40	27 and 39 [fad diets and modified Cochrane sensitive randomized search]

41	limit 40 to english
42	(Randomized Controlled Trial or controlled clinical trial).pt.
43	randomized controlled trials/ or double blind method/ or random allocation/
44	single blind method/
45	clinical trial.pt.
46	research design/ or clinical trials/
47	placebos/
48	(clinic* adj25 trial*).mp.
49	((singl* or doubl* or trebl* or tripl*) adj (mask* or blind*)).mp.
50	(placebo* or random*).mp.
51	(latin adj square).mp.
52	comparative study/
53	follow up studies/ or prospective studies/
54	(control* or prospective* or volunteer*).mp.
55	or/42-54
56	exp animals/ not human.sh.
57	55 not 56 [Modified Robinson_Dickersin sensitive randomized search]
58	20 and 57 [fad diets and Robinson_Dickersin sensitive randomized search]
59	limit 58 to english
60	41 or 59

Text S2: Details on the missing SDs imputation for each outcome

Methods for imputation of missing standard deviations

We used published standard deviations (SDs), where available. When standard errors instead of SDs were presented, the former was converted to SDs.¹ If both were missing, we estimated SDs from P values or confidence interval (CIs) according to the recommendations of the Cochrane Handbook for Systematic Reviews.¹ We also estimated SDs from graphs when they were missing in tables or in text. If studies reported medians and interquartile ranges (IQRs), we used median to impute the missing mean and calculated SDs by dividing IQRs by 1.35.¹ If none of these options are viable, we imputed the missing SDs using pooled SDs from other studies included in our NMA following the formula below:²

$$SD_{pooled} = \sqrt{\frac{\sum(n_i - 1)SD_i^2}{\sum(n_i - 1)}}$$

1. Higgins JPT, Deeks JJ (editors). Chapter 7: Selecting studies and collecting data. In: Higgins JPT, Green S (editors), Cochrane Handbook for Systematic Reviews of Interventions. Version 5.1.0 [updated March 2011]. The Cochrane Collaboration, 2011. Available from www.cochrane-handbook.org.
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Weight loss at 12 months

Eight studies did not report the SDs in their report. Six studies (Bazzano, 2014; Foster GD, 2010; Aldana, 2007; Gardner, 2007; Rock, 2010; Jolly, 2011) reported 95% Confidence Intervals (CIs) of mean, we estimated the SDs from 95% CIs. One study (Iqbal, 2010) provided the error bars of mean change in Figure 2 of their report, we estimated the SD from graph. One study (Green, 2015) reported P value between experimental and control groups (P=0.03), we estimated the SD between groups from P value and used this to impute the missing SDs for both groups (degrees of freedom=87+81-2=166, obtained SD=2.19 by entering =tinv(0.03, 166) into a cell in a Microsoft Excel spreadsheet).

Weight loss at 6 months

Twenty-one studies did not report the SDs. Fifteen studies (Ijzelenberg, 2012; Konstantinidou, 2010 ; Wardle, 2000; Bazzano, 2014; Foster GD, 2010; Yancy, 2004; Aldana, 2007; Gardner, 2007; Rock, 2010; Jolly, 2011; Jenkins, 2014; Liu, 2013; Veum, 2017; Ramprasath, 2014; Jenkins, 2017) reported 95% CIs of mean, we estimated the SDs from 95% CIs. One study (Iqbal, 2010) provided the error bars of mean change in Figure 2 of their report, we estimated SD from graph. One study (Green, 2015) reported P value between experimental and control groups (P=0.001), we estimated the SD between groups from P value and used to impute the missing SDs for both groups (degrees of freedom=93+85-2=178, obtained SD=3.35 by entering =tinv(0.001, 178) into a cell in a Microsoft Excel spreadsheet). We imputed the missing SDs of 4 studies (Blumenthal, 2010a; Dyson, 2007; Johnston, 2013; Lima, 2013) using the pooled SDs.

SBP reduction at 12 months

Four studies did not report the SDs. Four of them (Bazzano, 2014; Foster GD, 2010; Aldana, 2007) reported 95% CIs of mean, we estimated the SDs from 95% CIs. We imputed the missing SDs for 1 studies (Green, 2015) using the pooled SDs.

SBP reduction at 6 months

Thirteen studies did not report the SDs. Nine of them (Konstantinidou, 2010; Blumenthal, 2010a; Bazzano, 2014; Foster GD, 2010; Yancy, 2004; Aldana, 2007; Liu, 2013; Ramprasath, 2014; Davis,2017) reported 95% CIs of mean, we estimated the SDs from 95% CIs. We imputed the missing SDs for 4 studies (Blumenthal, 2000; Lima, 2013; Samaha 03; Green, 2015) using the pooled SDs.

DBP reduction at 12 months

Four studies did not report the SDs. Four of them (Bazzano, 2014; Foster GD, 2010; Aldana, 2007) reported 95% CIs of mean, we estimated the SDs from 95% CIs. We imputed the missing SDs for 1 studies (Green, 2015) using the pooled SDs.

DBP reduction at 6 months

Fourteen studies did not report the SDs. Ten of them (Konstantinidou, 2010; Blumenthal, 2010a; Bazzano, 2014; Foster GD, 2010; Yancy, 2004; Aldana, 2007; Jenkins, 2014; Liu, 2013; Ramprasath, 2014; Davis,2017) reported 95% CIs of mean, we estimated the SDs from 95% CIs. We imputed the missing SDs for 4 studies (Blumenthal, 2000; Lima, 2013; Samaha 03; Green, 2015) using the pooled SDs.

LDL reduction at 12 months

Three studies did not report the SDs. Two of them (Foster GD, 2010; Aldana, 2007) reported 95% CIs of mean, we estimated the SDs from 95% CIs. We imputed the missing SDs for 1 studies (Green, 2015) using the pooled SDs.

LDL reduction at 6 months

Fifteen studies did not report the SDs. Nine of them (Wardle, 2000; Konstantinidou, 2010; Blumenthal, 2010a; Bazzano, 2014; Foster GD, 2010; Aldana, 2007; Rock, 2010; Jenkins, 2014; Ramprasath, 2014) reported 95% CIs of mean, we estimated the SDs from 95% CIs. We imputed the missing SDs for 6 studies (Austel, 2015; Dyson, 2007; Lasker, 2008; Yancy, 2004; Yang, 2016; Green, 2015) using the pooled SDs.

HDL increase at 12 months

Four studies (Bazzano, 2014; Foster GD, 2010; Aldana, 2007; Rock, 2010) reported 95% CIs of mean, we estimated the SDs from 95% CIs. We imputed the missing SDs for 1 studies (Green, 2015) using the pooled SDs.

HDL increase at 6 months

Seventeen studies did not report the SDs. 12 of them (Wardle, 2000; Konstantinidou, 2010; Blumenthal, 2010a; Bazzano, 2014; Foster GD, 2010; Aldana, 2007; Rock, 2010; Jenkins, 2014; Liu, 2013; Veum, 2017; Ramprasath, 2014; Yang, 2016) reported 95% CIs of mean, we estimated the

SDs from 95% CIs. We imputed the missing SDs for 5 studies (Austel, 2015; Dyson, 2007; Lasker, 2008; Yancy, 2004; Green, 2015) using the pooled SDs.

CRP reduction at 12 months

One studies (Bazzano, 2014) reported 95% CIs of mean, we estimated the SDs from 95% CIs. One reported IQR of median (Rock, 2010), we estimated the SDs from IQR.

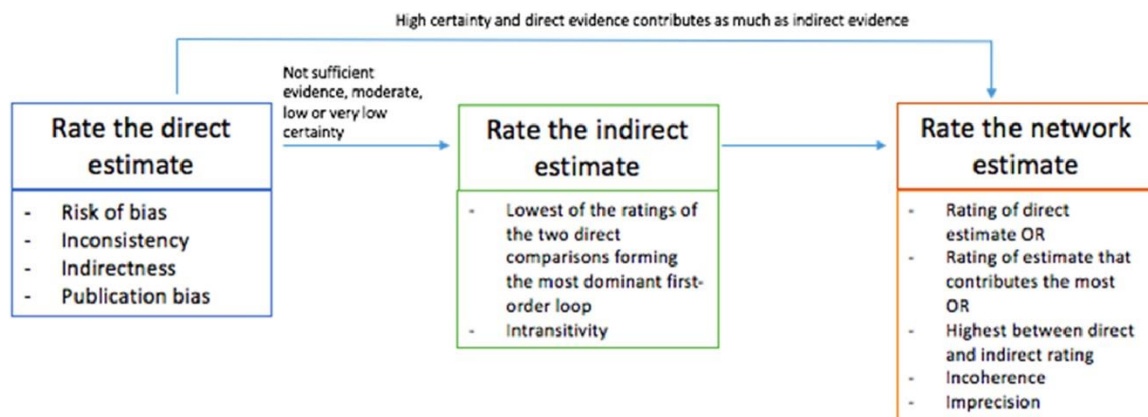
CRP reduction at 6 months

Five studies (Konstantinidou, 2010; Bazzano, 2014; McAuley, 2005; Jenkins, 2014; Ramprasath, 2014) reported 95% CIs of mean, we estimated the SDs from 95% CIs. One reported IQR of median (Rock, 2010), we estimated the SDs from IQR.

Text S3: Instructions for GRADE assessment

Our certainty of assessments addressed the following categories: risk of bias, imprecision, inconsistency, and indirectness. We did not assess for publication bias given the most popular diets were usually compared to an active control (low fat diet or another popular diet) and a limited number of popular diets were compared to usual diet as a control. In particular, only 2 of 136 comparison groups (Atkins versus Control-low fat, and Zone versus Control-low fat) had more than 10 studies. For both direct and indirect comparisons, the starting point for certainty in estimates was ‘high’. The certainty in indirect estimates was inferred from examination of the dominant lowest order loop. We identified the dominant lowest order loop by per comparison contribution matrix which could show the contribution percentage of each direct comparison to each indirect comparison. If more than one loop contributed similar power to the indirect estimate, we assumed that the grade of the indirect evidence started at the lowest grade within all similarly contributing loops. The certainty rating chosen was the lowest of the direct estimates contributing to the indirect comparison. For instance, consider a comparison of A versus B that is informed by A versus C and B versus C. If A versus C was rated as high certainty and B versus C as moderate certainty, the overall indirect certainty rating was moderate (moderate from the B versus C comparison). We considered further rating down each indirect comparison for intransitivity if the interventions or populations were dissimilar between the direct comparisons informing the dominant loop with respect to exercise, behavioral support (i.e. the loop that contributed most to the indirect estimate).

Network estimate certainty started with the certainty of evidence from the direct or indirect evidence that dominated the comparison. We considered rating down the certainty in the network estimate if there was incoherence between the indirect and direct estimates or if there was imprecision (wide credible intervals) around the treatment effect. When there was serious inconsistency, we used the estimates with the higher certainty of the direct and indirect evidence.



Instruction for each domain:

Risk of Bias – For each direct estimate, we rated down for risk of bias if studies with high risk of bias had contributed more to the overall effect estimate. If half the studies were at high risk and half at low risk, we assigned risk of bias based on the total number of patients randomized within

each risk of bias category. For example, if 2 studies are high risk with a total of 500 patients, while 2 studies are at low risk with a total of 300 patients, the risk of bias was high.

Inconsistency/heterogeneity – We assessed the inconsistency for each direct estimate by visually inspecting the distribution of point estimates and corresponding 95% credible intervals. We looked to see if the point estimates were in the same direction, similar in magnitude and we assessed if the estimates all fell within the widest 95% credible intervals.

Publication bias: not detectable.

Indirectness – for weight-loss comparisons, if the majority of participants enrolled included clinical populations, we rated down for indirectness. If we concluded that an active popular diet (Mediterranean) was of higher certainty evidence than another active diet (Atkins, DASH, Jenny Craig, Zone) and there was no direct comparison, we also rated down. For lipid markers, blood pressure and CRP comparisons, if the majority of studies enrolled patients with clinical conditions respective to the outcome of interest (e.g. high lipids, blood pressure), we rated down for indirectness.

Intransitivity – we assessed the intransitivity (the distribution of effect modifiers [exercise, behavioral support]) between comparisons that informed the direct comparisons for the indirect estimates. To do so, we looked at the league tables for adjusted and unadjusted estimates. If the point estimates were relatively the same, and the point estimates for each fell within the largest 95%CrI, we did not rate down.

Imprecision – Among all outcomes, we rated down for imprecision among direct estimates if there was a small sample size (less than 400 among continuous outcomes).

Weight loss: Among Indirect and network estimates, for active popular diets versus control or active versus active popular diet groups, we rated down for imprecision if the confidence interval crossed 1 kg.

For remaining CV risk outcomes: For active popular diets versus active diets or control groups, we rated down for imprecision if the confidence interval crossed our minimal important difference (MID). Based on consultation with cardiovascular experts and the literature, the MIDs were determined to be 2.5% for SBP and DBP, and 5% for LDL, HDL and CRP (Chaivaroli L et al. 2018).

	Normal	20%	15%	10%	5%	2.5%
SBP	120 mm Hg	24	18	12	6	3 (MID)
DBP	80 mm Hg	16	12	8	4	2 (MID)
LDL	100 mg/dL	20	15	10	5 (MID)	2.5
HDL ↑	40 mg/dL	8	6	4	2 (MID)	1
CRP	10 mg/dL	2	1.5	1.0	0.5 (MID)	0.25

SBP/DBP: 2mmHg - based on epidemiology in relation to stroke, MI, etc.

LDL and HDL: 5% or 0.1mmol/L - based on FDA/Health Canada cholesterol-lowering health claims for foods

CRP: 0.5mg/L - based on Reynolds Risk score 0.5mg/L = 1% change in 10y CVD risk

GRADE certainty in estimates

High certainty - Further research is very unlikely to change our certainty in the estimate of effect;

Moderate certainty - Further research is likely to have an important impact on our certainty in the estimate of effect and may change the estimate;

Low certainty - Further research is very likely to have an important impact on our certainty in the estimate of effect and is likely to change the estimate;

Very low certainty - Any estimate of effect is very uncertain.

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Text S4: The list of eligible studies

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Table S1: The characteristics of eligible dietary program study interventions

Dietary program*	Calorie & macronutrient recommendations	Exercise recommendations	Behavioral supports	Other co-interventions
<i>Atkins</i>	Though several studies incorporating this diet program did not recommend a specific caloric intake, among those that did the daily intake ranged from 1400-2200 and 1200-1600 calories for males and females, respectively. This program was often based on an Atkins manual, and typically involved an initial induction phase in which carbohydrates (CHO), proteins and fats were, respectively, 4-5%, 35% and 60% of the daily caloric intake. This was followed by a gradual increase in carbohydrate intake until a goal weight was achieved.	Several studies encouraged exercise, consisting of at least 30 minutes per day, 3 days of the week.	Participants were offered supports such as individualized daily calorie targets; weekly calorie controlled, low-fat menu plans, grocery lists, and exercise plans; access to a web-based food and exercise diary and community forums; and group meetings and dietitian-led education sessions.	Among studies providing additional co-interventions, this typically consisted of multivitamin supplements or prepared foods to aid with adherence.
<i>DASH</i>	DASH focuses on reduction of daily sodium intake (2,300 mg/day; 1,500 mg/day for some groups), with advice to consume the appropriate amount of calories to maintain a healthy weight or lose weight if needed. Daily Nutrient Goals Used in the DASH Studies (for a 2,000-Calorie Eating Plan) (Total fat: 27% of calories; Saturated fat: 6% of calories; Protein: 18% of calories; Carbohydrate: 55% of calories; Cholesterol: 150mg; Sodium: 2300mg; Potassium: 4700mg; Calcium: 1250mg; Magnesium: 500mg; Fiber: 30g). A minority of studies recommended calorie restrictions of about 500 kcal/d. Most provided no caloric guidelines.	Exercise is not typically part of the DASH eating plan. Studies in this review advised high, moderate, low or no exercise.	Participants were provided with moderate to high support in these studies, including menu plans and dietician support in group or individual settings. Some studies included psychological strategies such as Cognitive Behavioural Therapy.	No additional co-interventions.
<i>Jenny Craig**</i>	This program typically suggested a daily caloric intake between 1200-2000 calories. Though macronutrient recommendations were not clearly provided, in general the Jenny Craig program encourages a macronutrient intake of 50-60% CHO, 20-30% protein and 20-30% fats. ¹	Recommendations of 30 minutes of exercise on 5 or more days of the week were provided.	Participants in this program were provided with personalized meal and exercise plans, and one-to-one counseling sessions with a Jenny Craig certified consultant.	Participants were provided with prepackaged, prepared foods.
<i>Mediterranean</i>	Participants were encouraged to increase intake of vegetables, legumes, whole grains and bread, to eat fish regularly, and to choose poultry rather than other meats. Olive oil was usually recommended. A few studies recommended moderate consumption of red wine with meals.	In half of the studies, this program included exercise (typically walking or moderate aerobic activity).	Mediterranean diet intervention arms almost always included moderate to high support, including nutritional counselling, menus, and shopping lists. Several studies demonstrated support using shared meals as part of the support.	A minority of studies provided supplements (olive oil, nuts or fish oil capsules). There were no additional co-interventions.
<i>Ornish</i>	A daily caloric recommendation was not clearly provided in this program. However, participants were encouraged to follow a macronutrient intake of 75% CHO, 15% protein, and 10% fats.	Participants engaged in twice-weekly supervised exercise sessions. Independent, daily exercise of at least 30 minutes per day was encouraged.	Participants were provided with sessions that included supervised exercise, stress management, a meal, lifestyle-related lecture and group support.	Participants were offered to supplement their diet with a multivitamin and omega-3 fatty acids.

<i>Paleolithic</i>	The paleolithic diet aims to mimic hunter-gatherer diet by excluding added sugars and grains and emphasizing protein (typically meat), seeds, nuts and vegetables. Paleolithic programs did not restrict caloric intake.	Exercise is not typically part of the paleolithic program. Studies either recommended increased exercise without specific guidelines or did not address exercise.	Participants were provided with low to moderate support, from written materials to formal cooking classes and recipes.	No additional co-interventions.
<i>Portfolio</i>	This program encouraged consumption of a low-weight maintaining vegetarian diet high in cholesterol-lowering foods. The goal of the dietary portfolio was to increase plant sterols, viscous fiber (oats, barley, and psyllium), soy protein and nuts, with encouragement to consume peas, beans and lentils.	Exercise is not part of the dietary portfolio program.	Participants were provided with moderate support. Dietitians counselled participants regularly and modified pre-intervention 7-day intake records to incorporate study foods. Participants received a 7-day study food checklist and an illustrated study booklet.	Participants used a plant sterol ester-enriched margarine.
<i>Rosemary Conley</i>	Caloric and macronutrient recommendations were not clearly provided. Rosemary Conley's 'Eat Yourself Slim' manual suggests 60% CHO, 15% protein, and selection of foods containing <4% fats. ²	Weekly, group exercise classes were offered to participants.	Group meetings; one-on-one support; additional supports via e-mail and telephone; and exercise sessions were offered to participants.	No additional co-interventions.
<i>Slimming World</i>	Weight loss goals in this program were individualized, and macronutrient recommendations were not clearly indicated. The approach of this program, however, is in accordance with the British Nutrition Foundation, which recommends a diet consisting of 60% CHO and 35% fats. ^{3,4}	Participants were encouraged to gradually build up to 30 minutes of intense physical activity 5 days a week.	Participants were offered group meetings and group support; one-to-one phone support from a consultant or group members; and access to program websites and magazines.	No additional co-interventions.
<i>South Beach</i>	Specific caloric and macronutrient recommendations were not clearly specified in this program. Participants followed the initial phase of the diet for 2 weeks and consumed small quantities of low glycemic-index carbohydrates, high intake of protein, and moderate intake of mono- and polyunsaturated fats. Following this phase participants gradually added carbohydrates back to their diet.	Exercise and physical activity were assessed, but not clearly recommended to participants in this program.	Individual counseling and support from a bariatric nutritionist were provided to participants in this diet program. In addition, participants were provided with sample meal plans and written instructions about the diet	No additional co-interventions.
<i>The Biggest Loser</i>	Daily caloric intake targets were individualized in this program. Though specific macronutrient recommendations were not clearly provided, this program generally suggests no more than 30% daily caloric intake from fats.	Weekly physical activity was encouraged and based on exercise preferences.	Participants were provided with access to online calorie-controlled, low-fat menu plans and grocery lists; weekly physical activity plans based on exercise preferences; and web-based community forums and newsletters.	No additional co-interventions.
<i>Volumetrics</i>	The key component of the program involves consumption of foods with low energy density (foods that contain a small number of calories relative to their size). Specific macronutrient recommendations were not clearly provided in this program, though Volumetrics generally	Participants were encouraged to exercise daily for 30 minutes, 5 days a week.	Participants were provided with written materials and instructions from a dietitian in an effort to help them achieve a reduced fat diet	No additional co-interventions.

	suggests a daily macronutrient intake of 55% carbohydrates, 15-25% protein and 20- 30% fats. ⁵			
<i>Weight Watchers</i>	In general, this program consists of tracking daily points (each point is about 50 kcal) based on a participant's current weight and weight loss goals. Though a recommended macronutrient intake was not clearly specified, this program is generally consistent with the National Academy of Sciences acceptable macronutrient distribution ranges for adults, which are 45-65% carbohydrates, 10-35% protein and 20-35% fats. ⁶	Thirty minutes of exercise on most days of the week was encouraged.	Participants were typically provided with access to weekly group meetings and support, behavioral counseling, individual contact with the dietitian and educational resources such as recipes and meal ideas, as well as community discussion boards.	No additional co-interventions.
<i>Zone</i>	This program typically consisted of an active weight loss-phase in which the daily caloric intake was reduced to 1500 and 1200 calories for males and females respectively, followed by a weight maintenance phase. The recommended macronutrient intake during both phases was 40% carbohydrates, 30% protein and 30% fats.	Thirty minutes of exercise on most days of the week was encouraged.	Participants were typically offered meal planning and nutritional counseling from a dietitian and group support.	Among studies providing additional co-interventions, this typically consisted of prepared foods to aid with adherence.

*This table was derived from data provided in the studies. If this information was not reported, then the data was taken from the dietary program website or other available resources; please note there is often considerable variability between branded diets within included studies. **Only female participants were enrolled in the 2 eligible and included Jenny Craig trials.

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Table S2 Characteristics of Included Studies

Study	Country	Network node	Population Description	Number of patients	Age, mean (SD), years	Women, number (%)	Body weight, mean (SD), kg	Study duration (wk)
Wing, 1998	USA	Low fat, Dietary advice, Usual diet	Obese and nondiabetic, 30-100% overweight; one or both parents with Type 2 diabetes	154	45.7 (4.4)	122 (79.0)	98.7 (15.1)	104
Iqbal, 2010	USA	Atkins, Low fat	Obese, Type 2 diabetes	144	59.4 (9.2)	15 (10.4)	116.9 (18.9)	104
Burke, 2005	Australia	DASH, Dietary advice	BMI>25, medicated hypertension	241	56.2 (7.3)	134 (55.6)	85.5 (11.7)	68
de Lorgeril, 1994	France	Mediterranean, Usual diet	MI within 6 months of enrolment	605	53.5 (10.0)	56 (9.3)	73.9 (11.1)	260
Edwards, 2011	USA	DASH, Usual diet	Elevated BP	52	46.4 (9.6)	27 (51.9)	NR	12
Droste, 2013	Luxembourg	Mediterranean, Usual diet	Carotid atherosclerosis	122	63.6 (9.5)	36 (33.0)	79.4 (16.3)	20
Dunn, 2014	Australia	Mediterranean, Usual diet	Volunteer premenopausal and recreationally active but untrained women	32	22.0 (4.4)	30 (100.0)	72.1 (11.6)	12
Ijzelenberg, 2012	The Netherlands	Mediterranean, Dietary advice	Stable established CVD and at least one lifestyle-related risk factor	146	59.9 (10.9)	33 (22.6)	87.0 (18.0)	24
Konstantinidou, 2010	Spain	Mediterranean, Usual diet	Healthy community sample	90	44.3 (10.9)	64 (71.1)	67.3 (13.9)	12
Green, 2014	USA	DASH, Usual diet	Overweight and obese people taking antipsychotics	36	48.5 (13.3)	29 (81.0)	95.7 (17.8)	12
Esposito, 2009	Italy	Mediterranean, Low fat	Overweight, sedentary patients newly diagnosed with Type 2 diabetes	215	52.2 (10.9)	109 (50.7)	85.9 (10.1)	208
Nowson, 2009	Australia	DASH, Low fat	Postmenopausal women with high/normal BP	111	59.2 (4.8)	95 (100.0)	78.5 (12.6)	14
Papandreu, 2012	Greece	Mediterranean, Low fat	Obese sleep clinic patients with moderate-to-severe OSAS (sleep apnoea)	40	49.0 (12.2)	6 (15.0)	105.2 (16.1)	24
Mekki, 2010	Algeria	Mediterranean, Dietary advice	Undialyzed patients with a moderate CRF with a glomerular filtration rate (GFR) of	40	61.0 (14.0)	22 (55.0)	74 (94.0)	13

Michalsen, 2006	Germany	Mediterranean, Usual diet	60–89 mL min ⁻¹ and dyslipidemia (TG > 1.7 mmol/L) and/or total cholesterol > 5 mmol/L) Patients with established CAD verified by coronary angiography	105	59.4 (8.6)	23 (22.7)	NR	52
Nowson, 2005	Australia	DASH, Low fat	A seated office BP of more than 120/80 mm Hg (SBP/DBP) at their first visit, or taking antihypertensive medication.	63	47.9 (9.3)	0 (0.0)	93.2 (9.6)	12
Lima, 2013	Brazil	DASH, Usual diet	Hypertensive	206	NR	160 (77.6)	NR	24
Lindeberg, 2007	Sweden	Mediterranean, Paleolithic	Ischemic heart disease	29	60.9 (8.3)	0 (0.0)	94.1 (11.1)	12
McManus, 2001	USA	Mediterranean, Low fat	Overweight	101	44.0 (10.0)	91 (91.0)	91.0 (30.7)	76
Skoldstam, 2003	Sweden	Mediterranean, Usual diet	Rheumatoid arthritis	51	58.5 (NR)	10 (24.4)	76.0 (13.5)	12
Stachowska, 2005	Poland	Mediterranean, Low fat	Kidney Graft recipients	37	43.2 (11.2)	12 (32.4)	NR	26
Svetkey, 2009	USA	DASH, Dietary advice	Hypertensive > 25 y/o	574	60.5 (11.4)	350 (61.0)	90.5 (17.4)	26,78
Toobert, 2003	USA	Mediterranean, Usual diet	type 2 diabetes	279	60.9 (7.9)	279 (100.0)	92.9 (22.3)	24
Tuttle, 2008	USA	DASH, Mediterranean	MI	101	58.0 (9.5)	26 (26.0)	NR	104
Racine, 2012	USA	DASH, Dietary advice	Hypertension and/or hyperlipidemia	321	72.4 (7.7)	250 (84.0)	NR	52
Sexton, 2013	New Zealand	Mediterranean, Usual diet	Symptomatic asthma	38	38.4 (13.2)	25 (71.0)	NR	12
Salas-Salvado, 2008	Spain	Mediterranean, Low fat	Healthy community sample	1264	67.4 (5.9)	658 (54.0)	75.4 (11.0)	52
Wardle, 2000	United Kingdom	Mediterranean, Low fat, Usual diet	Adults with mildly or moderately raised serum cholesterol levels	176	53.0 (10.1)	91 (52.0)	77.4 (15.7)	12

Whitt-Glover, 2013	USA	DASH, Dietary advice	Healthy community sample	25	50.7 (7.9)	22 (88.0)	NR	12
Papandreu, 2012	Greece	Mediterranean, Low fat	Obese with moderate to severe OSAHS	21	48.1 (12.4)	4 (19.0)	102.3 (13.1)	24
Vincent-Baudry, 2005	France	Mediterranean, Low fat	Eligible participants: fasting plasma cholesterol concentration of 6.5-7.7 mmol/L; triacylglycerol concentration of 2.1-4.6 mmol/L; glycemia (glucose concentration of 6.1-6.9 mmol/L); systolic and diastolic blood pressure between 140-180 and 90-105 mm Hg, respectively; body mass index [BMI (in kg/m ²)] ≥ 27	212	51.2 (10.5)	100 (59.1)	NR	12
Appel, 2003	USA	DASH, Low fat	Generally healthy adults with above optimal BP including stage 1 hypertension	810	50.0 (8.9)	502 (62.0)	96.9 (18.0)	78
Athyros, 2011	Greece	Mediterranean, Usual diet	Patients with mild hypercholesterolemia (TC 5.2-6.4 mmol/l)	150	54.7 (3.7)	77 (51.0)	NR	16
Blumenthal 2010a, 2010b, Epstein 2012	USA	DASH, Usual diet	Overweight with above normal BP	144	52.0 (10.0)	97 (67.4)	93.1 (14.1)	52
Ruth, 2013	USA	Atkins, Low fat	Obese, otherwise healthy	55	42.5 (12.1)	49 (89.1)	99.9 (14.4)	12
Elhayany, 2010	Israel	Mediterranean, Low fat	Overweight diabetic patients	259	56.3 (6.2)	86 (48.0)	86.7 (12.9)	52
Bazzano, 2014	USA	Atkins, Low fat	General public	148	46.8 (10.1)	131 (88.5)	97.1 (13.0)	52
de la Iglesia, 2014	Spain	Zone, Low fat	General public with Metabolic Syndrome	105	49.0 (10.0)	45 (47.0)	99.7 (17.9)	24
Dyson, 2007	UK	Atkins, Low fat	Half Type II diabetes, half without	26	52.0 (9.0)	20 (77.0)	96.3 (16.6)	12
Foraker, 2014	USA	Zone, Low fat	Premenopausal women with BMI 25-34	79	41.4 (5.3)	79 (100.0)	83.9 (8.9)	52
Frisch, 2009	Germany	Atkins, Low fat	Overweight	200	47.0 (10.5)	138 (69.0)	99.6 (16.3)	52
Garcia-Toro, 2014	Spain	Mediterranean,	Depressive episode	80	49.0 (11.2)	37 (73.0)	NR	24

Shai, 2008	Israel	Dietary advice Atkins, Mediterranean, Low fat	Obese (BMI ≥ 27), or Type 2 diabetes or coronary heart disease regardless of BMI	322	52.0 (7.0)	45 (14.0)	91.4 (13.4)	104
Gardner, 2007	USA	Atkins, Ornish, Zone, Low fat	Obese, otherwise healthy	311	41.0 (6.0)	311 (100.0)	85.2 (12.4)	52
Brehm, 2003	USA	Atkins, Low fat	Obese, otherwise healthy	53	43.6 (7.7)	42 (100.0)	91.7 (7.2)	24
Brinkworth, 2009	Australia	Atkins, Low fat	Abdominal obesity and 1 other metabolic syndrome risk factor	118	50.1 (7.9)	75 (63.6)	95.3 (15.3)	52
Daly, 2006	UK	Atkins, Low fat	Obese, poorly controlled Type 2 diabetes	102	58.6 (10.8)	53 (51.9)	101.9 (15.6)	12
Lasker, 2008	USA	Zone, Low fat	Obese, otherwise healthy	65	47.2 (7.0)	31 (62.0)	95.5 (15.0)	16
Foster, 2010	USA	Atkins, Low fat	Obese, otherwise healthy	307	45.5 (9.7)	208 (67.8)	103.4 (14.9)	104
Foster, 2003	USA	Atkins, Low fat	Obese, otherwise healthy	63	44.1 (8.2)	43 (68.2)	98.5 (17.8)	52
Truby et al, 2006 and Morgan et al, 2008	UK	Atkins, Weight Watchers, Rosemary Conley, Usual diet	Obese, otherwise healthy	293	40.2 (10.2)	214 (73.0)	89.4 (13.3)	52
Volek, 2009	USA	Atkins, Low fat	Obese, atherogenic dyslipidemia	40	34.7 (11.9)	20 (50.0)	95.4 (14.4)	12
Brehm, 2005	USA	Atkins, Low fat	Obese, otherwise healthy	50	43.1 (12.5)	40 (100.0)	90.7 (2.2)	16
Davis, 2009	USA	Atkins, Low fat	Obese, Type 2 diabetes	105	53.5 (6.5)	82 (78.1)	97.3 (18.5)	52
Westman, 2008	USA	Atkins, Low fat	Obese, Type 2 diabetes	97	51.8 (7.5)	66 (78.6)	105.9 (19.6)	24
McAuley, 2005	New Zealand	Atkins, Zone, Low fat	Obese, insulin-resistant women, otherwise healthy	96	45.6 (7.6)	93 (100.0)	95.8 (13.4)	24
Dansinger, 2005	USA	Atkins, Ornish, Weight Watchers, Zone	Obese and 1 other metabolic cardiac risk factor(s)	160	49.0 (11.0)	81 (51.0)	100.0 (15.0)	52
Yancy, 2004, Westman, 2006, and Yancy, 2009	USA	Atkins, Low fat	Obese, otherwise healthy. Elevated lipid levels	120	44.9 (9.5)	91 (76.5)	97.3 (17.1)	24

Aldana, 2007	USA	Ornish, Dietary advice	Coronary artery disease	93	62.0 (9.1)	41 (44.0)	89.8 (21.2)	52
Blumenthal, 2000	USA	Low fat, Usual diet	Obese, unmedicated high-normal blood pressure or stage I or 2 hypertension	133	47.5 (8.9)	74 (56.0)	94.2 (16.5)	24
Brinkworth, 2004a, Brinkworth, 2004b, Farnsworth, 2003a, Layman, 2003, and Parker, 2002	Australia	Zone, Low fat	Obese, Type 2 diabetes	66	61.8 (7.8)	23 (60.5)	93.7 (18.1)	64
Das, 2007	USA	Zone, Low fat	Obese, otherwise healthy	34	35.0 (6.0)	26 (76.0)	79.0 (10.7)	52
Ebbeling, 2007	USA	Zone, Low fat	Obese, otherwise healthy	73	27.5 (4.0)	58 (79.0)	103.4 (16.2)	74
Guldbrand, 2012	Sweden	Atkins, Low fat	Type 2 diabetes	61	62.0 (10.1)	34 (55.7)	95.2 (19.7)	104
Haufe et al, 2011 and Haufe et al, 2012	Germany	Atkins, Low fat	Obese, otherwise healthy	170	44.1 (8.6)	84 (82.4)	92.6 (15.2)	24
Collins, 2010	Australia	Biggest Loser, Usual diet	Obese, otherwise healthy	309	42.0 (10.2)	180 (58.0)	94.0 (14.6)	12
Heshka, 2000	USA	Weight Watchers, Dietary advice	Obese, otherwise healthy	423	44.5 (10.0)	358 (84.6)	93.7 (13.8)	104
Jen et al, 2004 and Djuric et al, 2002	USA	Weight Watchers, Low fat, Dietary advice	Stage I or II breast cancer	48	51.7 (8.4)	48 (100.0)	95.4 (13.9)	52
Layman, 2005	USA	Zone, Low fat	Obese, otherwise healthy	48	46.6 (4.9)	48 (100.0)	87.7 (13.8)	16
Layman, 2009	USA	Zone, Low fat	Obese, otherwise healthy	130	45.4 (13.7)	71 (54.6)	92.8 (14.5)	52
Ello-Martin, 2007	USA	Volumetric, Low fat	Obese, otherwise healthy	97	44.9 (9.4)	97 (100.0)	90.5 (9.6)	52
Stern et al, 2004 and Samaha et al, 2003	USA	Atkins, Low fat	Diabetes and metabolic syndrome	132	53.5 (9.0)	23 (17.4)	131.0 (25.1)	52
Thomson, 2010	USA	Atkins, Low fat	Post-menopausal women, survivors of	43	56.2 (9.4)	40 (100.0)	84.1 (12.3)	24

Yamada, 2014	Japan	Atkins, Low fat Jenny	Stage I or II breast cancer Patients with DM2, high HbA1c (6.9-8.4)	24	63.3 (12.0)	12 (50.0)	67.6 (12.5)	24
Rock, 2007	USA	Craig, Dietary advice Jenny	Obese, otherwise healthy	70	41.1 (11.5)	70 (100.0)	92.0 (10.8)	52
Rock, 2010	USA	Craig, Dietary advice	Obese, otherwise healthy	446	44.3 (10.3)	442 (100.0)	92.2 (NR)	104
Rippe, 1998	USA	Weight Watchers, Usual diet	Overweight, otherwise healthy	80	36.5 (6.9)	80 (100.0)	81.5 (7.0)	12
Womble, 2004	USA	Low fat, Dietary advice Weight Watchers, Slimming	Obese, otherwise healthy	47	43.7 (10.2)	47(100)	90.7 (11.7)	52
Jolly, 2011	UK	World, Rosemary Conley, Dietary advice	Obese, with or without comorbidities	740	49.3 (14.7)	513(69.3)	93.4 (14.4)	52
Pinto, 2013	USA	Weight Watchers, Low fat	Overweight or obese, otherwise healthy	144	49.7 (9.2)	127 (90.0)	96.6 (17.4)	48
Wadden, 2004	USA	Low fat, Dietary advice	Obese, otherwise healthy	123	44.1 (9.9)	123 (100)	97.3 (13)	65
Galletly, 2007	Australia	Zone, Low fat	Overweight, polycystic ovary syndrome	28	32.5 (1.2)	28(100)	101.3 (4.8)	16
Goodrick, 1998	USA	Low fat, Dietary advice, Usual diet	Overweight, binge eating, otherwise healthy	219	40.0 (6.3)	219(100)	87.8 (9.8)	76
Luscombe, 2002	Australia	Zone, Low fat	Type 2 diabetes	32	63.2 (9.7)	15 (57.7)	92.9 (15.7)	12
Luscombe, 2003	Australia	Zone, Low fat	Obese, hyperinsulinemia	36	54.0 (6.0)	26(72.2)	94.0 (15.0)	16
Jenkins, 2014	Canada	Atkins, Low fat	Overweight, hyperlipidemic	50	56.5 (7.0)	24 (61.5)	84.5 (12.8)	26
Kitabchi, 2013	USA	Zone, Dietary advice	Premenopausal women with a BMI 30 to 55	32	35.6 (10.0)	32 (100)	NR	26
Lim, 2010	Australia	Atkins, Low fat, Usual diet	At least one CVD risk factor other than obesity	113	47.0 (10.0)	93 (89.4)	89.8 (2.6)	64
Mellberg, 2014	Sweden	Paleolithic, Low fat	Post-menopausal obese women	70	59.9 (5.7)	61 (100)	86.9 (10.3)	104

Ornish, 1990	USA	Ornish, Usual diet	Coronary artery disease	53	57.8 (8.2)	5 (12.2)	86.1 (19.2)	52
Rock, 2014	USA	Jenny Craig, Low fat	Type II diabetes with BMI 25–45	227	56.5 (9.0)	116 (51.1)	105.5 (17.7)	52
Sacks, 2009	USA	Atkins, Low fat	Overweight or obese	811	51.0 (9.0)	515 (64)	93.0 (16.0)	104
Saslow, 2014	USA	Atkins, Low fat	Diabetic or prediabetic, BMI of 25 or more	34	59.5 (11.2)	25 (73.6)	99.9 (24.8)	12
Tay, 2014	AUS	Atkins, Low fat	BMI 26–45 kg/m ² , with T2DM	131	58.0 (7.0)	49 (42.6)	101.7 (15.0)	24
Wycherley, 2012	AUS	Atkins, Low fat	Overweight or obese	123	50.7 (9.3)	0 (0.0)	103.7 (13.9)	52
Wycherley, 2013	AUS	Atkins, Low fat	Overweight or obese with at least one American Heart Association metabolic syndrome component	56	46.8 (8.1)	0 (0.0)	106.5 (12.3)	12
Aude, 2004	USA	South Beach, Low fat	General public	60	45.1 (10.0)	28 (52.0)	99.5 (27.5)	12
Johnston, 2013	USA	Weight Watchers, Dietary advice	General public	292	46.5 (10.5)	262 (89.8)	90.1 (13.4)	24
Landers, 2002	USA	Atkins, Zone, Low fat	General public	91	NR	NR	NR	12
Panunzio, 2011	Italy	Mediterranean, Usual diet	General public	80	54.8 (0.7)	35 (57.3)	74.8 (12.9)	25
Liu, 2013	China	Atkins, Low fat	Overweight	50	47.9 (6.6)	50 (100.0)	65.9 (6.5)	12
Jebb, 2011	UK, Germany, Australia	Weight Watchers, Dietary advice	Obese, and one other risk factor for obesity-related disease	772	47.3 (12.8)	668 (86.5)	86.7 (11.6)	52
Ahern, 2017	England	Weight Watchers, Dietary advice	BMI > 28, general practice	1269	53.2 (13.8)	859 (68.0)	96.1 (17.0)	104
Guldbrand, 2014	Sweden	Atkins, Low fat	Type 2 diabetes	61	62.0 (10.3)	34 (56.0)	95.1 (20.3)	104
Veum, 2017	Norway	Atkins, Low fat	Non-diabetic, abdominal obesity	46	40.2 (5.1)	0 (0.0)	111.5 (11.5)	12
Hill, 2015	US	DASH	Overweight	66	45.9 (36.5)	34 (54.8)	102.9 (72.4)	156
Foroozanfar, 2017	Iran	DASH, Low fat	Overweight and/or obese	60	26.4 (4.3)	60 (100.0)	86.1 (14.2)	12
Azadi, 2016	Iran	DASH, Low fat	Overweight or obese with polycystic ovary syndrome	60	31.9 (6.1)	60 (100.0)	79.3 (12.0)	12

Ramprasad h, 2014 and Jenkins, 2011	Canada	Portfolio, Low fat	Hyperlipidemic	351	56.3 (9.1)	211 (61.2)	75.4 (13.5)	86
Green, 2015	USA	DASH, Usual diet	Taking antipsychotic agents, BMI 25-45	200	47.2 (10.6)	144 (72.0)	107.7 (25.1)	52
Ma, 2015	USA	DASH, Usual diet	BMI 18.5-39.9 kg·m ⁻² , and uncontrolled persistent asthma	90	51.8 (12.3)	67 (74.4)	76.5 (15.9)	24
Austel, 2015	Germany	Mediterra nean, Usual diet	Overweight	225	52.5 (1.0)	174 (82.1)	84.5 (1.3)	52
Abenavoli, 2017	Italy	Mediterra nean, Usual diet	Caucasian overweight	50	46.1 (4.5)	16 (8.0)	86.1 (3.2)	24
Yang, 2016	China	Weight Watchers, Dietary advice	Overweight	300	49.2 (10.4)	239 (79.7)	73.4 (9.7)	26
Baetge, 2017	US	Weight Watchers, Jenny Craig, Dietary advice, Usual diet	Overweight/obese, sedentary women	133	47.2 (11.3)	113 (100.0)	86.0 (14.0)	12
Marrero, 2016	US	Weight Watchers, Dietary advice	Overweight	225	51.6 (11.2)	191 (84.9)	100.6 (20.8)	24 and 52
Kafeshani, 2015	Iran	DASH, Usual diet	Obese, otherwise healthy	51	37.5 (8.4)	44 (100.0)	83.3 (8.9)	12
Fito, 2014	Spanish	Mediterra nean, Low fat	Participants at high risk of CVD, but with no CVD	7447	66.7 (5.9)	522 (56.1)	NR	295
Brader et al, 2014 and Uusitupa et al, 2013	Finland, Iceland, Sweden, Denmark	Mediterra nean, Dietary advice	Overweight	213	54.3 (8.2)	101 (66.0)	NR	24
Davis, 2017a	Australia	Mediterra nean, Usual diet	Healthy elderly population	166	71.0 (4.9)	84 (56.5)	NR	24
O'Neil, 2016	USA	Weight Watchers, Usual diet	Type 2 diabetes	563	NR	400 (71.0)	105.1 (19.7)	52

sd, standard deviation; wk, weeks; nr, not reported; CVD, cardiovascular disease

Table S3: The number of study and participants of individual popular named diets for all outcomes

Popular Diets	Weight loss				LDL reduction			
	6-months		12-months		6-months		12-months	
	No. of study	No. of patients	No. of study	No. of patients	No. of study	No. of patients	No. of study	No. of patients
Atkins	34	1356	16	834	32	1413	13	642
Dietary advice	17	1736	12	1082	9	509	8	735
Low fat	64	2592	30	1771	48	2105	22	1049
Usual diet diet	26	1519	7	712	18	1074	7	696
DASH	14	1110	1	87	6	314	2	150
Jenny Craig	4	539	3	499	4	538	3	496
Mediterranean	13	552	5	1312	16	954	5	560
Ornish	3	124	4	145	3	131	4	152
Paleolithic	2	48	1	34	1	34	-	-
Portfolio	1	223	-	-	1	223	-	-
Rosemary Conley	2	121	2	88	1	41	-	-
Slimming World	1	85	1	62	-	-	-	-
South Beach	1	22	-	-	1	22	-	-
The Biggest Loser	1	164	-	-	1	164	-	-
Volumetrics	1	35	1	35	1	35	1	35
Weight Watchers	12	2095	10	1941	5	464	6	1352
Zone	15	406	6	209	11	347	6	203

Table S3 continued: The number of study and participants of individual popular named diets for all outcomes

Popular Diets	HDL increase				SBP reduction			
	6-months		12-months		6-months		12-months	
	No. of study	No. of patients	No. of study	No. of patients	No. of study	No. of patients	No. of study	No. of patients
Atkins	32	1413	13	642	30	1342	13	648
Dietary advice	10	591	9	817	10	929	6	750
Low fat	48	2105	22	1049	43	2188	18	947
Usual diet diet	17	1070	7	706	21	1340	6	657
DASH	6	314	2	150	13	1009	2	150
Jenny Craig	4	538	3	496	1	147	1	135
Mediterranean	15	934	5	560	10	645	3	388
Ornish	3	131	4	152	3	126	4	147
Paleolithic	1	34	-	-	1	34	-	-
Portfolio	1	223	-	-	1	223	-	-
Rosemary Conley	1	41	-	-	1	42	-	-
Slimming World	-	-	-	-	-	-	-	-
South Beach	1	22	-	-	-	-	-	-
The Biggest Loser	1	164	-	-	1	164	-	-
Volumetrics	1	35	1	35	1	35	1	35
Weight Watchers	6	572	7	1455	7	1627	6	1806
Zone	11	347	6	203	8	267	4	160

Table S3 continued: The number of study and participants of individual popular named diets for all outcomes

Popular Diets	DBP reduction				CRP reduction			
	6-months		12-months		6-months		12-months	
	No. of study	No. of patients	No. of study	No. of patients	No. of study	No. of patients	No. of study	No. of patients
Atkins	29	1302	13	648	13	473	5	173
Dietary advice	10	929	6	750	3	133	1	94
Low fat	42	2149	18	947	16	695	5	168
Usual diet diet	21	1340	6	657	7	470	3	293
DASH	13	1009	2	150	-	-	-	-
Jenny Craig	1	147	1	135	2	476	1	313
Mediterranean	10	645	3	388	8	376	1	48
Ornish	3	126	4	147	1	21	1	20
Paleolithic	1	34	-	-	1	34	-	-
Portfolio	1	223	-	-	1	223	-	-
Rosemary Conley	1	42	-	-	-	-	-	-
Slimming World	-	-	-	-	-	-	-	-
South Beach	-	-	-	-	-	-	-	-
The Biggest Loser	1	164	-	-	-	-	-	-
Volumetrics	1	35	1	35	-	-	-	-
Weight Watchers	7	1650	6	1806	2	252	2	227
Zone	8	267	4	160	4	85	2	45

Table S4: The reported information on funding sources, potential conflict of interest, primary and secondary outcomes reported in RCTs

Study	Funding sources	Potential conflict of interest	Primary outcomes reported in RCTs	Secondary outcomes reported in RCTs
Wing, 1998	National Institutes of Health	NR	NS	NS
Iqbal, 2010	Veterans Affairs Merit Review Entry Program	None	Changes in weight	Changes in lipids
Burke, 2005	Australian National Health and Medical Research Council Australian Fisheries Research and Development Corporation	None	Blood pressure	NS
De Lorgeril, 1994	INSERM*, Ministry of Research, NAMTS*, CETIOM*, and ONIDOL*, Astea-Clave BSN*, and the Fondation pour la Recherche Medicale	NR	NS	NS
Edwards, 2011	National Institutes of Health	None	NS	NS
Droste, 2013	Centre de Recherche Public-Santé	None	24-hour SBP	24-hour DBP, diurnal and nocturnal SBP, diurnal and nocturnal DBP
Dunn, 2014	None	None	NS	NS
Ijzelenberg, 2012	Netherlands Organisation for Health Research and Development	None	Weight, DBP, SBP, HDL, LDL	NS
Konstantinidou, 2010	Fóndo de Investigación Sanitaria–Fóndo Europeo de Desarrollo Regional, by Sistema Nacional de Salud contract Miguel Servet Instituto de Salud Carlos III, and by the Greek State Scholarship Foundation (Athens, Greece), and partially supported by the Generalitat of Catalunya	None	NS	NS
Green, 2014	NR	None	NS	NS
Esposito, 2009	Second University of Naples	None	Not relevant	Changes in weight
Nowson, 2009	Meat & Livestock Australia	None	NS	NS
Papandreu, 2012	NR	None	NS	NS
Mekki, 2010	National Agency of Health Research	NR	NS	NS
Michalsen, 2006	Alfried Krupp von Bohlen und Halbach Foundation	NR	NS	NS
Nowson, 2005	Dairy Research and Development Corporation	None	NS	NS
Lima, 2013	Fundacao de Amparo e Pesquisa do Estado do Maranhao and Coordenacao de perfeicoamento de Pessoal de Nivel Superior	None	NS	NS

Lindeberg, 2007	Region Skåne and Lund University	None	Changes in body weight	Not relevant
McManus, 2001	Peanut Institute, the International Olive Oil Council, and International Tree Nut Council	NR	Change in body weight from baseline to 18 months	Change in body weight at 6, 12 and 18 months
Skoldstam, 2003	Grants from the Faculty of Social Sciences of Umeå University, the Swedish Foundation for Health Care Sciences and Allergy Research, the Health Research Council in southeast Sweden, the Swedish Rheumatism Association, the Swedish Nutrition Foundation, the JC Kempe Memorial Scholarship Fund, the Borgerskapet i Umeå Fund, and the Uppsala Hemsysterskola Fund	NR	NS	NS
Stachowska, 2005	NR	NR	NS	NS
Svetkey, 2009	National Institutes of Health	None	SBP	DBP
Toobert, 2003	National Heart, Lung, and Blood Institute	NR	NS	NS
Tuttle, 2008	Washington State Attorney General Vitamins Settlement Fund	Note 1	NS	NS
Racine, 2012	Fund from Administration on Aging through a cooperative agreement with the Mecklenburg County Department of Social Services	None	NS	NS
Sexton, 2013	Health Research Council of New Zealand	None	NS	NS
Salas-Salvado, 2008	Grants from the Generalitat valenciana. The Fundación Patrimonio Comunal Olivarero and Hojiblanca SA (Málaga, Spain) donated the olive oil used in this study, California Walnut Commission (Sacramento, California) donated the walnuts, Borges SA (Reus) donated the almonds, and Morella Nuts SA (Reus, Spain) donated the hazelnuts	None	NS	NS
Wardle, 2000	Grant from Biotechnology and Biological Sciences Research Council	NR	NS	NS
Whitt-Glover, 2013	National Heart, Lung, and Blood Institute	None	Changes in blood pressure	SBP, DBP
Papandreu, 2012	NR	None	NS	NS
Vincent-Baudry, 2005	French Research Ministry, INSERM*, the provence-Alpes-Côte d'Azur Regional Council, the Bouches du Rhône General Council, the CRITT-PACA*, and the following companies: Rivoire & Carret Lustucru, Jean Martin, Le Cabanon,	None	NS	NS

	Boulangerie Coagulation Surgelés, Distplack Mariani, and Minoterie Giraud			
Appel, 2003	National Institutes of Health	NR	Change in SBP	Change in DBP
Athyros, 2011	Minerva Hellas	NR	Not relevant	Change in lipid, blood pressure
Blumenthal, 2010a	National Heart, Lung, and Blood Institute and the General Clinical Research Center, National Institutes of Health	NR	SBP,DBP	Not relevant
Ruth, 2013	Dr. Robert C. and Veronica Atkins Foundation, Boston University Clinical and Translational Science Institute	Note 2	Not relevant	Weight loss
Elhayany, 2010	NR	None	NS	NS
Bazzano, 2014	National Institutes of Health	None	Body weight	Not relevant
de la Iglesia, 2014	Health Department of the Government of Navarra and the Linea Especial about Nutrition, Obesity and Health	None	NS	NS
Dyson, 2007	Medisense UK, Abbott Laboratories	Note 3	Body weight	HDL, LDL
Foraker, 2014	Breast Cancer Research Foundation and the National Center for Advancing Translational Sciences	None	Changes in body weight	Changes in blood pressure and blood lipids
Frisch, 2009	Fund by different German health insurances and the 'Institute for Applied Telemedicine'	None	Weight loss	Blood pressure, blood lipids
Garcia-Toro, 2014	the Instituto de Salud Carlos III of the Spanish Ministry of Health	None	NS	NS
Shai, 2008	Atkins Research Foundation	None	Weight loss	Not relevant
Gardner, 2007	Hass Avocado Board	None	Weight change	LDL, HDL
Brehm, 2003	American Heart Association	NR	NS	NS
Brinkworth, 2009	National Heart Foundation	None	NS	NS
Daly, 2006	Diabetes UK	NR	Weight, HDL	Blood pressure
Lasker, 2008	National Cattleman's Beef Association, The Beef Board and Kraft Foods	Note 4	Lipid	Not relevant
Foster GD, 2010	National Institutes of Health	None	Body weight	LDL
Foster, 2003	National Institutes of Health	Note 5	Not relevant	Changes in weight
Truby et al, 2006 and Morgan et al, 2008	British Broadcasting Corporation	None	NS	NS

Volek, 2009	Graduate School and the Health Disparity EXPORT Center	NR	NS	NS
Brehm, 2005	Atkins Foundation	NR	NS	NS
Davis, 2009	The Robert C. Atkins Foundation and The Diabetes Research and Training Center, clinical and translational science award	None	Weight	Blood pressure and lipids
Westman, 2008	Robert C. Atkins Foundation	None	NS	NS
McAuley, 2005	Health Research Council of New Zealand	None	NS	NS
Dansinger, 2005	General Clinical Research Center	Note 6	Change from baseline weight at 1 year	Not relevant
Yancy, 2004	Atkins Foundation	Note 7	Body weight	Not relevant
Aldana, 2007	Excellence in Academic Medicine Act of The State of Minis	NR	NS	NS
Blumenthal, 2000	National Institutes of Health	NR	weight loss	Not relevant
Brinkworth, 2004	Meadow Lea Foods	None	NS	NS
Das, 2007	National Institutes of Health	None	Body weight	Not relevant
Ebbeling, 2007	National Institute of Diabetes and Digestive and Kidney Diseases	None	Body fat percentage	Not relevant
Guldbrand, 2012	University Hospital of Linköping Research Funds	None	Weight	Not relevant
Haufe, 2011, Haufe, 2012	Federal Ministry of Education and Research	None	Weight loss	Not relevant
Collins CE, 2010	Australian Research Council Linkage Project	Note 8	Not relevant	Weight, blood pressure
Heshka, 2000	Weight Watchers International	Note 9	Change in body weight	Blood pressure
Jen et al, 2004 and Djuric et al, 2002	Weight Watchers International	NR	NS	NS
Layman, 2005	Illinois Council on Food and Agriculture Research, National Cattlemen's Beef Association, The Beef Board, Kraft Foods	NR	NS	NS
Layman, 2009	National Cattlemen's Beef Association	None	HDL	Changes in LDL
Ello-Martin, 2007	National Institutes of Health	None	Weight loss	Not relevant
Stern et al, 2004 and	Veterans Affairs Healthcare Network Competitive Pilot Project Grant	None	Weight loss	Serum lipid levels

Samaha et al, 2003				
Thomson, 2010	Robert C. and Veronica Atkins Foundation	NR	NS	NS
Yamada, 2014	NR	None	Body weight	Lipid levels, HDL, LDL
Rock, 2007	Jenny Craig Inc	None	NS	NS
Rock, 2010	Jenny Craig Inc	NR	Weight loss	Not relevant
Rippe, 1998	Weight Watchers International	NR	NS	NS
Womble, 2004	Pilot Study Grant from the North American Association for the Study of Obesity	NR	Change in body weight	Not relevant
Jolly, 2011	NHS South Birmingham	None	NS	NS
Pinto, 2013	National Institute of Diabetes and Digestive and Kidney Diseases	None	Weight change	Not relevant
Wadden, 2004	National Institute of Diabetes Digestive and Kidney Disease	None	NS	NS
Galletly, 2007	NR	NR	NS	NS
Goodrick, 1998	National Institute of Diabetes and Digestive and Kidney Diseases Grant	NR	Weight	Not relevant
Luscombe, 2002	Meadow Lea Foods	NR	NS	NS
Luscombe, 2003	Health and Medical Research Grant and the Dairy Research and Development Corporation of Australia	NR	NS	NS
Jenkins, 2014	Solae, LLC, Loblaw Companies Limited	Note 10	Change in body weight	Not relevant
Kitabchi, 2013	Medical Student Research Fellowship	None	NS	NS
Lim, 2010	National Heart Foundation	None	Differences in weight	Not relevant
Mellberg, 2014	The Swedish Council for Working Life and Social Research	None	NS	NS
Ornish, 1990	National Heart, Lung, and Blood Institute	NR	NS	NS
Rock, 2014	Jenny Craig Inc	Note 11	Weight change	Not relevant
Sacks, 2009	National Heart, Lung, and Blood Institute and the General Clinical Research Center, National Institutes of Health	None	Change in body weight	Not relevant
Saslow, 2014	William K. Bowes, Jr. Foundation	None	Not relevant	Changes in lipids and weight
Tay, 2014	National Health and Medical Research Council	None	Not relevant	Blood lipids and pressure
Wycherley, 2012	Meat and Livestock Australia	None	NS	NS
Wycherley, 2013	Meat and Livestock Australia	None	NS	NS

Aude, 2004	Agatston Research Institute	NR	Weight loss	Blood lipid levels
Johnston, 2013	Weight Watchers International	None	Weight loss	Not relevant
Landers, 2002	NR	NR	Weight loss	Not relevant
Panunzio, 2011	NR	NR	NS	NS
Liu, 2013	Ministry of Science and Technology of China	None	NS	NS
Jebb, 2011	Weight Watchers International	None	Weight change over 12 months	Blood pressure
Ahern, 2017	National Prevention Research Initiative, Weight Watchers International	None	Change in body weight at 12 months	Body weight at 3 months and 24 months
Guldbrand, 2014	University Hospital of Linkoping Research Funds	None	NS	NS
Veum, 2017	Western Norway Regional Health Authority, Meltzerfondet, Bergen Medical Research Foundation, and the University of Bergen.	None	NS	NS
Hill, 2015	National Institutes of Health	None	HDL, SBP, DBP	Not relevant
Foroozani, 2017	Grant from Vice-chancellor for Research, Kashan University of Medical Sciences	None	NS	NS
Azadi, 2016	Shahid Sadoughi University of Medical Sciences	None	NS	NS
Ramprasad, 2014; Jenkins, 2011	This work was supported by the CRCE of the Federal Government of Canada (Drs Jenkins, Jones, and Lamarche), CIHR, AFM Net, Loblaws Brands Ltd, Solae (St Louis, Missouri), and Unilever (Vlaardingen, the Netherlands, and Toronto, Ontario, Canada). Dr. Jenkins receives salary support as a Canada Research Chair from the federal government of Canada. Unilever Research and Development provided the donation of margarines used in the study and Can-Oat Milling, a division of Viterra Inc (Portage La Prairie, Manitoba, Canada), provided the generous donation of HiFi medium oat bran used for the study breads and funding for freezer acquisition. St Michael's Hospital Foundation provided funding for the production of the study booklet	Note 12	NS	NS
Green, 2015	National Institute of Diabetes and Digestive and Kidney Diseases,	Note 13	Weight change	Blood pressure
Ma, 2015	National Heart, Lung and Blood Institute, Palo Alto Medical Foundation Research Institute	None	NS	NS

Austel, 2015	Taste of Sweden Deutschland	None	NS	NS
Abenavoli, 2017	NR	None	NS	NS
Yang, 2016	Weight Watchers International	NR	Body weight change	Not relevant
Baetge, 2017	Curves International	None	NS	NS
Marrero, 2016	Weight Watchers International	Note 14	Change in body weight	Blood pressure, HDL
Kafeshani, 2015	Research Council of Food Security Research Center, Isfahan University of Medical Sciences	None	NS	NS
Fito, 2014	Spanish Ministry of Health, Centro Nacional de Investigaciones Cardiovasculares	None	NS	NS
Brader, 2014; Uusitupa, 2013	Supported by NordForsk NCoE in Food Nutrition and Health and by the Academy of Finland, Finnish Diabetes Research Foundation, Finnish Foundation for Cardiovascular Research, The Sigrid Juselius Foundation and EVO funding from Kuopio University Hospital (Finland); the Druvan Foundation, ESPEN and Ska ⁿ e University Hospital, The Heart–Lung Foundation, Diabetesfonden and Foundation Cerealia (Sweden); The Danish Council for Strategic Research (DairyHealth, BioFunCarb), Aarhus University (Denmark), The Agricultural Productivity Fund (Iceland) and the Icelandic Research Fund for graduate students	None	NS	NS
Davis, 2017a	National Health and Medical Research Council	None	Blood pressure	Not relevant
Jenkins, 2017	Institute of Nutrition, Metabolism, Diabetes of the Canadian Institute for Health Research	Note 15	Body weight change	Not relevant
O'Neil, 2016	Weight Watchers International	Note 16	Not relevant	Weight change, cardiovascular risk factors

Most of RCTs (90.98%) received funding support, in which 34.7% were funded in-part or in-whole by diet company. 57.8% reported that none of the authors declared a conflict of interest. 52.0% studies did not specify the primary outcome. 7.4% studies specified the primary outcomes that were not our targeted outcomes. 53.7% studies did not specify the secondary outcome. 21.5% studies specified the primary outcomes that were not our targeted outcomes.

Notes:

NR = not reported

NS = not specified (the outcomes didn't subdivided into the primary outcomes or secondary outcomes.)

“Not relevant” means that the primary/secondary outcomes reported in RCTs were not our targeted outcomes (our targeted outcomes include weight loss, SBP, DBP, LDL, HDL, and CRP).

* means acronym undefined

Note 1: Bibus has received consulting fees from companies that make fish oil, Coromega Co., Vista, CA, and Enreco, Inc., Newton, WI. He also has equity ownership in Lipid Technologies, LLC, Austin, MN, the company that performed the plasma fatty acid analysis. Bibus owns patents related to lipid therapy. He has served as an expert witness regarding lipids and fatty acids.

Note 2: Ruth, Shah, Port, Bourland, Istfan, Nelson and Gokce have no competing interests. Apovian has served on the advisory boards for Allergan, Amylin, Orexigen, Merck, Johnson and Johnson, Abbott, Arena, Zafgen, Novo Nordisk and SanofiAventis and has received research funding from Lilly, Amylin, Pfizer, Sanofi-Aventis, Orexigen, MetaProteomics, and the Dr. Robert C. and Veronica Atkins Foundation.

Note 3: DRM and PAD have received research funding from the Sugar Bureau. SB has no competing interests to declare.

Note 4: DKL received grant/research support from the funding agencies for this research: the National Cattleman's Beef Association, The Beef Board and Kraft Foods.

Note 5: Dr. Foster reports having received consulting fees from Abbott Laboratories and HealtheTech and lecture fees from Abbott Laboratories and Roche Laboratories. Dr. Wyatt reports having received consulting fees from Ortho-McNeil, USANA, and GlaxoSmithKline and lecture fees from Roche Laboratories, Abbott Laboratories, Slim-Fast, and Ortho-McNeil. Dr. Hill reports having received consulting fees from HealtheTech, Johnson & Johnson, Procter & Gamble, Coca-Cola, and the International Life Sciences Institute; lecture fees from Abbott Laboratories, Roche Laboratories, and Kraft Foods; and grant support from M&M Mars, Procter & Gamble, and Abbott Laboratories. Dr. Szapary reports having received lecture fees from AstraZeneca and Kos Pharmaceuticals and grant support from AstraZeneca. Dr. Klein reports having received consulting fees from Roche Laboratories and HealtheTech, lecture fees from Ortho-McNeil, and grants from GlaxoSmithKline and Regeneron.

Note 6: The General Clinical Research Center scientific staff provided consultation in the design of the study. The General Clinical Research Center nursing staff provided assistance with the data collection. No sponsor participated in the analysis or interpretation of the data, manuscript preparation, review, or approval, or the decision to publish.

Note 7: Grants received: E.C. Westman (Robert C. Atkins Foundation); Grants pending: E.C. Westman and W.S. Yancy Jr. (Robert C. Atkins Foundation).

Note 8: CEC is a dietetic consultant to SP Health Co. M Neve received a PhD scholarship supplement from SP Health Co, and P Jones is employed as an Accredited Practising Dietitian by SP health Co. All other authors declare that they have no competing interests.

Note 9: Dr Anderson has received grants/research support from Abbott, AstraZeneca, Aventis, Bristol-Myers Squibb, GlaxoSmithKline, Health Management Resources, Johnson & Johnson, Kos, Merck, NutriPharma, Protein Technologies International, Procter&Gamble, Regeneron,

Roche, Schering- Plough, Tishcon, Weight Watchers, and Wyeth- Ayerst, has served as a consultant to GlaxoSmithKline, Health Management Resources, Johnson & Johnson, Knoll, NutriPharma, and Protein Technologies International, and has received honoraria from Abbott, Bristol- Myers Squibb, GlaxoSmithKline, NutriPharma, and Protein Technologies International; Dr Greenway is a consultant to Jenny Craig; and Dr Pi-Sunyer serves on the scientific advisory board for Weight Watchers

Note 10: DJAJ has served on the Scientific Advisory Board of Sanitarium Company, Agri-Culture and Agri-Food Canada (AAFC), Canadian Agriculture Policy Institute (CAPI), California Strawberry Commission, Loblaw Supermarket, Herbal Life International, Nutritional Fundamental for Health, Pacific Health Laboratories, Metagenics, Bayer Consumer Care, Orafti, Dean Foods, Kellogg's, Quaker Oats, Procter & Gamble, Coca-Cola, NuVal Griffin Hospital, Abbott, Pulse Canada, Saskatchewan Pulse Growers, and Canola Council of Canada; received honoraria for scientific advice from Sanitarium Company, Orafti, the Almond Board of California, the American Peanut Council, International Tree Nut Council Nutrition Research and Education Foundation and the Peanut Institute, Herbal Life International, Pacific Health Laboratories, Nutritional Fundamental for Health, Barilla, Metagenics, Bayer Consumer Care, Unilever Canada and Netherlands, Solae LLC, Oldways, Kellogg's, Quaker Oats, Procter & Gamble, Coca-Cola, NuVal Griffin Hospital, Abbott, Canola Council of Canada, Dean Foods, California Strawberry Commission, Haine Celestial, Pepsi, and Alpro Foundation; has been on the speakers panel for the Almond Board of California; received research grants from Saskatchewan Pulse Growers, the Agricultural Bioproducts Innovation Program (ABIP) through the Pulse Research Network (PURENet), Advanced Food Materials Network (AFMNet), Loblaw, Unilever, Barilla, Almond Board of California, Coca-Cola, Solae LLC, Haine Celestial, Sanitarium Company, Orafti, International Tree Nut Council Nutrition Research and Education Foundation and the Peanut Institute, the Canola and Flax Councils of Canada, Calorie Control Council, Canadian Institutes of Health Research (CIHR), Canada Foundation for Innovation, and the Ontario Research Fund; and received travel support to meetings from the Solae LLC, Sanitarium Company, Orafti, AFMNet, Coca-Cola, The Canola and Flax Councils of Canada, Oldways Preservation Trust, Kellogg's, Quaker Oats, Griffin Hospital, Abbott Laboratories, Dean Foods, the California Strawberry Commission, American Peanut Council, Herbal Life International, Nutritional Fundamental for Health, Metagenics, Bayer Consumer Care, AAFC, CAPI, Pepsi, Almond Board of California, Unilever, Alpro Foundation, International Tree Nut Council, Barilla, Pulse Canada, and the Saskatchewan Pulse Growers. CWCK reported being on speakers bureaus for Almond Board of California, Solae LLC, and Unilever; and receiving research grants from CIHR, Unilever, Solae LLC, Loblaw Brands Ltd, International Tree Nut Council, and Almond Board of California. EV has received partial salary funding from research grants provided by Unilever, Loblaws, and the Almond Board of California. GP, RM and ESK are employees of Solae, LLC. JMWW was a recipient of a Canadian Institutes of Health Research (CIHR) Doctoral Research Award and is now a holder of a CIHR randomised controlled trials—mentoring program Training Grant.

Note 11: By contractual agreement, scientists at UCSD and the University of Minnesota have responsibility and independence regarding data management, analysis, and publication. The sponsor contributed to the development of the design and protocol through discussions with the investigators during the development phase of the study. The funding sponsor had no role in

the conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript (except for verifying the specific weight loss program activities that comprised the intervention); and decision to submit the manuscript for publication. No other potential conflicts of interest relevant to this article were reported.

Note 12: Dr. Ramprasath reported receiving grants from CRCE of the Federal Government of Canada, CIHR, AFM Net, Loblaw Brands Ltd, Solae, and Unilever. Dr. Jenkins reported serving on the Scientific Advisory Board of Unilever, Sanitarium Company, California Strawberry Commission, Loblaw Supermarket, Herbal Life International, Nutritional Fundamental for Health, Pacific Health Laboratories, Metagenics, Bayer Consumer Care, Orafiti, Dean Foods, Kellogg's, Quaker Oats, Procter & Gamble, Coca-Cola, NuVal Griffin Hospital, Abbott, Pulse Canada, Saskatchewan Pulse Growers, and Canola Council of Canada; receiving honoraria for scientific advice from the Almond

Board of California, International Tree Nut Council Nutrition Research and Education Foundation, Barilla, Unilever Canada, Solae, Oldways, Kellogg's, Quaker Oats, Procter & Gamble, Coca-Cola, NuVal Griffin Hospital, Abbott, Canola Council of Canada, Dean Foods, California Strawberry Commission, Haine Celestial, and Alpro Foundation; being on the speakers panel for the Almond Board of California; receiving research grants from Loblaw Brands Ltd, Unilever, Barilla, Almond Board of California, Solae, Haine Celestial, Sanitarium Company, Orafiti, International Tree Nut Council, and Peanut Institute; and receiving travel support to meetings from the Almond Board of California, Unilever, Alpro Foundation, and International Tree Nut Council. Dr. Jenkins' wife is a director of Glycemic Index Laboratories, Toronto, Ontario, Canada, and his sister, Caroline Brydson, contributed to the diet booklet used in the study, which may in the future be expanded to book form for the general public. Dr. Jones reported receiving grants from the Canadian Institutes of Health Research (CIHR), Canada Research Chair Endowment (CRCE) of the Federal Government of Canada, Advanced Foods and Materials Network (AFM Net), Danone, Enzymotec, and Unilever. Dr. Jones also serves as president of Nutritional Fundamentals for Health Inc, which markets plant sterols among other nutraceuticals. Dr. Lamarche reported receiving grants from CIHR and AFM Net, being a consultant and on speakers bureaus for Danone, and receiving royalties from Atrium Innovations. Dr. Kendall reported being on speakers bureaus for Almond Board of California, Solae, and Unilever; and receiving research grants from CIHR, Unilever, Solae, Loblaw Brands Ltd, International Tree Nut Council, and Almond Board of California. Dr. Faulkner reported receiving grants from CRCE of the Federal Government of Canada, CIHR, AFM Net, Loblaw Brands Ltd, Unilever, and Solae. Ms. Cermakova reported receiving grants from CRCE of the Federal Government of Canada, CIHR, AFM Net, Loblaw Brands Ltd, Unilever, Solae, and Viterra Food Processing-Oat and Specialty Grain Milling. Dr. de Souza reported receiving grants from Coca-Cola, Calorie Control Council, and CIHR. Mr. Ireland reported receiving grants from CRCE of the Federal Government of Canada, CIHR, AFM Net, Loblaw Brands Ltd, Solae, and Unilever. Ms. Patel reported receiving grants from CRCE of the Federal Government of Canada, CIHR, AFM Net, Loblaw Brands Ltd, Solae, and Unilever. Dr. Bashyam reported receiving grants from CIHR, CRCE of the Federal Government of Canada, AFM Net, Loblaw Brands Ltd, Solae, and Unilever. No other authors reported any conflict of interest.

Note 13: Dr. Green has received grant support from AHRQ, the Kaiser Permanente Center for Safety and Effectiveness Research, the Kaiser Permanente Community Benefit Initiative, NIDA,

NIDDK, NIH, NIMH, and Purdue Pharma; she has also provided research consultation for The Industry PMR (the Industry PMR consortium is comprised of Actavis, Endo Pharmaceuticals, Janssen Pharmaceuticals, Mallinckrodt, Pfizer, Purdue Pharma, Rhodes Pharmaceuticals, Roxane Laboratories, and Zogenix). Dr. Yarborough has received grant support from AHRQ, the Kaiser Permanente Center for Safety and Effectiveness Research, the Kaiser Permanente Community Benefit Initiative, NCCAM, NIDA, NIDDK, NIMH, and Purdue Pharma. Dr. Leo has received funding from GenomeDX Biosciences and Pfizer. Mr. Yarborough has received grant support from the Kaiser Permanente Community Benefit Initiative, NIDDK, NIMH, and Purdue Pharma. Mr. Stumbo has received grant support from AHRQ, the Health Resources and Services Administration, the Kaiser Permanente Community Benefit Initiative, the Lucile Packard Foundation for Children's Health, Maternal and Child Health Bureau, NCCAM, NIDDK, NIMH, and Purdue Pharma. Ms. Janoff has received grant support from AHRQ, the Kaiser Permanente Center for Safety and Effectiveness Research, NIDA, NIDDK, NIMH, and Purdue Pharma. Dr. Perrin has received grant support from AHRQ, the Centers for Disease Control and Prevention, the Kaiser Permanente Community Benefit Initiative, Kaiser Permanente Northwest, Merck, NCCAM, NCI, NCMHD, NHLBI, NIA, NICHD, NIDA, NIDDK, NIMH, NINR, NIOSH, Purdue Pharma, and the Veterans Administration. Dr. Nichols has received grant support from AHRQ, AstraZeneca, Bristol-Myers Squibb, GlaxoSmithKline, NHLBI, NIDDK, NIH, Novartis Pharmaceuticals, and Merck. Dr. Stevens has received grant support from AHRQ, NCCAM, NCI, NCRR, NHLBI, NICHD, NIDDK, NIH, and Kaiser Permanente Northwest.

Note 14: K. Miller-Kovach and G. D. Foster are both employed by Weight Watchers International

Note 15: Food items for the food basket were contributed by Loblaw Cos. Ltd., Alberta Barley Commission, Almond Board of CA, Barilla, ConAgra Foods, Earth's Own Food Co. Inc., International Nut Council, Kellogg Co., Mars Canada, Pepsi-QTG Canada, Puresource Natural Products, and So Soyab Inc. Dr. Jenkins has received research grants from Saskatchewan Pulse Growers, Agricultural Bioproducts Innovation Program through the Pulse Research Network, Advanced Foods and Material Network, Loblaw Cos. Ltd., Unilever, Barilla, Almond Board of CA, Agriculture and Agri-food Canada, Pulse Canada, Kellogg's Co., Canada, Quaker Oats, Canada, Procter & Gamble Technical Centre Ltd., Bayer Consumer Care, Pepsi/Quaker, International Nut & Dried Fruit, Soy Foods Association of North America, Coca-Cola Co. (investigator-initiated, unrestricted grant), Solae, Haine Celestial, Sanitarium Co., Orafti, International Tree Nut Council Nutrition Research and Education Foundation, Peanut Institute, Canola and Flax Councils of Canada, Canola Council of Canada, Canadian Institutes of Health Research, Canada Foundation for Innovation and Ontario Research Fund; and has served on the speaker's panel and scientific advisory board and has received travel support and honoraria from Almond Board of California, Canadian Agriculture Policy Institute, Loblaw Cos. Ltd., Griffin Hospital, Coca-Cola Co., Epicure, Danone, Saskatchewan Pulse Growers, Sanitarium Co., Orafti, American Peanut Council, International Tree Nut Council Nutrition Research and Education Foundation, Peanut Institute, Herbalife International, Pacific Health Laboratories, Nutritional Fundamental for Health, Metagenics, Bayer Consumer Care, Unilever Canada and Netherlands, Solae, Kellogg, Quaker Oats, Griffin Hospital, Abbott Laboratories, Dean Foods, California Strawberry Commission, Haine Celestial, PepsiCo, Alpro Foundation, Pioneer Hi-Bred International, DuPont Nutrition and Health, Spherix Consulting and WhiteWave Foods, Advanced Foods and Material Network,

Canola and Flax Councils of Canada, Nutritional Fundamentals for Health, Agri-Culture and Agri-Food Canada, the Canadian Agri-Food Policy Institute, Pulse Canada, Saskatchewan Pulse Growers, Soy Foods Association of North America, Nutrition Foundation of Italy, Nutra-Source Diagnostics, McDougall Program, Toronto Knowledge Translation Group (St. Michael's Hospital), Canadian College of Naturopathic Medicine, Hospital for Sick Children, Canadian Nutrition Society, American Society of Nutrition, Arizona State University, Paolo Sorbini Foundation and Institute of Nutrition, Metabolism, and Diabetes; and has received honoraria from U.S. Department of Agriculture; and has received the 2013 Award for Excellence in Research from the International Nut and Dried Fruit Council; and has received funding and travel support from Canadian Society of Endocrinology and Metabolism. Dr. de Souza has received personal fees from World Health Organization, Canadian Institutes for Health Research/Health Canada; and grants from Dietitians of Canada and Canadian Institutes for Health Research. Amy Jenkins is an employee of Vineland Research and Innovation Centre, a not-for-profit organization.

Note 16: PMO received grants from Orexigen Therapeutics, WWI, and Novo Nordisk; served on advisory groups for Novo Nordisk, Medscape/WebMD, Pfizer, and Janssen; and received honoraria from Novo Nordisk, Vindico CME, and Medscape/WebMD. TAW, KF, PLH, RFK, WTG, DMR, RJM, DW, WJR, and JLS received funding from MUSC to conduct this research at their sites. TAW received grants from Novo Nordisk and Nutrisystem; served on advisory boards for Orexigen.

Table S5: Summary of risk of bias by network nodes

Popular diets		Atkins (n=36)				DASH (n=18)				Jenny Craig (n=4)	
Individual RoB item	Overall RoB	Low RoB (n=23)		High RoB (n=13)		Low RoB (n=17)		High RoB (n=1)		Low RoB (n=4)	
		n	%	n	%	n	%	n	%	n	%
Sequence generation	Low	17	47.2%	8	22.2%	14	77.8%	1	5.6%	3	75.0%
	Unclear	6	16.7%	5	13.9%	3	16.7%	0	0.0%	1	25.0%
	High	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Allocation concealment	Low	15	41.7%	0	0.0%	9	50.0%	0	0.0%	1	25.0%
	Unclear	8	22.2%	13	36.1%	7	38.9%	1	5.6%	3	75.0%
	High	0	0.0%	0	0.0%	1	5.6%	0	0.0%	0	0.0%
Blinding (participants and personnel)	Low	5	13.9%	2	5.6%	7	38.9%	0	0.0%	2	50.0%
	Unclear	12	33.3%	8	22.2%	4	22.2%	0	0.0%	1	25.0%
	High	6	16.7%	3	8.3%	6	33.3%	1	5.6%	1	25.0%
Blinding (outcome assessors)	Low	7	19.4%	4	11.1%	10	55.6%	0	0.0%	1	25.0%
	Unclear	12	33.3%	7	19.4%	7	38.9%	1	5.6%	2	50.0%
	High	4	11.1%	2	5.6%	0	0.0%	0	0.0%	1	25.0%
Incomplete outcome data	Low	16	44.4%	0	0.0%	15	83.3%	0	0.0%	3	75.0%
	Unclear	2	5.6%	0	0.0%	2	11.1%	1	5.6%	1	25.0%
	High	5	13.9%	13	36.1%	0	0.0%	0	0.0%	0	0.0%

Table S5 continued: Summary of risk of bias by network nodes

Popular diets		Mediterranean (n=30)				Ornish (n=4)		Paleolithic (n=2)	
	Overall RoB	Low RoB (n=27)		High RoB (n=3)		Low RoB (n=4)		Low RoB (n=2)	
Individual RoB item		n	%	n	%	n	%	n	%
Sequence generation	Low	19	63.3%	0	0.0%	2	50.0%	2	100.0%
	Unclear	8	26.7%	3	10.0%	2	50.0%	0	0.0%
	High	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Allocation concealment	Low	12	40.0%	0	0.0%	2	50.0%	2	100.0%
	Unclear	15	50.0%	3	10.0%	2	50.0%	0	0.0%
	High	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Blinding (participants and personnel)	Low	10	33.3%	0	0.0%	3	75.0%	2	100.0%
	Unclear	12	40.0%	3	10.0%	0	0.0%	0	0.0%
	High	5	16.7%	0	0.0%	1	25.0%	0	0.0%
Blinding (outcome assessors)	Low	8	26.7%	1	3.3%	3	75.0%	1	50.0%
	Unclear	19	63.3%	2	6.7%	1	25.0%	1	50.0%
	High	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Incomplete outcome data	Low	24	80.0%	0	0.0%	3	75.0%	2	100.0%
	Unclear	1	3.3%	0	0.0%	0	0.0%	0	0.0%
	High	2	6.7%	3	10.0%	1	25.0%	0	0.0%

Table S5 continued: Summary of risk of bias by network nodes

Popular diets		Portfolio (n=1)		Rosemary Conley (n=2)				Slimming World (n=1)		South Beach (n=1)	
	Overall RoB	Low RoB (n=1)		Low RoB (n=1)		High RoB (n=1)		Low RoB (n=1)		Low RoB (n=1)	
Individual RoB item		n	%	n	%	n	%	n	%	n	%
Sequence generation	Low	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Unclear	0	0.0%	1	50.0%	1	50.0%	1	100.0%	1	100.0%
	High	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Allocation concealment	Low	1	100.0%	1	50.0%	0	0.0%	1	100.0%	0	0.0%
	Unclear	0	0.0%	0	0.0%	1	50.0%	0	0.0%	1	100.0%
	High	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Blinding (participants and personnel)	Low	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Unclear	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
	High	1	100.0%	1	50.0%	1	50.0%	1	100.0%	0	0.0%
Blinding (outcome assessors)	Low	1	100.0%	1	50.0%	0	0.0%	1	100.0%	1	100.0%
	Unclear	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	High	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%
Incomplete outcome data	Low	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
	Unclear	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	High	0	0.0%	1	50.0%	1	50.0%	1	100.0%	0	0.0%

Table S5 continued: Summary of risk of bias by network nodes

Popular diets		Biggest Loser (n=1)		Volumetric s (n=1)		Weight Watchers (n=14)				Zone (n=16)			
	Overall RoB	Low RoB (n=1)		High RoB (n=1)		Low RoB (n=10)		High RoB (n=4)		Low RoB (n=11)		High RoB (n=5)	
Individual RoB item		n	%	n	%	n	%	n	%	n	%	n	%
Sequence generation	Low	1	100.0 %	0	0.0%	6	42.9 %	1	7.1%	6	37.5 %	1	6.3%
	Unclear	0	0.0%	1	100.0 %	4	28.6 %	3	21.4 %	3	18.8 %	4	25.0 %
	High	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	12.5 %	0	0.0%
Allocation concealment	Low	1	100.0 %	0	0.0%	6	42.9 %	0	0.0%	4	25.0 %	0	0.0%
	Unclear	0	0.0%	1	100.0 %	3	21.4 %	4	28.6 %	7	43.8 %	5	31.3 %
	High	0	0.0%	0	0.0%	1	7.1%	0	0.0%	0	0.0%	0	0.0%
Blinding (participants and personnel)	Low	0	0.0%	0	0.0%	2	14.3 %	0	0.0%	4	25.0 %	0	0.0%
	Unclear	0	0.0%	0	0.0%	3	21.4 %	1	7.1%	4	25.0 %	5	31.3 %
	High	1	100.0 %	1	100.0 %	5	35.7 %	3	21.4 %	3	18.8 %	0	0.0%
Blinding (outcome assessors)	Low	1	100.0 %	0	0.0%	4	28.6 %	2	14.3 %	5	31.3 %	0	0.0%
	Unclear	0	0.0%	1	100.0 %	5	35.7 %	1	7.1%	5	31.3 %	5	31.3 %
	High	0	0.0%	0	0.0%	1	7.1%	1	7.1%	1	6.3%	0	0.0%
Incomplete outcome data	Low	1	100.0 %	0	0.0%	7	50.0 %	0	0.0%	8	50.0 %	0	0.0%
	Unclear	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	6.3%	0	0.0%
	High	0	0.0%	1	100.0 %	3	21.4 %	4	28.6 %	2	12.5 %	5	31.3 %

Table S5 continued: Summary of risk of bias by network nodes

Popular diets		Usual diet (n=31)				Dietary advice (n=26)				Low fat (n=72)			
Individual RoB item	Overall RoB	Low RoB (n=25)		High RoB (n=6)		Low RoB (n=22)		High RoB (n=4)		Low RoB (n=51)		High RoB (n=21)	
		n	%	n	%	n	%	n	%	n	%	n	%
Sequence generation	Low	18	58.1%	2	6.5%	10	38.5%	1	3.8%	32	44.4%	9	12.5%
	Unclear	7	22.6%	4	12.9%	12	46.2%	3	11.5%	17	23.6%	12	16.7%
	High	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	2.8%	0	0.0%
Allocation concealment	Low	10	32.3%	0	0.0%	8	30.8%	0	0.0%	25	34.7%	0	0.0%
	Unclear	14	45.2%	6	19.4%	13	50.0%	4	15.4%	26	36.1%	21	29.2%
	High	1	3.2%	0	0.0%	1	3.8%	0	0.0%	0	0.0%	0	0.0%
Blinding (participants and personnel)	Low	8	25.8%	0	0.0%	4	15.4%	0	0.0%	14	19.4%	2	2.8%
	Unclear	10	32.3%	4	12.9%	9	34.6%	4	15.4%	27	37.5%	15	20.8%
	High	7	22.6%	2	6.5%	9	34.6%	0	0.0%	10	13.9%	4	5.6%
Blinding (outcome assessors)	Low	11	35.5%	1	3.2%	8	30.8%	1	3.8%	18	25.0%	5	6.9%
	Unclear	14	45.2%	4	12.9%	12	46.2%	3	11.5%	29	40.3%	15	20.8%
	High	0	0.0%	1	3.2%	2	7.7%	0	0.0%	4	5.6%	1	1.4%
Incomplete outcome data	Low	22	71.0%	0	0.0%	20	76.9%	0	0.0%	40	55.6%	0	0.0%
	Unclear	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	6.9%	0	0.0%
	High	3	9.7%	6	19.4%	2	7.7%	4	15.4%	6	8.3%	21	29.2%

Table S6: GRADE assessment for 6-month weight loss in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet	1	185	NA	-0.79 (-5.23, 3.65)	No	No	No	Undetected	High	V serious	Low	No	Yes
Low fat	Usual diet	4	854	88.9	5.10 (2.73, 7.47)	No	Serious	No	Undetected	Mod	No	Mod	No	Yes
Low CHO	Usual diet	1	168	NA	9.78 (-0.77, 20.30)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Moderate Macro	Usual diet	18	2373	92.9	2.80 (1.72, 3.91)	No	Serious	No	Undetected	Mod	No	Mod	Yes	Yes
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	9	2841	93.7	2.99 (1.51, 4.46)	No	Serious	No	Undetected	Mod	No	Mod	NA	NA
Low CHO	Low fat	6	436	0.0	0.73 (-1.16, 2.62)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Moderate Macro	Low fat	11	963	92.6	-1.47 (-2.83, -0.11)	No	Serious	No	Undetected	Mod	Serious	Low	Yes	Yes
Moderate Macro	Low CHO	44	3533	73.1	-1.46 (-2.22, -0.72)	No	Serious	No	Undetected	Mod	No	Mod	Yes	Yes

Table S6 continued: GRADE assessment for 6-month weight loss in macronutrient composition NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	0.07 (-1.79, 1.94)	Moder Macro	Mod	No	Mod	Serious	Low	0.02 (-1.72, 1.78)	0.756	High	No	Serious	Mod
Low fat	Usual diet	3.98 (2.31, 5.69)	Moder Macro	Mod	No	Mod	No	Mod	4.36 (3.03, 5.73)	0.579	Mod	No	No	Mod
Low CHO	Usual diet	4.45 (3.22, 5.69)	Moder Macro	Mod	No	Mod	No	Mod	4.63 (3.42, 5.87)	0.145	Mod	No	No	Mod
Moderate Macro	Usual diet	6.02 (1.74, 10.30)	Low carb, low fat	Mod	Serious	Low	No	Low	3.06 (2.05, 4.10)	0.147	Mod	No	No	Mod
Low fat	Dietary advice	4.35 (2.56, 6.15)	Moder Macro	Mod	No	Mod	No	Mod	4.35 (2.56, 6.15)	NA	Mod	No	No	Mod
Low CHO	Dietary advice	4.61 (3.01, 6.23)	Moder Macro	Mod	No	Mod	No	Mod	4.61 (3.01, 6.23)	NA	Mod	No	No	Mod
Moderate Macro	Dietary advice								3.04 (1.60, 4.48)	NA	Mod	No	No	Mod
Low CHO	Low fat	-0.11 (-1.66, 1.45)	Moder Macro	Mod	No	Mod	Serious	Low	0.27 (-0.91, 1.44)	0.502	High	No	Serious	Mod
Moderate Macro	Low fat	-1.37 (-3.54, 0.79)	Low carb	Mod	No	Mod	Serious	Low	-1.30 (-2.40, -0.22)	0.935	Mod	No	Serious	Low
Moderate Macro	Low CHO	-2.46 (-5.06, 0.14)	Low fat	Mod	No	Mod	Serious	Low	-1.57 (-2.29, -0.86)	0.46	Mod	No	No	Mod

Table S7: GRADE assessment for 6-month SBP reduction in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet	2	211	1.4	6.16 (0.38, 11.9)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Low CHO	Usual diet	1	80	NA	4.37 (-5.60, 14.3)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Moderate Macro	Usual diet	14	2458	77.7	3.43 (1.58, 5.29)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	6	2997	37.1	2.03 (-0.67, 4.75)	No	No	Serious	Undetected	Mod	Serious	Low	NA	No
Low CHO	Low fat	6	918	43.4	1.01 (-1.77, 3.81)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Moderate Macro	Low fat	8	909	69.2	-2.08 (-4.75, 0.65)	No	Serious	Serious	Undetected	Low	Serious	V low	Yes	Yes
Moderate Macro	Low CHO	33	3041	18.7	-1.51 (-2.91, -0.14)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes

Table S7 continued: GRADE assessment for 6-month SBP reduction in macronutrient composition NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	1.45 (-1.8, 4.69)	Moder Macro	Mod	No	Mod	Serious	Low	1.45 (-1.8, 4.69)	NA	Mod	No	Serious	Low
Low fat	Usual diet	4.19 (1.48, 6.94)	Moder Macro, low carb	Low	No	Low	Serious	V low	5.06 (2.52, 7.60)	0.510	Mod	No	Serious	Low
Low CHO	Usual diet	5.27 (3.00, 7.59)	Moder Macro	Mod	No	Mod	No	Mod	5.15 (3.01, 7.32)	0.824	Mod	No	No	Mod
Moderate Macro	Usual diet	3.47 (-4.24, 11.2)	Low carb, low fat	Low	No	Low	Serious	V low	3.49 (1.72, 5.25)	0.970	Mod	No	Serious	Low
Low fat	Dietary advice	3.59 (0.22, 6.99)	Moder Macro	Low	No	Low	Serious	V low	3.59 (0.22, 6.99)	NA	Low	No	Serious	V Low
Low CHO	Dietary advice	3.69 (0.69, 6.74)	Moder Macro	Mod	No	Mod	Serious	Low	3.69 (0.69, 6.74)	NA	Mod	No	Serious	Low
Moderate Macro	Dietary advice								2.03 (-0.70, 4.78)	NA	Mod	No	Serious	Low
Low CHO	Low fat	-1.52 (-4.58, 1.63)							0.09 (-1.94, 2.17)	0.216	High	No	Serious	Mod
Moderate Macro	Low fat	-1.85 (-5.38, 1.66)	usual, low carb	Mod	No	Mod	Serious	Low	-1.57 (-3.56, 0.44)	0.890	Mod	No	Serious	Low
Moderate Macro	Low CHO	-2.58 (-6.86, 1.78)	usual, low fat	Low	No	Low	Serious	V low	-1.67 (-2.99, -0.37)	0.629	Mod	No	Serious	Low

Table S8: GRADE assessment for 6-month DBP reduction in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet	2	211	0.0	3.09 (-0.18, 6.39)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Low CHO	Usual diet	1	80	NA	3.30 (-3.35, 9.94)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Moderate Macro	Usual diet	14	2458	74.2	1.89 (0.79, 2.98)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	6	2997	6.9	0.84 (-0.74, 2.41)	No	No	Serious	Undetected	Mod	Serious	Low	NA	No
Low CHO	Low fat	6	918	10.1	1.41 (-0.29, 3.13)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Moderate Macro	Low fat	8	909	30.5	-1.92 (-3.65, -0.18)	No	Serious	Serious	Undetected	Low	Serious	V low	Yes	Yes
Moderate Macro	Low CHO	32	2985	15.4	-1.09 (-1.94, -0.25)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes

Table S8 continued: GRADE assessment for 6-month DBP reduction in macronutrient composition NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	1.05 (-0.92, 3.02)	Moder Macro	Mod	No	Mod	Serious	Low	1.05 (-0.92, 3.02)	NA	Mod	No	Serious	Low
Low fat	Usual diet	2.55 (0.77, 4.36)	Moder Macro, low carb	Low	No	Low	Serious	V low	2.85 (1.30, 4.41)	0.744	Mod	No	Serious	Low
Low CHO	Usual diet	3.20 (1.78, 4.62)	Moder Macro	Mod	No	Mod	Serious	Low	3.22 (1.90, 4.54)	0.966	Mod	No	Serious	Low
Moderate Macro	Usual diet	1.61 (-2.83, 6.03)	Low carb, low fat	Low	No	Low	Serious	V low	1.89 (0.82, 2.96)	0.916	Mod	No	Serious	Low
Low fat	Dietary advice	1.8 (-0.28, 3.88)	Moder Macro	Low	No	Low	Serious	V low	1.8 (-0.28, 3.88)	NA	Low	No	Serious	V Low
Low CHO	Dietary advice	2.16 (0.32, 4.01)	Moder Macro	Mod	No	Mod	Serious	Low	2.16 (0.32, 4.01)	NA	Mod	No	Serious	Low
Moderate Macro	Dietary advice								0.83 (-0.83, 2.48)	NA	Mod	No	Serious	Low
Low CHO	Low fat	-1.31 (-3.22, 0.593)	Moder Macro, usual						0.37 (-0.93, 1.66)	0.029	High	No	Serious	Mod
Moderate Macro	Low fat	-0.39 (-2.48, 1.66)	usual, low carb	Mod	No	Mod	Serious	Low	-0.96 (-2.23, 0.29)	0.426	Mod	No	Serious	Low
Moderate Macro	Low CHO	-3.05 (-5.77, -0.30)	usual, low fat	Low	No	Low	Serious	V low	-1.33 (-2.16, -0.51)	0.178	Mod	No	Serious	Low

Table S9: GRADE assessment for 6-month LDL reduction in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-squares, %	MD (95% CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet	2	201	0.0	7.71 (-1.90, 17.2)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Low CHO	Usual diet	1	70	NA	2.71 (-24.7, 30.1)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Moderate Macro	Usual diet	12	1572	26.9	5.21 (1.77, 8.80)	No	No	No	Undetected	High	Serious	Mod	NA	No
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	4	1176	97.5	3.60 (-1.91, 9.34)	No	No	Serious	Undetected	Mod	Serious	Low	NA	No
Low CHO	Low fat	7	946	4.8	-6.35 (-10.9, -1.74)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Moderate Macro	Low fat	9	1019	54.9	-1.52 (-6.54, 3.55)	No	Serious	Serious	Undetected	Low	Serious	V low	Yes	Yes
Moderate Macro	Low CHO	38	3425	53.4	4.16 (1.90, 6.52)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes

Table S9 continued: GRADE assessment for 6-month LDL reduction in macronutrient composition NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95% CrI)	First order loop of the most contribution	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95% CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	1.6 (-5.03, 8.2)	Moder Macro	Mod	No	Mod	Serious	Low	1.60 (-5.03, 8.2)	NA	Mod	No	Serious	Low
Low fat	Usual diet	6.58 (1.53, 11.80)	Moder Macro	High	No	High	Serious	Mod	7.07 (2.44, 11.70)	0.828	High	No	Serious	Mod
Low CHO	Usual diet	0.69 (-3.36, 4.73)	Moder Macro	Mod	No	Mod	Serious	Low	1.00 (-2.95, 4.95)	0.807	Mod	No	Serious	Low
Moderate Macro	Usual diet								5.22 (1.9, 8.68)	NA	High	No	Serious	Mod
Low fat	Dietary advice	5.47 (-1.19, 12.16)	Moder Macro	Low	No	Low	Serious	V low	5.47 (-1.19, 12.16)	NA	Low	No	Serious	V Low
Low CHO	Dietary advice	-0.6 (-6.68, 5.56)	Moder Macro	Mod	No	Mod	Serious	Low	-0.6 (-6.68, 5.56)	NA	Mod	No	Serious	Low
Moderate Macro	Dietary advice								3.61 (-1.97, 9.44)	NA	Mod	No	Serious	Low
Low CHO	Low fat	-5.55 (-11.3, 0.29)							-6.07 (-9.59, -2.53)	0.820	High	No	Serious	Mod
Moderate Macro	Low fat	-1.93 (-8.32, 4.74)	low carb	Mod	No	Mod	Serious	Low	-1.85 (-5.33, 1.73)	0.962	Mod	No	Serious	Low
Moderate Macro	Low CHO	4.87 (-2.78, 12.6)	low fat	Low	No	Low	Serious	V low	4.21 (2.04, 6.48)	0.867	Mod	No	Serious	Low

Table S10: GRADE assessment for 6-month HDL increase in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet	2	201	0.0	-3.35 (-7.01, 0.32)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Low CHO	Usual diet	1	70	NA	2.69 (-6.13, 11.5)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Moderate Macro	Usual diet	12	1572	55.1	-0.74 (-2.22, 0.62)	No	No	No	Undetected	High	Serious	Mod	NA	No
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	4	1176	99.3	1.08 (-1.23, 3.31)	No	No	Serious	Undetected	Mod	Serious	Low	NA	No
Low CHO	Low fat	7	946	57.1	3.37 (1.20, 5.50)	No	No	No	Undetected	High	Serious	Mod	Yes	Yes
Moderate Macro	Low fat	9	1019	0.0	1.36 (-0.42, 3.16)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Moderate Macro	Low CHO	38	3425	61.7	-3.34 (-4.25, -2.45)	No	No	Serious	Undetected	Mod	No	Mod	Yes	Yes

Table S10 continued: GRADE assessment for 6-month HDL increase in macronutrient composition NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-1.97 (-4.68, 0.70)	Moder Macro	Mod	No	Mod	Serious	Low	-1.97 (-4.68, 0.7)	NA	Mod	No	Serious	Low
Low fat	Usual diet	-1.25 (-3.52, 0.94)	Moder Macro	High	No	High	Serious	Mod	-1.88 (-3.73, -0.04)	0.322	High	No	Serious	Mod
Low CHO	Usual diet	2.30 (0.55, 3.98)	Moder Macro	Mod	No	Mod	Serious	Low	2.31 (0.68, 3.87)	0.895	Mod	No	Serious	Low
Moderate Macro	Usual diet								-0.89 (-2.31, 0.44)	NA	High	No	Serious	Mod
Low fat	Dietary advice	0.10 (-2.61, 2.8)	Moder Macro	Mod	No	Mod	Serious	Low	0.1 (-2.61, 2.8)	NA	Mod	No	Serious	Low
Low CHO	Dietary advice	4.29 (1.77, 6.74)	Moder Macro	Mod	No	Mod	Serious	Low	4.29 (1.77, 6.74)	NA	Mod	No	Serious	Low
Moderate Macro	Dietary advice								1.09 (-1.28, 3.37)	NA	Mod	No	Serious	Low
Low CHO	Low fat	4.75 (2.62, 6.84)	Moder Macro	Mod	No	Mod	No	Mod	4.19 (2.69, 5.64)	0.398	High	No	No	High
Moderate Macro	Low fat	-1.43 (-4.40, 1.42)	low carb	Mod	No	Mod	Serious	Low	0.98 (-0.45, 2.36)	0.078	Mod	No	Serious	Low
Moderate Macro	Low CHO	-0.66 (-3.92, 2.64)	low fat	Mod	No	Mod	Serious	Low	-3.20 (-4.10, -2.33)	0.117	Mod	No	No	Mod

Table S11: GRADE assessment for 6-month CRP reduction in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet													
Low CHO	Usual diet													
Moderate Macro	Usual diet	6	485	91.9	0.09 (-0.82, 1.03)	No	Serious	No	Undetected	Mod	Serious	Low	NA	No
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	1	40	NA	2.80 (-0.548, 6.14)	No	No	Serious	Undetected	Mod	V serious	V low	NA	No
Low CHO	Low fat	2	171	0.0	-0.25 (-2.00, 1.47)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Moderate Macro	Low fat	2	278	0.0	-0.12 (-2.07, 1.80)	No	No	Serious	Undetected	Mod	Serious	Low	No	Yes
Moderate Macro	Low CHO	16	1592	68.7	-0.22 (-0.86, 0.41)	No	Serious	No	Undetected	Mod	Serious	Low	Yes	Yes

Table S11 continued: GRADE assessment for 6-month CRP reduction in macronutrient composition NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-2.7 (-6.73, 1.33)	Moder Macro	Mod	No	Mod	Serious	Low	-2.7 (-6.73, 1.33)	NA	Mod	No	Serious	Mod
Low fat	Usual diet	0.38 (-1.22, 2.04)	Moder Macro	Mod	No	Mod	Serious	Low	0.38 (-1.22, 2.04)	NA	Mod	No	Serious	Mod
Low CHO	Usual diet	0.29 (-0.8, 1.42)	Moder Macro	Mod	No	Mod	Serious	Low	0.29 (-0.8, 1.42)	NA	Mod	No	Serious	Mod
Moderate Macro	Usual diet								0.09 (-0.81, 1.02)	NA	Mod	No	Serious	Mod
Low fat	Dietary advice	3.08 (-1.06, 7.23)	Moder Macro	Mod	No	Mod	Serious	Low	3.08 (-1.06, 7.23)	NA	Mod	No	Serious	Mod
Low CHO	Dietary advice	2.99 (-0.98, 6.96)	Moder Macro	Mod	No	Mod	Serious	Low	2.99 (-0.98, 6.96)	NA	Mod	No	Serious	Mod
Moderate Macro	Dietary advice								2.80 (-0.548, 6.14)	NA	Mod	No	Serious	Mod
Low CHO	Low fat	0.34 (-2.26, 2.94)	Moder Macro	Mod	No	Mod	Serious	Low	-0.09 (-1.43, 1.25)	0.683	Mod	No	Serious	Mod
Moderate Macro	Low fat	-0.39 (-2.85, 2.05)	Low carb	Mod	No	Mod	Serious	Low	-0.29 (-1.65, 1.05)	0.902	Mod	No	Serious	Mod
Moderate Macro	Low CHO	0.28 (-3.10, 3.67)	Low fat	Mod	No	Mod	Serious	Low	-0.20 (-0.82, 0.41)	0.759	Mod	No	Serious	Mod

Table S12: Macronutrient composition NMA results for 6- and 12- months CRP reductions

	12-mo CRP reduction (n=8)				
6-mo CRP reduction (n=25)	Usual Diet				
	-2.7 (-6.73, 1.33)	Dietary Advice	0.86 (-1.18, 3.00)	0.01 (-1.21, 1.38)	0.15 (-0.90, 1.33)
	0.38 (-1.22, 2.04)	3.08 (-1.06, 7.23)	Low Fat	-0.85 (-2.62, 0.93)	-0.70 (-2.51, 1.08)
	0.29 (-0.80, 1.42)	2.99 (-0.98, 6.96)	-0.09 (-1.43, 1.24)	Low CHO	0.15 (-0.57, 0.83)
	0.09 (-0.81, 1.02)	2.79 (-1.14, 6.71)	-0.29 (-1.65, 1.05)	-0.20 (-0.82, 0.41)	Moderate Macronutrient

High certainty
Moderate certainty
Low certainty
Very low certainty

Table S13: Macronutrient composition NMA results for 12-month weight loss

Usual Diet				
-2.13 (-4.35, -0.13)	Dietary Advice			
3.34 (1.71, 4.99)	5.47 (3.67, 7.50)	Low Fat		
3.17 (1.55, 4.72)	5.31 (3.64, 7.11)	-0.16 (-1.42, 1.00)	Low CHO	
1.90 (0.45, 3.30)	4.03 (2.57, 5.66)	-1.44 (-2.58, -0.37)	-1.27 (-2.06, -0.46)	Moderate Macronutrient

Table S14: Macronutrient composition NMA results for 12-month SBP and DBP reductions

12-mo SBP reduction (n=62)	12-mo DBP reduction (n=61)				
	Usual Diet	-1.06 (-3.97, 2.34)	0.23 (-2.17, 2.99)	0.77 (-1.60, 3.41)	0.14 (-1.99, 2.64)
	-0.53 (-4.18, 3.50)	Dietary Advice	1.28 (-1.44, 4.00)	1.83 (-0.75, 4.21)	1.19 (-0.98, 3.37)
	-0.29 (-3.43, 3.17)	0.23 (-3.15, 3.61)	Low Fat	0.54 (-1.34, 2.27)	-0.08 (-1.74, 1.57)
	1.33 (-1.61, 4.56)	1.86 (-1.20, 4.87)	1.64 (-0.72, 3.92)	Low CHO	-0.63 (-1.77, 0.66)
	0.51 (-2.15, 3.49)	1.04 (-1.57, 3.62)	0.81 (-1.37, 2.96)	-0.83 (-2.37, 0.77)	Moderate Macronutrient

Table S15: Macronutrient composition NMA results for 12-month LDL reduction and HDL increase

12-mo LDL reduction (n=62)	12-mo HDL increase (n=61)				
	Usual Diet	-4.32 (-7.88, -0.75)	-2.90 (-5.61, -0.15)	0.07 (-2.47, 2.65)	-2.81 (-5.09, -0.52)
	-0.7 (-6.82, 5.70)	Dietary Advice	1.41 (-1.90, 4.76)	4.38 (1.37, 7.45)	1.50 (-1.23, 4.25)
	3.81 (-1.63, 9.87)	4.47 (-0.72, 10.24)	Low Fat	2.97 (0.93, 5.04)	0.09 (-1.81, 1.98)
	1.19 (-4.01, 6.93)	1.85 (-2.55, 6.80)	-2.62 (-6.69, 1.31)	Low CHO	-2.88 (-4.21, -1.59)
	1.45 (-3.29, 6.78)	2.10 (-1.43, 6.43)	-2.37 (-6.2, 1.51)	0.28 (-2.32, 2.91)	Moderate Macronutrient

Table S16: 6-month weight loss across all macronutrient composition diet classes when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies			
Healthy populations	Usual Diet	-0.93 (-2.68, 0.83)	3.48 (2.16, 4.83)	4.00 (2.73, 5.29)	2.58 (1.57, 3.60)
	-0.67 (-3.10, 1.81)	Dietary Advice	4.42 (2.61, 6.23)	4.93 (3.26, 6.62)	3.51 (2.04, 4.98)
	4.28 (2.11, 6.52)	4.95 (2.29, 7.63)	Low Fat	0.51 (-0.68, 1.71)	-0.90 (-1.97, 0.15)
	4.71 (2.86, 6.67)	5.38 (3.10, 7.72)	0.44 (-1.34, 2.24)	Low CHO	-1.42 (-2.24, -0.61)
	2.62 (1.09, 4.23)	3.29 (1.32, 5.30)	-1.66 (-3.46, 0.15)	-2.09 (-3.27, -0.93)	Moderate Macronutrient

Table S17: 6-month weight loss across all macronutrient composition diet classes when restricted to studies without diet company support

Usual Diet				
0.93 (-1.31, 3.16)	Dietary Advice			
4.01 (2.61, 5.46)	3.09 (0.79, 5.41)	Low Fat		
4.47 (3.11, 5.89)	3.55 (1.36, 5.76)	0.46 (-0.81, 1.73)	Low CHO	
2.77 (1.69, 3.90)	1.85 (-0.14, 3.86)	-1.24 (-2.40, -0.09)	-1.7 (-2.62, -0.80)	Moderate Macronutrient

Table S18: 6-month SBP reduction across all macronutrient composition diet classes when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies			
Healthy populations	Usual Diet	0.93 (-3.16, 4.99)	4.16 (1.17, 7.17)	5.26 (2.58, 7.96)	3.66 (1.64, 5.72)
	1.51 (-3.10, 6.11)	Dietary Advice	3.22 (-1.00, 7.49)	4.33 (0.37, 8.31)	2.73 (-0.77, 6.30)
	5.91 (2.37, 9.68)	4.37 (-0.15, 9.28)	Low Fat	1.11 (-1.35, 3.55)	-0.49 (-2.83, 1.87)
	5.71 (2.73, 8.86)	4.18 (0.16, 8.54)	-0.19 (-2.79, 2.35)	Low CHO	-1.60 (-3.40, 0.22)
	3.27 (0.64, 5.91)	1.75 (-2.00, 5.58)	-2.63 (-5.56, 0.06)	-2.44 (-4.32, -0.74)	Moderate Macronutrient

Table S19: 6-month SBP across all macronutrient composition diet classes when restricted to studies without diet company support

Usual Diet				
2.13 (-2.10, 6.41)	Dietary Advice			
4.81 (1.72, 7.90)	2.68 (-1.74, 7.03)	Low Fat		
5.59 (2.86, 8.37)	3.45 (-0.58, 7.52)	0.78 (-1.67, 3.29)	Low CHO	
3.61 (1.41, 5.84)	1.49 (-2.15, 5.09)	-1.20 (-3.64, 1.28)	-1.98 (-3.80, -0.19)	Moderate Macronutrient

Table S20: 6-month DBP reduction across all macronutrient composition diet classes when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies			
Healthy populations	Usual Diet	0.56 (-2.05, 3.07)	2.62 (0.74, 4.52)	3.40 (1.71, 5.10)	1.82 (0.54, 3.10)
	1.10 (-1.14, 3.15)	Dietary Advice	2.06 (-0.57, 4.80)	2.85 (0.39, 5.40)	1.27 (-0.91, 3.53)
	2.63 (0.72, 4.65)	1.52 (-0.48, 3.92)	Low Fat	0.78 (-0.80, 2.36)	-0.80 (-2.32, 0.70)
	3.27 (1.67, 4.93)	2.16 (0.44, 4.19)	0.64 (-0.73, 1.93)	Low CHO	-1.58 (-2.73, -0.44)
	1.86 (0.43, 3.25)	0.75 (-0.80, 2.46)	-0.77 (-2.35, 0.63)	-1.41 (-2.41, -0.52)	Moderate Macronutrient

Table S21: 6-month DBP reduction across all macronutrient composition diet classes when restricted to studies without diet company support

Usual Diet				
1.59 (-0.96, 4.23)	Dietary Advice			
2.57 (0.69, 4.47)	0.98 (-1.76, 3.65)	Low Fat		
3.48 (1.81, 5.17)	1.89 (-0.63, 4.35)	0.91 (-0.63, 2.46)	Low CHO	
1.96 (0.61, 3.31)	0.37 (-1.90, 2.54)	-0.61 (-2.17, 0.92)	-1.52 (-2.66, -0.40)	Moderate Macronutrient

Table S22: 6-month LDL reduction across all macronutrient composition diet classes when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies			
Healthy populations	Usual Diet	-0.44 (-7.26, 6.85)	5.88 (1.38, 10.61)	2.17 (-1.45, 6.40)	4.67 (1.65, 7.96)
	3.98 (-9.33, 17.41)	Dietary Advice	6.24 (-0.90, 13.53)	2.44 (-3.94, 9.62)	5.04 (-1.23, 11.48)
	7.89 (0.23, 15.42)	3.93 (-9.61, 17.16)	Low Fat	-3.67 (-7.06, -0.06)	-1.19 (-4.71, 2.32)
	1.00 (-5.44, 7.59)	-2.98 (-15.60, 9.70)	-6.88 (-12.02, -1.50)	Low CHO	2.52 (-0.01, 4.65)
	4.11 (-1.53, 9.88)	0.14 (-11.94, 12.21)	-3.78 (-9.50, 2.18)	3.10 (-0.64, 6.84)	Moderate Macronutrient

Table S23: 6-month LDL reduction across all macronutrient composition diet classes when restricted to studies without diet company support

Usual Diet				
0.93 (-7.47, 9.27)	Dietary Advice			
6.73 (0.90, 12.57)	5.80 (-2.50, 14.21)	Low Fat		
0.96 (-4.26, 6.37)	0.01 (-7.63, 7.96)	-5.77 (-10.06, -1.36)	Low CHO	
4.75 (0.39, 9.32)	3.81 (-3.11, 11.10)	-1.97 (-6.33, 2.51)	3.79 (0.59, 7.02)	Moderate Macronutrient

Table S24: 6-month HDL increase across all macronutrient composition diet classes when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies			
Healthy populations	Usual Diet	-2.45 (-6.53, 1.84)	-1.60 (-3.92, 0.58)	2.14 (0.06, 4.04)	-0.66 (-2.41, 0.89)
	-0.73 (-5.21, 3.51)	Dietary Advice	0.89 (-3.54, 4.84)	4.62 (0.33, 8.39)	1.84 (-2.32, 5.42)
	-1.57 (-4.08, 1.22)	-0.86 (-5.00, 3.92)	Low Fat	3.73 (2.02, 5.43)	0.93 (-0.71, 2.55)
	2.13 (-0.15, 4.29)	2.87 (-1.21, 7.04)	3.69 (1.48, 5.57)	Low CHO	-2.80 (-3.96, -1.65)
	-0.85 (-2.85, 0.97)	-0.11 (-4.02, 3.81)	0.72 (-1.67, 2.67)	-2.98 (-4.33, -1.69)	Moderate Macronutrient

Table S25: 6-month HDL increase across all macronutrient composition diet classes when restricted to studies without diet company support

Usual Diet				
-2.60 (-5.28, 0.10)	Dietary Advice			
-2.76 (-4.75, -0.76)	-0.17 (-2.86, 2.53)	Low Fat		
1.21 (-0.66, 2.99)	3.82 (1.26, 6.23)	3.97 (2.34, 5.53)	Low CHO	
-1.50 (-3.06, -0.01)	1.10 (-1.19, 3.26)	1.26 (-0.32, 2.76)	-2.71 (-3.81, -1.61)	Moderate Macronutrient

Table S26: 6-month weight loss across all macronutrient composition diet classes after adjusting for behavior support and exercise

Usual Diet				
-0.21 (-1.81, 1.42)	Dietary Advice			
2.69 (1.16, 4.27)	2.90 (1.05, 4.78)	Low Fat		
3.14 (1.74, 4.59)	3.36 (1.66, 5.07)	0.45 (-0.64, 1.56)	Low CHO	
1.57 (0.28, 2.90)	1.78 (0.20, 3.39)	-1.11 (-2.15, -0.09)	-1.57 (-2.24, -0.91)	Moderate Macronutrient

Table S27: 6-month SBP and DBP reductions across all macronutrient composition diet classes after adjusting for behavior support and exercise

6-mo SBP reduction	6-mo DBP reduction				
	Usual Diet	1.81 (-0.68, 4.29)	2.79 (1.20, 4.41)	3.28 (1.92, 4.64)	1.88 (0.76, 3.00)
	2.10 (-0.95, 5.07)	Dietary Advice	0.98 (-1.64, 3.67)	1.47 (-0.86, 3.83)	0.07 (-2.19, 2.36)
	4.13 (1.68, 6.58)	2.03 (-1.27, 5.39)	Low Fat	0.49 (-0.86, 1.82)	-0.92 (-2.12, 0.36)
	4.37 (2.29, 6.47)	2.62 (-0.68, 5.30)	0.24 (-1.67, 2.15)	Low CHO	-1.40 (-2.25, -0.55)
	2.49 (0.73, 4.23)	0.38 (-2.35, 3.18)	-1.64 (-3.50, 0.21)	-1.88 (-3.15, -0.64)	Moderate Macronutrient

Table S28: 6-month LDL reduction and HDL increase across all macronutrient composition diet classes after adjusting for behavior support and exercise

		6-mo HDL reduction			
		6-mo LDL reduction	Usual Diet	-2.26 (-5.09, 0.62)	-1.95 (-3.87, -0.04)
1.70 (-4.23, 7.83)	Dietary Advice		0.32 (-2.67, 3.22)	4.53 (1.81, 7.08)	1.39 (-1.22, 3.81)
6.62 (2.24, 11.08)	4.93 (-1.36, 11.05)		Low Fat	4.21 (2.65, 5.73)	1.07 (-0.46, 2.52)
1.13 (-2.63, 4.88)	-0.58 (-6.26, 4.95)		-5.51 (-8.90, -2.11)	Low CHO	-3.15 (-4.05, -2.26)
5.07 (1.91, 8.30)	3.36 (-1.84, 8.53)		-1.56 (-4.89, 1.83)	3.95 (1.85, 6.09)	Moderate Macronutrient

Table S29: GRADE assessment for 6-month weight loss in individual popular diets NMA

Comparisons		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet	4	482	0.0	-0.231 (-2.31, 1.86)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Low fat	Usual diet	6	916	86.0	4.87 (3.42, 6.36)	No	Serious	No	Undetected	Mod	No	Mod	Yes	Yes
Atkins	Usual diet	1	80	NA	9.78 (1.07, 18.5)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
DASH	Usual diet	8	1119	88.0	3.15 (1.93, 4.37)	No	Serious	Serious	Undetected	Low	No	Low	Yes	Yes
Jenny Craig	Usual diet	1	47	NA	5.42 (-6.32, 17.2)	No	No	No	Undetected	High	V serious	Low	No	Yes
Mediterranean	Usual diet	8	725	91.2	2.11 (0.791, 3.49)	No	Serious	No	Undetected	Mod	No	Mod	Yes	Yes
Ornish	Usual diet													
Paleolithic	Usual diet													
Portfolio	Usual diet													
Rosemary Conley	Usual diet	2	233	53.1	4.05 (-0.430, 8.54)	No	Serious	No	Undetected	Mod	Serious	Low	NA	No
Slimming World	Usual diet	1	157	NA	1.29 (-2.42, 5.01)	No	No	No	Undetected	High	Serious	Mod	NA	No
South Beach	Usual diet													
The Biggest Loser	Usual diet	1	260	NA	2.88 (2.25, 3.50)	No	No	No	Undetected	High	Serious	Mod	NA	No
Volumetrics	Usual diet													
Weight Watchers	Usual diet	5	795	72.7	4.99 (2.78, 7.16)	Serious	Serious	No	Undetected	Mod	No	Mod	No	Yes
Zone	Usual diet													
Low fat	Dietary advice	4	331	86.7	5.63 (3.76, 7.47)	No	Serious	No	Undetected	Mod	No	Mod	Yes	Yes
Atkins	Dietary advice													

DASH	Dietary advice	2	778	0.0	2.87 (0.519, 5.23)	No	No	Serious	Undetected	Mod	No	Mod	No	Yes
Jenny Craig	Dietary advice	3	554	0.0	6.01 (3.72, 8.29)	No	No	No	Undetected	High	No	High	Yes	No
Mediterranean	Dietary advice	1	166	NA	0.692 (-3.37, 4.75)	No	No	Serious	Undetected	Mod	Serious	Low	No	Yes
Ornish	Dietary advice	1	93	NA	3.20 (1.18, 5.22)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Paleolithic	Dietary advice													
Portfolio	Dietary advice													
Rosemary Conley	Dietary advice	1	257	NA	2.38 (1.09, 3.68)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Slimming World	Dietary advice	1	262	NA	1.34 (0.222, 2.46)	No	No	No	Undetected	High	Serious	Mod	NA	NA
South Beach	Dietary advice													
The Biggest Loser	Dietary advice													
Volumetrics	Dietary advice													
Weight Watchers	Dietary advice	7	2675	97.9	3.37 (2.16, 4.58)	No	Serious	No	Undetected	Mod	No	Mod	Yes	No
Zone	Dietary advice													
Atkins	Low fat	32	2575	49.8	1.65 (0.964, 2.34)	No	No	Serious	Undetected	Mod	No	Mod	Yes	Yes
DASH	Low fat	5	735	0.0	0.89 (-0.58, 2.35)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Jenny Craig	Low fat	1	227	NA	7.07 (5.89, 8.26)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Mediterranean	Low fat	4	220	0.0	0.39 (-1.54, 2.37)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Ornish	Low fat	1	117	NA	-1.10 (-3.62, 1.41)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Paleolithic	Low fat	1	61	NA	4.91 (-0.46, 10.3)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Portfolio	Low fat	1	345	NA	-0.13 (-2.76, 2.50)	No	No	Serious	Undetected	Mod	Serious	Low	NA	NA
Rosemary Conley	Low fat													
Slimming World	Low fat													
South Beach	Low fat	1	45	NA	6.10 (3.65, 8.54)	No	No	No	Undetected	High	Serious	Mod	NA	NA

The Biggest Loser	Low fat													
Volumetrics	Low fat	1	71	NA	2.20 (0.130, 4.27)	Serious	No	No	Undetected	Mod	Serious	Low	NA	NA
Weight Watchers	Low fat	1	83	NA	-0.90 (-3.00, 1.20)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Zone	Low fat	14	775	58.7	0.28 (-0.77, 1.35)	No	Serious	No	Undetected	Mod	Serious	Low	Yes	Yes
DASH	Atkins													
Jenny Craig	Atkins													
Mediterranean	Atkins													
Ornish	Atkins	2	168	44.7	-2.59 (-6.01, 0.88)	No	Serious	No	Undetected	Mod	Serious	Low	Yes	Yes
Paleolithic	Atkins													
Portfolio	Atkins													
Rosemary Conley	Atkins	1	81	NA	-0.10 (-7.60, 7.40)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Slimming World	Atkins													
South Beach	Atkins													
The Biggest Loser	Atkins													
Volumetrics	Atkins													
Weight Watchers	Atkins	2	139	0.0	-1.05 (-5.18, 3.07)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Zone	Atkins	4	257	0.0	-1.63 (-4.07, 0.81)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Jenny Craig	DASH													
Mediterranean	DASH													
Ornish	DASH													
Paleolithic	DASH													
Portfolio	DASH													
Rosemary Conley	DASH													

Slimming World	DASH														
South Beach	DASH														
The Biggest Loser	DASH														
Volumetrics	DASH														
Weight Watchers	DASH														
Zone	DASH														
Mediterranean	Jenny Craig														
Ornish	Jenny Craig														
Paleolithic	Jenny Craig														
Portfolio	Jenny Craig														
Rosemary Conley	Jenny Craig														
Slimming World	Jenny Craig														
South Beach	Jenny Craig														
The Biggest Loser	Jenny Craig														
Volumetrics	Jenny Craig														
Weight Watchers	Jenny Craig	1	56	NA	-0.98 (-11.2, 9.22)	No	No	No	Undetected	High	V serious	Low	No	Yes	
Zone	Jenny Craig														
Ornish	Mediterranean														
Paleolithic	Mediterranean	1	29	NA	1.20 (-0.91, 3.31)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	No	
Portfolio	Mediterranean														
Rosemary Conley	Mediterranean														
Slimming World	Mediterranean														
South Beach	Mediterranean														

The Biggest Loser	Mediterranean														
Volumetrics	Mediterranean														
Weight Watchers	Mediterranean														
Zone	Mediterranean														
Paleolithic	Ornish														
Portfolio	Ornish														
Rosemary Conley	Ornish														
Slimming World	Ornish														
South Beach	Ornish														
The Biggest Loser	Ornish														
Volumetrics	Ornish														
Weight Watchers	Ornish	1	51	NA	-2.00 (-8.10, 4.10)	No	No	Serious	Undetected	Mod	V serious	V low	No	Yes	
Zone	Ornish	2	150	0.0	0.053 (-3.19, 3.27)	No	No	No	Undetected	High	Serious	Mod	Yes	No	
Portfolio	Paleolithic														
Rosemary Conley	Paleolithic														
Slimming World	Paleolithic														
South Beach	Paleolithic														
The Biggest Loser	Paleolithic														
Volumetrics	Paleolithic														
Weight Watchers	Paleolithic														
Zone	Paleolithic														
Rosemary Conley	Portfolio														
Slimming World	Portfolio														

South Beach	Portfolio														
The Biggest Loser	Portfolio														
Volumetrics	Portfolio														
Weight Watchers	Portfolio														
Zone	Portfolio														
Slimming World	Rosemary Conley	1	165	NA	-1.04 (-4.64, 2.56)	No	No	No	Undetected	High	Serious	Mod	NA	NA	
South Beach	Rosemary Conley														
The Biggest Loser	Rosemary Conley														
Volumetrics	Rosemary Conley														
Weight Watchers	Rosemary Conley	2	254	NA	-0.30 (-4.28, 3.68)	No	No	No	Undetected	High	Serious	Mod	NA	NA	
Zone	Rosemary Conley														
South Beach	Slimming World														
The Biggest Loser	Slimming World														
Volumetrics	Slimming World														
Weight Watchers	Slimming World	1	171	NA	0.90 (-2.22, 4.02)	No	No	No	Undetected	High	Serious	Mod	NA	NA	
Zone	Slimming World														
The Biggest Loser	South Beach														
Volumetrics	South Beach														
Weight Watchers	South Beach														
Zone	South Beach														
Volumetrics	The Biggest Loser														
Weight Watchers	The Biggest Loser														

Zone	The Biggest Loser													
Weight Watchers	Volumetrics													
Zone	Volumetrics													
Zone	Weight Watchers	1	56	NA	0.50 (-3.87, 4.87)	No	No	Serious	Undetected	Mod	V serious	V low	No	Yes

Table S29 continued: GRADE assessment for 6-month weight loss in individual popular diets NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	0.73 (-0.75, 2.22)	Weight Watchers	Mod	No	Mod	Serious	Low	0.31 (-0.94, 1.59)	0.516	High	No	Serious	Mod
Low fat	Usual diet	2.76 (1.33, 4.24)	DASH	Low	No	Low	No	Low	3.76 (2.70, 4.86)	0.046	Mod	Serious	No	Low
Atkins	Usual diet	5.35 (4.07, 6.66)	Low fat	Mod	No	Mod	No	Mod	5.46 (4.19, 6.75)	0.209	Mod	No	No	Mod
DASH	Usual diet	4.59 (2.65, 6.55)	Low fat	Mod	No	Mod	No	Mod	3.63 (2.52, 4.76)	0.233	Mod	No	No	Mod
Jenny Craig	Usual diet	8.12 (5.79, 10.50)	Dietary advice	High	No	High	No	High	7.77 (5.51, 10.00)	0.559	High	No	No	High
Mediterranean	Usual diet	4.69 (2.12, 7.26)	Low fat	Mod	Serious	Low	No	Low	2.87 (1.60, 4.21)	0.103	Mod	No	No	Mod
Ornish	Usual diet	3.64 (1.33, 5.99)	Low fat	Mod	No	Mod	No	Mod	3.64 (1.33, 5.99)	NA	Mod	No	No	Mod
Paleolithic	Usual diet	5.31 (1.89, 8.82)	Mediterranean	Mod	No	Mod	No	Mod	5.31 (1.89, 8.82)	NA	Mod	No	No	Mod
Portfolio	Usual diet	3.64 (-0.68, 7.96)	Low fat	Mod	Serious	Low	Serious	V low	3.64 (-0.68, 7.96)	NA	Low	No	Serious	V low
Rosemary Conley	Usual diet	NA							3.76 (1.13, 6.45)	NA	Mod	No	No	Mod
Slimming World	Usual diet	NA							2.15 (-0.78, 5.11)	NA	High	No	Serious	Mod
South Beach	Usual diet	9.86 (5.64, 14.08)	Low fat	Mod	No	Mod	No	Mod	9.86 (5.64, 14.08)	NA	Mod	No	Serious	Low
The Biggest Loser	Usual diet	NA							2.88 (-0.44, 6.18)	NA	High	No	Serious	Mod
Volumetrics	Usual diet	5.95 (1.97, 9.98)	Low fat	Mod	No	Mod	No	Mod	5.95 (1.97, 9.98)	NA	Mod	No	No	Mod

Weight Watchers	Usual diet	3.42 (1.53, 5.32)	Dietary advice	Mod	No	Mod	No	Mod	3.90 (2.52, 5.31)	0.423	Mod	No	No	Mod
Zone	Usual diet	4.07 (2.57, 5.60)	Low fat	Mod	No	Mod	No	Mod	4.07 (2.57, 5.60)	NA	Mod	No	No	Mod
Low fat	Dietary advice	2.30 (0.85, 3.76)	Usual diet	Mod	No	Mod	Serious	Low	3.46 (2.26, 4.66)	0.011	Mod	Serious	No	Low
Atkins	Dietary advice	5.15 (3.78, 6.52)	Low fat	Mod	No	Mod	No	Mod	5.15 (3.78, 6.52)	NA	Mod	No	No	Mod
DASH	Dietary advice	3.48 (1.83, 5.11)	Usual diet	Low	No	Low	No	Low	3.33 (1.93, 4.71)	0.706	Mod	No	No	Mod
Jenny Craig	Dietary advice	11.00 (7.41, 14.50)							7.46 (5.39, 9.50)	0.019	High	Serious	No	Mod
Mediterranean	Dietary advice	2.77 (1.06, 4.52)	Usual diet	Mod	No	Mod	No	Mod	2.57 (0.94, 4.22)	0.458	Mod	No	No	Mod
Ornish	Dietary advice	3.41 (0.62, 6.25)	Low fat	Mod	No	Mod	Serious	Low	3.33 (1.08, 5.60)	0.931	Mod	No	No	Mod
Paleolithic	Dietary advice	5.01 (1.46, 8.61)	Low fat	Mod	No	Mod	No	Mod	5.01 (1.46, 8.61)	NA	Mod	No	No	Mod
Portfolio	Dietary advice	3.33 (-1.03, 7.69)	Low fat	Mod	Serious	Low	Serious	V low	3.33 (-1.03, 7.69)	NA	Low	No	Serious	V low
Rosemary Conley	Dietary advice	6.10 (0.67, 11.50)	weight Watchers						3.46 (0.843, 6.13)	0.256	High	No	Serious	Mod
Slimming World	Dietary advice	NA							1.85 (-1.05, 4.75)	NA	High	No	Serious	Mod
South Beach	Dietary advice	9.56 (5.30, 13.80)	Low fat	Mod	No	Mod	No	Mod	9.56 (5.30, 13.8)	NA	Mod	No	No	Low
The Biggest Loser	Dietary advice	2.58 (-0.99, 6.11)	Usual diet	High	Serious	Mod	Serious	Low	2.58 (-0.99, 6.11)	NA	Mod	No	Serious	Low
Volumetrics	Dietary advice	5.65 (1.63, 9.69)	Low fat	Mod	No	Mod	No	Mod	5.65 (1.63, 9.69)	NA	Mod	No	No	Mod
Weight Watchers	Dietary advice	4.26 (1.95, 6.55)	Low fat	Mod	No	Mod	No	Mod	3.60 (2.42, 4.77)	0.482	Mod	No	No	Mod
Zone	Dietary advice	3.77 (2.19, 5.35)	Low fat	Mod	No	Mod	No	Mod	3.77 (2.19, 5.35)	NA	Mod	No	No	Mod
Atkins	Low fat	1.26 (-2.00, 4.50)	Zone	Mod	No	Mod	Serious	Low	1.69 (0.97, 2.43)	0.807	Mod	No	No	Mod
DASH	Low fat	-1.29 (-3.01, 0.43)							-0.13 (-1.33, 1.06)	0.069	High	No	Serious	Mod
Jenny Craig	Low fat	2.06 (-0.58, 4.71)	Dietary advice	Mod	No	Mod	Serious	Low	4.01 (1.83, 6.13)	0.022	Mod	Serious	No	Low
Mediterranean	Low fat	-1.90 (-3.77, 0.02)	Usual diet	Mod	No	Mod	Serious	Low	-0.89 (-2.30, 0.56)	0.109	High	No	Serious	Mod

Ornish	Low fat	0.831 (-2.22, 3.92)							-0.12 (-2.29, 2.07)	0.434	High	No	Serious	Mod
Paleolithic	Low fat	0.13 (-3.98, 4.27)	Mediterranean	Mod	No	Mod	Serious	Low	1.57 (-1.88, 5.04)	0.213	High	No	Serious	Mod
Portfolio	Low fat	NA							-0.13 (-4.31, 4.05)	NA	Mod	No	Serious	Low
Rosemary Conley	Low fat	0.00 (-2.69, 2.71)	Usual diet	Mod	Serious	Low	Serious	V low	0.00 (-2.69, 2.71)	NA	Low	No	Serious	V low
Slimming World	Low fat	-1.61 (-4.61, 1.39)	Usual diet	Mod	No	Mod	Serious	Low	-1.61 (-4.61, 1.39)	NA	Mod	No	Serious	Low
South Beach	Low fat	NA							6.1 (2.02, 10.17)	NA	High	No	Serious	Mod
The Biggest Loser	Low fat	-0.89 (-4.38, 2.58)	Usual diet	Mod	Serious	Low	Serious	V low	-0.89 (-4.38, 2.58)	NA	Low	No	Serious	V low
Volumetrics	Low fat	NA							2.19 (-1.66, 6.04)	NA	Mod	No	Serious	Low
Weight Watchers	Low fat	0.29 (-1.20, 1.77)	Dietary advice	Mod	No	Mod	Serious	Low	0.19 (-1.25, 1.52)	0.571	Mod	No	Serious	Low
Zone	Low fat	0.26 (-3.79, 4.31)	Atkins	Mod	No	Mod	Serious	Low	0.310 (-0.76, 1.40)	0.991	Mod	No	Serious	Low
DASH	Atkins	-1.82 (-3.21, -0.45)	Low fat	Mod	No	Mod	Serious	Low	-1.82 (-3.21, -0.45)	NA	Mod	No	Serious	Low
Jenny Craig	Atkins	2.31 (0.06, 4.55)	Low fat	Mod	Serious	Low	Serious	V low	2.31 (0.06, 4.55)	NA	Low	No	Serious	V low
Mediterranean	Atkins	-2.59 (-4.16, -0.98)	Low fat	Mod	No	Mod	Serious	Low	-2.59 (-4.16, -0.98)	NA	Mod	No	Serious	Low
Ornish	Atkins	-1.90 (-6.04, 2.24)	Low fat	Mod	No	Mod	Serious	Low	-1.82 (-4.03, 0.42)	0.919	Mod	No	Serious	Low
Paleolithic	Atkins	-0.14 (-3.64, 3.41)	Low fat	Mod	No	Mod	Serious	Low	-0.14 (-3.64, 3.41)	NA	Mod	No	Serious	Low
Portfolio	Atkins	-1.82 (-6.07, 2.42)	Low fat	Mod	Serious	Low	Serious	V low	-1.82 (-6.07, 2.42)	NA	Low	No	Serious	V low
Rosemary Conley	Atkins	-2.43 (-5.59, 0.72)	Low fat, Usual diet	Mod	Serious	Low	Serious	V low	-1.69 (-4.45, 1.09)	0.52	Mod	No	Serious	Low
Slimming World	Atkins	-3.31 (-6.36, -0.24)	Low fat, Usual diet	Mod	No	Mod	Serious	Low	-3.31 (-6.36, -0.24)	NA	Mod	No	Serious	Low
South Beach	Atkins	4.41 (0.26, 8.53)	Low fat	Mod	No	Mod	Serious	Low	4.41 (0.26, 8.53)	NA	Mod	No	Serious	Low
The Biggest Loser	Atkins	-2.58 (-6.14, 0.95)	Low fat, Usual diet	Mod	No	Mod	Serious	Low	-2.58 (-6.14, 0.95)	NA	Mod	No	Serious	Low
Volumetrics	Atkins	0.50 (-3.42, 4.41)	Low fat	Mod	No	Mod	Serious	Low	0.50 (-3.42, 4.41)	NA	Mod	No	Serious	Low

Weight Watchers	Atkins	-1.58 (-3.28, 0.11)	Low fat	Mod	No	Mod	Serious	Low	-1.55 (-3.09, -0.04)	0.787	Mod	No	Serious	Low
Zone	Atkins	-1.23 (-2.77, 0.31)	Low fat	Mod	No	Mod	Serious	Low	-1.38 (-2.62, -0.14)	0.793	High	No	Serious	Mod
Jenny Craig	DASH	4.14 (1.82, 6.45)	Usual diet	Low	No	Low	No	Low	4.14 (1.82, 6.45)	NA	Low	No	No	Low
Mediterranean	DASH	-0.76 (-2.34, 0.87)	Usual diet	Low	No	Low	Serious	V low	-0.76 (-2.34, 0.87)	NA	Low	No	Serious	V low
Ornish	DASH	0 (-2.38, 2.42)	Low fat	High	No	High	Serious	Mod	0 (-2.38, 2.42)	NA	High	No	Serious	Mod
Paleolithic	DASH	1.68 (-1.84, 5.29)	Low fat	High	No	High	Serious	Mod	1.68 (-1.84, 5.29)	NA	High	No	Serious	Mod
Portfolio	DASH	0.01 (-4.35, 4.35)	Low fat	Mod	Serious	Low	Serious	V low	0.01 (-4.35, 4.35)	NA	Low	No	Serious	V low
Rosemary Conley	DASH	0.13 (-2.63, 2.93)	Usual diet	Low	Serious	V low	Serious	V low	0.13 (-2.63, 2.93)	NA	V low	No	Serious	V low
Slimming World	DASH	-1.48 (-4.53, 1.59)	Usual diet	Low	No	Low	No	Low	-1.48 (-4.53, 1.59)	NA	Low	No	Serious	V low
South Beach	DASH	6.23 (1.98, 10.48)	Low fat	High	No	High	No	High	6.23 (1.98, 10.48)	NA	High	No	No	Mod
The Biggest Loser	DASH	-0.76 (-4.26, 2.73)	Usual diet	Low	Serious	V low	Serious	V low	-0.76 (-4.26, 2.73)	NA	V low	No	Serious	V low
Volumetrics	DASH	2.32 (-1.7, 6.37)	Low fat	Mod	No	Mod	Serious	Low	2.32 (-1.70, 6.37)	NA	Mod	No	Serious	Low
Weight Watchers	DASH	0.26 (-1.29, 1.83)	Usual diet	Low	No	Low	Serious	V low	0.26 (-1.29, 1.83)	NA	Low	No	Serious	V low
Zone	DASH	0.44 (-1.15, 2.04)	Low fat	Mod	No	Mod	Serious	Low	0.44 (-1.15, 2.04)	NA	Mod	No	Serious	Low
Mediterranean	Jenny Craig	-4.90 (-7.33, -2.39)	Low fat	Mod	No	Mod	No	Mod	-4.90 (-7.33, -2.39)	NA	Mod	No	No	Low
Ornish	Jenny Craig	-4.14 (-7.03, -1.15)	Low fat	Mod	No	Mod	No	Mod	-4.14 (-7.03, -1.15)	NA	Mod	No	No	Low
Paleolithic	Jenny Craig	-2.46 (-6.42, 1.6)	Low fat	Mod	No	Mod	Serious	Low	-2.46 (-6.42, 1.60)	NA	Mod	No	Serious	Low
Portfolio	Jenny Craig	-4.14 (-8.83, 0.58)	Low fat	Mod	Serious	Low	Serious	V low	-4.14 (-8.83, 0.58)	NA	Low	No	Serious	V low
Rosemary Conley	Jenny Craig	-4.01 (-7.25, -0.7)	Usual diet	Mod	Serious	Low	No	Low	-4.01 (-7.25, -0.70)	NA	Low	No	No	V low
Slimming World	Jenny Craig	-5.62 (-9.1, -2.11)	Dietary advice	High	No	High	No	High	-5.62 (-9.1, -2.11)	NA	High	No	No	Mod
South Beach	Jenny Craig	2.09 (-2.49, 6.71)	Low fat	Mod	No	Mod	Serious	Low	2.09 (-2.49, 6.71)	NA	Mod	No	Serious	Low

The Biggest Loser	Jenny Craig	-4.89 (-8.88, -0.9)	Usual diet	High	Serious	Mod	No	Mod	-4.89 (-8.88, -0.90)	NA	Mod	No	No	Low
Volumetrics	Jenny Craig	-1.82 (-6.20, 2.61)	Low fat	Mod	No	Mod	Serious	Low	-1.82 (-6.20, 2.61)	NA	Mod	No	Serious	Low
Weight Watchers	Jenny Craig	-4.24 (-6.61, -1.87)	Dietary advice	Mod	Serious	Low	No	Low	-3.87 (-6.12, -1.58)	0.455	Low	No	No	Low
Zone	Jenny Craig	-3.69 (-6.06, -1.30)	Low fat	Mod	No	Mod	No	Mod	-3.69 (-6.06, -1.30)	NA	Mod	No	No	Low
Ornish	Mediterranean	0.77 (-1.76, 3.30)	Low fat	High	No	High	Serious	Mod	0.77 (-1.76, 3.30)	NA	High	No	Serious	Mod
Paleolithic	Mediterranean	5.96 (-0.48, 12.40)							2.45 (-0.86, 5.80)	0.212	Mod	No	Serious	Low
Portfolio	Mediterranean	0.77 (-3.68, 5.16)	Low fat	Mod	Serious	Low	Serious	V low	0.77 (-3.68, 5.16)	NA	Low	No	Serious	V low
Rosemary Conley	Mediterranean	0.89 (-1.99, 3.78)	Usual diet	Mod	Serious	Low	Serious	V low	0.89 (-1.99, 3.78)	NA	Low	No	Serious	V low
Slimming World	Mediterranean	-0.72 (-3.90, 2.42)	Usual diet	Mod	No	Mod	Serious	Low	-0.72 (-3.90, 2.42)	NA	Mod	No	Serious	Low
South Beach	Mediterranean	6.99 (2.66, 11.28)	Low fat	High	No	High	No	High	6.99 (2.66, 11.28)	NA	High	No	No	Mod
The Biggest Loser	Mediterranean	0.01 (-3.59, 3.52)	Usual diet	Mod	Serious	Low	Serious	V low	0.01 (-3.59, 3.52)	NA	Low	No	Serious	V low
Volumetrics	Mediterranean	3.08 (-1.04, 7.18)	Low fat	Mod	No	Mod	Serious	Low	3.08 (-1.04, 7.18)	NA	Mod	No	Serious	Low
Weight Watchers	Mediterranean	1.03 (-0.76, 2.77)	Usual diet	Mod	No	Mod	Serious	Low	1.03 (-0.76, 2.77)	NA	Mod	No	Serious	Low
Zone	Mediterranean	1.20 (-0.59, 2.97)	Low fat	Mod	No	Mod	Serious	Low	1.20 (-0.59, 2.97)	NA	Mod	No	Serious	Low
Paleolithic	Ornish	1.68 (-2.36, 5.75)	Low fat	High	No	High	Serious	Mod	1.68 (-2.36, 5.75)	NA	High	No	Serious	Mod
Portfolio	Ornish	0.00 (-4.74, 4.68)	Low fat	Mod	Serious	Low	Serious	V low	0.00 (-4.74, 4.68)	NA	Low	No	Serious	V low
Rosemary Conley	Ornish	0.12 (-3.22, 3.47)	Dietary advice	Mod	Serious	Low	Serious	V low	0.12 (-3.22, 3.47)	NA	Low	No	Serious	V low
Slimming World	Ornish	-1.49 (-5.07, 2.09)	Dietary advice	Mod	No	Mod	Serious	Low	-1.49 (-5.07, 2.09)	NA	Mod	No	Serious	Low
South Beach	Ornish	6.22 (1.59, 10.84)	Low fat	High	No	High	No	High	6.22 (1.59, 10.84)	NA	High	No	No	Mod
The Biggest Loser	Ornish	-0.76 (-4.83, 3.26)	Usual diet, Low fat	High	Serious	Mod	Serious	Low	-0.76 (-4.83, 3.26)	NA	Mod	No	Serious	Low
Volumetrics	Ornish	2.32 (-2.11, 6.72)	Low fat	Mod	No	Mod	Serious	Low	2.32 (-2.11, 6.72)	NA	Mod	No	Serious	Low

Weight Watchers	Ornish	0.92 (-1.78, 3.62)	Dietary advice	Mod	No	Mod	Serious	Low	0.26 (-2.14, 2.64)	0.329	Mod	No	Serious	Low
Zone	Ornish	0.65 (-3.56, 4.88)							0.44 (-1.87, 2.72)	0.745	High	No	Serious	Mod
Portfolio	Paleolithic	-1.68 (-7.16, 3.72)	Low fat	Mod	Serious	Low	Serious	V low	-1.68 (-7.16, 3.72)	NA	Low	No	Serious	V low
Rosemary Conley	Paleolithic	-1.55 (-5.85, 2.73)	Mediterranean, Usual diet	Mod	No	Mod	Serious	Low	-1.55 (-5.85, 2.73)	NA	Mod	No	Serious	Low
Slimming World	Paleolithic	-3.16 (-7.68, 1.28)	Mediterranean, Usual diet	Mod	No	Mod	Serious	Low	-3.16 (-7.68, 1.28)	NA	Mod	No	Serious	Low
South Beach	Paleolithic	4.55 (-0.83, 9.85)	Low fat	High	No	High	Serious	Mod	4.55 (-0.83, 9.85)	NA	High	No	Serious	Mod
The Biggest Loser	Paleolithic	-2.44 (-7.27, 2.29)	Mediterranean, Usual diet	Mod	Serious	Low	Serious	V low	-2.44 (-7.27, 2.29)	NA	Low	No	Serious	V low
Volumetrics	Paleolithic	0.64 (-4.54, 5.77)	Low fat	Mod	No	Mod	Serious	Low	0.64 (-4.54, 5.77)	NA	Mod	No	Serious	Low
Weight Watchers	Paleolithic	-1.42 (-5.08, 2.2)	Mediterranean, Usual diet	Mod	No	Mod	Serious	Low	-1.42 (-5.08, 2.2)	NA	Mod	No	Serious	Low
Zone	Paleolithic	-1.25 (-4.88, 2.36)	Low fat	Mod	No	Mod	Serious	Low	-1.25 (-4.88, 2.36)	NA	Mod	No	Serious	Low
Rosemary Conley	Portfolio	0.13 (-4.84, 5.13)	Usual diet, Low fat	Mod	Serious	Low	Serious	V low	0.13 (-4.84, 5.13)	NA	Low	No	Serious	V low
Slimming World	Portfolio	-1.49 (-6.62, 3.68)	Usual diet, Low fat	Mod	Serious	Low	Serious	V low	-1.49 (-6.62, 3.68)	NA	Low	No	Serious	V low
South Beach	Portfolio	6.22 (0.39, 12.06)	Low fat	Mod	Serious	Low	Serious	V low	6.22 (0.39, 12.06)	NA	Low	No	Serious	V low
The Biggest Loser	Portfolio	-0.75 (-6.21, 4.67)	Usual diet, Low fat	Mod	Serious	Low	Serious	V low	-0.75 (-6.21, 4.67)	NA	Low	No	Serious	V low
Volumetrics	Portfolio	2.32 (-3.36, 8.03)	Low fat	Mod	Serious	Low	Serious	V low	2.32 (-3.36, 8.03)	NA	Low	No	Serious	V low
Weight Watchers	Portfolio	0.26 (-4.14, 4.67)	Low fat	Mod	Serious	Low	Serious	V low	0.26 (-4.14, 4.67)	NA	Low	No	Serious	V low
Zone	Portfolio	0.43 (-3.88, 4.76)	Low fat	Mod	Serious	Low	Serious	V low	0.43 (-3.88, 4.76)	NA	Low	No	Serious	V low
Slimming World	Rosemary Conley	NA							-1.61 (-5.00, 1.75)	NA	High	No	Serious	Mod
South Beach	Rosemary Conley	6.11 (1.20, 10.97)	Usual diet, Low fat	Mod	No	Mod	No	Mod	6.11 (1.20, 10.97)	NA	Mod	No	No	Low
The Biggest Loser	Rosemary Conley	-0.88 (-5.18, 3.34)	Usual diet	Mod	Serious	Low	Serious	V low	-0.88 (-5.18, 3.34)	NA	Low	No	Serious	V low
Volumetrics	Rosemary Conley	2.20 (-2.53, 6.90)	Usual diet, Low fat	Mod	No	Mod	Serious	Mod	2.20 (-2.53, 6.90)	NA	Mod	No	Serious	Low

Weight Watchers	Rosemary Conley	NA							0.14 (-2.53, 2.76)	NA	High	No	Serious	Mod
Zone	Rosemary Conley	0.31 (-2.59, 3.18)	Usual diet, Low fat	Mod	Serious	Low	Serious	V low	0.31 (-2.59, 3.18)	NA	Low	No	Serious	V low
South Beach	Slimming World	7.72 (2.65, 12.75)	Usual diet, Low fat	High	No	High	No	High	7.72 (2.65, 12.75)	NA	High	No	No	Mod
The Biggest Loser	Slimming World	0.72 (-3.70, 5.14)	Usual diet	High	Serious	Mod	Serious	Low	0.72 (-3.7, 5.14)	NA	Mod	No	Serious	Low
Volumetric s	Slimming World	3.80 (-1.08, 8.69)	Usual diet, Low fat	Mod	No	Mod	Serious	Low	3.80 (-1.08, 8.69)	NA	Mod	No	Serious	Low
Weight Watchers	Slimming World	NA							1.75 (-1.19, 4.67)	NA	High	No	Serious	Mod
Zone	Slimming World	1.92 (-1.24, 5.09)	Usual diet, Low fat	High	No	High	Serious	Mod	1.92 (-1.24, 5.09)	NA	High	No	Serious	Mod
The Biggest Loser	South Beach	-6.99 (-12.35, -1.67)	Usual diet, Low fat	High	Serious	Mod	No	Mod	-6.99 (-12.35, -1.67)	NA	Mod	No	No	Low
Volumetric s	South Beach	-3.9 (-9.53, 1.68)	Low fat	Mod	No	Mod	Serious	Low	-3.90 (-9.53, 1.68)	NA	Mod	No	Serious	Low
Weight Watchers	South Beach	-5.96 (-10.25, -1.67)	Low fat	Mod	No	Mod	No	Mod	-5.96 (-10.25, -1.67)	NA	Mod	No	No	Low
Zone	South Beach	-5.79 (-10.01, -1.56)	Low fat	Mod	No	Mod	No	Mod	-5.79 (-10.01, -1.56)	NA	Mod	No	Serious	Low
Volumetric s	The Biggest Loser	3.07 (-2.08, 8.29)	Usual diet, Low fat	Mod	Serious	Low	Serious	V low	3.07 (-2.08, 8.29)	NA	Low	No	Serious	V low
Weight Watchers	The Biggest Loser	1.02 (-2.55, 4.62)	Usual diet	Mod	Serious	Low	Serious	V low	1.02 (-2.55, 4.62)	NA	Low	No	Serious	V low
Zone	The Biggest Loser	1.19 (-2.42, 4.86)	Usual diet, Low fat	High	Serious	Mod	Serious	Low	1.19 (-2.42, 4.86)	NA	Mod	No	Serious	Low
Weight Watchers	Volumetric s	-2.05 (-6.15, 2.02)	Low fat, dietary advice	Mod	No	Mod	Serious	Low	-2.05 (-6.15, 2.02)	NA	Mod	No	Serious	Low
Zone	Volumetric s	-1.88 (-5.88, 2.12)	Low fat	Mod	No	Mod	Serious	Low	-1.88 (-5.88, 2.12)	NA	Mod	No	Serious	Low
Zone	Weight Watchers	0.107 (-1.73, 1.96)	Low fat	Mod	No	Mod	Serious	Low	0.17 (-1.52, 1.88)	0.879	Mod	No	Serious	Low

* Although the credible interval of network evidence was narrow, we rated down one level for imprecision because these direct evidence informed indirect evidence had a large estimated effect with small sample size

Table S30: GRADE assessment for 6-month SBP reduction in individual popular diets NMA

Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet	1	65	NA	-0.39 (-17.30, 16.50)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Low fat	Usual diet	4	723	0.0	4.82 (1.54, 8.28)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Atkins	Usual diet	1	80	NA	4.40 (-3.43, 12.2)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
DASH	Usual diet	8	1150	84.1	4.67 (2.45, 6.99)	No	Serious	Serious	Undetected	Low	Serious	V low	Yes	Yes
Jenny Craig	Usual diet													
Mediterranean	Usual diet	6	677	48.9	2.71 (0.37, 5.12)	No	No	No	Undetected	Mod	Serious	Low	Yes	Yes
Ornish	Usual diet													
Paleolithic	Usual diet													
Portfolio	Usual diet													
Rosemary Conley	Usual diet	1	82	NA	1.70 (-4.74, 8.14)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA
The Biggest Loser	Usual diet	1	260	NA	3.18 (0.79, 5.58)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Volumetrics	Usual diet													
Weight Watchers	Usual diet	3	588	0.0	2.48 (-1.35, 6.27)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Zone	Usual diet													
Low fat	Dietary advice	1	98	NA	9.15 (5.11, 13.20)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Atkins	Dietary advice													
DASH	Dietary advice	2	598	0.0	2.75 (-1.23, 6.96)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Jenny Craig	Dietary advice													

Mediterranean	Dietary advice	2	217	0.0	1.36 (-3.82, 6.55)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Ornish	Dietary advice	1	93	NA	0.89 (-6.16, 7.94)	No	No	Serious	Undetected	Mod	V serious	V low	No	Yes
Paleolithic	Dietary advice													
Portfolio	Dietary advice													
Rosemary Conley	Dietary advice													
The Biggest Loser	Dietary advice													
Volumetrics	Dietary advice													
Weight Watchers	Dietary advice	3	1748	97.2	1.79 (-0.70, 4.46)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Zone	Dietary advice	1	24	NA	2.01 (-2.25, 6.27)	No	No	No	Undetected	High	V serious	Low	No	Yes
Atkins	Low fat	28	2572	0.0	1.19 (-0.13, 2.58)	No	No	No	Undetected	High	Serious	Mod	Yes	No
DASH	Low fat	3	655	41.1	2.25 (-0.74, 5.44)	No	No	No	Undetected	High	Serious	Mod	Yes	Yes
Jenny Craig	Low fat	1	212	NA	3.91 (-0.53, 8.35)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Mediterranean	Low fat	1	169	NA	-0.99 (-5.52, 3.53)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Ornish	Low fat	1	138	NA	-2.61 (-5.91, 0.70)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Paleolithic	Low fat	1	61	NA	10.70 (4.95, 16.40)	No	No	No	Undetected	High	V serious	Low	NA	NA
Portfolio	Low fat	1	345	NA	2.03 (-0.61, 4.68)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Rosemary Conley	Low fat													
The Biggest Loser	Low fat													
Volumetrics	Low fat	1	71	NA	-1.01 (-5.60, 3.58)	Serious	No	No	Undetected	Mod	Serious	Low	NA	NA
Weight Watchers	Low fat													
Zone	Low fat	6	462	0.0	-0.03 (-2.88, 2.84)	No	No	No	Undetected	High	No	High	Yes	No

DASH	Atkins													
Jenny Craig	Atkins													
Mediterranean	Atkins													
Ornish	Atkins	2	179	0.0	-4.90 (-9.91, 0.12)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Paleolithic	Atkins													
Portfolio	Atkins													
Rosemary Conley	Atkins	1	82	NA	-2.70 (-9.10, 3.69)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA
The Biggest Loser	Atkins													
Volumetrics	Atkins													
Weight Watchers	Atkins	2	139	0.0	-2.12 (-8.66, 4.49)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Zone	Atkins	3	260	0.0	-2.10 (-6.65, 2.53)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Jenny Craig	DASH													
Mediterranean	DASH	1	95	NA	2.99 (-3.59, 9.56)	No	No	Serious	Undetected	Mod	V serious	V low	No	Yes
Ornish	DASH													
Paleolithic	DASH													
Portfolio	DASH													
Rosemary Conley	DASH													
The Biggest Loser	DASH													
Volumetrics	DASH													
Weight Watchers	DASH													
Zone	DASH													
Mediterranean	Jenny Craig													
Ornish	Jenny Craig													
Paleolithic	Jenny Craig													

Portfolio	Jenny Craig														
Rosemary Conley	Jenny Craig														
The Biggest Loser	Jenny Craig														
Volumetrics	Jenny Craig														
Weight Watchers	Jenny Craig														
Zone	Jenny Craig														
Ornish	Mediterranean														
Paleolithic	Mediterranean														
Portfolio	Mediterranean														
Rosemary Conley	Mediterranean														
The Biggest Loser	Mediterranean														
Volumetrics	Mediterranean														
Weight Watchers	Mediterranean														
Zone	Mediterranean														
Paleolithic	Ornish														
Portfolio	Ornish														
Rosemary Conley	Ornish														
The Biggest Loser	Ornish														
Volumetrics	Ornish														
Weight Watchers	Ornish	1	51	NA	5.22 (-5.44, 15.90)	No	No	No	Undetected	High	V serious	Low	No	Yes	
Zone	Ornish	2	185	0.0	2.31 (-2.51, 7.24)	No	No	No	Undetected	High	Serious	Mod	Yes	No	
Portfolio	Paleolithic														
Rosemary Conley	Paleolithic														

The Biggest Loser	Paleolithic														
Volumetrics	Paleolithic														
Weight Watchers	Paleolithic														
Zone	Paleolithic														
Rosemary Conley	Portfolio														
The Biggest Loser	Portfolio														
Volumetrics	Portfolio														
Weight Watchers	Portfolio														
Zone	Portfolio														
The Biggest Loser	Rosemary Conley														
Volumetrics	Rosemary Conley														
Weight Watchers	Rosemary Conley	1	89	NA	-0.40 (-6.28, 5.48)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA	
Zone	Rosemary Conley														
Volumetrics	The Biggest Loser														
Weight Watchers	The Biggest Loser														
Zone	The Biggest Loser														
Weight Watchers	Volumetrics														
Zone	Volumetrics														
Zone	Weight Watchers	1	56	NA	-0.32 (-14.10, 13.40)	No	No	No	Undetected	High	V serious	Low	No	Yes	

Table S30 continued: GRADE assessment for 6-month SBP reduction in individual popular diets NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	1.25 (-1.13, 3.51)	Weight_Watchers	Mod	No	Mod	Serious	Low	0.58 (-1.85, 2.94)	0.694	Mod	No	Serious	Low
Low fat	Usual diet	2.51 (-0.32, 5.35)	DASH	Low	No	Low	Serious	V low	3.95 (1.81, 6.10)	0.273	High	No	Serious	Mod
Atkins	Usual diet	5.24 (2.66, 7.89)	Low fat	High	No	High	Serious	Mod	5.14 (2.78, 7.57)	0.803	High	No	Serious	Mod
DASH	Usual diet	4.76 (1.16, 8.51)	Low fat	High	No	High	Serious	Mod	4.68 (2.83, 6.64)	0.974	High	No	Serious	Mod
Jenny Craig	Usual diet	7.86 (1.52, 14.21)	Low fat	High	Serious	Mod	Serious	Low	7.86 (1.52, 14.21)	NA	Mod	No	Serious	Low
Mediterranean	Usual diet	3.64 (-0.37, 7.64)	Low fat	High	No	High	Serious	Mod	2.94 (0.95, 5.02)	0.692	High	No	Serious	Mod
Ornish	Usual diet	0.69 (-3.06, 4.35)	Low fat	High	No	High	Serious	Mod	0.69 (-3.06, 4.35)	NA	High	No	Serious	Mod
Paleolithic	Usual diet	14.56 (7.34, 21.85)	Low fat	High	No	High	Serious	Mod	14.56 (7.34, 21.85)	NA	High	No	Serious	Mod
Portfolio	Usual diet	5.97 (0.74, 11.18)	Low fat	High	No	High	Serious	Mod	5.97 (0.74, 11.18)	NA	High	No	Serious	Mod
Rosemary Conley	Usual diet	NA							2.39 (-2.62, 7.39)	NA	Mod	No	V serious	V low
The Biggest Loser	Usual diet	NA							3.17 (-1.46, 7.81)	NA	High	No	Serious	Mod
Volumetrics	Usual diet	2.93 (-3.46, 9.29)	Low fat	Mod	No	Mod	Serious	Low	2.93 (-3.46, 9.29)	NA	Mod	No	Serious	Low
Weight Watchers	Usual diet	2.80 (-0.84, 6.61)	Dietary advice	Mod	No	Mod	Serious	Low	2.80 (-0.84, 6.61)	NA	Mod	No	Serious	Low
Zone	Usual diet	3.46 (0.53, 6.44)	Low fat	High	No	High	Serious	Mod	3.46 (0.53, 6.44)	NA	High	No	Serious	Mod
Low fat	Dietary advice	1.97 (-0.47, 4.47)	DASH	High	No	High	Serious	Mod	3.37 (0.97, 5.85)	0.016	High	Serious	Serious	Low

Atkins	Dietary advice	4.54 (1.99, 7.19)	Low fat	Mod	No	Mod	Serious	Low	4.54 (1.99, 7.19)	NA	Mod	No	Serious	Low
DASH	Dietary advice	4.97 (1.90, 8.10)	Low fat	Mod	No	Mod	Serious	Low	4.09 (1.73, 6.65)	0.380	High	No	Serious	Mod
Jenny Craig	Dietary advice	7.29 (0.88, 13.72)	Low fat	Mod	Serious	Low	Serious	V low	7.29 (0.88, 13.72)	NA	Low	No	Serious	V low
Mediterranean	Dietary advice	2.77 (-0.45, 6.22)	Usual diet	Mod	No	Mod	Serious	Low	2.36 (-0.32, 5.16)	0.650	High	No	Serious	Mod
Ornish	Dietary advice	-0.07 (-4.18, 4.06)	Low fat	Mod	No	Mod	Serious	Low	0.13 (-3.52, 3.76)	0.841	Mod	No	Serious	Low
Paleolithic	Dietary advice	13.99 (6.71, 21.37)	Low fat	Mod	No	Mod	Serious	Low	13.99 (6.71, 21.37)	NA	Mod	No	Serious	Low
Portfolio	Dietary advice	5.39 (0.07, 10.75)	Low fat	Mod	No	Mod	Serious	Low	5.39 (0.07, 10.75)	NA	Mod	No	Serious	Low
Rosemary Conley	Dietary advice	1.81 (-3.33, 6.99)	Weight Watchers	Mod	No	Mod	Serious	Low	1.81 (-3.33, 6.99)	NA	Mod	No	Serious	Low
The Biggest Loser	Dietary advice	2.60 (-2.58, 7.84)	Usual diet	Mod	Serious	Low	Serious	V low	2.60 (-2.58, 7.84)	NA	Low	No	Serious	V low
Volumetrics	Dietary advice	2.34 (-4.13, 8.85)	Low fat	Mod	No	Mod	Serious	Low	2.34 (-4.13, 8.85)	NA	Mod	No	Serious	Low
Weight Watchers	Dietary advice	2.42 (-1.59, 6.51)							1.95 (-0.10, 4.18)	0.807	High	No	Serious	Mod
Zone	Dietary advice	3.24 (-0.20, 6.79)	Low fat	Mod	No	Mod	Serious	Low	2.90 (-0.03, 5.93)	0.719	High	No	Serious	Mod
Atkins	Low fat	0.78 (-4.20, 5.76)	Zone	High	No	High	Serious	Mod	1.19 (-0.06, 2.50)	0.860	High	No	Serious	Mod
DASH	Low fat	-1.10 (-4.33, 2.32)	Usual diet	Low	No	Low	Serious	V low	0.73 (-1.43, 3.01)	0.148	High	No	Serious	Mod
Jenny Craig	Low fat	NA							3.93 (-2.03, 9.86)	NA	High	No	Serious	Mod
Mediterranean	Low fat	-0.99 (-3.91, 2.02)	Usual diet	Mod	No	Mod	Serious	Low	-1.00 (-3.61, 1.65)	1.000	High	No	Serious	Mod
Ornish	Low fat	NA							-3.24 (-6.49, -0.01)	0.669	High	No	Serious	Mod
Paleolithic	Low fat	NA							10.63 (3.72, 17.57)	NA	High	No	Serious	Mod
Portfolio	Low fat	2.03 (-2.74, 6.77)							2.03 (-2.74, 6.77)	NA	High	No	Serious	Mod
Rosemary Conley	Low fat	-1.55 (-6.59, 3.49)	Atkins	Mod	No	Mod	Serious	Low	-1.55 (-6.59, 3.49)	NA	Mod	No	Serious	Low
The Biggest Loser	Low fat	-0.77 (-5.87, 4.35)	Usual diet	High	Serious	Mod	Serious	Low	-0.77 (-5.87, 4.35)	NA	Mod	No	Serious	Low

Volumetrics	Low fat	NA								-1.01 (-7.04, 4.99)	NA	Mod	No	Serious	Low
Weight Watchers	Low fat	-1.39 (-4.02, 1.33)	Atkins	High	No	High	Serious	Mod		-1.39 (-4.02, 1.33)	NA	High	No	Serious	Mod
Zone	Low fat	-1.04 (-6.24, 4.19)								-0.47 (-2.77, 1.86)	0.734	High	No	No	High
DASH	Atkins	-0.45 (-2.87, 2.04)	Low fat	High	No	High	No	High		-0.45 (-2.87, 2.04)	NA	High	No	No	High
Jenny Craig	Atkins	2.74 (-3.36, 8.77)	Low fat	High	Serious	Mod	Serious	Low		2.74 (-3.36, 8.77)	NA	Mod	No	Serious	Low
Mediterranean	Atkins	-2.18 (-4.98, 0.65)	Low fat	High	No	High	Serious	Mod		-2.18 (-4.98, 0.65)	NA	High	No	Serious	Mod
Ornish	Atkins	-3.73 (-12.40, 4.84)								-4.43 (-7.76, -1.20)	0.811	High	No	Serious	Mod
Paleolithic	Atkins	9.45 (2.42, 16.48)	Low fat	High	No	High	Serious	Mod		9.45 (2.42, 16.48)	NA	High	No	Serious	Mod
Portfolio	Atkins	0.85 (-4.13, 5.72)	Low fat	High	Serious	Mod	Serious	Low		0.85 (-4.13, 5.72)	NA	Mod	No	Serious	Low
Rosemary Conley	Atkins	NA								-2.74 (-7.80, 2.31)	NA	Mod	No	V serious	V low
The Biggest Loser	Atkins	-1.95 (-7.18, 3.25)	Usual diet	Mod	Serious	Low	Serious	V low		-1.95 (-7.18, 3.25)	NA	Low	No	Serious	V low
Volumetrics	Atkins	-2.20 (-8.39, 3.92)	Low fat	Mod	No	Mod	Serious	Low		-2.20 (-8.39, 3.92)	NA	Mod	No	Serious	Low
Weight Watchers	Atkins	-2.86 (-6.39, 0.65)	Usual diet	Mod	No	Mod	Serious	Low		-2.60 (-5.37, 0.19)	0.812	High	No	Serious	Mod
Zone	Atkins	-1.48 (-5.13, 2.14)	Low fat	High	No	High	Serious	Mod		-1.66 (-4.13, 0.80)	0.840	High	No	Serious	Mod
Jenny Craig	DASH	3.18 (-3.20, 9.50)	Low fat	High	No	High	Serious	Mod		3.18 (-3.20, 9.50)	NA	High	No	Serious	Mod
Mediterranean	DASH	-2.31 (-5.04, 0.34)	Usual diet	Low	No	Low	Serious	V low		-1.74 (-4.28, 0.77)	0.200	Mod	No	Serious	Low
Ornish	DASH	-3.98 (-7.85, -0.32)	Low fat	High	No	High	Serious	Mod		-3.98 (-7.85, -0.32)	NA	High	No	Serious	Mod
Paleolithic	DASH	9.89 (2.60, 17.14)	Low fat	High	No	High	Serious	Mod		9.89 (2.60, 17.14)	NA	High	No	Serious	Mod
Portfolio	DASH	1.30 (-4.02, 6.46)	Low fat	High	No	High	Serious	Mod		1.30 (-4.02, 6.46)	NA	High	No	Serious	Mod
Rosemary Conley	DASH	-2.29 (-7.51, 2.83)	Usual diet	Low	No	Low	Serious	V low		-2.29 (-7.51, 2.83)	NA	Low	No	Serious	V low
The Biggest Loser	DASH	-1.49 (-6.58, 3.45)	Usual diet	Low	Serious	V low	Serious	V low		-1.49 (-6.58, 3.45)	NA	V low	No	Serious	V low

Volumetrics	DASH	-1.76 (-8.19, 4.61)	Low fat	Mod	No	Mod	Serious	Low	-1.76 (-8.19, 4.61)	NA	Mod	No	Serious	Low
Weight Watchers	DASH	-2.13 (-4.87, 0.57)	Usual diet	Low	No	Low	Serious	V low	-2.13 (-4.87, 0.57)	NA	Low	No	Serious	V low
Zone	DASH	-1.21 (-4.26, 1.78)	Low fat	High	No	High	Serious	Mod	-1.21 (-4.26, 1.78)	NA	High	No	Serious	Mod
Mediterranean	Jenny Craig	-4.92 (-11.40, 1.62)	Low fat	High	Serious	Mod	Serious	Low	-4.92 (-11.40, 1.62)	NA	Mod	No	Serious	Low
Ornish	Jenny Craig	-7.18 (-13.99, -0.44)	Low fat	High	Serious	Mod	Serious	Low	-7.18 (-13.99, -0.44)	NA	Mod	No	Serious	Low
Paleolithic	Jenny Craig	6.71 (-2.42, 15.88)	Low fat	High	Serious	Mod	Serious	Low	6.71 (-2.42, 15.88)	NA	Mod	No	Serious	Low
Portfolio	Jenny Craig	-1.91 (-9.50, 5.72)	Low fat	High	Serious	Mod	Serious	Low	-1.91 (-9.50, 5.72)	NA	Mod	No	Serious	Low
Rosemary Conley	Jenny Craig	-5.48 (-13.30, 2.36)	Low fat, Atkins	Mod	Serious	Low	Serious	V low	-5.48 (-13.30, 2.36)	NA	Low	No	Serious	V low
The Biggest Loser	Jenny Craig	-4.70 (-12.54, 3.18)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	-4.70 (-12.54, 3.18)	NA	Mod	No	Serious	Low
Volumetrics	Jenny Craig	-4.94 (-13.40, 3.53)	Low fat	Mod	Serious	Low	Serious	V low	-4.94 (-13.40, 3.53)	NA	Low	No	Serious	V low
Weight Watchers	Jenny Craig	-5.32 (-11.80, 1.23)	Low fat, Atkins	Mod	Serious	Low	Serious	V low	-5.32 (-11.80, 1.23)	NA	Low	No	Serious	V low
Zone	Jenny Craig	-4.40 (-10.76, 2.00)	Low fat	High	Serious	Mod	Serious	Low	-4.40 (-10.76, 2.00)	NA	Mod	No	Serious	Low
Ornish	Mediterranean	-2.26 (-6.34, 1.66)	Low fat, Usual diet	Mod	No	Mod	Serious	Low	-2.26 (-6.34, 1.66)	NA	Mod	No	Serious	Low
Paleolithic	Mediterranean	11.62 (4.22, 19.02)	Low fat	High	No	High	Serious	Mod	11.62 (4.22, 19.02)	NA	High	No	Serious	Mod
Portfolio	Mediterranean	3.02 (-2.46, 8.40)	Low fat	High	No	High	Serious	Mod	3.02 (-2.46, 8.40)	NA	High	No	Serious	Mod
Rosemary Conley	Mediterranean	-0.56 (-5.89, 4.69)	Usual diet	Mod	No	Mod	Serious	Low	-0.56 (-5.89, 4.69)	NA	Mod	No	Serious	Low
The Biggest Loser	Mediterranean	0.23 (-4.88, 5.26)	Usual diet	Mod	Serious	Low	Serious	V low	0.23 (-4.88, 5.26)	NA	Low	No	Serious	V low
Volumetrics	Mediterranean	-0.02 (-6.64, 6.49)	Low fat	Mod	No	Mod	Serious	Low	-0.02 (-6.64, 6.49)	NA	Mod	No	Serious	Low
Weight Watchers	Mediterranean	-0.40 (-3.37, 2.57)	Usual diet	Mod	No	Mod	Serious	Low	-0.40 (-3.37, 2.57)	NA	Mod	No	Serious	Low
Zone	Mediterranean	0.51 (-2.79, 3.82)	Low fat	High	No	High	Serious	Mod	0.51 (-2.79, 3.82)	NA	High	No	Serious	Low
Paleolithic	Ornish	13.90 (6.26, 21.54)	Low fat	High	No	High	Serious	Mod	13.90 (6.26, 21.54)	NA	High	No	Serious	Mod

Portfolio	Ornish	5.28 (-0.47, 11.07)	Low fat	High	No	High	Serious	Mod	5.28 (-0.47, 11.07)	NA	High	No	Serious	Mod
Rosemary Conley	Ornish	1.71 (-4.11, 7.56)	Atkins	Mod	No	Mod	Serious	Low	1.71 (-4.11, 7.56)	NA	Mod	No	Serious	Low
The Biggest Loser	Ornish	2.48 (-3.40, 8.44)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	2.48 (-3.40, 8.44)	NA	Mod	No	Serious	Low
Volumetrics	Ornish	2.25 (-4.60, 9.06)	Low fat	Mod	No	Mod	Serious	Low	2.25 (-4.60, 9.06)	NA	Mod	No	Serious	Low
Weight Watchers	Ornish	1.06 (-3.26, 5.42)	Atkins	High	No	High	Serious	Mod	1.83 (-1.93, 5.72)	0.402	High	No	Serious	Mod
Zone	Ornish	2.33 (-6.57, 11.20)							2.78 (-0.69, 6.30)	0.970	High	No	Serious	Mod
Portfolio	Paleolithic	-8.61 (-17.02, -0.22)	Low fat	High	No	High	Serious	Mod	-8.61 (-17.02, -0.22)	NA	High	No	Serious	Low
Rosemary Conley	Paleolithic	-12.20 (-20.76, -3.59)	Low fat, Atkins	Mod	No	Mod	Serious	Low	-12.20 (-20.76, -3.59)	NA	Mod	No	Serious	Low
The Biggest Loser	Paleolithic	-11.40 (-20.01, -2.83)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	-11.40 (-20.01, -2.83)	NA	Mod	No	Serious	Low
Volumetrics	Paleolithic	-11.65 (-20.85, -2.51)	Low fat	Mod	No	Mod	Serious	Low	-11.65 (-20.85, -2.51)	NA	Mod	No	Serious	Low
Weight Watchers	Paleolithic	-12.02 (-19.44, -4.61)	Low fat, Atkins	Mod	No	Mod	Serious	Low	-12.02 (-19.44, -4.61)	NA	Mod	No	Serious	Low
Zone	Paleolithic	-11.11 (-18.40, -3.82)	Low fat	High	No	High	Serious	Mod	-11.11 (-18.40, -3.82)	NA	High	No	Serious	Mod
Rosemary Conley	Portfolio	-3.59 (-10.52, 3.40)	Low fat, Atkins	Mod	No	Mod	Serious	Low	-3.59 (-10.52, 3.40)	NA	Mod	No	Serious	Low
The Biggest Loser	Portfolio	-2.80 (-9.76, 4.20)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	-2.80 (-9.76, 4.20)	NA	Mod	No	Serious	Low
Volumetrics	Portfolio	-3.04 (-10.69, 4.60)	Low fat	Mod	No	Mod	Serious	Low	-3.04 (-10.69, 4.60)	NA	Mod	No	Serious	Low
Weight Watchers	Portfolio	-3.43 (-8.82, 2.10)	Low fat, Atkins	Mod	Serious	Low	Serious	V low	-3.43 (-8.82, 2.10)	NA	Low	No	Serious	V low
Zone	Portfolio	-2.51 (-7.76, 2.80)	Low fat	High	Serious	Mod	Serious	Low	-2.51 (-7.76, 2.80)	NA	Mod	No	Serious	Low
The Biggest Loser	Rosemary Conley	0.79 (-6.04, 7.62)	Usual diet	Mod	No	Mod	Serious	Low	0.79 (-6.04, 7.62)	NA	Mod	No	Serious	Low
Volumetrics	Rosemary Conley	0.54 (-7.34, 8.40)	Low fat, Atkins	Mod	No	Mod	Serious	Low	0.54 (-7.34, 8.40)	NA	Mod	No	Serious	Low
Weight Watchers	Rosemary Conley	NA							0.16 (-4.86, 5.25)	NA	Mod	No	V serious	V low
Zone	Rosemary Conley	1.08 (-4.34, 6.52)	Atkins	Mod	No	Mod	Serious	Low	1.08 (-4.34, 6.52)	NA	Mod	No	Serious	Low

Volumetrics	The Biggest Loser	-0.24 (-8.12, 7.63)	Low fat, Usual diet	Mod	Serious	Low	Serious	V low		-0.24 (-8.12, 7.63)	NA	Low	No	Serious	V low
Weight Watchers	The Biggest Loser	-0.63 (-5.86, 4.68)	Usual diet	Mod	Serious	Low	Serious	V low		-0.63 (-5.86, 4.68)	NA	Low	No	Serious	V low
Zone	The Biggest Loser	0.28 (-5.17, 5.80)	Low fat, Usual diet	High	Serious	Mod	Serious	Low		0.28 (-5.17, 5.80)	NA	Mod	No	Serious	Low
Weight Watchers	Volumetrics	-0.38 (-6.92, 6.24)	Low fat, Atkins	Mod	No	Mod	Serious	Low		-0.38 (-6.92, 6.24)	NA	Mod	No	Serious	Low
Zone	Volumetrics	0.54 (-5.87, 7.02)	Low fat	Mod	No	Mod	Serious	Low		0.54 (-5.87, 7.02)	NA	Mod	No	Serious	Low
Zone	Weight Watchers	1.20 (-2.24, 4.67)	Dietary advice	High	No	High	Serious	Mod		0.94 (-2.27, 4.15)	0.774	High	No	Serious	Mod

Table S31: GRADE assessment for 6-month DBP reduction in individual popular diets NMA

Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet	1	65	NA	0.50 (-9.16, 10.20)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
Low fat	Usual diet	4	723	0.0	2.47 (0.16, 4.87)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Atkins	Usual diet	1	80	NA	3.30 (-1.88, 8.49)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
DASH	Usual diet	8	1150	84.3	2.61 (1.04, 4.22)	No	Serious	Serious	Undetected	Low	Serious	V low	Yes	Yes
Jenny Craig	Usual diet													
Mediterranean	Usual diet	6	677	0.0	1.38 (-0.44, 3.20)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Ornish	Usual diet													
Paleolithic	Usual diet													
Portfolio	Usual diet													
Rosemary Conley	Usual diet	1	82	NA	2.00 (-1.76, 5.77)	Serious	No	No	Undetected	Mod	Serious	Low	NA	NA
The Biggest Loser	Usual diet	1	260	NA	2.20 (0.55, 3.85)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Volumetrics	Usual diet													
Weight Watchers	Usual diet	3	588	30.4	0.62 (-2.06, 3.41)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Zone	Usual diet													
Low fat	Dietary advice	1	98	NA	4.20 (0.95, 7.44)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Atkins	Dietary advice													
DASH	Dietary advice	2	598	70.4	1.62 (-1.35, 4.86)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Jenny Craig	Dietary advice													

Mediterranean	Dietary advice	2	217	0.0	-0.56 (-4.52, 3.32)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Ornish	Dietary advice	1	93	NA	-0.28 (-4.87, 4.31)	No	No	Serious	Undetected	Mod	Serious	Low	No	Yes
Paleolithic	Dietary advice													
Portfolio	Dietary advice													
Rosemary Conley	Dietary advice													
The Biggest Loser	Dietary advice													
Volumetrics	Dietary advice													
Weight Watchers	Dietary advice	3	1748	97.8	0.90 (-1.01, 2.87)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Zone	Dietary advice	1	24	NA	2.01 (-1.52, 5.54)	No	No	No	Undetected	High	V serious	Low	No	Yes
Atkins	Low fat	27	2493	9.8	1.03 (0.07, 2.00)	No	No	No	Undetected	High	No	High	Yes	No
DASH	Low fat	3	655	24.8	1.63 (-0.62, 3.98)	No	No	No	Undetected	High	Serious	Mod	Yes	Yes
Jenny Craig	Low fat	1	212	NA	5.54 (2.45, 8.63)	No	No	No	Undetected	High	No	High	NA	NA
Mediterranean	Low fat	1	169	NA	-2.00 (-6.49, 2.49)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Ornish	Low fat	1	138	NA	-1.50 (-4.20, 1.21)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Paleolithic	Low fat	1	61	NA	1.61 (-2.04, 5.26)	No	No	No	Undetected	High	V serious	Low	NA	NA
Portfolio	Low fat	1	345	NA	1.75 (0.07, 3.42)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Rosemary Conley	Low fat													
The Biggest Loser	Low fat													
Volumetrics	Low fat	1	71	NA	-0.29 (-3.50, 2.92)	Serious	No	No	Undetected	Mod	Serious	Low	NA	NA
Weight Watchers	Low fat													
Zone	ow fat	6	462	0.0	0.06 (-2.12, 2.25)	No	No	No	Undetected	High	Serious	Mod	Yes	No
DASH	Atkins													

Jenny Craig	Atkins													
Mediterranean	Atkins													
Ornish	Atkins	2	179	29.0	-3.45 (-7.33, 0.34)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Paleolithic	Atkins													
Portfolio	Atkins													
Rosemary Conley	Atkins	1	82	NA	-1.30 (-5.43, 2.83)	Serious	No	No	Undetected	Mod	Serious	Low	NA	NA
The Biggest Loser	Atkins													
Volumetrics	Atkins													
Weight Watchers	Atkins	2	139	21.5	-2.81 (-7.20, 1.55)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Zone	Atkins	3	260	0.0	-1.30 (-4.49, 1.86)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Jenny Craig	DASH													
Mediterranean	DASH	1	95	NA	-2.01 (-6.03, 2.02)	No	No	Serious	Undetected	Mod	Serious	Low	No	Yes
Ornish	DASH													
Paleolithic	DASH													
Portfolio	DASH													
Rosemary Conley	DASH													
The Biggest Loser	DASH													
Volumetrics	DASH													
Weight Watchers	DASH													
Zone	DASH													
Mediterranean	Jenny Craig													
Ornish	Jenny Craig													
Paleolithic	Jenny Craig													
Portfolio	Jenny Craig													

Rosemary Conley	Jenny Craig														
The Biggest Loser	Jenny Craig														
Volumetrics	Jenny Craig														
Weight Watchers	Jenny Craig														
Zone	Jenny Craig														
Ornish	Mediterranean														
Paleolithic	Mediterranean														
Portfolio	Mediterranean														
Rosemary Conley	Mediterranean														
The Biggest Loser	Mediterranean														
Volumetrics	Mediterranean														
Weight Watchers	Mediterranean														
Zone	Mediterranean														
Paleolithic	Ornish														
Portfolio	Ornish														
Rosemary Conley	Ornish														
The Biggest Loser	Ornish														
Volumetrics	Ornish														
Weight Watchers	Ornish	1	51	NA	1.90 (-4.35, 8.15)	No	No	No	Undetected	High	V serious	Low	No	Yes	
Zone	Ornish	2	185	5.3	1.47 (-2.21, 5.26)	No	No	No	Undetected	High	Serious	Mod	Yes	No	
Portfolio	Paleolithic														
Rosemary Conley	Paleolithic														

The Biggest Loser	Paleolithic														
Volumetrics	Paleolithic														
Weight Watchers	Paleolithic														
Zone	Paleolithic														
Rosemary Conley	Portfolio														
The Biggest Loser	Portfolio														
Volumetrics	Portfolio														
Weight Watchers	Portfolio														
Zone	Portfolio														
The Biggest Loser	Rosemary Conley														
Volumetrics	Rosemary Conley														
Weight Watchers	Rosemary Conley	1	89	NA	0.80 (-3.23, 4.82)	Serious	No	No	Undetected	Mod	Serious	Low	NA	NA	
Zone	Rosemary Conley														
Volumetrics	The Biggest Loser														
Weight Watchers	The Biggest Loser														
Zone	The Biggest Loser														
Weight Watchers	Volumetrics														
Zone	Volumetrics														
Zone	Weight Watchers	1	56	NA	3.80 (-3.25, 10.90)	No	No	No	Undetected	High	V serious	Low	No	Yes	

Table S31 continued: GRADE assessment for 6-month DBP reduction in individual popular diets NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	0.59 (-1.19, 2.39)	Weight Watchers	Mod	No	Mod	Serious	Low	0.40(-1.31, 2.09)	0.974	Mod	No	Serious	Low
Low fat	Usual diet	1.84 (-0.30, 4.02)	DASH	Low	No	Low	Serious	V low	2.22 (0.75, 3.75)	0.671	High	No	Serious	Mod
Atkins	Usual diet	3.36 (1.59, 5.20)	Low fat	High	No	High	Serious	Mod	3.30 (1.67, 4.99)	0.980	High	No	Serious	Mod
DASH	Usual diet	3.54 (1.06, 6.20)	Low fat	High	No	High	Serious	Mod	2.84 (1.58, 4.18)	0.531	High	No	Serious	Mod
Jenny Craig	Usual diet	7.81 (3.35, 12.30)	Low fat	High	Serious	Mod	Serious	Low	7.81 (3.35, 12.30)	NA	Mod	No	Serious	Low
Mediterranean	Usual diet	0.04 (-2.92, 2.98)							1.03 (-0.46, 2.53)	0.445	High	No	Serious	Mod
Ornish	Usual diet	0.20 (-2.45, 2.80)	Low fat	High	No	High	Serious	Mod	0.20 (-2.45, 2.80)	NA	High	No	Serious	Mod
Paleolithic	Usual diet	3.85 (-1.00, 8.75)	Low fat	High	No	High	Serious	Mod	3.85 (-1.00, 8.75)	NA	High	No	Serious	Mod
Portfolio	Usual diet	3.98 (0.36, 7.66)	Low fat	High	Serious	Mod	Serious	Low	3.98 (0.36, 7.66)	NA	Mod	No	Serious	Low
Rosemary Conley	Usual diet	NA							1.44 (-1.95, 4.85)	NA	Mod	No	Serious	Low
The Biggest Loser	Usual diet	NA							2.20 (-1.11, 5.52)	NA	High	No	Serious	Mod
Volumetrics	Usual diet	1.95 (-2.58, 6.53)	Low fat	Mod	No	Mod	Serious	Low	1.95 (-2.58, 6.53)	NA	Mod	No	Serious	Low
Weight Watchers	Usual diet	1.15 (-1.42, 3.69)	Dietary advice	Mod	Serious	Low	Serious	V low	1.03 (-0.70, 2.79)	0.884	Mod	No	Serious	Low
Zone	Usual diet	2.33 (0.24, 4.48)	Low fat	High	No	High	Serious	Mod	2.33 (0.24, 4.48)	NA	High	No	Serious	Mod
Ctl - low fat	Dietary advice	1.32 (-0.58, 3.28)	DASH	High	No	High	Serious	Mod	1.83 (0.09, 3.62)	0.220	High	No	Serious	Mod

Atkins	Dietary advice	2.91 (1.07, 4.81)	Low fat	Mod	No	Mod	Serious	Low	2.91 (1.07, 4.81)	NA	Mod	No	Serious	Low
DASH	Dietary advice	3.00 (0.80, 5.19)	Usual diet	Low	No	Low	Serious	V low	2.44 (0.74, 4.25)	0.428	High	No	Serious	Mod
Jenny Craig	Dietary advice	7.41 (2.86, 12.00)	Low fat	Mod	Serious	Low	Serious	V low	7.41 (2.86, 12.00)	NA	Low	No	Serious	V low
Mediterranean	Dietary advice	1.06 (-1.30, 3.49)	Usual diet	Mod	No	Mod	Serious	Low	0.64 (-1.36, 2.63)	0.480	High	No	Serious	Mod
Ornish	Dietary advice	-0.20 (-3.22, 2.79)	Weight Watchers	High	No	High	Serious	Mod	-0.22 (-2.83, 2.35)	0.984	High	No	Serious	Mod
Paleolithic	Dietary advice	3.44 (-1.51, 8.45)	Low fat	Mod	No	Mod	Serious	Low	3.44 (-1.51, 8.45)	NA	Mod	No	Serious	Low
Portfolio	Dietary advice	3.58 (-0.16, 7.37)	Low fat	Mod	Serious	Low	Serious	V low	3.58 (-0.16, 7.37)	NA	Low	No	Serious	V low
Rosemary Conley	Dietary advice	1.03 (-2.51, 4.59)	Weight Watchers	Mod	Serious	Low	Serious	V low	1.03 (-2.51, 4.59)	NA	Low	No	Serious	V low
The Biggest Loser	Dietary advice	1.79 (-1.92, 5.53)	Usual diet	Mod	Serious	Low	Serious	V low	1.79 (-1.92, 5.53)	NA	Low	No	Serious	V low
Volumetrics	Dietary advice	1.54 (-3.07, 6.23)	Low fat	Mod	No	Mod	Serious	Low	1.54 (-3.07, 6.23)	NA	Mod	No	Serious	Low
Weight Watchers	Dietary advice	0.02 (-2.73, 2.86)							0.63 (-0.86, 2.18)	0.602	High	No	Serious	Mod
Zone	Dietary advice	1.93 (-0.53, 4.46)	Low fat	Mod	No	Mod	Serious	Low	1.91 (-0.24, 4.12)	0.973	Mod	No	Serious	Low
Atkins	Low fat	1.71 (-1.69, 5.10)							1.07 (0.19, 1.96)	0.708	High	No	No	High
DASH	Low fat	-0.58 (-2.85, 1.76)	Usual diet	Low	No	Low	Serious	V low	0.62 (-0.93, 2.19)	0.175	High	No	Serious	Mod
Jenny Craig	Low fat	NA							5.58 (1.34, 9.80)	NA	High	No	Serious	Mod
Mediterranean	Low fat	-1.10 (-3.21, 0.98)	Usual diet	High	No	High	Serious	Mod	-1.19 (-3.16, 0.72)	0.759	High	No	Serious	Mod
Ornish	Low fat	-3.61 (-7.43, 0.21)							-2.05 (-4.44, 0.27)	0.418	High	No	Serious	Mod
Paleolithic	Low fat	NA							1.60 (-3.02, 6.24)	NA	High	No	V serious	Low
Portfolio	Low fat	NA							1.75 (-1.59, 5.08)	NA	High	No	Serious	Mod
Rosemary Conley	Low fat	-0.80 (-4.24, 2.63)	Atkins	Mod	Serious	Low	Serious	V low	-0.80 (-4.24, 2.63)	NA	Low	No	Serious	V low

The Biggest Loser	Low fat	-0.04 (-3.71, 3.57)	Usual diet	High	Serious	Mod	Serious	Low	-0.04 (-3.71, 3.57)	NA	Mod	No	Serious	Low
Volumetrics	Low fat	NA							-0.29 (-4.58, 4.01)	NA	Mod	No	Serious	Low
Weight Watchers	Low fat	-1.20 (-3.06, 0.65)	Atkins	High	No	High	Serious	Mod	-1.20 (-3.06, 0.65)	NA	High	No	Serious	Mod
Zone	Low fat	0.94 (-2.78, 4.72)							0.08 (-1.61, 1.78)	0.682	High	No	No	High
DASH	Atkins	-0.47 (-2.17, 1.27)	Low fat	High	No	High	Serious	Mod	-0.47 (-2.17, 1.27)	NA	High	No	Serious	Mod
Jenny Craig	Atkins	4.50 (0.17, 8.81)	Low fat	High	Serious	Mod	Serious	Low	4.50 (0.17, 8.81)	NA	Mod	No	Serious	Low
Mediterranean	Atkins	-2.30 (-4.37, -0.25)	Low fat	High	No	High	Serious	Mod	-2.30 (-4.37, -0.25)	NA	High	No	Serious	Mod
Ornish	Atkins	-3.11 (-8.98, 2.74)							-3.12 (-5.55, -0.78)	0.883	High	No	Serious	Mod
Paleolithic	Atkins	0.53 (-4.19, 5.23)	Low fat	High	No	High	Serious	Mod	0.53 (-4.19, 5.23)	NA	High	No	Serious	Mod
Portfolio	Atkins	0.67 (-2.78, 4.12)	Low fat	High	Serious	Mod	Serious	Low	0.67 (-2.78, 4.12)	NA	Mod	No	Serious	Low
Rosemary Conley	Atkins	NA							-1.88 (-5.33, 1.55)	NA	Mod	No	Serious	Low
The Biggest Loser	Atkins	-1.12 (-4.86, 2.56)	Usual diet	Mod	Serious	Low	Serious	V low	-1.12 (-4.86, 2.56)	NA	Low	No	Serious	V low
Volumetrics	Atkins	-1.37 (-5.75, 3.01)	Low fat	Mod	No	Mod	Serious	Low	-1.37 (-5.75, 3.01)	NA	Mod	No	Serious	Low
Weight Watchers	Atkins	-2.29 (-4.77, 0.18)	Usual diet	Mod	No	Mod	Serious	Low	-2.26 (-4.23, -0.34)	0.945	High	No	Serious	Mod
Zone	Atkins	-0.76 (-3.41, 1.86)	Low fat	High	No	High	Serious	Mod	-0.99 (-2.77, 0.80)	0.773	High	No	Serious	Mod
Jenny Craig	DASH	4.97 (0.44, 9.46)	Low fat	High	Serious	Mod	Serious	Low	4.97 (0.44, 9.46)	NA	Mod	No	Serious	Low
Mediterranean	DASH	-1.80 (-3.84, 0.15)	Usual diet	Low	No	Low	Serious	V low	-1.80 (-3.68, -0.03)	0.941	Mod	No	Serious	Low
Ornish	DASH	-2.65 (-5.38, -0.02)	Low fat	High	No	High	Serious	Mod	-2.65 (-5.38, -0.02)	NA	High	No	Serious	Mod
Paleolithic	DASH	1.00 (-3.90, 5.89)	Low fat	High	No	High	Serious	Mod	1.00 (-3.90, 5.89)	NA	High	No	Serious	Mod
Portfolio	DASH	1.14 (-2.56, 4.79)	Low fat	High	Serious	Mod	Serious	Low	1.14 (-2.56, 4.79)	NA	Mod	No	Serious	Low
Rosemary Conley	DASH	-1.41 (-4.96, 2.08)	Usual diet	Low	Serious	V low	Serious	V low	-1.41 (-4.96, 2.08)	NA	V low	No	Serious	V low

The Biggest Loser	DASH	-0.64 (-4.26, 2.88)	Usual diet	Low	Serious	V low	Serious	V low	-0.64 (-4.26, 2.88)	NA	V low	No	Serious	V low
Volumetrics	DASH	-0.90 (-5.48, 3.68)	Low fat	Mod	No	Mod	Serious	Low	-0.90 (-5.48, 3.68)	NA	Mod	No	Serious	Low
Weight Watchers	DASH	-1.80 (-3.73, 0.07)	Usual diet	Low	Serious	V low	Serious	V low	-1.80 (-3.73, 0.07)	NA	V low	No	Serious	V low
Zone	DASH	-0.52 (-2.70, 1.65)	Low fat	High	No	High	Serious	Mod	-0.52 (-2.70, 1.65)	NA	High	No	Serious	Mod
Mediterranean	Jenny Craig	-6.79 (-11.45, -2.16)	Low fat	High	Serious	Mod	Serious	Low	-6.79 (-11.45, -2.16)	NA	Mod	No	Serious	Low
Ornish	Jenny Craig	-7.62 (-12.48, -2.80)	Low fat	High	Serious	Mod	Serious	Low	-7.62 (-12.48, -2.80)	NA	Mod	No	Serious	Low
Paleolithic	Jenny Craig	-3.97 (-10.22, 2.32)	Low fat	High	Serious	Mod	Serious	Low	-3.97 (-10.22, 2.32)	NA	Mod	No	Serious	Low
Portfolio	Jenny Craig	-3.83 (-9.20, 1.56)	Low fat	High	Serious	Mod	Serious	Low	-3.83 (-9.20, 1.56)	NA	Mod	No	Serious	Low
Rosemary Conley	Jenny Craig	-6.37 (-11.82, -0.95)	Low fat, Atkins	Low	Serious	V low	Serious	V low	-6.37 (-11.82, -0.95)	NA	V low	No	Serious	V low
The Biggest Loser	Jenny Craig	-5.61 (-11.19, -0.06)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	-5.61 (-11.19, -0.06)	NA	Mod	No	Serious	Low
Volumetrics	Jenny Craig	-5.86 (-11.88, 0.15)	Low fat	Mod	Serious	Low	Serious	V low	-5.86 (-11.88, 0.15)	NA	Low	No	Serious	V low
Weight Watchers	Jenny Craig	-6.77 (-11.37, -2.16)	Low fat, Atkins	High	Serious	Mod	Serious	Low	-6.77 (-11.37, -2.16)	NA	Mod	No	Serious	Low
Zone	Jenny Craig	-5.48 (-10.01, -0.91)	Low fat	High	Serious	Mod	Serious	Low	-5.48 (-10.01, -0.91)	NA	Mod	No	Serious	Low
Ornish	Mediterranean	-0.82 (-3.75, 2.04)	Low fat	High	No	High	Serious	Mod	-0.82 (-3.75, 2.04)	NA	High	No	Serious	Mod
Paleolithic	Mediterranean	2.82 (-2.18, 7.87)	Low fat	High	No	High	Serious	Mod	2.82 (-2.18, 7.87)	NA	High	No	Serious	Mod
Portfolio	Mediterranean	2.96 (-0.86, 6.83)	Low fat	High	Serious	Mod	Serious	Low	2.96 (-0.86, 6.83)	NA	Mod	No	Serious	Low
Rosemary Conley	Mediterranean	0.42 (-3.24, 4.07)	Usual diet	Mod	Serious	Low	Serious	V low	0.42 (-3.24, 4.07)	NA	Low	No	Serious	V low
The Biggest Loser	Mediterranean	1.18 (-2.47, 4.82)	Usual diet	High	Serious	Mod	Serious	Low	1.18 (-2.47, 4.82)	NA	Mod	No	Serious	Low
Volumetrics	Mediterranean	0.92 (-3.77, 5.65)	Low fat	Mod	No	Mod	Serious	Low	0.92 (-3.77, 5.65)	NA	Mod	No	Serious	Low
Weight Watchers	Mediterranean	0.02 (-2.10, 2.16)	Usual diet	Mod	No	Mod	Serious	Low	0.02 (-2.10, 2.16)	NA	Mod	No	Serious	Low
Zone	Mediterranean	1.31 (-1.10, 3.77)	Low fat	High	No	High	Serious	Mod	1.31 (-1.10, 3.77)	NA	High	No	Serious	Mod

Paleolithic	Ornish	3.66 (-1.51, 8.88)	Low fat	High	No	High	Serious	Mod	3.66 (-1.51, 8.88)	NA	High	No	Serious	Mod
Portfolio	Ornish	3.79 (-0.24, 7.92)	Low fat	High	Serious	Mod	Serious	Low	3.79 (-0.24, 7.92)	NA	Mod	No	Serious	Low
Rosemary Conley	Ornish	1.24 (-2.75, 5.30)	Atkins	Mod	Serious	Low	Serious	V low	1.24 (-2.75, 5.30)	NA	Low	No	Serious	V low
The Biggest Loser	Ornish	2.00 (-2.19, 6.26)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	2.00 (-2.19, 6.26)	NA	Mod	No	Serious	Low
Volumetrics	Ornish	1.76 (-3.10, 6.71)	Low fat	Mod	No	Mod	Serious	Low	1.76 (-3.10, 6.71)	NA	Mod	No	Serious	Low
Weight Watchers	Ornish	0.48 (-2.58, 3.60)	Atkins	High	No	High	Serious	Mod	0.85 (-1.79, 3.58)	0.660	High	No	Serious	Mod
Zone	Ornish	2.47 (-3.60, 8.56)							2.13 (-0.37, 4.73)	0.876	High	No	Serious	Mod
Portfolio	Paleolithic	0.14 (-5.60, 5.85)	Low fat	High	Serious	Mod	Serious	Low	0.14 (-5.60, 5.85)	NA	Mod	No	Serious	Low
Rosemary Conley	Paleolithic	-2.42 (-8.21, 3.36)	Low fat, Atkins	Mod	Serious	Low	Serious	V low	-2.42 (-8.21, 3.36)	NA	Low	No	Serious	V low
The Biggest Loser	Paleolithic	-1.65 (-7.55, 4.21)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	-1.65 (-7.55, 4.21)	NA	Mod	No	Serious	Low
Volumetrics	Paleolithic	-1.89 (-8.24, 4.44)	Low fat	Mod	No	Mod	Serious	Low	-1.89 (-8.24, 4.44)	NA	Mod	No	Serious	Low
Weight Watchers	Paleolithic	-2.80 (-7.83, 2.19)	Low fat, Atkins	High	No	High	Serious	Mod	-2.80 (-7.83, 2.19)	NA	High	No	Serious	Mod
Zone	Paleolithic	-1.52 (-6.45, 3.41)	Low fat	High	No	High	Serious	Mod	-1.52 (-6.45, 3.41)	NA	High	No	Serious	Mod
Rosemary Conley	Portfolio	-2.55 (-7.35, 2.23)	Low fat, Atkins	Mod	Serious	Low	Serious	V low	-2.55 (-7.35, 2.23)	NA	Low	No	Serious	V low
The Biggest Loser	Portfolio	-1.78 (-6.73, 3.10)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	-1.78 (-6.73, 3.10)	NA	Mod	No	Serious	Low
Volumetrics	Portfolio	-2.04 (-7.47, 3.41)	Low fat	Mod	Serious	Low	Serious	V low	-2.04 (-7.47, 3.41)	NA	Low	No	Serious	V low
Weight Watchers	Portfolio	-2.94 (-6.77, 0.86)	Low fat, Atkins	High	Serious	Mod	Serious	Low	-2.94 (-6.77, 0.86)	NA	Mod	No	Serious	Low
Zone	Portfolio	-1.66 (-5.38, 2.11)	Low fat	High	Serious	Mod	Serious	Low	-1.66 (-5.38, 2.11)	NA	Mod	No	Serious	Low
The Biggest Loser	Rosemary Conley	0.77 (-4.01, 5.49)	Usual diet	Mod	Serious	Low	Serious	V low	0.77 (-4.01, 5.49)	NA	Low	No	Serious	V low
Volumetrics	Rosemary Conley	0.51 (-4.97, 6.02)	Low fat, Atkins	Mod	Serious	Low	Serious	V low	0.51 (-4.97, 6.02)	NA	Low	No	Serious	V low
Weight Watchers	Rosemary Conley	NA							-0.39 (-3.85, 3.06)	NA	Mod	No	Serious	Low

Zone	Rosemary Conley	0.89 (-2.82, 4.65)	Atkins	Mod	Serious	Low	Serious	V low	0.89 (-2.82, 4.65)	NA	Low	No	Serious	V low
Volumetrics	The Biggest Loser	-0.25 (-5.86, 5.42)	Low fat, Usual diet	Mod	Serious	Low	Serious	V low	-0.25 (-5.86, 5.42)	NA	Low	No	Serious	V low
Weight Watchers	The Biggest Loser	-1.16 (-4.88, 2.62)	Usual diet	Mod	Serious	Low	Serious	V low	-1.16 (-4.88, 2.62)	NA	Low	No	Serious	V low
Zone	The Biggest Loser	0.12 (-3.78, 4.11)	Low fat, Usual diet	High	Serious	Mod	Serious	Low	0.12 (-3.78, 4.11)	NA	Mod	No	Serious	Low
Weight Watchers	Volumetrics	-0.90 (-5.60, 3.76)	Low fat, Atkins	Mod	No	Mod	Serious	Low	-0.90 (-5.60, 3.76)	NA	Mod	No	Serious	Low
Zone	Volumetrics	0.38 (-4.23, 5.01)	Low fat	Mod	No	Mod	Serious	Low	0.38 (-4.23, 5.01)	NA	Mod	No	Serious	Low
Zone	Weight Watchers	0.81 (-1.71, 3.35)	Dietary advice	High	No	High	Serious	Mod	1.28 (-1.01, 3.57)	0.353	High	No	Serious	Mod

Table S32: GRADE assessment for 6-month LDL reduction in individual popular diets NMA

Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet	2	113	0.0	-1.73 (-17.80, 14.40)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Low fat	Usual diet	2	201	0.0	7.57 (-3.41, 18.40)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Atkins	Usual diet	1	70	NA	2.71 (-18.10, 23.50)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
DASH	Usual diet	4	428	11.6	2.85 (-5.44, 11.30)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Jenny Craig	Usual diet	1	47	NA	-5.68 (-38.60, 27.30)	No	No	No	Undetected	High	V serious	V low	No	Yes
Mediterranean	Usual diet	9	1027	79.6	3.49 (-1.18, 8.32)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Ornish	Usual diet													
Paleolithic	Usual diet													
Portfolio	Usual diet													
Rosemary Conley	Usual diet	1	78	NA	13.50 (-3.88, 30.90)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA
South Beach	Usual diet													
The Biggest Loser	Usual diet	1	260	NA	3.93 (-0.27, 8.13)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Volumetrics	Usual diet													
Weight Watchers	Usual diet	3	578	0.0	3.07 (-7.22, 13.50)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes
Zone	Usual diet													
Low fat	Dietary advice	1	98	NA	11.9 (3.72, 20.10)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Atkins	Dietary advice													
DASH	Dietary advice													

Jenny Craig	Dietary advice	3	551	0.0	0.14(-9.29, 9.48)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Mediterranean	Dietary advice	3	257	97.7	6.28 (-2.68, 15.40)	No	Serious	No	Undetected	Mod	Serious	Low	No	Yes
Ornish	Dietary advice	1	93	0.0	9.50 (-3.93, 22.90)	No	No	Serious	Undetected	Mod	V serious	V low	No	Yes
Paleolithic	Dietary advice													
Portfolio	Dietary advice													
Rosemary Conley	Dietary advice													
South Beach	Dietary advice													
The Biggest Loser	Dietary advice													
Volumetrics	Dietary advice													
Weight Watchers	Dietary advice	2	357	51.7	0.66(-10.70, 11.60)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Zone	Dietary advice													
Atkins	Low fat	30	2717	69.7	-4.34 (-7.36, -1.37)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes
DASH	Low fat	1	54	NA	7.70 (-9.19, 24.60)	No	No	No	Undetected	High	V serious	V low	No	Yes
Jenny Craig	Low fat	1	227	NA	1.03 (-8.11, 10.20)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Mediterranean	Low fat	4	424	92.7	7.00(-0.31, 14.60)	No	Serious	No	Undetected	Mod	Serious	Low	No	Yes
Ornish	Low fat	1	127	NA	0.82(-9.57, 11.20)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Paleolithic	Low fat	1	161	NA	5.41 (-5.95, 16.80)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Portfolio	Low fat	1	345	NA	19.40 (13.90, 24.90)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Rosemary Conley	Low fat													
South Beach	Low fat	1	45	NA	-2.48 (-15.60, 10.60)	No	No	No	Undetected	High	V serious	V low	NA	NA
The Biggest Loser	Low fat													

Volumetrics	Low fat	1	71	NA	5.29 (-3.99, 14.60)	No	No	No	Undetected	High	V serious	Low	NA	NA
Weight Watchers	Low fat													
Zone	Low fat	10	634	20.9	-6.06 (-11.50, -0.66)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes
DASH	Atkins													
Jenny Craig	Atkins													
Mediterranean	Atkins	1	173	NA	5.30 (4.22, 6.38)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Ornish	Atkins	2	138	0.0	8.29 (-4.39, 21.10)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Paleolithic	Atkins													
Portfolio	Atkins													
Rosemary Conley	Atkins	1	74	NA	10.80 (-4.77, 26.40)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA
South Beach	Atkins													
The Biggest Loser	Atkins													
Volumetrics	Atkins													
Weight Watchers	Atkins	2	131	0.0	7.22 (-6.46, 21.10)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Zone	Atkins	3	239	0.0	3.42 (-6.59, 13.50)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Jenny Craig	DASH													
Mediterranean	DASH	1	95	NA	-0.00 (-15.40, 15.30)	No	No	Serious	Undetected	Mod	V serious	V low	No	Yes
Ornish	DASH													
Paleolithic	DASH													
Portfolio	DASH													
Rosemary Conley	DASH													
South Beach	DASH													
The Biggest Loser	DASH													
Volumetrics	DASH													

Weight Watchers	DASH													
Zone	DASH													
Mediterranean	Jenny Craig													
Ornish	Jenny Craig													
Paleolithic	Jenny Craig													
Portfolio	Jenny Craig													
Rosemary Conley	Jenny Craig													
South Beach	Jenny Craig													
The Biggest Loser	Jenny Craig													
Volumetrics	Jenny Craig													
Weight Watchers	Jenny Craig	1	56	NA	-6.18 (-24.70, 12.30)	No	No	No	Undetected	High	V serious	V low	No	Yes
Zone	Jenny Craig													
Ornish	Mediterranean													
Paleolithic	Mediterranean													
Portfolio	Mediterranean													
Rosemary Conley	Mediterranean													
South Beach	Mediterranean													
The Biggest Loser	Mediterranean													
Volumetrics	Mediterranean													
Weight Watchers	Mediterranean													
Zone	Mediterranean													
Paleolithic	Ornish													
Portfolio	Ornish													

Rosemary Conley	Ornish													
South Beach	Ornish													
The Biggest Loser	Ornish													
Volumetrics	Ornish													
Weight Watchers	Ornish	1	51	NA	-10.6 (-35.40, 14.20)	No	No	No	Undetected	High	V serious	Low	No	Yes
Zone	Ornish	2	176	0.0	-4.75 (-16.80, 7.16)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Portfolio	Paleolithic													
Rosemary Conley	Paleolithic													
South Beach	Paleolithic													
The Biggest Loser	Paleolithic													
Volumetrics	Paleolithic													
Weight Watchers	Paleolithic													
Zone	Paleolithic													
Rosemary Conley	Portfolio													
South Beach	Portfolio													
The Biggest Loser	Portfolio													
Volumetrics	Portfolio													
Weight Watchers	Portfolio													
Zone	Portfolio													
South Beach	Rosemary Conley													
The Biggest Loser	Rosemary Conley													
Volumetrics	Rosemary Conley													
Weight Watchers	Rosemary Conley	1	87	NA	-0.40(-14.60, 13.80)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA

Zone	Rosemary Conley													
The Biggest Loser	South Beach													
Volumetrics	South Beach													
Weight Watchers	South Beach													
Zone	South Beach													
Volumetrics	The Biggest Loser													
Weight Watchers	The Biggest Loser													
Zone	The Biggest Loser													
Weight Watchers	Volumetrics													
Zone	Volumetrics													
Zone	Weight Watchers	1	56	NA	0.90(-19.70, 21.50)	No	No	No	Undetected	High	V serious	V low	No	Yes

Table S32 continued: GRADE assessment for 6-month LDL reduction in individual popular diets NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-1.75 (-9.12, 5.64)	Mediterranean	High	No	High	V serious	Low	-2.01 (-8.35, 4.35)	0.996	High	No	Serious	Mod
Low fat	Usual diet	-0.13 (-6.51, 6.22)	Mediterranean	Mod	No	Mod	V serious	V low	1.92 (-3.54, 7.38)	0.199	High	No	Serious	Mod
Atkins	Usual diet	-3.26 (-9.48, 2.91)	Mediterranean	Mod	No	Mod	Serious	Low	-2.75 (-8.56, 3.00)	0.519	Mod	No	Serious	Low
DASH	Usual diet	7.18 (-7.08, 21.6)	Mediterranean						3.93 (-3.19, 11.20)	0.606	High	No	Serious	Mod
Jenny Craig	Usual diet	0.83 (-9.06, 10.90)	Dietary advice	Mod	No	Mod	V serious	V low	0.21 (-8.54, 8.93)	0.623	High	No	V serious	Low
Mediterranean	Usual diet	7.62 (-0.89, 16.30)	Low fat						4.59 (0.60, 8.73)	0.429	High	No	Serious	Mod
Ornish	Usual diet	4.71 (-3.45, 12.99)	Low fat	High	No	High	Serious	Mod	4.71 (-3.45, 12.99)	NA	High	No	Serious	Mod
Paleolithic	Usual diet	7.27 (-7.71, 22.26)	Low fat	High	No	High	V serious	Low	7.27 (-7.71, 22.26)	NA	High	No	V serious	Low
Portfolio	Usual diet	21.29 (10.03, 32.55)	Low fat	Mod	No	Mod	Serious	Low	21.29 (10.03, 32.55)	NA	Mod	No	Serious	Low
Rosemary Conley	Usual diet	NA							7.15 (-4.66, 19.00)	NA	Mod	No	V serious	V low
South Beach	Usual diet	-0.64 (-16.96, 15.63)	Low fat	High	No	High	V serious	Low	-0.64 (-16.96, 15.63)	NA	High	No	V serious	Low
The Biggest Loser	Usual diet	NA							3.90 (-5.64, 13.42)	NA	High	No	Serious	Mod
Volumetrics	Usual diet	7.13 (-6.36, 20.53)	Low fat	High	No	High	V serious	Low	7.13 (-6.36, 20.53)	NA	High	No	V serious	Low

Weight Watchers	Usual diet	-0.98 (-12.40, 10.20)	Dietary advice	Mod	No	Mod	V serious	V low	7.13 (-6.36, 20.53)	NA	Mod	No	V serious	V low
Zone	Usual diet	-2.89 (-9.26, 3.47)	Low fat	Mod	No	Mod	Serious	Low	-2.89 (-9.26, 3.47)	NA	Mod	No	Serious	Low
Low fat	Dietary advice	1.50 (-5.62, 8.65)	Mediterranean	Mod	No	Mod	Serious	Low	3.94 (-2.43, 10.20)	0.16	Mod	No	Serious	Low
Atkins	Dietary advice	-0.65 (-6.45, 5.17)	Low fat	Mod	No	Mod	V serious	V low	-0.65 (-6.45, 5.17)	NA	Mod	No	V serious	V low
DASH	Dietary advice	5.92 (-2.49, 14.30)	Usual diet	Mod	No	Mod	Serious	Low	5.92 (-2.49, 14.30)	NA	Mod	No	Serious	Low
Jenny Craig	Dietary advice	6.38 (-9.27, 22.10)	Low fat						2.22 (-5.43, 9.78)	0.47	High	No	Serious	Mod
Mediterranean	Dietary advice	6.95 (-1.40, 15.30)	Usual diet	Mod	No	Mod	Serious	Low	6.60 (0.63, 12.70)	0.91	High	No	Serious	Mod
Ornish	Dietary advice	6.07 (-4.76, 17.00)	Low fat	Mod	No	Mod	Serious	Low	6.96 (-2.06, 16.20)	0.73	Mod	No	Serious	Low
Paleolithic	Dietary advice	9.36 (-5.89, 24.70)	Low fat	Mod	No	Mod	V serious	V low	9.36 (-5.89, 24.70)	NA	Mod	No	V serious	V low
Portfolio	Dietary advice	23.39 (11.79, 34.95)	Low fat	Mod	No	Mod	Serious	Low	23.39 (11.79, 34.95)	NA	Mod	No	Serious	Low
Rosemary Conley	Dietary advice	9.25 (-3.09, 21.69)	Usual diet	Mod	Serious	Low	Serious	V low	9.25 (-3.09, 21.69)	NA	Low	No	Serious	V low
South Beach	Dietary advice	1.47 (-15.06, 17.98)	Low fat	Mod	No	Mod	V serious	V low	1.47 (-15.06, 17.98)	NA	Mod	No	V serious	V low
The Biggest Loser	Dietary advice	6.01 (-5.14, 17.06)	Usual diet	Mod	Serious	Low	V serious	V low	6.01 (-5.14, 17.06)	NA	Low	No	V serious	V low
Volumetrics	Dietary advice	9.22 (-4.55, 22.99)	Low fat	Mod	No	Mod	Serious	Low	9.22 (-4.55, 22.99)	NA	Mod	No	Serious	Low
Weight Watchers	Dietary advice	6.46 (-3.63, 16.70)	Usual diet	Mod	No	Mod	Serious	Low	3.01 (-4.22, 10.10)	0.33	High	No	Serious	Mod
Zone	Dietary advice	-0.78 (-7.65, 6.03)	Low fat	Mod	No	Mod	V serious	V low	-0.78 (-7.65, 6.03)	NA	Mod	No	V serious	V low
Atkins	Low fat	-8.61 (-20.00, 2.87)	Zone	Mod	No	Mod	Serious	Low	-4.67 (-7.52, -1.87)	0.48	Mod	No	Serious	Low
DASH	Low fat	0.86(-8.33, 10.20)	Usual diet	High	No	High	V serious	Low	2.01 (-6.39, 10.50)	0.54	High	No	V serious	Low
Jenny Craig	Low fat	-3.23 (-13.70, 7.39)	Dietary advice						-1.72 (-10.10, 6.63)	0.63	High	No	V serious	Low
Mediterranean	Low fat	-1.33 (-9.15, 6.70)	Atkins	Mod	No	Mod	Serious	Mod	2.67 (-2.40, 7.88)	0.11	Mod	No	Serious	Low

Ornish	Low fat	7.52 (-4.82, 19.80)	Zone						3.03 (-4.92, 11.20)	0.45	High	No	Serious	Mod
Paleolithic	Low fat	NA							5.40 (-8.81, 19.62)	NA	High	No	V serious	Low
Portfolio	Low fat	NA							19.41 (9.28, 29.60)	NA	High	No	Serious	Mod
Rosemary Conley	Low fat	5.28 (-6.62, 17.24)	Atkins	Mod	Serious	Low	Serious	V low	5.28 (-6.62, 17.24)	NA	Low	No	Serious	V low
South Beach	Low fat	NA							-2.51 (-18.07, 13.07)	NA	High	No	V serious	Low
The Biggest Loser	Low fat	2.02 (-8.72, 12.72)	Usual diet	High	Serious	Mod	V serious	V low	2.02 (-8.72, 12.72)	NA	Mod	No	V serious	V low
Volumetric s	Low fat	NA							5.24 (-7.33, 17.81)	NA	High	No	V serious	Low
Weight Watchers	Low fat	-0.81 (-7.23, 5.60)	Atkins	Mod	No	Mod	V serious	V low	-0.81 (-7.23, 5.60)	NA	Mod	No	V serious	V low
Zone	Low fat	-0.32 (-15.40, 14.60)	Atkins	Mod	No	Mod	V serious	V low	-4.78 (-9.54, 0.0192)	0.49	Mod	No	Serious	Low
DASH	Atkins	6.57 (-1.36, 14.48)	Low fat	Mod	No	Mod	Serious	Low	6.57 (-1.36, 14.48)	NA	Mod	No	Serious	Low
Jenny Craig	Atkins	2.90 (-4.83, 10.65)	Low fat	Mod	No	Mod	Serious	Low	2.90 (-4.83, 10.65)	NA	Mod	No	Serious	Low
Mediterranean	Atkins	7.77 (1.10, 14.60)	Low fat	Mod	No	Mod	Serious	Low	7.34 (1.97, 12.90)	0.70	Mod	No	Serious	Low
Ornish	Atkins	10.50 (-8.37, 29.40)	Low fat						7.71 (-0.30, 16.00)	0.84	High	No	Serious	Mod
Paleolithic	Atkins	10.00 (-4.42, 24.44)	Low fat	Mod	No	Mod	Serious	Low	10.00 (-4.42, 24.44)	NA	Mod	No	Serious	Low
Portfolio	Atkins	24.03 (13.60, 34.53)	Low fat	Mod	No	Mod	Serious	Low	24.03 (13.60, 34.53)	NA	Mod	No	Serious	Low
Rosemary Conley	Atkins	NA							9.89 (-1.98, 21.83)	NA	Mod	No	Serious	Low
South Beach	Atkins	2.11 (-13.66, 17.89)	Low fat	Mod	No	Mod	V serious	V low	2.11 (-13.66, 17.89)	NA	Mod	No	V serious	V low
The Biggest Loser	Atkins	6.65 (-4.21, 17.48)	Usual diet	High	Serious	Mod	Serious	Low	6.65 (-4.21, 17.48)	NA	Mod	No	Serious	Low
Volumetric s	Atkins	9.86 (-2.97, 22.71)	Low fat	Mod	No	Mod	Serious	Low	9.86 (-2.97, 22.71)	NA	Mod	No	Serious	Low
Weight Watchers	Atkins	1.54 (-8.17, 11.10)	Usual diet	Mod	No	Mod	V serious	V low	3.73 (-3.48, 10.90)	0.43	Mod	No	Serious	Low

Zone	Atkins	-2.60 (-9.52, 4.32)	Low fat	Mod	No	Mod	Serious	Low	-0.11 (-5.32, 5.18)	0.28	High	No	Serious	Mod
Jenny Craig	DASH	-3.66 (-13.65, 6.39)	Usual diet	Mod	No	Mod	V serious	V low	-3.66 (-13.65, 6.39)	NA	Mod	No	V serious	V low
Mediterranean	DASH	0.81 (-7.82, 9.39)	Usual diet	High	No	High	V serious	Low	0.66 (-7.11, 8.46)	0.94	High	No	V serious	Low
Ornish	DASH	0.91 (-9.28, 11.17)	Low fat	High	No	High	V serious	Low	0.91 (-9.28, 11.17)	NA	High	No	V serious	Low
Paleolithic	DASH	3.44 (-12.62, 19.62)	Low fat	High	No	High	Serious	Mod	3.44 (-12.62, 19.62)	NA	High	No	V serious	Low
Portfolio	DASH	17.47 (4.66, 30.24)	Low fat	Mod	No	Mod	No	Low	17.47 (4.66, 30.24)	NA	Mod	No	Serious	Low
Rosemary Conley	DASH	3.35 (-10.07, 16.80)	Usual diet	Mod	Serious	Low	V serious	V low	3.35 (-10.07, 16.80)	NA	Low	No	V serious	V low
South Beach	DASH	-4.46 (-21.78, 12.91)	Low fat	High	No	High	V serious	Low	-4.46 (-21.78, 12.91)	NA	High	No	V serious	Low
The Biggest Loser	DASH	0.09 (-11.55, 11.65)	Usual diet	High	Serious	Mod	Serious	Low	0.09 (-11.55, 11.65)	NA	Mod	No	Serious	Low
Volumetrics	DASH	3.32 (-11.48, 18.07)	Low fat	High	No	High	V serious	Low	3.32 (-11.48, 18.07)	NA	High	No	V serious	Low
Weight Watchers	DASH	-2.76 (-11.60, 6.09)	Usual diet	Mod	No	Mod	V serious	V low	-2.76 (-11.60, 6.09)	NA	Mod	No	V serious	V low
Zone	DASH	-6.72 (-15.47, 2.11)	Low fat	Mod	No	Mod	Serious	Low	-6.72 (-15.47, 2.11)	NA	Mod	No	Serious	Low
Mediterranean	Jenny Craig	4.28 (-3.45, 12.00)	Dietary advice	Mod	No	Mod	Serious	Low	4.28 (-3.45, 12.00)	NA	Mod	No	Serious	Low
Ornish	Jenny Craig	4.57 (-5.29, 14.43)	Low fat	High	No	High	V serious	Low	4.57 (-5.29, 14.43)	NA	High	No	V serious	Low
Paleolithic	Jenny Craig	7.09 (-8.98, 23.16)	Low fat	High	No	High	V serious	Low	7.09 (-8.98, 23.16)	NA	High	No	V serious	Low
Portfolio	Jenny Craig	21.13 (8.48, 33.75)	Low fat	Mod	No	Mod	Serious	Low	21.13 (8.48, 33.75)	NA	Mod	No	Serious	Low
Rosemary Conley	Jenny Craig	7.00 (-6.52, 20.53)	Atkins, Low fat	Mod	Serious	Low	V serious	V low	7.00 (-6.52, 20.53)	NA	Low	No	V serious	V low
South Beach	Jenny Craig	-0.81 (-18.03, 16.43)	Low fat	High	No	High	V serious	Low	-0.81 (-18.03, 16.43)	NA	High	No	V serious	Low
The Biggest Loser	Jenny Craig	3.74 (-8.68, 16.07)	Usual diet	High	Serious	Mod	V serious	V low	3.74 (-8.68, 16.07)	NA	Mod	No	V serious	V low
Volumetrics	Jenny Craig	6.94 (-7.72, 21.60)	Low fat	High	No	High	V serious	Low	6.94 (-7.72, 21.60)	NA	High	No	V serious	Low

Weight Watchers	Jenny Craig	2.51 (-8.32, 13.30)	Dietary advice	High	No	High	V serious	Low	0.79 (-8.51, 10.00)	0.42	High	No	V serious	Low
Zone	Jenny Craig	-3.06 (-11.60, 5.49)	Low fat	Mod	No	Mod	V serious	V low	-3.06 (-11.60, 5.49)	NA	Mod	No	V serious	V low
Ornish	Mediterranean	0.30 (-7.76, 8.38)	Low fat	Mod	No	Mod	V serious	V low	0.30 (-7.76, 8.38)	NA	Mod	No	V serious	V low
Paleolithic	Mediterranean	2.83 (-12.04, 17.72)	Low fat	Mod	No	Mod	V serious	V low	2.83 (-12.04, 17.72)	NA	Mod	No	V serious	V low
Portfolio	Mediterranean	16.85 (5.74, 27.92)	Low fat	Mod	No	Mod	Serious	Low	16.85 (5.74, 27.92)	NA	Mod	No	Serious	Low
Rosemary Conley	Mediterranean	2.73 (-9.28, 14.71)	Usual diet	Mod	Serious	Low	V serious	V low	2.73 (-9.28, 14.71)	NA	Low	No	V serious	V low
South Beach	Mediterranean	-5.06 (-21.28, 11.11)	Low fat	Mod	No	Mod	V serious	V low	-5.06 (-21.28, 11.11)	NA	Mod	No	V serious	V low
The Biggest Loser	Mediterranean	-0.52 (-10.79, 9.63)	Usual diet	High	Serious	Mod	V serious	V low	-0.52 (-10.79, 9.63)	NA	Mod	No	V serious	V low
Volumetrics	Mediterranean	2.69 (-10.71, 15.98)	Low fat	Mod	No	Mod	V serious	V low	2.69 (-10.71, 15.98)	NA	Mod	No	V serious	V low
Weight Watchers	Mediterranean	-3.36 (-9.77, 2.99)	Usual diet	Mod	No	Mod	Serious	Low	-3.36 (-9.77, 2.99)	NA	Mod	No	Serious	Low
Zone	Mediterranean	-7.32 (-13.47, -1.24)	Low fat	Mod	No	Mod	Serious	Low	-7.32 (-13.47, -1.24)	NA	Mod	No	Serious	Low
Paleolithic	Ornish	2.52 (-13.41, 18.48)	Low fat	High	No	High	V serious	Low	2.52 (-13.41, 18.48)	NA	High	No	V serious	Low
Portfolio	Ornish	16.57 (4.14, 28.94)	Low fat	Mod	No	Mod	Serious	Low	16.57 (4.14, 28.94)	NA	Mod	No	Serious	Low
Rosemary Conley	Ornish	2.45 (-11.20, 16.03)	Atkins	Mod	Serious	Low	V serious	V low	2.45 (-11.20, 16.03)	NA	Low	No	V serious	V low
South Beach	Ornish	-5.36 (-22.58, 11.79)	Low fat	High	No	High	V serious	Low	-5.36 (-22.58, 11.79)	NA	High	No	V serious	Low
The Biggest Loser	Ornish	-0.83 (-13.51, 11.74)	Low fat, Usual diet	High	Serious	Mod	V serious	V low	-0.83 (-13.51, 11.74)	NA	Mod	No	V serious	V low
Volumetrics	Ornish	2.37 (-12.12, 16.84)	Low fat	High	No	High	V serious	Low	2.37 (-12.12, 16.84)	NA	High	No	V serious	Low
Weight Watchers	Ornish	-1.58 (-13.40, 9.97)	Atkins	Mod	No	Mod	V serious	V low	-3.97 (-13.90, 5.70)	0.42	High	No	V serious	Low
Zone	Ornish	-12.60 (-31.90, 6.65)							-7.80 (-16.40, -0.60)	0.52	High	No	Serious	Mod
Portfolio	Paleolithic	14.00 (-3.46, 31.43)	Low fat	Mod	No	Mod	Serious	Low	14.00 (-3.46, 31.43)	NA	Mod	No	Serious	Low

Rosemary Conley	Paleolithic	-0.09 (-18.72, 18.38)	Low fat, Atkins	Mod	No	Mod	V serious	Low	-0.09 (-18.72, 18.38)	NA	Mod	No	V serious	V low
South Beach	Paleolithic	-7.91 (-28.96, 13.10)	Low fat	High	No	High	V serious	Mod	-7.91 (-28.96, 13.10)	NA	High	No	V serious	Low
The Biggest Loser	Paleolithic	-3.35 (-21.22, 14.43)	Low fat, Usual diet	High	No	High	V serious	Mod	-3.35 (-21.22, 14.43)	NA	High	No	V serious	Low
Volumetric s	Paleolithic	-0.16 (-19.08, 18.71)	Low fat	High	No	High	V serious	Mod	-0.16 (-19.08, 18.71)	NA	High	No	V serious	Low
Weight Watchers	Paleolithic	-6.20 (-21.80, 9.33)	Low fat, Atkins	Mod	No	Mod	V serious	Low	-6.20 (-21.80, 9.33)	NA	Mod	No	V serious	V low
Zone	Paleolithic	-10.18 (-25.01, 4.69)	Low fat	Mod	No	Mod	Serious	Low	-10.18 (-25.01, 4.69)	NA	Mod	No	Serious	Low
Rosemary Conley	Portfolio	-14.13 (-29.73, 1.53)	Low fat, Atkins	Mod	No	Mod	Serious	Low	-14.13 (-29.73, 1.53)	NA	Mod	No	Serious	Low
South Beach	Portfolio	-21.93 (-40.45, -3.32)	Low fat	Mod	No	Mod	Serious	Low	-21.93 (-40.45, -3.32)	NA	High	No	Serious	Mod
The Biggest Loser	Portfolio	-17.39 (-32.15, -2.65)	Low fat, Usual diet	Mod	Serious	Low	Serious	V low	-17.39 (-32.15, -2.65)	NA	Low	No	Serious	V low
Volumetric s	Portfolio	-14.17 (-30.37, 1.94)	Low fat	Mod	No	Mod	Serious	Low	-14.17 (-30.37, 1.94)	NA	Mod	No	Serious	Low
Weight Watchers	Portfolio	-20.22 (-32.21, -8.21)	Low fat, Atkins	Mod	No	Mod	V serious	V low	-20.22 (-32.21, -8.21)	NA	Mod	No	V serious	V low
Zone	Portfolio	-24.18 (-35.26, -13.19)	Low fat	Mod	No	Mod	V serious	V low	-24.18 (-35.26, -13.19)	NA	Mod	No	V serious	V low
South Beach	Rosemary Conley	-7.81 (-27.35, 11.76)	Low fat, Atkins	Mod	No	Mod	V serious	V low	-7.81 (-27.35, 11.76)	NA	Mod	No	Serious	Low
The Biggest Loser	Rosemary Conley	-3.26 (-18.53, 11.98)	Usual diet	Mod	Serious	Low	V serious	V low	-3.26 (-18.53, 11.98)	NA	Low	No	Serious	V low
Volumetric s	Rosemary Conley	-0.05 (-17.38, 17.25)	Low fat, Atkins	Mod	No	Mod	V serious	V low	-0.05 (-17.38, 17.25)	NA	Mod	No	Serious	Low
Weight Watchers	Rosemary Conley	NA							-6.10 (-18.06, 5.81)	NA	Mod	No	Serious	Low
Zone	Rosemary Conley	-10.04 (-22.64, 2.51)	Atkins	Mod	Serious	Low	Serious	V low	-10.04 (-22.64, 2.51)	NA	Low	No	Serious	V low
The Biggest Loser	South Beach	4.54 (-14.34, 23.45)	Low fat, Usual diet	High	No	High	V serious	Low	4.54 (-14.34, 23.45)	NA	High	No	V serious	Low
Volumetric s	South Beach	7.75 (-12.26, 27.82)	Low fat	High	No	High	V serious	Low	7.75 (-12.26, 27.82)	NA	High	No	V serious	Low

Weight Watchers	South Beach	1.72 (-15.13, 18.49)	Low fat, Atkins	Mod	No	Mod	V serious	V low	1.72 (-15.13, 18.49)	NA	Mod	No	V serious	V low
Zone	South Beach	-2.26 (-18.43, 13.92)	Low fat	Mod	No	Mod	V serious	V low	-2.26 (-18.43, 13.92)	NA	Mod	No	V serious	V low
Volumetrics	The Biggest Loser	3.22 (-13.29, 19.69)	Low fat, Usual diet	High	No	High	V serious	Low	3.22 (-13.29, 19.69)	NA	High	No	V serious	Low
Weight Watchers	The Biggest Loser	-2.83 (-14.22, 8.51)	Usual diet	Mod	Serious	Low	V serious	V low	-2.83 (-14.22, 8.51)	NA	Low	No	V serious	V low
Zone	The Biggest Loser	-6.79 (-18.27, 4.70)	Low fat, Usual diet	Mod	Serious	Low	Serious	V low	-6.79 (-18.27, 4.70)	NA	Low	No	V serious	V low
Weight Watchers	Volumetrics	-6.05 (-20.17, 8.04)	Low fat, Atkins	Mod	No	Mod	V serious	V low	-6.05 (-20.17, 8.04)	NA	Mod	No	V serious	V low
Zone	Volumetrics	-10.00 (-23.33, 3.33)	Low fat	Mod	No	Mod	Serious	Low	-10.00 (-23.33, 3.33)	NA	Mod	No	Serious	Low
Zone	Weight Watchers	-5.15 (-14.70, 4.37)	Atkins	Mod	No	Mod	Serious	Low	-3.84 (-11.90, 4.34)	0.56	High	No	Serious	Mod

Table S33: GRADE assessment for 6-month HDL reduction in individual popular diets NMA

Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet	2	113	0.0	-1.35 (-6.07, 3.40)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Low fat	Usual diet	2	201	0.0	-3.37 (-7.03, 0.31)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Atkins	Usual diet	1	70	NA	2.68 (-4.31, 9.68)	Serious	No	No	Undetected	Mod	V serious	V low	No	Yes
DASH	Usual diet	4	428	57.4	-1.62 (-4.57, 1.41)	No	Serious	No	Undetected	Mod	Serious	Low	Yes	Yes
Jenny Craig	Usual diet	1	47	NA	-1.36 (-10.0, 7.31)	No	No	No	Undetected	High	V serious	Low	No	Yes
Mediterranean	Usual diet	8	997	52.5	-0.30 (-2.18, 1.44)	No	Serious	No	Undetected	Mod	Serious	Low	Yes	Yes
Ornish	Usual diet													
Paleolithic	Usual diet													
Portfolio	Usual diet													
Rosemary Conley	Usual diet	1	78	NA	-1.95 (-8.00, 4.10)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA
South Beach	Usual diet													
The Biggest Loser	Usual diet	1	260	NA	-0.02 (-1.23, 1.19)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Volumetrics	Usual diet													
Weight Watchers	Usual diet	3	578	0.0	-1.94 (-5.10, 1.35)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes
Zone	Usual diet													
Low fat	Dietary advice	1	98	NA	-2.32 (-4.28, -0.37)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes
Atkins	Dietary advice													
DASH	Dietary advice													
Jenny Craig	Dietary advice	3	551	0.0	-2.67 (-5.99, 0.84)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Mediterranean	Dietary advice	3	257	96.4	1.89 (-1.17, 4.69)	No	Serious	No	Undetected	Mod	Serious	Low	No	Yes
Ornish	Dietary advice	1	30	NA	-2.79 (-5.78, 0.20)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Paleolithic	Dietary advice													
Portfolio	Dietary advice													

Rosemary Conley	Dietary advice													
South Beach	Dietary advice													
The Biggest Loser	Dietary advice													
Volumetrics	Dietary advice													
Weight Watchers	Dietary advice	3	542	93.6	1.71 (-1.04, 4.29)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Zone	Dietary advice													
Atkins	Low fat	30	2717	63.6	3.76 (2.74, 4.82)	No	Serious	No	Undetected	Mod	No	Mod	Yes	Yes
DASH	Low fat	1	54	NA	-2.31 (-6.75, 2.13)	No	No	No	Undetected	High	V serious	Low	No	Yes
Jenny Craig	Low fat	1	227	NA	2.01 (-1.06, 5.08)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Mediterranean	Low fat	4	493	0.0	0.37 (-2.36, 3.14)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Ornish	Low fat	1	127	NA	-2.11 (-6.03, 1.82)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Paleolithic	Low fat	1	61	NA	-0.39 (-5.24, 4.46)	No	No	No	Undetected	High	V serious	Low	NA	NA
Portfolio	Low fat	1	345	NA	-1.13 (-3.91, 1.65)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Rosemary Conley	Low fat													
South Beach	Low fat	1	45	NA	2.50 (-2.20, 7.19)	No	No	No	Undetected	High	Serious	Mod	NA	NA
The Biggest Loser	Low fat													
Volumetrics	Low fat	1	71	NA	2.0 (-0.97, 4.97)	No	No	No	Undetected	High	Serious	Mod	NA	NA
Weight Watchers	Low fat													
Zone	Low fat	10	634	36.7	1.74 (-0.18, 3.61)	No	Serious	No	Undetected	Mod	Serious	Low	Yes	Yes
DASH	Atkins													
Jenny Craig	Atkins													
Mediterranean	Atkins	1	173	NA	-2.80 (-3.02, -2.58)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Ornish	Atkins	2	177	12.5	-7.04 (-12.00, -2.19)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Paleolithic	Atkins													
Portfolio	Atkins													
Rosemary Conley	Atkins	1	74	NA	-4.64 (-13.30, 4.03)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA
South Beach	Atkins													

The Biggest Loser	Atkins														
Volumetrics	Atkins														
Weight Watchers	Atkins	2	131	0.0	-3.84 (-8.77, 1.12)	No	No	No	Undetected	High	Serious	Mod	No	Yes	
Zone	Atkins	3	239	0.0	-2.06 (-5.98, 1.85)	No	No	No	Undetected	High	Serious	Mod	No	Yes	
Jenny Craig	DASH														
Mediterranean	DASH	1	95	NA	0.00 (-4.04, 4.04)	No	No	Serious	Undetected	Mod	V serious	V low	No	Yes	
Ornish	DASH														
Paleolithic	DASH														
Portfolio	DASH														
Rosemary Conley	DASH														
South Beach	DASH														
The Biggest Loser	DASH														
Volumetrics	DASH														
Weight Watchers	DASH														
Zone	DASH														
Mediterranean	Jenny Craig														
Ornish	Jenny Craig														
Paleolithic	Jenny Craig														
Portfolio	Jenny Craig														
Rosemary Conley	Jenny Craig														
South Beach	Jenny Craig														
The Biggest Loser	Jenny Craig														
Volumetrics	Jenny Craig														
Weight Watchers	Jenny Craig	1	56	NA	3.41 (-5.25, 12.10)	No	No	No	Undetected	High	V serious	Low	No	Yes	
Zone	Jenny Craig														
Ornish	Mediterranean														
Paleolithic	Mediterranean														

Portfolio	Mediterranean														
Rosemary Conley	Mediterranean														
South Beach	Mediterranean														
The Biggest Loser	Mediterranean														
Volumetrics	Mediterranean														
Weight Watchers	Mediterranean														
Zone	Mediterranean														
Paleolithic	Ornish														
Portfolio	Ornish														
Rosemary Conley	Ornish														
South Beach	Ornish														
The Biggest Loser	Ornish														
Volumetrics	Ornish														
Weight Watchers	Ornish	1	51	NA	6.01 (-1.95, 14.00)	No	No	No	Undetected	High	V serious	Low	No	Yes	
Zone	Ornish	2	176	0.0	4.21 (-0.56, 9.04)	No	No	No	Undetected	High	Serious	Mod	No	Yes	
Portfolio	Paleolithic														
Rosemary Conley	Paleolithic														
South Beach	Paleolithic														
The Biggest Loser	Paleolithic														
Volumetrics	Paleolithic														
Weight Watchers	Paleolithic														
Zone	Paleolithic														
Rosemary Conley	Portfolio														
South Beach	Portfolio														
The Biggest Loser	Portfolio														
Volumetrics	Portfolio														
Weight Watchers	Portfolio														

Zone	Portfolio													
South Beach	Rosemary Conley													
The Biggest Loser	Rosemary Conley													
Volumetrics	Rosemary Conley													
Weight Watchers	Rosemary Conley	1	87	NA	0.78 (-4.65, 6.21)	Serious	No	No	Undetected	Mod	V serious	V low	NA	NA
Zone	Rosemary Conley													
The Biggest Loser	South Beach													
Volumetrics	South Beach													
Weight Watchers	South Beach													
Zone	South Beach													
Volumetrics	The Biggest Loser													
Weight Watchers	The Biggest Loser													
Zone	The Biggest Loser													
Weight Watchers	Volumetrics													
Zone	Volumetrics													
Zone	Weight Watchers	1	56	NA	2.30 (-7.17, 11.80)	No	No	No	Undetected	High	V serious	Low	No	Yes

Table S33 continued: GRADE assessment for 6-month HDL reduction in individual popular diets NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-2.04 (-4.45, 0.45)	Mediterranean	Mod	No	Mod	Serious	Low	-1.71 (-3.72, 0.37)	0.750	Mod	No	Serious	Low
Low fat	Usual diet	-1.53 (-3.89, 0.81)	Mediterranean	Mod	No	Mod	Serious	Low	-2.13 (-4.02, -0.17)	0.392	Mod	No	Serious	Low
Atkins	Usual diet	1.66 (-0.52, 3.89)	Low fat	Mod	No	Mod	Serious	Low	1.79 (-0.22, 3.85)	0.740	Mod	No	Serious	Low
DASH	Usual diet	-2.51 (-6.78, 1.71)	Mediterranean	Mod	No	Mod	Serious	Low	-1.90 (-4.33, 0.56)	0.723	Mod	No	Serious	Low
Jenny Craig	Usual diet	-3.00 (-6.47, 0.51)	Dietary advice	Mod	No	Mod	Serious	Low	-2.85 (-5.86, 0.25)	0.694	High	No	Serious	Mod
Mediterranean	Usual diet	-1.21 (-4.03, 1.66)	Low fat	Mod	No	Mod	Serious	Low	-0.61 (-2.15, 0.87)	0.626	Mod	No	Serious	Low
Ornish	Usual diet	-4.87 (-7.97, -1.77)	Low fat	Mod	No	Mod	Serious	Low	-4.87 (-7.97, -1.77)	NA	Mod	No	Serious	Low
Paleolithic	Usual diet	-2.52 (-8.85, 3.83)	Low fat	Mod	No	Mod	V serious	V low	-2.52 (-8.85, 3.83)	NA	Mod	No	V serious	V low
Portfolio	Usual diet	-3.26 (-8.17, 1.68)	Low fat	Mod	Serious	Low	Serious	V low	-3.26 (-8.17, 1.68)	NA	Low	No	Serious	V low
Rosemary Conley	Usual diet	NA							-2.04 (-6.87, 2.81)	NA	Mod	No	V serious	V low
South Beach	Usual diet	0.36 (-5.85, 6.55)	Low fat	Mod	No	Mod	V serious	V low	0.36 (-5.85, 6.55)	NA	Mod	No	V serious	V low
The Biggest Loser	Usual diet	NA							-0.01 (-3.82, 3.81)	NA	High	No	Serious	Mod
Volumetrics	Usual diet	-0.13 (-5.18, 4.92)	Low fat	Mod	No	Mod	V serious	V low	-0.13 (-5.18, 4.92)	NA	Mod	No	V serious	V low
Weight Watchers	Usual diet	0.01 (-3.43, 3.32)	Dietary advice	Mod	No	Mod	V serious	V low	-0.88 (-3.11, 1.32)	0.497	Mod	No	Serious	Low
Zone	Usual diet	-0.33 (-2.84, 2.19)	Low fat	Mod	No	Mod	Serious	Low	-0.33 (-2.84, 2.19)	NA	Mod	No	Serious	Low

Low fat	Dietary advice	0.26 (-2.20, 2.62)	Mediterranean	Mod	No	Mod	Serious	Low	-0.42 (-2.47, 1.62)	0.271	Mod	No	Serious	Low
Atkins	Dietary advice	3.49 (1.31, 5.64)	Low fat	Mod	No	Mod	Serious	Low	3.49 (1.31, 5.64)	NA	Mod	No	Serious	Low
DASH	Dietary advice	-0.21 (-3.24, 2.80)	Usual diet	Mod	No	Mod	Serious	Low	-0.21 (-3.24, 2.80)	NA	Mod	No	Serious	Low
Jenny Craig	Dietary advice	2.15 (-2.96, 7.26)							-1.15 (-3.84, 1.60)	0.131	High	No	Serious	Mod
Mediterranean	Dietary advice	0.45 (-2.25, 3.08)	Usual diet	Mod	No	Mod	Serious	Low	1.10 (-0.94, 3.01)	0.479	Mod	No	Serious	Low
Ornish	Dietary advice	-3.44 (-7.33, 0.35)	Low fat	Mod	No	Mod	Serious	Low	-3.16 (-6.12, -0.27)	0.827	Mod	No	Serious	Low
Paleolithic	Dietary advice	-0.83 (-7.19, 5.55)	Low fat	Mod	No	Mod	V serious	V low	-0.83 (-7.19, 5.55)	NA	Mod	No	V serious	V low
Portfolio	Dietary advice	-1.56 (-6.56, 3.41)	Low fat	Mod	Serious	Low	Serious	V low	-1.56 (-6.56, 3.41)	NA	Low	No	V serious	V low
Rosemary Conley	Dietary advice	-0.34 (-5.33, 4.62)	Weight Watchers	Mod	Serious	Low	Serious	V low	-0.34 (-5.33, 4.62)	NA	Low	No	V serious	V low
South Beach	Dietary advice	2.05 (-4.23, 8.30)	Low fat	Mod	No	Mod	V serious	V low	2.05 (-4.23, 8.30)	NA	Mod	No	V serious	V low
The Biggest Loser	Dietary advice	1.70 (-2.68, 5.98)	Usual diet	Mod	Serious	Low	Serious	V low	1.70 (-2.68, 5.98)	NA	Low	No	Serious	V low
Volumetrics	Dietary advice	1.57 (-3.54, 6.64)	Low fat	Mod	No	Mod	V serious	V low	1.57 (-3.54, 6.64)	NA	Mod	No	V serious	Low
Weight Watchers	Dietary advice	-0.78 (-4.13, 2.59)							0.83 (-1.30, 2.85)	0.245	High	No	Serious	Mod
Zone	Dietary advice	1.37 (-1.25, 3.94)	Low fat	Mod	No	Mod	Serious	Low	1.37 (-1.25, 3.94)	NA	Mod	No	Serious	Low
Atkins	Low fat	5.74 (1.58, 9.80)	Zone	Mod	No	Mod	Serious	Low	3.91 (2.92, 4.92)	0.363	Mod	No	No	Mod
DASH	Low fat	1.02 (-2.17, 4.29)	Usual diet	Mod	No	Mod	Serious	Low	0.22 (-2.60, 3.05)	0.308	High	No	Serious	Mod
Jenny Craig	Low fat	-2.47 (-6.05, 1.24)							-0.73 (-3.62, 2.23)	0.141	High	No	Serious	Mod
Mediterranean	Low fat	2.55 (-0.31, 5.14)	Atkins	Mod	No	Mod	Serious	Low	1.51 (-0.37, 3.31)	0.266	High	No	Serious	Mod
Ornish	Low fat	-3.83 (-7.78, 0.07)	Atkins	Mod	No	Mod	Serious	Low	-2.75 (-5.54, 0.01)	0.570	High	No	Serious	Mod
Paleolithic	Low fat	NA							-0.39 (-6.39, 5.65)	NA	High	No	V serious	Low
Portfolio	Low fat	NA							-1.13 (-5.68, 3.41)	NA	High	No	Serious	Mod

Rosemary Conley	Low fat	0.10 (-4.84, 5.01)	Atkins	Mod	Serious	Low	V serious	V low	0.10 (-4.84, 5.01)	NA	Low	No	V serious	V low
South Beach	Low fat	NA							2.49 (-3.44, 8.36)	NA	High	No	V serious	Low
The Biggest Loser	Low fat	2.13 (-2.15, 6.38)	Low fat	Mod	Serious	Low	Serious	V low	2.13 (-2.15, 6.38)	NA	Low	No	Serious	V low
Volumetrics	Low fat	NA							2.00 (-2.66, 6.65)	NA	High	No	V serious	Low
Weight Watchers	Low fat	1.26 (-1.11, 3.58)	Atkins	Mod	No	Mod	Serious	Low	1.26 (-1.11, 3.58)	NA	Mod	No	Serious	Low
Zone	Low fat	3.69 (-2.59, 9.98)	Atkins	Mod	No	Mod	Serious	Low	1.81 (0.07, 3.54)	0.553	Mod	No	Serious	Low
DASH	Atkins	-3.69 (-6.62, -0.78)	Low fat	Mod	No	Mod	Serious	Low	-3.69 (-6.62, -0.78)	NA	Mod	No	Serious	Low
Jenny Craig	Atkins	-4.64 (-7.65, -1.58)	Low fat	Mod	No	Mod	Serious	Low	-4.64 (-7.65, -1.58)	NA	Mod	No	Serious	Low
Mediterranean	Atkins	-1.99 (-4.54, 0.39)	Low fat	Mod	No	Mod	Serious	Low	-2.40 (-4.40, -0.50)	0.702	Mod	No	Serious	Low
Ornish	Atkins	-6.25 (-11.60, -0.84)		Mod	No	Mod	Serious	Low	-6.66 (-9.51, -3.88)	0.862	High	No	Serious	Mod
Paleolithic	Atkins	-4.31 (-10.40, 1.80)	Low fat	Mod	No	Mod	Serious	Low	-4.31 (-10.40, 1.80)	NA	Mod	No	Serious	Low
Portfolio	Atkins	-5.04 (-9.70, -0.41)	Low fat	Mod	Serious	Low	Serious	V low	-5.04 (-9.70, -0.41)	NA	Low	No	Serious	V low
Rosemary Conley	Atkins	NA							-3.82 (-8.75, 1.09)	NA	Mod	No	Serious	Low
South Beach	Atkins	-1.43 (-7.42, 4.53)	Low fat	Mod	No	Mod	V serious	V low	-1.43 (-7.42, 4.53)	NA	Mod	No	Serious	Low
The Biggest Loser	Atkins	-1.78 (-6.13, 2.50)	Usual diet	Mod	Serious	Low	Serious	V low	-1.78 (-6.13, 2.50)	NA	Low	No	Serious	V low
Volumetrics	Atkins	-1.92 (-6.71, 2.84)	Low fat	Mod	No	Mod	Serious	Low	-1.92 (-6.71, 2.84)	NA	Mod	No	Serious	Low
Weight Watchers	Atkins	-2.19 (-5.32, 0.91)	Usual diet	Mod	No	Mod	Serious	Low	-2.67 (-5.10, -0.31)	0.529	High	No	Serious	Mod
Zone	Atkins	-2.09 (-4.62, 0.37)	Low fat	Mod	No	Mod	Serious	Low	-2.10 (-4.03, -0.21)	0.983	High	No	Serious	Mod
Jenny Craig	DASH	-0.94 (-4.69, 2.83)	Low fat	High	No	High	Serious	Mod	-0.94 (-4.69, 2.83)	NA	High	No	Serious	Mod
Mediterranean	DASH	1.68 (-1.39, 4.70)	Usual diet	Mod	No	Mod	Serious	Low	1.29 (-1.40, 3.89)	0.588	Mod	No	Serious	Low
Ornish	DASH	-2.95 (-6.76, 0.80)	Low fat	High	No	High	Serious	Mod	-2.95 (-6.76, 0.80)	NA	High	No	Serious	Mod

Paleolithic	DASH	-0.62 (-7.27, 6.04)	Low fat	High	No	High	V serious	Low	-0.62 (-7.27, 6.04)	NA	High	No	V serious	Low
Portfolio	DASH	-1.35 (-6.70, 3.99)	Low fat	High	Serious	Mod	V serious	V low	-1.35 (-6.70, 3.99)	NA	Mod	No	V serious	V low
Rosemary Conley	DASH	-0.13 (-5.51, 5.23)	Usual diet	Mod	Serious	Low	V serious	V low	-0.13 (-5.51, 5.23)	NA	Low	No	V serious	V low
South Beach	DASH	2.27 (-4.29, 8.76)	Low fat	High	No	High	V serious	Low	2.27 (-4.29, 8.76)	NA	High	No	V serious	Low
The Biggest Loser	DASH	1.90 (-2.67, 6.41)	Usual diet	Mod	Serious	Low	V serious	V low	1.90 (-2.67, 6.41)	NA	Low	No	Serious	V low
Volumetrics	DASH	1.78 (-3.70, 7.22)	Low fat	High	No	High	V serious	Low	1.78 (-3.70, 7.22)	NA	High	No	V serious	Low
Weight Watchers	DASH	1.03 (-2.17, 4.19)	Usual diet	Mod	No	Mod	Serious	Low	1.03 (-2.17, 4.19)	NA	Mod	No	Serious	Low
Zone	DASH	1.58 (-1.70, 4.85)	Low fat	Mod	No	Mod	Serious	Low	1.58 (-1.70, 4.85)	NA	Mod	No	Serious	Low
Mediterranean	Jenny Craig	2.24 (-0.88, 5.23)	Low fat	High	No	High	Serious	Mod	2.24 (-0.88, 5.23)	NA	High	No	Serious	Mod
Ornish	Jenny Craig	-2.01 (-5.81, 1.69)	Dietary advice	Mod	No	Mod	Serious	Low	-2.01 (-5.81, 1.69)	NA	Mod	No	Serious	Low
Paleolithic	Jenny Craig	0.33 (-6.37, 7.02)	Low fat	High	No	High	Serious	Mod	0.33 (-6.37, 7.02)	NA	High	No	V serious	Low
Portfolio	Jenny Craig	-0.41 (-5.84, 4.95)	Low fat	High	Serious	Mod	V serious	V low	-0.41 (-5.84, 4.95)	NA	Mod	No	V serious	V low
Rosemary Conley	Jenny Craig	0.81 (-4.64, 6.24)	Atkins, Low fat	Mod	Serious	Low	V serious	V low	0.81 (-4.64, 6.24)	NA	Low	No	V serious	V low
South Beach	Jenny Craig	3.20 (-3.43, 9.76)	Low fat	High	No	High	V serious	Low	3.20 (-3.43, 9.76)	NA	High	No	V serious	Low
The Biggest Loser	Jenny Craig	2.85 (-2.09, 7.66)	Usual diet	High	Serious	Mod	Serious	Low	2.85 (-2.09, 7.66)	NA	Mod	No	Serious	Low
Volumetrics	Jenny Craig	2.72 (-2.80, 8.17)	Low fat	High	No	High	Serious	Mod	2.72 (-2.80, 8.17)	NA	High	No	Serious	Mod
Weight Watchers	Jenny Craig	1.81 (-1.85, 5.36)	Dietary advice	High	No	High	Serious	Mod	1.97 (-1.25, 5.08)	0.694	High	No	Serious	Mod
Zone	Jenny Craig	2.52 (-0.86, 5.84)	Low fat	Mod	No	Mod	Serious	Low	2.52 (-0.86, 5.84)	NA	Mod	No	Serious	Low
Ornish	Mediterranean	-4.25 (-7.30, -1.18)	Low fat	High	No	High	Serious	Mod	-4.25 (-7.30, -1.18)	NA	High	No	Serious	Mod
Paleolithic	Mediterranean	-1.91 (-8.18, 4.44)	Low fat	High	No	High	V serious	Low	-1.91 (-8.18, 4.44)	NA	High	No	V serious	Low
Portfolio	Mediterranean	-2.65 (-7.51, 2.29)	Low fat	High	Serious	Mod	Serious	Low	-2.65 (-7.51, 2.29)	NA	Mod	No	Serious	Low

Rosemary Conley	Mediterranean	-1.42 (-6.35, 3.52)	Usual diet	Mod	Serious	Low	V serious	V low	-1.42 (-6.35, 3.52)	NA	Low	No	V serious	V low
South Beach	Mediterranean	0.97 (-5.20, 7.16)	Low fat	High	No	High	V serious	Low	0.97 (-5.20, 7.16)	NA	High	No	V serious	Low
The Biggest Loser	Mediterranean	0.61 (-3.46, 4.73)	Usual diet	Mod	Serious	Low	V serious	V low	0.61 (-3.46, 4.73)	NA	Low	No	V serious	V low
Volumetrics	Mediterranean	0.48 (-4.51, 5.53)	Low fat	High	No	High	V serious	Low	0.48 (-4.51, 5.53)	NA	High	No	V serious	Low
Weight Watchers	Mediterranean	-0.26 (-2.57, 2.09)	Usual diet	Mod	No	Mod	Serious	Low	-0.26 (-2.57, 2.09)	NA	Mod	No	Serious	Low
Zone	Mediterranean	0.29 (-2.14, 2.77)	Low fat	Mod	No	Mod	Serious	Low	0.29 (-2.14, 2.77)	NA	Mod	No	Serious	Low
Paleolithic	Ornish	2.34 (-4.25, 9.03)	Low fat	High	No	High	V serious	Low	2.34 (-4.25, 9.03)	NA	High	No	V serious	Low
Portfolio	Ornish	1.60 (-3.69, 6.96)	Low fat	High	Serious	Mod	Serious	Low	1.60 (-3.69, 6.96)	NA	Mod	No	V serious	V low
Rosemary Conley	Ornish	2.83 (-2.65, 8.32)	Atkins	Mod	Serious	Low	Serious	V low	2.83 (-2.65, 8.32)	NA	Low	No	Serious	V low
South Beach	Ornish	5.23 (-1.32, 11.77)	Low fat	High	No	High	Serious	Mod	5.23 (-1.32, 11.77)	NA	High	No	Serious	Mod
The Biggest Loser	Ornish	4.85 (-0.04, 9.81)	Usual diet, Low fat	Mod	Serious	Low	Serious	V low	4.85 (-0.04, 9.81)	NA	Low	No	Serious	V low
Volumetrics	Ornish	4.74 (-0.67, 10.18)	Low fat	High	No	High	Serious	Mod	4.74 (-0.67, 10.18)	NA	High	No	Serious	Mod
Weight Watchers	Ornish	3.28 (-0.43, 6.96)	Dietary advice	Mod	No	Mod	Serious	Low	3.99 (0.77, 7.20)	0.480	High	No	Serious	Mod
Zone	Ornish	4.06 (-1.70, 9.74)	Low fat	Mod	No	Mod	Serious	Low	4.56 (1.57, 7.58)	0.615	High	No	Serious	Mod
Portfolio	Paleolithic	-0.74 (-8.28, 6.80)	Low fat	High	Serious	Mod	V serious	V low	-0.74 (-8.28, 6.80)	NA	Mod	No	V serious	V low
Rosemary Conley	Paleolithic	0.48 (-7.27, 8.25)	Atkins, Low fat	Mod	Serious	Low	V serious	V low	0.48 (-7.27, 8.25)	NA	Low	No	V serious	V low
South Beach	Paleolithic	2.87 (-5.57, 11.30)	Low fat	High	No	High	V serious	Low	2.87 (-5.57, 11.30)	NA	High	No	V serious	Low
The Biggest Loser	Paleolithic	2.52 (-4.87, 9.88)	Usual diet, Low fat	Mod	Serious	Low	V serious	V low	2.52 (-4.87, 9.88)	NA	Low	No	V serious	V low
Volumetrics	Paleolithic	2.39 (-5.23, 9.99)	Low fat	High	No	High	V serious	Low	2.39 (-5.23, 9.99)	NA	High	No	V serious	Low
Weight Watchers	Paleolithic	1.65 (-4.83, 8.07)	Atkins, Low fat	Mod	No	Mod	V serious	V low	1.65 (-4.83, 8.07)	NA	Mod	No	V serious	V low
Zone	Paleolithic	2.20 (-4.09, 8.41)	Atkins, Low fat	Mod	No	Mod	V serious	V low	2.20 (-4.09, 8.41)	NA	Mod	No	V serious	V low

Rosemary Conley	Portfolio	1.23 (-5.47, 7.87)	Atkins, Low fat	Mod	Serious	Low	V serious	V low	1.23 (-5.47, 7.87)	NA	Low	No	V serious	V low
South Beach	Portfolio	3.62 (-3.82, 11.05)	Low fat	High	Serious	Mod	V serious	V low	3.62 (-3.82, 11.05)	NA	Mod	No	V serious	V low
The Biggest Loser	Portfolio	3.26 (-3.00, 9.47)	Usual diet, Low fat	Mod	Serious	Low	V serious	V low	3.26 (-3.00, 9.47)	NA	Low	No	V serious	V low
Volumetrics	Portfolio	3.13 (-3.39, 9.63)	Low fat	High	Serious	Mod	V serious	V low	3.13 (-3.39, 9.63)	NA	Mod	No	V serious	V low
Weight Watchers	Portfolio	2.39 (-2.75, 7.47)	Atkins, Low fat	Mod	Serious	Low	Serious	V low	2.39 (-2.75, 7.47)	NA	Low	No	Serious	V low
Zone	Portfolio	2.94 (-1.94, 7.80)	Low fat	Mod	Serious	Low	V serious	V low	2.94 (-1.94, 7.80)	NA	Low	No	Serious	V low
South Beach	Rosemary Conley	2.38 (-5.30, 10.07)	Atkins, Low fat	Mod	Serious	Low	V serious	V low	2.38 (-5.30, 10.07)	NA	Low	No	V serious	V low
The Biggest Loser	Rosemary Conley	2.04 (-4.13, 8.18)	Usual diet	Mod	Serious	Low	V serious	V low	2.04 (-4.13, 8.18)	NA	Low	No	V serious	V low
Volumetrics	Rosemary Conley	1.91 (-4.86, 8.71)	Atkins, Low fat	Mod	Serious	Low	V serious	V low	1.91 (-4.86, 8.71)	NA	Low	No	V serious	V low
Weight Watchers	Rosemary Conley	NA							1.15 (-3.68, 6.01)	NA	Mod	No	Serious	Low
Zone	Rosemary Conley	1.71 (-3.46, 6.88)	Atkins	Mod	Serious	Low	V serious	V low	1.71 (-3.46, 6.88)	NA	Low	No	V serious	V low
The Biggest Loser	South Beach	-0.36 (-7.65, 6.94)	Usual diet, Low fat	Mod	Serious	Low	V serious	V low	-0.36 (-7.65, 6.94)	NA	Low	No	V serious	V low
Volumetrics	South Beach	-0.49 (-7.99, 7.03)	Low fat	High	No	High	V serious	Low	-0.49 (-7.99, 7.03)	NA	High	No	V serious	Low
Weight Watchers	South Beach	-1.23 (-7.60, 5.13)	Atkins, Low fat	Mod	No	Mod	V serious	V low	-1.23 (-7.60, 5.13)	NA	Mod	No	V serious	V low
Zone	South Beach	-0.69 (-6.83, 5.49)	Atkins, Low fat	Mod	No	Mod	V serious	V low	-0.69 (-6.83, 5.49)	NA	Mod	No	V serious	V low
Volumetrics	The Biggest Loser	-0.12 (-6.42, 6.19)	Low fat, Usual diet	Mod	Serious	Low	V serious	V low	-0.12 (-6.42, 6.19)	NA	Low	No	V serious	V low
Weight Watchers	The Biggest Loser	-0.87 (-5.28, 3.53)	Usual diet	Mod	Serious	Low	V serious	V low	-0.87 (-5.28, 3.53)	NA	Low	No	V serious	V low
Zone	The Biggest Loser	-0.32 (-4.88, 4.25)	Usual diet, Low fat	Mod	Serious	Low	V serious	V low	-0.32 (-4.88, 4.25)	NA	Low	No	V serious	V low
Weight Watchers	Volumetrics	-0.75 (-5.98, 4.46)	Atkins, Low fat	Mod	No	Mod	V serious	V low	-0.75 (-5.98, 4.46)	NA	Mod	No	V serious	V low
Zone	Volumetrics	-0.20 (-5.17, 4.77)	Low fat	Mod	No	Mod	V serious	V low	-0.20 (-5.17, 4.77)	NA	Mod	No	V serious	V low
Zone	Weight Watchers	0.34 (-2.82, 3.45)	Atkins	High	No	High	Serious	Mod	0.57 (-2.21, 3.38)	0.615	High	No	Serious	Mod

Table S34: GRADE assessment for 6-month CRP reduction in individual popular diets NMA

Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95%CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet													
Atkins	Usual diet													
Jenny Craig	Usual diet													
Mediterranean	Usual diet	6	485	91.7	0.11 (-0.79, 1.05)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Ornish	Usual diet													
Paleolithic	Usual diet													
Portfolio	Usual diet													
Weight Watchers	Usual diet	1	471	NA	2.02 (0.61, 3.43)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes
Zone	Usual diet													
Low fat	Dietary advice													
Atkins	Dietary advice													
Jenny Craig	Dietary advice	1	426	NA	1.11 (-1.11, 3.34)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Mediterranean	Dietary advice	1	40	NA	2.79 (-0.55, 6.14)	No	No	Serious	Undetected	Mod	V serious	Low	No	Yes
Ornish	Dietary advice													
Paleolithic	Dietary advice													
Portfolio	Dietary advice													
Weight Watchers	Dietary advice													
Zone	Dietary advice	1	24	NA	1.30 (0.50, 2.09)	No	No	No	Undetected	High	V serious	Low	Yes	No

Atkins	Low fat	12	902	70.2	0.26 (-0.44, 1.03)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes
Jenny Craig	Low fat	1	227	NA	0.12 (-0.95, 1.20)	No	No	No	Undetected	High	V serious	Low	Yes	No
Mediterranean	Low fat	1	182	NA	0.30 (0.20, 0.40)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Ornish	Low fat													
Paleolithic	Low fat	1	61	NA	0.20 (-0.53, 0.92)	No	No	No	Undetected	High	V serious	Low	Yes	No
Portfolio	Low fat	1	345	NA	-0.68 (-2.75, 1.39)	No	No	No	Undetected	High	V serious	Low	Yes	No
Weight Watchers	Low fat													
Zone	Low fat	2	96	0.0	0.13 (-2.00, 2.26)	No	No	No	Undetected	High	V serious	Low	No	Yes
Jenny Craig	Atkins													
Mediterranean	Atkins	1	173	NA	-0.20 (-0.33, -0.07)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Ornish	Atkins	1	43	NA	0.05 (-4.02, 4.12)	No	No	No	Undetected	High	V serious	Low	NA	NA
Paleolithic	Atkins													
Portfolio	Atkins													
Weight Watchers	Atkins	1	52	NA	-0.61 (-2.13, 0.90)	No	No	No	Undetected	High	V serious	Low	Yes	No
Zone	Atkins	2	104	0.0	-0.77 (-2.63, 1.09)	No	No	No	Undetected	High	Serious	Mod	Yes	No
Mediterranean	Jenny Craig													
Ornish	Jenny Craig													
Paleolithic	Jenny Craig													
Portfolio	Jenny Craig													
Weight Watchers	Jenny Craig													
Zone	Jenny Craig													
Ornish	Mediterranean													
Paleolithic	Mediterranean													

Portfolio	Mediterranean													
Weight Watchers	Mediterranean													
Zone	Mediterranean													
Paleolithic	Ornish													
Portfolio	Ornish													
Weight Watchers	Ornish	1	51	NA	-0.66 (-2.92, 1.60)	No	No	No	Undetected	High	V serious	Low	Yes	No
Zone	Ornish	1	47	NA	-0.68 (-3.95, 2.59)	No	No	No	Undetected	High	V serious	Low	NA	NA
Portfolio	Paleolithic													
Weight Watchers	Paleolithic													
Zone	Paleolithic													
Weight Watchers	Portfolio													
Zone	Portfolio													
Zone	Weight Watchers	1	56	NA	-0.02 (-1.25, 1.20)	No	No	No	Undetected	High	V serious	Low	Yes	No

Table S34 continued: GRADE assessment for 6-month CRP reduction in individual popular diets NMA

Comparison groups		Indirect evidence							Network evidence					
Arm 1	Arm 2 (Ref)	MD (95%CrI)	First order loop of the most contribution	Low est of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95%CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-1.15 (-3.30, 0.93)	Mediterranean	Mod	Serious	Low	Serious	V low	-1.15 (-3.30, 0.93)	NA	Low	NA	Serious	V low
Low fat	Usual diet	0.33 (-1.25, 1.93)	Mediterranean	Mod	No	Mod	V serious	V low	0.33 (-1.25, 1.93)	NA	Mod	NA	V serious	V low
Atkins	Usual diet	0.64 (-0.90, 2.26)	Mediterranean	Mod	No	Mod	Serious	Low	0.64 (-0.90, 2.26)	NA	Mod	NA	Serious	Low
Jenny Craig	Usual diet	0.19 (-2.08, 2.45)	Mediterranean, Low fat	Mod	No	Mod	V serious	V low	0.19 (-2.08, 2.45)	NA	Mod	NA	V serious	V low
Mediterranean	Usual diet	2.61 (-0.72, 6.01)	Low fat, Zone, Weight Watchers	Mod	No	Mod	Serious	Low	0.247 (-0.59, 1.13)	0.139	Mod	No	Serious	Low
Ornish	Usual diet	1.11 (-1.62, 3.87)	Mediterranean, Atkins	Mod	No	Mod	V serious	V low	1.11 (-1.62, 3.87)	NR	Mod	NA	V serious	V low
Paleolithic	Usual diet	0.52 (-2.09, 3.17)	Mediterranean, Low fat	Mod	No	Mod	V serious	V low	0.52 (-2.09, 3.17)	NR	Mod	NA	V serious	V low
Portfolio	Usual diet	-0.37 (-3.61, 2.88)	Mediterranean, Low fat	Mod	No	Mod	V serious	V low	-0.37 (-3.61, 2.88)	NR	Mod	NA	V serious	V low
Weight Watchers	Usual diet	-0.49 (-3.11, 2.07)	Mediterranean, Atkins	Mod	No	Mod	V serious	V low	0.87 (-0.88, 2.70)	0.139	Mod	No	Serious	Low
Zone	Usual diet	0.27 (-1.54, 2.11)	Mediterranean, Atkins	Mod	No	Mod	V serious	V low	0.27 (-1.54, 2.11)	NA	Mod	NA	V serious	V low
Low fat	Dietary advice	1.48 (-0.26, 3.30)	Jenny Craig	High	Serious	Mod	Serious	Low	1.48 (-0.26, 3.30)	NA	Mod	NA	Serious	Low
Atkins	Dietary advice	1.79 (0.05, 3.68)	Zone	High	Serious	Mod	Serious	Low	1.79 (0.05, 3.68)	NA	Mod	NA	Serious	Low
Jenny Craig	Dietary advice	1.88 (-1.33, 5.20)							1.34 (-0.40, 3.14)	0.677	High	No	Serious	Mod
Mediterranean	Dietary advice	0.95 (-1.54, 3.34)	Zone, Atkins	High	Serious	Mod	V serious	V low	1.41 (-0.57, 3.49)	0.411	Mod	No	Serious	Low
Ornish	Dietary advice	2.26 (-0.57, 5.20)	Zone	High	Serious	Mod	Serious	Low	2.26 (-0.57, 5.20)	NA	Mod	NA	Serious	Low
Paleolithic	Dietary advice	1.67 (-1.02, 4.48)	Zone, Low fat	High	Serious	Mod	V serious	V low	1.67 (-1.02, 4.48)	NA	Mod	NA	V serious	V low

Portfolio	Dietary advice	0.78 (-2.52, 4.16)	Zone, Low fat	High	No	High	V serious	Low	0.78 (-2.52, 4.16)	NA	High	NA	Serious	Mod
Weight Watchers	Dietary advice	2.02 (-0.15, 4.33)	Zone	High	Serious	Mod	Serious	Low	2.02 (-0.15, 4.33)	NA	Mod	NA	Serious	Low
Zone	Dietary advice	1.69 (-1.09, 4.68)							1.42 (-0.20, 3.16)	0.821	High	No	Serious	Mod
Atkins	Low fat	1.39 (-2.10, 4.92)	Mediterranean	High	No	High	V serious	Low	0.31 (-0.35, 1.03)	0.520	High	No	Serious	Mod
Jenny Craig	Low fat	-0.64 (-3.89, 2.51)							-0.14 (-1.97, 1.63)	0.679	High	No	V serious	Low
Mediterranean	Low fat	-0.88 (-3.58, 2.12)							-0.08 (-1.54, 1.40)	0.491	High	No	V serious	Low
Ornish	Low fat	0.78 (-1.73, 3.30)	Atkins	Mod	No	Mod	Serious	Low	0.78 (-1.73, 3.30)	NA	Mod	NA	V serious	V low
Paleolithic	Low fat	0.19 (-1.90, 2.29)							0.19 (-1.90, 2.29)	NA	High	NA	V serious	Low
Portfolio	Low fat	-0.70 (-3.53, 2.13)							-0.70 (-3.53, 2.13)	NA	High	NA	V serious	Low
Weight Watchers	Low fat	0.55 (-1.18, 2.33)	Atkins	Mod	No	Mod	Serious	Low	0.55 (-1.18, 2.33)	NA	Mod	NA	V serious	V low
Zone	Low fat	-0.00 (-2.10, 2.04)	Atkins	Mod	No	Mod	Serious	Low	-0.06 (-1.36, 1.25)	0.928	High	No	V serious	Low
Jenny Craig	Atkins	-0.45 (-2.39, 1.38)	Low fat	Mod	No	Mod	Serious	Low	-0.45 (-2.39, 1.38)	NA	Mod	NA	V serious	V low
Mediterranean	Atkins	-1.16 (-3.87, 1.79)							-0.39 (-1.87, 1.05)	0.568	High	No	V serious	Low
Ornish	Atkins	NA							0.47 (-2.03, 2.94)	NA	High	NA	V serious	Low
Paleolithic	Atkins	-0.12 (-2.34, 2.06)	Low fat	Mod	No	Mod	Serious	Low	-0.12 (-2.34, 2.06)	NA	Mod	NA	V serious	V low
Portfolio	Atkins	-1.02 (-3.94, 1.88)	Low fat	Mod	No	Mod	Serious	Low	-1.02 (-3.94, 1.88)	NA	Mod	NA	V serious	V low
Weight Watchers	Atkins	1.97 (-1.05, 5.01)							0.23 (-1.48, 1.94)	0.163	High	No	V serious	Low
Zone	Atkins	-0.23 (-2.68, 2.16)							-0.37 (-1.70, 0.90)	0.711	High	No	Serious	Mod
Mediterranean	Jenny Craig	0.06 (-2.08, 2.26)	Low fat	High	No	High	Serious	Mod	0.06 (-2.08, 2.26)	NA	High	NA	V serious	Low

Ornish	Jenny Craig	0.92 (-2.06, 3.94)	Low fat, Atkins	Mod	No	Mod	Serious	Low	0.92 (-2.06, 3.94)	NA	Mod	NA	V serious	V low
Paleolithic	Jenny Craig	0.33 (-2.40, 3.11)	Low fat	High	No	High	Serious	Mod	0.33 (-2.40, 3.11)	NA	High	NA	V serious	Low
Portfolio	Jenny Craig	-0.56 (-3.90, 2.81)	Low fat	High	No	High	Serious	Mod	-0.56 (-3.90, 2.81)	NA	High	NA	V serious	Low
Weight Watchers	Jenny Craig	0.68 (-1.65, 3.11)	Low fat, Atkins	Mod	No	Mod	Serious	Low	0.68 (-1.65, 3.11)	NA	Mod	NA	V serious	V low
Zone	Jenny Craig	0.08 (-1.86, 2.06)	Dietary advice	High	No	High	Serious	Mod	0.08 (-1.86, 2.06)	NA	High	NA	V serious	Low
Ornish	Mediterranean	0.86 (-1.86, 3.56)	Atkins	High	No	High	Serious	Mod	0.86 (-1.86, 3.56)	NA	High	NA	V serious	Low
Paleolithic	Mediterranean	0.27 (-2.28, 2.81)	Low fat	High	No	High	Serious	Mod	0.27 (-2.28, 2.81)	NA	High	NA	V serious	Low
Portfolio	Mediterranean	-0.62 (-3.81, 2.55)	Low fat	High	No	High	Serious	Mod	-0.62 (-3.81, 2.55)	NA	High	NA	V serious	Low
Weight Watchers	Mediterranean	0.62 (-1.17, 2.44)	Atkins	High	No	High	Serious	Mod	0.62 (-1.17, 2.44)	NA	High	NA	V serious	Low
Zone	Mediterranean	0.02 (-1.72, 1.74)	Atkins	High	No	High	Serious	Mod	0.02 (-1.72, 1.74)	NA	High	NA	V serious	Low
Paleolithic	Ornish	-0.59 (-3.85, 2.68)	Atkins, Low fat	Mod	No	Mod	Serious	Low	-0.59 (-3.85, 2.68)	NA	Mod	NA	V serious	V low
Portfolio	Ornish	-1.48 (-5.27, 2.30)	Atkins, Low fat	Mod	No	Mod	Serious	Low	-1.48 (-5.27, 2.30)	NA	Mod	NA	V serious	V low
Weight Watchers	Ornish	-0.23 (-2.75, 2.30)							-0.23 (-2.75, 2.30)	NA	High	NA	V serious	Low
Zone	Ornish	NA							-0.84 (-3.32, 1.65)	NA	High	NA	V serious	Low
Portfolio	Paleolithic	-0.90 (-4.40, 2.61)	Low fat	High	No	High	Serious	Mod	-0.90 (-4.40, 2.61)	NA	High	NA	V serious	Low
Weight Watchers	Paleolithic	0.35 (-2.35, 3.09)	Atkins, Low fat	Mod	No	Mod	Serious	Low	0.35 (-2.35, 3.09)	NA	Mod	NA	V serious	V low
Zone	Paleolithic	-0.25 (-2.70, 2.20)	Low fat	High	No	High	Serious	Mod	-0.25 (-2.70, 2.20)	NA	High	NA	V serious	Low
Weight Watchers	Portfolio	1.25 (-2.06, 4.59)	Atkins, Low fat	Mod	No	Mod	Serious	Low	1.25 (-2.06, 4.59)	NA	Mod	NA	V serious	V low
Zone	Portfolio	0.65 (-2.46, 3.74)	Low fat	High	No	High	Serious	Mod	0.65 (-2.46, 3.74)	NA	High	NA	V serious	Low
Zone	Weight Watchers	-2.42 (-5.74, 0.83)							-0.61 (-2.41, 1.17)	0.211	High	No	V serious	Low

Table S35: Summary of individual popular diets NMA for all outcomes at 6 months

Outcomes	Certainty of Evidence	Classification	Intervention	MD (95% CrI) vs usual diet
Weight loss (kilograms)	Higher (Moderate to High)	Among the most effective	Jenny Craig (H)	7.77 (5.51, 10.0)
			Atkins (M)	5.46 (4.19, 6.75)
		Inferior to the most effective / superior to the least effective	Volumetrics (M)	5.95 (1.97, 9.98)
			Paleolithic (M)	5.31 (1.89, 8.82)
			Low fat (M)	4.87 (3.42, 6.36)
			Zone (M)	4.07 (2.57, 5.60)
			Weight Watchers (M)	3.90 (2.52, 5.31)
			Rosemary Conley (M)	3.76 (1.13, 6.45)
			DASH (M)	3.63 (2.52, 4.76)
			Ornish (M)	3.64 (1.33, 5.99)
	Mediterranean (M)	2.87 (1.60, 4.21)		
	Among the least effective	The Biggest Loser (M)	2.88 (-0.44, 6.18)	
Slimming World (M)		2.15 (-0.78, 5.11)		
Dietary advice (M)		0.31 (-0.94, 1.59)		
Low (Low to very low)	May be the most effective	South Beach (L)	9.86 (5.64, 14.08)	
	May be the least effective	Portfolio (VL)	3.64 (-0.68, 7.96)	
SBP Reduction (mm Hg)	Higher (Moderate to High)	The most effective	Paleolithic (M)	14.56 (7.34, 21.85)
		Inferior to the most effective / superior to the least effective	Portfolio (M)	5.97 (0.74, 11.18)
			Atkins (M)	5.14 (2.78, 7.57)
			DASH (M)	4.68 (2.83, 6.64)
			Low fat (M)	3.95 (1.81, 6.10)
			Zone (M)	3.46 (0.53, 6.44)
	Mediterranean (M)	2.94 (0.95, 5.02)		
	Among the least effective	The Biggest Loser (M)	3.17 (-1.46, 7.81)	
		Ornish (M)	0.69 (-3.06, 4.35)	
	Low (Low to very low)	May be the most effective	Jenny Craig (L)	7.86 (1.52, 14.21)
		May be among the least effective	Volumetrics (L)	2.93 (-3.46, 9.29)
			Weight Watchers (L)	2.80 (-0.84, 6.61)
Rosemary Conley (VL)			2.39 (-2.62, 7.39)	
Dietary advice (L)			0.58 (-1.85, 2.94)	
DBP Reduction (mm Hg)	Higher (Moderate to High)	The most effective	Atkins (M)	3.30 (1.67, 4.99)
		Inferior to the most effective / superior to the least effective	DASH (M)	2.84 (1.58, 4.18)
			Zone (M)	2.33 (0.24, 4.48)
			Low fat (M)	2.22 (0.75, 3.75)
		Among the least effective	Paleolithic (M)	3.85 (-1.00, 8.75)
			The Biggest Loser (M)	2.20 (-1.11, 5.52)
			Mediterranean (M)	1.03 (-0.46, 2.53)
	Low (Low to very low)	May be the most effective	Ornish (M)	0.20 (-2.45, 2.80)
			Jenny Craig (L)	7.81 (3.35, 12.30)
		May be inferior to the most effective / superior to the least effective	Portfolio (L)	3.98 (0.36, 7.66)

		May be among the least effective	Volumetrics (L)	1.95 (-2.58, 6.53)
			Rosemary Conley (L)	1.44 (-1.95, 4.85)
			Weight Watchers (L)	1.03 (-0.70, 2.79)
			Dietary advice (L)	0.40(-1.31, 2.09)
LDL Reduction (mg/dL)	Higher (Moderate to High)	The most effective	Mediterranean (M)	4.59 (0.60, 8.73)
		Among the least effective	Ornish (M)	4.71 (-3.45, 12.99)
			DASH (M)	3.93 (-3.19, 11.20)
			The Biggest Loser (M)	3.90 (-5.64, 13.42)
			Low fat (M)	1.92 (-3.54, 7.38)
	Dietary advice (M)		-2.01 (-8.35, 4.35)	
	Low (Low to very low)	May be the most effective	Portfolio (L)	21.29 (10.03, 32.55)
		May be among the least effective	Paleolithic (L)	7.27 (-7.71, 22.26)
			Rosemary Conley (VL)	7.15 (-4.66, 19.00)
			Volumetrics (L)	7.13 (-6.36, 20.53)
			Weight Watchers (VL)	7.13 (-6.36, 20.53)
			Jenny Craig (L)	0.21 (-8.54, 8.93)
			South Beach (L)	-0.64 (-16.96, 15.63)
Atkins (L)			-2.75 (-8.56, 3.00)	
Zone (L)	-2.89 (-9.26, 3.47)			
HDL Increase (mg/dL)	Higher (Moderate to High)	Not better than usual diet	The Biggest Loser (M)	-0.01 (-3.82, 3.81)
			Jenny Craig (M)	-2.85 (-5.86, 0.25)
	Low (Low to very low)	May be the most effective	Atkins* (L)	3.41 (0.83, 5.75)
		May be among the least effective	South Beach (VL)	0.36 (-5.85, 6.55)
			Volumetrics (L)	-0.13 (-5.18, 4.92)
			Zone (L)	-0.33 (-2.84, 2.19)
			Mediterranean (L)	-0.61 (-2.15, 0.87)
			Weight Watchers (L)	-0.88 (-3.11, 1.32)
			Dietary advice (L)	-1.71 (-3.72, 0.37)
			DASH (L)	-1.90 (-4.33, 0.56)
			Rosemary Conley (VL)	-2.04 (-6.87, 2.81)
Paleolithic (VL)			-2.52 (-8.85, 3.83)	
Portfolio (VL)	-3.26 (-8.17, 1.68)			
	May be worse than usual diet	Ornish (L)	-4.87 (-7.97, -1.77)	
		Low fat (L)	-2.13 (-4.02, -0.17)	
CRP Reduction (mg/dL)	Low (Low to very low)	Not better than usual diet	Ornish (VL)	1.11 (-1.62, 3.87)
			Weight Watchers (L)	0.87 (-0.88, 2.70)
			Atkins (L)	0.64 (-0.90, 2.26)
			Paleolithic (VL)	0.52 (-2.09, 3.17)
			Low fat (VL)	0.33 (-1.25, 1.93)
			Zone (VL)	0.27 (-1.54, 2.11)
			Mediterranean (L)	0.25 (-0.59, 1.13)
			Jenny Craig (VL)	0.19 (-2.08, 2.45)
Portfolio (VL)	-0.37 (-3.61, 2.88)			

			Dietary advice (VL)	-1.15 (-3.30, 0.93)
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*Results for Atkins showed significant difference after adjusting for behavior support and exercise. 95%CrI:
95% Credible Intervals; MD: Mean difference; NMA: Network meta-analysis

Table 36 Individual popular diets NMA results with GRADE certainty of evidence for weight loss at 6 months (kg)

Usual diet																		
0.30 (-0.94, 1.58)	Dietary advice																	
4.87 (3.42, 6.36)*	5.63 (3.76, 7.47)*	Low fat																
5.46 (4.19, 6.76)	5.15 (3.78, 6.52)	1.69 (0.97, 2.43)	Atkins															
3.64 (2.52, 4.75)	3.33 (1.92, 4.71)	-0.13 (-1.33, 1.05)	-1.82 (-3.21, -0.45)	DASH														
7.77 (5.53, 10.01)	6.01 (3.72, 8.29)*	7.07 (5.89, 8.26)*	2.31 (0.06, 4.55)	4.14 (1.82, 6.45)	Jenny Craig													
2.87 (1.60, 4.20)	2.57 (0.94, 4.23)	-0.90 (-2.31, 0.56)	-2.59 (-4.16, -0.98)	-0.76 (-2.34, 0.87)	-4.90 (-7.33, -2.39)	Mediterranean												
3.64 (1.33, 5.99)	3.33 (1.09, 5.60)	-0.13 (-2.28, 2.06)	-1.82 (-4.02, 0.41)	0.00 (-2.38, 2.42)	-4.14 (-7.03, -1.15)	0.77 (-1.76, 3.30)	Ornish											
5.31 (1.89, 8.82)	5.01 (1.46, 8.61)	1.55 (-1.89, 5.04)	-0.14 (-3.64, 3.41)	1.68 (-1.84, 5.29)	-2.46 (-6.42, 1.60)	2.44 (-0.85, 5.77)	1.68 (-2.36, 5.75)	Paleolithic										
3.64 (-0.68, 7.96)	3.33 (-1.03, 7.69)	-0.13 (-4.31, 4.05)	-1.82 (-6.07, 2.42)	0.01 (-4.35, 4.35)	-4.14 (-8.83, 0.58)	0.77 (-3.68, 5.16)	0.00 (-4.74, 4.68)	-1.68 (-7.16, 3.72)	Portfolio									
3.76 (1.13, 6.45)	3.46 (0.85, 6.11)	0.00 (-2.69, 2.71)	-1.69 (-4.44, 1.07)	0.13 (-2.63, 2.93)	-4.01 (-7.25, -0.70)	0.89 (-1.99, 3.78)	0.12 (-3.22, 3.47)	-1.55 (-5.85, 2.73)	0.13 (-4.84, 5.13)	Rosemary Conley								
2.15 (-0.78, 5.11)	1.85 (-1.05, 4.75)	-1.61 (-4.61, 1.39)	-3.31 (-6.36, -0.24)	-1.48 (-4.53, 1.59)	-5.62 (-9.10, -2.11)	-0.72 (-3.90, 2.42)	-1.49 (-5.07, 2.09)	-3.16 (-7.68, 1.28)	-1.49 (-6.62, 3.68)	-1.61 (-5.00, 1.75)	Slimming World							
9.86 (5.64, 14.08)	9.56 (5.30, 13.80)	6.10 (2.02, 10.17)	4.41 (0.26, 8.53)	6.23 (1.98, 10.48)	2.09 (-2.49, 6.71)	6.99 (2.66, 11.28)	6.22 (1.59, 10.84)	4.55 (-0.83, 9.85)	6.22 (0.39, 12.06)	6.11 (1.20, 10.97)	7.72 (2.65, 12.75)	South Beach						
2.88 (-0.44, 6.18)	2.58 (-0.99, 6.11)	-0.89 (-4.38, 2.58)	-2.58 (-6.14, 0.95)	-0.76 (-4.26, 2.73)	-4.89 (-8.88, -0.90)	0.01 (-3.59, 3.52)	-0.76 (-4.83, 3.26)	-2.44 (-7.27, 2.29)	-0.75 (-6.21, 4.67)	-0.88 (-5.18, 3.34)	0.72 (-3.70, 5.14)	-6.99 (-12.35, -1.67)	The Biggest Loser					
5.95 (1.97, 9.98)	5.65 (1.63, 9.69)	2.19 (-1.66, 6.04)	0.50 (-3.42, 4.41)	2.32 (-1.70, 6.37)	-1.82 (-6.20, 2.61)	3.08 (-1.04, 7.18)	2.32 (-2.11, 6.72)	0.64 (-4.54, 5.77)	2.32 (-3.36, 8.03)	2.20 (-2.53, 6.90)	3.80 (-1.08, 8.69)	-3.90 (-9.53, 1.68)	3.07 (-2.08, 8.29)	Volumetrics				
3.90 (2.52, 5.29)	3.59 (2.42, 4.76)	0.14 (-1.25, 1.51)	-1.56 (-3.07, -0.05)	0.26 (-1.29, 1.83)	-3.88 (-6.12, -1.59)	1.03 (-0.76, 2.77)	0.26 (-2.14, 2.62)	-1.42 (-5.08, 2.20)	0.26 (-4.14, 4.67)	0.14 (-2.53, 2.76)	1.75 (-1.19, 4.67)	-5.96 (-10.25, -1.67)	1.02 (-2.55, 4.62)	-2.05 (-6.15, 2.02)	Weight Watchers			
4.07 (2.57, 5.60)	3.77 (2.19, 5.35)	0.31 (-0.77, 1.39)	-1.38 (-2.62, -0.15)	0.44 (-1.15, 2.04)	-3.69 (-6.06, -1.30)	1.20 (-0.59, 2.97)	0.44 (-1.86, 2.71)	-1.25 (-4.88, 2.36)	0.43 (-3.88, 4.76)	0.31 (-2.59, 3.18)	1.92 (-1.24, 5.09)	-5.79 (-10.01, -1.56)	1.19 (-2.42, 4.86)	-1.88 (-5.88, 2.12)	0.17 (-1.52, 1.88)	Zone		

High certainty Moderate certainty Low certainty Very low certainty

The values above the popular diets correspond to the difference in median weight loss between the column and row at 6 months, for positive values the diet indicated in the column is favored (e.g., the difference in median weight loss between the Jenny Craig and usual diet at 6 months is 7.77 kg). Diets in bold indicate a significant treatment effect. * Estimates were informed by direct evidence because of serious inconsistency in these comparisons.

The NMA included 97 RCTs enrolling 12,727 participants involving 14 popular diets and 3 control diets and reported weight loss at 6 months (\pm 3 months); of 136 paired comparisons 31 had direct and indirect evidence, 10 had only direct evidence, and 95 had only indirect evidence (Appendix table S27). Although the heterogeneity of the network was low ($\tau=0.38$), 7 of 18 direct comparisons with more than one RCT had $I^2 >50\%$. In 4 of 31 comparisons, we identified serious incoherence between direct and indirect evidence; in our evidence summaries, we used the estimates with higher certainty of direct and indirect for these comparisons (Appendix table S27). On the basis of substantial differences between unadjusted and adjusted network estimates, we identified serious intransitivity in 38 of 136 comparisons (Appendix table S27). Appendix table S34 presents the league table with the NMA estimates and GRADE assessments. Much of the evidence was judged as moderate or low certainty, most often because of serious inconsistency and imprecision.

Table S37: Individual popular diets NMA results for weight loss at 12 months (kg)

Usual diet													
-0.63 (-2.29, 1.00)	Dietary advice												
2.67 (1.07, 4.29)	-3.30 (-4.62, -2.03)	Low fat											
3.84 (2.10, 5.59)	4.48 (3.02, 5.95)	1.18 (0.25, 2.07)	Atkins										
3.08 (0.48, 5.66)	3.71 (0.66, 6.77)	0.41 (-2.65, 3.43)	-0.77 (-3.89, 2.34)	DASH									
7.18 (4.78, 9.56)	7.81 (5.88, 9.76)	4.51 (2.46, 6.51)	3.34 (1.15, 5.5)	4.11 (0.58, 7.61)	Jenny Craig								
2.80 (0.86, 4.72)	3.43 (1.56, 5.32)	0.14 (-1.37, 1.57)	-1.04 (-2.77, 0.65)	-0.27 (-3.51, 2.94)	-4.38 (-6.84, -1.91)	Mediterranean							
2.35 (0.06, 4.77)	2.99 (1.00, 5.07)	-0.31 (-2.22, 1.67)	-1.49 (-3.46, 0.57)	-0.73 (-4.13, 2.84)	-4.83 (-7.42, -2.10)	-0.45 (-2.79, 2.03)	Ornish						
6.97 (3.08, 10.90)	7.61 (3.85, 11.42)	4.31 (0.74, 7.88)	3.14 (-0.54, 6.82)	3.90 (-0.76, 8.61)	-0.20 (-4.26, 3.91)	4.18 (0.33, 8.07)	4.62 (0.55, 8.64)	Paleolithic					
2.80 (0.30, 5.34)	3.43 (1.18, 5.75)	0.13 (-2.23, 2.51)	-1.05 (-3.44, 1.39)	-0.28 (-3.84, 3.36)	-4.39 (-7.26, -1.44)	-0.01 (-2.69, 2.76)	0.44 (-2.47, 3.31)	-4.18 (-8.45, 0.11)	Rosemary Conley				
1.28 (-1.59, 4.18)	1.91 (-0.78, 4.66)	-1.39 (-4.24, 1.47)	-2.57 (-5.49, 0.39)	-1.80 (-5.65, 2.10)	-5.91 (-9.15, -2.59)	-1.53 (-4.65, 1.66)	-1.07 (-4.40, 2.19)	-5.70 (-10.25, -1.12)	-1.52 (-4.67, 1.63)	Slimming World			
4.17 (0.31, 8.04)	4.80 (1.07, 8.56)	1.49 (-2.03, 5.00)	0.32 (-3.31, 3.96)	1.09 (-3.54, 5.74)	-3.02 (-7.06, 1.07)	1.36 (-2.43, 5.19)	1.81 (-2.25, 5.79)	-2.81 (-7.83, 2.17)	1.37 (-2.88, 5.59)	2.89 (-1.66, 7.41)	Volumetrics		
2.98 (1.27, 4.65)	3.61 (2.53, 4.68)	0.31 (-1.08, 1.66)	-0.86 (-2.40, 0.63)	-0.09 (-3.20, 2.97)	-4.20 (-6.33, -2.08)	0.18 (-1.76, 2.10)	0.62 (-1.56, 2.70)	-4.00 (-7.85, -0.22)	0.18 (-2.14, 2.42)	1.70 (-1.09, 4.43)	-1.19 (-4.97, 2.57)	Weight Watchers	
3.25 (1.20, 5.33)	3.88 (2.11, 5.70)	0.58 (-0.79, 1.97)	-0.60 (-2.13, 0.99)	0.17 (-3.10, 3.51)	-3.93 (-6.31, -1.49)	0.45 (-1.52, 2.49)	0.9 (-1.26, 2.99)	-3.73 (-7.55, 0.10)	0.45 (-2.23, 3.12)	1.98 (-1.14, 5.10)	-0.92 (-4.68, 2.87)	0.27 (-1.54, 2.14)	Zone

The values correspond to the difference in mean weight lost between the row and column at 12 months (e.g., the difference in average weight lost between the Jenny Craig diet and usual diet at 12 months is 7.18 kg).

44 RCTs with 8,811 participants involving 14 network nodes reported 12-month weight loss. Portfolio, South Beach, and The Biggest Loser diets were not assessed at 12-month because there were no relevant RCTs. All other popular diets except Paleolithic slightly decreased in their estimated effects at 12-month follow-up compared with 6-month follow-up. The Jenny Craig kept the largest weight loss at this time point compared to usual diet.

Table S38 Individual popular diets NMA results with GRADE certainty of evidence for both DBP reduction (above right) and SBP reduction (below left) at 6 months (mm Hg)

		DBP reduction													
SBP reduction	Usual diet	0.41 (-1.30, 2.10)	2.24 (0.77, 3.76)	3.32 (1.69, 5.00)	2.85 (1.59, 4.18)	7.81 (3.35, 12.30)	1.02 (-0.48, 2.53)	0.20 (-2.45, 2.80)	3.85 (-1.00, 8.75)	3.98 (0.36, 7.66)	1.44 (-1.95, 4.85)	2.20 (-1.11, 5.52)	1.95 (-2.58, 6.53)	1.04 (-0.67, 2.80)	2.33 (0.24, 4.48)
	0.58 (-1.84, 2.93)	Dietary advice	1.83 (0.10, 3.62)	2.91 (1.07, 4.81)	2.44 (0.73, 4.25)	7.41 (2.86, 12.00)	0.61 (-1.38, 2.64)	-0.21 (-2.81, 2.36)	3.44 (-1.51, 8.45)	3.58 (0.16, 7.37)	1.03 (-2.51, 4.59)	1.79 (-1.92, 5.53)	1.54 (-3.07, 6.23)	0.63 (-0.85, 2.18)	1.92 (-0.21, 4.13)
	3.94 (1.79, 6.06)	1.97 (-0.47, 4.47)*	Low fat	1.08 (0.19, 1.97)	0.60 (-0.94, 2.19)	5.58 (1.34, 9.80)	-1.22 (-3.17, 0.69)	-2.04 (-4.44, 0.27)	1.60 (-3.02, 6.24)	1.75 (-1.59, 5.08)	-0.80 (-4.24, 2.63)	-0.04 (-3.71, 3.57)	-0.29 (-4.58, 4.01)	-1.20 (-3.06, 0.65)	0.09 (-1.60, 1.79)
	5.13 (2.76, 7.51)	4.54 (1.99, 7.19)	1.19 (-0.06, 2.48)	Atkins	-0.47 (-2.17, 1.27)	4.50 (0.17, 8.81)	-2.30 (-4.37, 0.25)	-3.12 (-5.55, -0.78)	0.53 (-4.19, 5.23)	0.67 (-2.78, 4.12)	-1.88 (-5.33, 1.55)	-1.12 (-4.86, 2.56)	-1.37 (-5.75, 3.01)	-2.28 (-5.75, 0.35)	-0.99 (-2.75, 0.80)
	4.68 (2.83, 6.62)	4.09 (1.74, 6.63)	0.74 (-1.42, 3.01)	-0.45 (-2.87, 2.04)	DASH	4.97 (0.44, 9.46)	-1.82 (-3.69, 0.03)	-2.65 (-5.38, -0.02)	1.00 (-3.90, 5.89)	1.14 (-2.56, 4.79)	-1.41 (-4.96, 2.08)	-0.64 (-4.26, 2.88)	-0.90 (-5.48, 3.68)	-1.80 (-3.73, 0.07)	-0.52 (-2.70, 1.65)
	7.86 (1.52, 14.21)	7.29 (0.88, 13.72)	3.93 (-2.03, 9.86)	2.74 (-3.36, 8.77)	3.18 (-3.20, 9.50)	Jenny Craig	-6.79 (-11.45, -2.16)	-7.62 (-12.48, -2.80)	-3.97 (-10.22, 2.32)	-3.83 (-9.20, 1.56)	-6.37 (-11.82, -0.95)	-5.61 (-11.19, -0.06)	-5.86 (-11.88, 0.15)	-6.77 (-11.37, -2.16)	-5.48 (-10.01, -0.91)
	2.95 (0.94, 5.01)	2.37 (-0.32, 5.17)	-0.99 (-3.58, 1.66)	-2.18 (-4.98, 0.65)	-1.73 (-4.27, 0.78)	-4.92 (-11.40, 1.62)	Mediterranean	-0.82 (-3.75, 2.04)	2.82 (-2.96, 7.87)	2.96 (-0.86, 6.83)	0.42 (-3.24, 4.07)	1.18 (-2.47, 4.82)	0.92 (-3.77, 5.65)	0.02 (-2.10, 2.16)	1.31 (-1.10, 3.77)
	0.69 (-3.06, 4.35)	0.10 (-3.53, 3.76)	-3.25 (-6.54, 0.02)	-4.44 (-7.79, -1.18)	-3.98 (-7.85, -0.32)	-7.18 (-13.99, -0.44)	-2.26 (-6.34, 1.66)	Ornish	3.66 (-1.51, 8.88)	3.79 (-0.24, 7.92)	1.24 (-2.75, 5.30)	2.00 (-2.19, 6.26)	1.76 (-3.10, 6.71)	0.85 (-1.80, 3.58)	2.13 (-0.35, 4.73)
	14.56 (7.34, 21.85)	13.99 (6.71, 21.37)	10.63 (3.72, 17.57)	9.45 (2.42, 16.48)	9.89 (2.60, 17.14)	6.71 (-2.42, 15.88)	11.62 (4.22, 19.02)	13.90 (6.26, 21.54)	Paleolithic	0.14 (-5.60, 5.85)	-2.42 (-8.21, 3.36)	-1.65 (-7.55, 4.21)	-1.89 (-8.24, 4.44)	-2.80 (-7.83, 2.19)	-1.52 (-6.45, 3.41)
	5.97 (0.74, 11.18)	5.39 (0.07, 10.75)	2.03 (-2.74, 6.77)	0.85 (-4.13, 5.72)	1.30 (-4.02, 6.46)	-1.91 (-9.50, 5.72)	3.02 (-2.46, 8.40)	5.28 (-0.47, 11.07)	-8.61 (-17.02, -0.22)	Portfolio	-2.55 (-7.35, 2.23)	-1.78 (-6.73, 3.10)	-2.04 (-7.47, 3.41)	-2.94 (-6.77, 0.86)	-1.66 (-2.11, 2.11)
	2.39 (-2.62, 7.39)	1.81 (-3.33, 6.99)	-1.55 (-6.59, 3.49)	-2.74 (-7.80, 2.31)	-2.29 (-7.51, 2.83)	-5.48 (-13.30, 2.36)	-0.56 (-5.89, 4.69)	1.71 (-4.11, 7.56)	-12.20 (-20.76, -3.59)	Rosemary Conley	0.77 (-4.01, 5.49)	0.51 (-4.97, 6.02)	-0.39 (-3.85, 3.06)	0.89 (-2.82, 4.65)	
	3.17 (-1.46, 7.81)	2.60 (-2.58, 7.84)	-0.77 (-5.87, 4.35)	-1.95 (-7.18, 3.25)	-1.49 (-6.58, 3.45)	-4.70 (-12.54, 3.18)	0.23 (-4.88, 5.26)	2.48 (-3.40, 8.44)	-11.40 (-20.01, -2.83)	The Biggest Loser	0.79 (-6.04, 7.62)	-0.24 (-8.12, 7.63)	-0.25 (-5.86, 5.42)	-1.16 (-4.88, 2.62)	0.12 (-3.78, 4.11)
	2.93 (-3.46, 9.29)	2.34 (-4.13, 8.85)	-1.01 (-7.04, 4.99)	-2.20 (-8.39, 3.92)	-1.76 (-8.19, 4.61)	-4.94 (-13.40, 3.53)	-0.02 (-6.64, 6.49)	2.25 (-4.60, 9.06)	-11.65 (-20.85, -2.51)	Volume trials	0.54 (-7.34, 8.40)	-0.24 (-8.12, 7.63)	-0.38 (-6.92, 6.24)	Weight Watchers	1.29 (-0.97, 3.58)
	2.55 (0.08, 5.08)	1.96 (-0.10, 4.19)	-1.39 (-4.02, 1.33)	-2.58 (-5.35, 0.23)	-2.13 (-4.87, 0.57)	-5.32 (-11.80, 1.23)	-0.40 (-3.37, 2.57)	1.86 (-1.92, 5.77)	-12.02 (-19.44, -4.61)	Zone	0.16 (-4.86, 5.25)	-0.63 (-5.86, 4.68)	0.54 (-6.92, 6.24)	0.92 (-2.31, 4.11)	
	3.46 (0.53, 6.44)	2.88 (-0.02, 5.90)	-0.47 (-2.76, 1.85)	-1.66 (-4.13, 0.79)	-1.21 (-4.26, 1.78)	-4.40 (-10.76, 2.00)	0.51 (-2.79, 3.82)	2.78 (-0.66, 6.32)	-11.11 (-18.40, -3.82)		1.08 (-4.34, 6.52)	0.28 (-5.17, 5.80)	0.54 (-5.87, 7.02)	0.92 (-2.31, 4.11)	

High certainty Moderate certainty Low certainty Very low certainty

The values correspond to the difference in median DBP reduction (above right) and SBP reduction (below left) between the column and row at 6 months, for positive values the diet indicated in the column is favored (e.g., the difference in median DBP reduction between Jenny Craig and usual diet at 6 months is 7.81 mm Hg; the difference in median SBP reduction between DASH and usual diet at 6 months is 4.68

mm Hg). Diets in bold indicate a significant treatment effect. * Estimate was informed by indirect evidence because of serious inconsistency in these comparisons.

SBP - The NMA included 71 RCTs enrolling 10,118 participants involving 12 popular diets and 3 control diets reported SBP at 6 months (\pm 3 months); of 105 paired comparisons, 24 had direct and indirect evidence, 8 had only direct evidence, and 73 had only indirect evidence (Appendix table S28). The heterogeneity of the network was low ($\tau=0.27$); 2 of 14 direct comparisons with more than one RCT had $I^2 > 50\%$.

The comparison of low fat and dietary advice was the only comparison in which we identified serious incoherence between direct and indirect evidence (Appendix table S28). We identified serious intransitivity in 26 of 105 comparisons (Appendix table S28). Much of the evidence was judged to be moderate or low certainty, most often because of serious risk of bias and imprecision (Appendix table S35-below left, Appendix table S28).

DBP - The NMA for DBP was almost identical to SBP with, again, much of the evidence judged as moderate or low certainty, most often rated down for risk of bias and imprecision (Table 35-above right, Appendix table S29).

Table S39: DBP reduction (above right) and SBP reduction (below left) at 12 months across individual popular diets with 95% credible intervals

		12-month DBP reduction									
12-month SBP reduction	Usual diet	-1.15 (-3.93, 1.62)	1.45 (-0.91, 4.26)	1.80 (-0.82, 4.65)	-1.50 (-4.86, 1.93)	2.06 (-2.81, 7.38)	1.27 (-1.57, 4.00)	-0.61 (-3.50, 2.55)	0.05 (-5.14, 5.71)	-0.25 (-2.74, 2.57)	1.69 (-1.33, 5.25)
	1.29 (-2.19, 5.08)	Dietary advice	2.60 (-0.03, 5.69)	2.95 (0.12, 6.05)	-0.34 (-4.51, 3.90)	3.21 (-1.8, 8.67)	2.42 (-1.11, 5.86)	0.55 (-2.33, 3.69)	1.21 (-4.13, 6.99)	0.90 (-0.56, 2.75)	2.85 (-0.29, 6.51)
	1.06 (-1.94, 4.64)	-0.24 (-3.65, 3.54)	Low fat	0.35 (-1.16, 1.67)	-2.94 (-7.04, 0.72)	0.61 (-3.78, 5.00)	-0.14 (-3.32, 2.22)	-2.05 (-4.67, 0.38)	-1.4 (-6.16, 3.4)	-1.68 (-4.54, 0.96)	0.24 (-1.99, 2.61)
	2.72 (-0.59, 6.41)	1.41 (-2.33, 5.31)	1.64 (-0.26, 3.41)	Atkins	-3.29 (-7.41, 0.62)	0.26 (-4.24, 4.95)	-0.51 (-3.74, 2.23)	-2.40 (-4.97, 0.21)	-1.75 (-6.60, 3.35)	-2.02 (-4.92, 0.84)	-0.10 (-2.43, 2.55)
	-3.74 (-8.23, 0.81)	-5.03 (-10.76, 0.43)	-4.81 (-10.26, 0.12)	-6.46 (-11.99, -1.29)	DASH	3.55 (-2.09, 9.58)	2.76 (-0.84, 6.23)	0.89 (-3.30, 5.29)	1.54 (-4.38, 7.93)	1.26 (-2.77, 5.50)	3.19 (-0.96, 7.85)
	-0.80 (-6.84, 5.81)	-2.10 (-8.41, 4.53)	-1.86 (-7.28, 3.55)	-3.51 (-9.14, 2.30)	2.94 (-4.30, 10.69)	Jenny Craig	-0.79 (-6.29, 4.11)	-2.66 (-7.81, 2.31)	-2.01 (-8.46, 4.47)	-2.29 (-7.58, 2.80)	-0.37 (-5.23, 4.67)
	2.32 (-1.13, 5.48)	1.04 (-3.64, 5.03)	1.33 (-2.69, 3.98)	-0.35 (-4.53, 2.82)	6.04 (1.10, 10.72)	3.13 (-3.72, 9.05)	Mediterranean	-1.89 (-5.12, 1.82)	-1.22 (-6.44, 4.62)	-1.51 (-4.73, 2.15)	0.40 (-2.73, 4.36)
	-0.67 (-4.56, 3.77)	-1.97 (-5.94, 2.31)	-1.75 (-5.04, 1.56)	-3.38 (-6.73, 0.10)	3.08 (-2.55, 9.19)	0.12 (-6.19, 6.46)	-3.02 (-6.97, 2.00)	Ornish	0.65 (-4.63, 6.14)	0.37 (-2.59, 3.31)	2.29 (-0.39, 5.31)
	0.68 (-5.76, 7.60)	-0.62 (-7.31, 6.34)	-0.39 (-6.23, 5.39)	-2.03 (-8.12, 4.09)	4.41 (-3.15, 12.50)	1.48 (-6.51, 9.36)	-1.65 (-7.96, 5.47)	1.35 (-5.40, 8.02)	Volumetrics	-0.28 (-5.90, 5.12)	1.65 (-3.60, 6.96)
	2.08 (-1.19, 5.89)	0.75 (-1.08, 2.96)	1.03 (-2.65, 4.54)	-0.63 (-4.41, 3.21)	5.81 (0.50, 11.60)	2.89 (-3.64, 9.29)	-0.26 (-4.13, 4.56)	2.76 (-1.42, 6.83)	1.40 (-5.46, 8.20)	Weight Watchers	1.93 (-1.19, 5.35)
	1.03 (-2.94, 5.69)	-0.28 (-4.44, 4.34)	-0.05 (-3.00, 3.07)	-1.69 (-4.80, 1.74)	4.76 (-0.86, 11.04)	1.81 (-4.29, 8.11)	-1.34 (-5.19, 3.80)	1.70 (-1.88, 5.47)	0.35 (-6.09, 7.04)	-1.07 (-5.29, 3.44)	Zone

The values correspond to the difference in median DBP reduction (above right) and SBP reduction (below left) between the column and row at 12-months (eg, the difference in median DBP reduction between Jenny Craig and usual diet at 12-months is 2.06 mm Hg; the difference in median SBP reduction between DASH and usual diet at 12-months is -3.74 mm Hg).

29 RCTs with 5,823 participants involving 8 popular diets were estimated. All popular diets decreased in their estimated effects at 12-months follow-up compared with 6-months follow-up.

Table S40 Individual popular diets NMA results with GRADE certainty of evidence for both HDL increase (above right) and LDL reduction (below left) at 6 months (mg/dL)

		HDL increase														
LDL reduction	Usual diet	-1.70 (-3.72, 0.39)	-2.14 (-4.04, -0.20)	1.78 (-0.24, 3.85)	-1.91 (-4.36, 0.57)	-2.85 (-5.86, 0.24)	-0.61 (-2.16, 0.88)	-4.87 (-7.97, -1.77)	-2.52 (-8.85, 3.83)	-3.26 (-8.17, 1.68)	-2.04 (-6.87, 2.81)	0.36 (-5.85, 6.55)	-0.01 (-3.82, 3.81)	-0.13 (-5.18, 4.92)	-0.88 (-3.11, 1.35)	-0.33 (-2.84, 2.19)
	-2.11 (-7.71, 3.53)	Dietary advice	-0.43 (-2.51, 1.60)	3.49 (1.31, 5.64)	-0.21 (-3.24, 2.80)	-1.15 (-3.87, 1.59)	1.09 (-0.97, 3.02)	-3.17 (-6.13, -0.26)	-0.83 (-7.19, 5.55)	-1.56 (-6.56, 3.41)	-0.34 (-5.33, 4.62)	2.05 (-4.23, 8.30)	1.70 (-2.68, 5.98)	1.57 (-3.54, 6.64)	0.82 (-1.29, 2.87)	1.37 (-1.25, 3.94)
	1.88 (-3.00, 6.74)	3.97 (-1.59, 9.55)	Low fat	3.91 (2.93, 4.93)	0.23 (-2.59, 3.04)	-0.72 (-3.62, 2.24)	1.52 (-0.36, 3.32)	-2.73 (-5.52, 0.03)	-0.39 (-6.39, 5.65)	-1.13 (-5.68, 3.41)	0.10 (-4.84, 5.01)	2.49 (-3.44, 8.36)	2.13 (-2.15, 6.38)	2.00 (-2.66, 3.58)	1.26 (-1.11, 3.58)	1.81 (0.06, 3.53)
	-2.74 (-7.89, 2.37)	-0.65 (-6.45, 5.17)	-4.62 (-7.15, -2.10)	Atkins	-3.69 (-6.62, -0.78)	-4.64 (-7.65, -1.58)	-2.39 (-4.39, -0.49)	-6.64 (-9.49, -3.87)	-4.31 (-10.40, 1.80)	-5.04 (-9.70, -0.41)	-3.82 (-8.75, 1.09)	-1.43 (-7.42, 4.53)	-1.78 (-6.13, 2.50)	-1.92 (-6.71, 2.84)	-2.66 (-5.09, -0.29)	-2.11 (-4.03, -0.22)
	3.81 (-2.79, 10.48)	5.92 (-2.49, 14.30)	1.96 (-5.83, 9.67)	6.57 (-1.36, 14.48)	DASH	-0.94 (-4.69, 2.83)	1.30 (-1.39, 3.91)	-2.95 (-6.76, 0.80)	-0.62 (-7.27, 6.04)	-1.35 (-6.70, 3.99)	-0.13 (-5.51, 5.23)	2.27 (-4.29, 8.76)	1.90 (-2.67, 6.41)	1.78 (-3.70, 7.22)	1.03 (-2.17, 4.19)	1.58 (-1.70, 4.85)
	0.15 (-7.69, 8.04)	2.25 (-4.53, 9.08)	-1.71 (-9.23, 5.79)	2.90 (-4.83, 10.65)	-3.66 (-13.65, 6.39)	Jenny Craig	2.24 (-0.88, 5.23)	-2.01 (-5.81, 1.69)	0.33 (-6.37, 7.02)	-0.41 (-5.84, 4.95)	0.81 (-4.64, 6.24)	3.20 (-3.43, 9.76)	2.85 (-2.09, 7.66)	2.72 (-2.80, 8.17)	1.97 (-1.20, 5.08)	2.52 (-0.86, 5.84)
	4.42 (0.87, 8.06)	6.53 (1.27, 11.83)	2.55 (-1.92, 7.10)	7.16 (2.42, 12.00)	0.61 (-6.57, 7.80)	4.28 (-3.45, 12.00)	Mediterranean	-4.25 (-7.30, -1.18)	-1.91 (-8.18, 4.44)	-2.65 (-7.51, 2.29)	-1.42 (-6.35, 3.52)	0.97 (-5.20, 7.16)	0.61 (-3.46, 4.73)	0.48 (-4.51, 5.53)	-0.26 (-2.57, 2.09)	0.29 (-2.14, 2.77)
	4.71 (-3.45, 12.99)	6.82 (-1.34, 15.09)	2.85 (-4.33, 10.07)	7.47 (0.24, 14.76)	0.91 (-9.28, 11.17)	4.57 (-5.29, 14.43)	0.30 (-7.76, 8.38)	Ornish	2.34 (-4.25, 9.03)	1.60 (-3.69, 6.96)	2.83 (-2.65, 8.32)	5.23 (-1.32, 11.77)	4.85 (-0.04, 9.81)	4.74 (-0.67, 10.18)	3.99 (0.78, 7.20)	4.54 (1.54, 7.57)
	7.27 (-7.71, 22.26)	9.36 (-5.89, 24.70)	5.40 (-8.81, 19.62)	10.00 (-4.42, 24.44)	3.44 (-12.62, 19.62)	7.09 (-8.98, 23.16)	2.83 (-12.04, 17.72)	2.52 (-13.41, 18.48)	Paleolithic	-0.74 (-8.28, 6.80)	0.48 (-7.27, 8.25)	2.87 (-5.57, 11.30)	2.52 (-4.87, 9.88)	2.39 (-5.23, 9.99)	1.65 (-4.83, 8.07)	2.20 (-4.09, 8.41)
	21.29 (10.03, 32.55)	23.39 (11.79, 34.95)	19.41 (9.28, 29.60)	24.03 (13.60, 34.53)	17.47 (4.66, 30.24)	21.13 (8.48, 33.75)	16.85 (5.74, 27.92)	16.57 (4.14, 28.94)	14.00 (-3.46, 31.43)	Portfolio	1.23 (-5.47, 7.87)	3.62 (-3.82, 11.05)	3.26 (-3.00, 9.47)	3.13 (-3.39, 9.63)	2.39 (-2.75, 7.47)	2.94 (-1.94, 7.80)
	7.15 (-4.66, 19.00)	9.25 (-3.09, 21.69)	5.28 (-6.62, 17.24)	9.89 (-1.98, 21.83)	3.35 (-10.07, 16.80)	7.00 (-6.52, 20.53)	2.73 (-9.28, 14.71)	2.45 (-11.20, 16.03)	-0.09 (-18.72, 18.38)	-14.13 (-29.73, 1.53)	Rosemary Conley	2.38 (-5.30, 10.07)	2.04 (-4.13, 8.18)	1.91 (-4.86, 8.71)	1.15 (-3.68, 6.01)	1.71 (-3.46, 6.88)
	-0.64 (-16.96, 15.63)	1.47 (-15.06, 17.98)	-2.51 (-18.07, 13.07)	2.11 (-13.66, 17.89)	-4.46 (-21.78, 12.91)	-0.81 (-18.03, 16.43)	-5.06 (-21.28, 11.11)	-5.36 (-22.58, 11.79)	-7.91 (-28.96, 13.10)	-21.93 (-40.45, -3.32)	-7.81 (-27.35, 11.76)	South Beach	-0.36 (-7.65, 6.94)	-0.49 (-7.99, 7.03)	-1.23 (-7.60, 5.13)	-0.69 (-6.83, 5.49)
	3.90 (-5.64, 13.42)	6.01 (-5.14, 17.06)	2.02 (-8.72, 12.72)	6.65 (-4.21, 17.48)	0.09 (-11.55, 11.65)	3.74 (-8.68, 16.07)	-0.52 (-10.79, 9.63)	-0.83 (-13.51, 11.74)	-3.35 (-21.22, 14.43)	-17.39 (-32.15, -2.65)	-3.26 (-18.53, 11.98)	4.54 (-14.34, 23.45)	The Biggest Loser	-0.12 (-6.42, 6.19)	-0.87 (-5.28, 3.53)	-0.32 (-4.88, 4.25)
	7.13 (-6.36, 20.53)	9.22 (-4.55, 22.99)	5.24 (-7.33, 17.81)	9.86 (-2.97, 22.71)	3.32 (-11.48, 18.07)	6.94 (-7.72, 21.60)	2.69 (-10.71, 15.98)	2.37 (-12.12, 16.84)	-0.16 (-19.08, 18.71)	-14.17 (-30.37, 1.94)	-0.05 (-17.38, 17.25)	7.75 (-12.26, 27.82)	3.22 (-13.29, 19.69)	Volumetrics	-0.75 (-5.98, 4.46)	-0.20 (-5.17, 4.77)
	1.06 (-5.11, 7.24)	3.17 (-3.23, 9.54)	-0.81 (-7.23, 5.60)	3.80 (-2.69, 10.32)	-2.76 (-11.60, 6.09)	0.91 (-7.48, 9.25)	-3.36 (-9.77, 2.99)	-3.66 (-12.59, 5.16)	-6.20 (-21.80, 9.33)	-20.22 (-32.21, -8.21)	-6.10 (-18.06, 5.81)	1.72 (-15.13, 18.49)	-2.83 (-14.22, 8.51)	-6.05 (-20.17, 8.04)	Weight Watchers	0.55 (-2.23, 3.37)
-2.89 (-9.26, 3.47)	-0.78 (-7.65, 6.03)	-4.77 (-9.15, -0.39)	-0.15 (-4.92, 4.63)	-6.72 (-15.47, 2.11)	-3.06 (-11.60, 5.49)	-7.32 (-13.47, -1.24)	-7.62 (-15.27, -0.06)	-10.18 (-25.01, 4.69)	-24.18 (-35.26, -13.19)	-10.04 (-22.64, 2.51)	-2.26 (-18.43, 13.92)	-6.79 (-18.27, 4.70)	-10.00 (-23.33, 3.33)	-3.97 (-11.42, 3.49)	Zone	

High certainty	Moderate certainty	Low certainty	Very low certainty
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The values correspond to the difference in median HDL increase (above right) and LDL reduction (below left) between the column and row at 6 months, for positive values the diet indicated in the column is favored (e.g., the difference in median HDL increase between Atkins and usual diet at 6 months is 1.78 mg/dL; the difference in median LDL reduction between Mediterranean and usual diet at 6 months is 4.42 mg/dL). Diets in bold indicate a significant treatment effect.

LDL – The NMA included 73 RCTs enrolling 8,368 participants involving 13 popular diets and 3 control diets reported LDL at 6 months (\pm 3 months); of 120 paired comparisons, 27 had direct and indirect evidence, 8 had only direct evidence, and 85 had only indirect evidence (Appendix table S30). The heterogeneity of the network was low ($\tau=0.05$); 5 of 15 direct comparisons with more than one RCT had $I^2 >50\%$. No serious incoherence was found (Appendix table S30). We identified serious intransitivity in 18 of 120 comparisons (Appendix table S30). Much of the evidence was judged as low or very low certainty, most often because of serious risk of bias and very serious imprecision (Appendix table S33, table S36-below left).

HDL – The NMA for HDL was almost identical to LDL with, again, much of the evidence judged as low or very low certainty, most often rated down for serious risk of bias and imprecision (Appendix table S31).

Table S41: HDL increase (above right) and LDL reduction (below left) at 12 months across individual popular diets with 95% credible intervals

		12-months HDL increase									
12-months LDL reduction	Usual diet	-2.50 (-4.95, -0.01)	-3.70 (-5.83, -1.65)	-0.25 (-2.59, 2.14)	-4.41 (-7.65, -1.05)	-0.04 (-3.38, 3.44)	-0.40 (-2.52, 1.74)	-5.28 (-8.18, -2.35)	-1.41 (-6.13, 3.23)	0.17 (-2.33, 2.64)	-2.87 (-5.75, 0.06)
	-2.92 (-9.33, 4.30)	Dietary advice	-1.21 (-3.54, 1.02)	2.25 (-0.24, 4.74)	-1.91 (-5.84, 2.08)	2.46 (-0.40, 5.43)	2.10 (-0.66, 4.82)	-2.78 (-5.53, -0.05)	1.08 (-3.74, 5.85)	2.67 (1.06, 4.20)	-0.38 (-3.30, 2.58)
	-0.85 (-6.65, 5.88)	2.02 (-4.14, 8.64)	Low fat	3.46 (2.21, 4.81)	-0.71 (-4.24, 3.02)	3.67 (0.72, 6.81)	3.29 (1.40, 5.31)	-1.58 (-3.94, 0.91)	2.29 (-1.91, 6.47)	3.87 (1.49, 6.32)	0.83 (-1.30, 3.06)
	-1.77 (-8.13, 5.42)	1.11 (-5.66, 8.23)	-0.93 (-4.40, 2.46)	Atkins	-4.17 (-7.92, -0.33)	0.20 (-3.00, 3.49)	-0.15 (-2.47, 2.12)	-5.03 (-7.54, -2.52)	-1.17 (-5.60, 3.18)	0.41 (-2.21, 2.99)	-2.63 (-4.95, -0.29)
	0.44 (-8.72, 9.49)	3.30 (-8.17, 14.14)	1.29 (-9.85, 11.34)	2.23 (-9.21, 12.67)	DASH	4.38 (-0.21, 8.94)	4.01 (0.53, 7.39)	-0.87 (-5.12, 3.31)	2.99 (-2.66, 8.44)	4.58 (0.55, 8.49)	1.54 (-2.64, 5.65)
	-7.65 (-16.00, 1.91)	-4.75 (-11.41, 2.54)	-6.77 (-14.47, 0.90)	-5.84 (-14.07, 2.51)	-8.04 (-19.94, 5.08)	Jenny Craig	-0.35 (-3.93, 3.05)	-5.24 (-8.88, -1.66)	-1.38 (-6.65, 3.72)	0.20 (-3.06, 3.32)	-2.83 (-6.50, 0.77)
	6.17 (0.22, 11.88)	9.08 (1.05, 16.01)	7.14 (0.62, 11.43)	8.03 (0.87, 13.39)	5.70 (-4.19, 15.57)	13.82 (3.91, 22.14)	Mediterranean	-4.89 (-7.85, -1.87)	-1.01 (-5.68, 3.56)	0.56 (-2.25, 3.37)	-2.47 (-5.30, 0.41)
	5.36 (-2.27, 14.17)	8.23 (0.93, 16.23)	6.24 (0.03, 12.58)	7.14 (0.69, 13.83)	4.94 (-6.42, 17.51)	12.99 (3.87, 22.25)	-0.85 (-8.24, 8.28)	Ornish	3.86 (-1.02, 8.65)	5.44 (2.54, 8.31)	2.41 (-0.31, 5.14)
	10.66 (-3.08, 24.97)	13.52 (-0.37, 27.72)	11.46 (-1.07, 24.07)	12.39 (-0.52, 25.45)	10.20 (-5.64, 27.00)	18.21 (3.61, 32.91)	4.49 (-8.69, 18.73)	5.22 (-8.83, 19.24)	Volumetrics	1.58 (-3.23, 6.46)	-1.45 (-6.12, 3.32)
	-0.86 (-7.07, 6.16)	2.05 (-2.08, 6.28)	0.03 (-6.74, 6.32)	0.96 (-6.29, 7.83)	-1.24 (-12.00, 10.16)	6.81 (-1.31, 14.30)	-7.02 (-13.99, 1.09)	-6.18 (-14.31, 1.28)	-11.46 (-25.69, 2.52)	Weight Watchers	-3.04 (-6.03, 0.03)
	-0.43 (-7.98, 8.07)	2.44 (-5.27, 10.58)	0.42 (-5.00, 5.83)	1.32 (-4.55, 7.31)	-0.88 (-12.02, 11.44)	7.16 (-2.03, 16.36)	-6.64 (-13.49, 1.86)	-5.80 (-12.98, 1.20)	-11.05 (-24.75, 2.63)	0.39 (-7.42, 8.63)	Zone

The values correspond to the difference in median HDL increase (above right) and LDL reduction (below left) between the column and row at 6 months (eg, the difference in median HDL increase between Atkins and usual diet at 12 months is -0.25 mg/dL; the difference in median LDL reduction between Mediterranean and usual diet at 12 months is 6.17 mg/dL).

35 RCTs with 6,070 participants involving 11 network nodes reported 12-months LDL. There were no relevant RCTs that focused on Paleolithic, Portfolio, Rosemary Conley, South Beach, and The Biggest Loser diets. Mediterranean diet demonstrated significant larger LDL reduction than usual diet. The difference between Mediterranean and Atkins was larger at 12-months than at 6-months follow up.

36 RCTs with 6,265 participants involving 11 network nodes reported 12-month HDL increase. The median HDL increase between the 8 popular diets ranged from 0.20 mg/dL and 5.03 mg/dL. None of popular diets showed significant HDL increase compared with usual diet.

Table S42 Individual popular diets NMA results with GRADE certainty of evidence for CRP reduction (mg/dL)

Usual diet											
-1.15 (-3.30, 0.93)	Dietary advice										
0.33 (-1.25, 1.93)	1.48 (-0.26, 3.30)	Low fat									
0.64 (-0.90, 2.26)	1.79 (0.05, 3.68)	0.31 (-0.35, 1.03)	Atkins								
0.19 (-2.08, 2.45)	1.34 (-0.38, 3.13)	-0.13 (-1.96, 1.64)	-0.45 (-2.39, 1.38)	Jenny Craig							
0.25 (-0.57, 1.12)	1.40 (-0.57, 3.47)	-0.08 (-1.52, 1.40)	-0.39 (-1.85, 1.04)	0.06 (-2.08, 2.26)	Mediterranean						
1.11 (-1.62, 3.87)	2.26 (-0.57, 5.20)	0.78 (-1.73, 3.30)	0.47 (-2.03, 2.94)	0.92 (-2.06, 3.94)	0.86 (-1.86, 3.56)	Ornish					
0.52 (-2.09, 3.17)	1.67 (-1.02, 4.48)	0.19 (-1.90, 2.29)	-0.12 (-2.34, 2.06)	0.33 (-2.40, 3.11)	0.27 (-2.28, 2.81)	-0.59 (-3.85, 2.68)	Paleolithic				
-0.37 (-3.61, 2.88)	0.78 (-2.52, 4.16)	-0.70 (-3.53, 2.13)	-1.02 (-3.94, 1.88)	-0.56 (-3.90, 2.81)	-0.62 (-3.81, 2.55)	-1.48 (-5.27, 2.30)	-0.90 (-4.40, 2.61)	Portfolio			
0.88 (-0.88, 2.70)	2.02 (-0.15, 4.33)	0.55 (-1.18, 2.33)	0.23 (-1.48, 1.94)	0.68 (-1.65, 3.11)	0.62 (-1.17, 2.44)	-0.23 (-2.75, 2.30)	0.35 (-2.35, 3.09)	1.25 (-2.06, 4.59)	Weight Watchers		
0.27 (-1.54, 2.11)	1.42 (-0.20, 3.15)	-0.06 (-1.36, 1.24)	-0.37 (-1.69, 0.90)	0.08 (-1.86, 2.06)	0.02 (-1.72, 1.74)	-0.84 (-3.32, 1.65)	-0.25 (-2.70, 2.20)	0.65 (-2.46, 3.74)	-0.60 (-2.41, 1.15)	Zone	

High certainty **Moderate certainty** **Low certainty** **Very low certainty**

The values correspond to the difference in median CRP reduction between the column and row at 6 months, for positive values the diet indicated in the column is favored (e.g., the difference in median CRP reduction between Ornish and usual diet at 6 months is 1.11).

CRP – The NMA included 27 RCTs enrolling 3,238 participants involving 8 popular diets and 3 control diets reported CRP at 6 months (± 3 months) (Appendix table S31).

Table S43: 6-month weight loss across all individual popular diets when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies (β -coefficient = 2.76, 95%CrI: -0.52 to 4.94)															
Healthy populations (β -coefficient = 0.72, 95%CrI: -0.96 to 2.43)	Usual diet	-0.03 (-1.55, 1.53)	3.13 (1.97, 4.30)	4.68 (3.23, 6.15)	3.37 (2.25, 4.50)	7.35 (5.05, 9.64)	2.50 (1.23, 3.84)	2.99 (0.65, 5.39)	4.84 (1.48, 8.33)	3.01 (-1.26, 7.29)	2.68 (-0.34, 5.75)	1.65 (-1.33, 4.64)	9.22 (5.09, 13.40)	2.88 (-0.34, 6.09)	NA	3.26 (1.48, 5.06)	3.21 (1.54, 4.92)
	0.45 (-1.23, 2.17)	Dietary advice	3.15 (1.68, 4.63)	4.70 (3.02, 6.39)	3.40 (1.78, 5.00)	7.38 (5.33, 9.39)	2.53 (0.73, 4.36)	3.02 (0.75, 5.33)	4.87 (1.30, 8.53)	3.03 (-1.35, 7.41)	2.71 (-0.21, 5.63)	1.67 (-1.19, 4.54)	9.25 (5.00, 13.05)	2.91 (-0.68, 6.45)	NA	3.29 (2.03, 4.55)	3.23 (1.39, 5.10)
	5.05 (3.17, 6.9)	4.6 (2.93, 6.21)	Low fat	1.55 (0.64, 2.46)	0.24 (-0.98, 1.45)	4.22 (2.02, 6.38)	-0.62 (-2.06, 0.83)	-0.14 (-2.29, 2.06)	1.72 (-1.65, 5.17)	-0.12 (-4.24, 4.01)	-0.44 (-3.54, 2.64)	-1.48 (-4.51, 1.55)	6.09 (2.12, 10.09)	-0.25 (-3.69, 3.15)	NA	0.14 (-1.61, 1.88)	0.08 (-1.16, 1.34)
	6.78 (4.71, 8.83)	6.32 (4.44, 8.18)	1.72 (0.76, 2.71)	Atkins	-1.3 (-2.82, 0.19)	2.67 (0.32, 4.98)	-2.17 (-3.85, -0.47)	-1.68 (-3.91, 0.58)	0.17 (-3.32, 3.75)	-1.67 (-5.89, 2.56)	-1.99 (-5.19, 1.2)	-3.03 (-6.17, 0.11)	4.55 (0.46, 8.64)	-1.80 (-5.36, 1.71)	NA	-1.41 (-3.32, 0.49)	-1.47 (-2.93, 0.01)
	1.05 (-2.49, 4.59)	0.60 (-3.35, 4.49)	-4.00 (-7.99, 0)	-5.72 (-9.83, -1.64)	DASH	3.98 (1.62, 6.30)	-0.87 (-2.43, 0.75)	-0.38 (-2.76, 2.05)	1.47 (-1.99, 5.04)	-0.36 (-4.65, 3.94)	-0.68 (-3.81, 2.46)	-1.73 (-4.80, 1.36)	5.85 (1.69, 10.04)	-0.49 (-3.92, 2.91)	NA	-0.11 (-1.98, 1.78)	-0.17 (-1.86, 1.58)
	6.37 (3.45, 9.28)	5.92 (3.47, 8.33)	1.32 (-1.57, 4.23)	-0.41 (-3.45, 2.63)	5.33 (0.74, 9.89)	Jenny Craig	-4.85 (-7.29, -2.32)	-4.36 (-7.22, -1.41)	-2.51 (-6.43, 1.55)	-4.34 (-8.98, 0.33)	-4.67 (-8.13, -1.16)	-5.71 (-9.12, -2.24)	1.87 (-2.64, 6.43)	-4.47 (-8.41, 0.53)	NA	-4.09 (-6.39, -1.75)	-4.15 (-6.58, -1.63)
	2.18 (0.54, 3.91)	1.72 (-0.50, 4.01)	-2.88 (-5.08, -0.54)	-4.60 (-6.99, -2.11)	1.12 (-2.72, 5.10)	-4.19 (-7.42, -0.86)	Mediterranean	0.49 (-2.04, 3.02)	2.34 (-0.89, 5.64)	0.50 (-3.88, 4.86)	0.18 (-3.06, 3.39)	-0.86 (-4.05, 2.30)	6.72 (2.48, 10.94)	0.38 (-3.13, 3.80)	NA	0.76 (-1.31, 2.79)	0.70 (-1.19, 2.60)
	3.96 (0.41, 7.51)	3.51 (0.03, 6.93)	-1.09 (-4.14, 1.96)	-2.82 (-5.91, 0.26)	2.91 (-2.10, 7.93)	-2.41 (-6.62, 1.79)	1.78 (-2.07, 5.52)	Ornish	1.85 (-2.13, 5.89)	0.01 (-4.65, 4.67)	-0.3 (-3.92, 3.26)	-1.35 (-4.92, 2.19)	6.23 (1.68, 10.76)	-0.11 (-4.15, 3.84)	NA	0.27 (-2.22, 2.72)	0.21 (-2.11, 2.53)
	9.98 (3.46, 16.50)	9.53 (3.06, 15.99)	4.93 (-1.32, 11.19)	3.21 (-3.13, 9.54)	8.94 (1.53, 16.33)	3.61 (-3.29, 10.5)	7.79 (1.13, 14.42)	6.03 (-0.93, 12.96)	Paleolithic	-1.84 (-7.24, 3.48)	-2.15 (-6.72, 2.31)	-3.20 (-7.72, 1.22)	4.38 (-0.90, 9.60)	-1.96 (-6.73, 2.66)	NA	-1.58 (-5.37, 2.12)	-1.64 (-5.29, 1.95)
	NA	NA	NA	NA	NA	NA	NA	NA	NA	Portfolio	-0.32 (-5.48, 4.84)	-1.36 (-6.48, 3.75)	6.21 (0.47, 11.95)	-0.13 (-5.51, 5.22)	NA	0.25 (-4.22, 4.73)	0.20 (-4.11, 4.51)
3.98 (1.29, 6.81)	3.53 (0.91, 6.25)	-1.07 (-3.88, 1.92)	-2.80 (-5.72, 0.28)	2.93 (-1.47, 7.49)	-2.38 (-5.92, 1.28)	1.80 (-1.31, 4.97)	0.02 (-4.08, 4.29)	-6.00 (-12.85, 0.94)	NA	Rosemary Conley	-1.04 (-4.51, 2.42)	6.53 (1.51, 11.58)	0.19 (-4.25, 4.60)	NA	0.58 (-2.40, 3.55)	0.52 (-2.75, 3.82)	

2.32 (-0.66, 5.36)	1.86 (-1.04, 4.80)	-2.73 (-5.85, 0.50)	-4.46 (-7.71, -1.13)	1.27 (-3.34, 5.93)	-4.05 (-7.79, -0.24)	0.15 (-3.27, 3.5)	-1.64 (-6, 2.8)	-7.65 (-14.66, -0.62)	NA	-1.66 (-5.06, 1.65)	Slimming World	7.58 (2.57, 12.59)	1.23 (-3.17, 5.60)	NA	1.62 (-1.31, 4.55)	1.56 (-1.66, 4.81)
11.15 (6.70, 15.57)	10.70 (6.32, 15.01)	6.10 (2.08, 10.11)	4.37 (0.23, 8.)	10.10 (4.42, 15.74)	4.78 (-0.20, 9.72)	8.97 (4.30, 13.52)	7.19 (2.12, 12.22)	1.16 (-6.28, 8.61)	NA	7.16 (2.14, 12.05)	8.83 (3.67, 13.90)	South Beach	-6.34 (-11.62, -1.11)	NA	-5.96 (-10.31, -1.62)	-6.01 (-10.20, -1.85)
2.88 (-0.37, 6.15)	2.43 (-1.27, 6.10)	-2.17 (-5.90, 1.61)	-3.89 (-7.74, -0.02)	1.83 (-2.98, 6.65)	-3.49 (-7.87, 0.88)	0.71 (-3.03, 4.33)	-1.08 (-5.88, 3.76)	-7.11 (-14.36, 0.22)	NA	-1.10 (-5.45, 3.10)	0.56 (-3.91, 4.98)	-8.27 (-13.76, -2.75)	The Biggest Loser	NA	0.39 (-3.29, 4.08)	0.33 (-3.26, 3.99)
7.25 (3.01, 11.48)	6.80 (2.63, 10.92)	2.20 (-1.61, 6.01)	0.48 (-3.47, 4.40)	6.20 (0.67, 11.72)	0.88 (-3.90, 5.67)	5.07 (0.58, 9.45)	3.29 (-1.60, 8.16)	-2.73 (-10.04, 4.58)	NA	3.27 (-1.59, 7.96)	4.93 (-0.07, 9.86)	-3.89 (-9.42, 1.64)	4.37 (-0.98, 9.72)	Volumetrics	NA	NA
4.18 (2.45, 5.97)	3.73 (2.40, 5.08)	-0.87 (-2.66, 0.99)	-2.6 (-4.59, 0.55)	3.13 (-0.78, 7.11)	-2.19 (-4.90, 0.57)	2.00 (-0.33, 4.29)	0.22 (-3.28, 3.80)	-5.80 (-12.31, 0.73)	NA	0.20 (-2.52, 2.82)	1.86 (-1.08, 4.79)	-6.97 (-11.33, -2.51)	1.30 (-2.38, 5.03)	-3.07 (-7.26, 1.17)	Weight Watchers	-0.06 (-2.09, 2.00)
5.21 (2.94, 7.50)	4.75 (2.66, 6.85)	0.16 (-1.14, 1.51)	-1.57 (-3.10, -0.02)	4.16 (-0.03, 8.39)	-1.16 (-4.33, 2.05)	3.03 (0.38, 5.62)	1.25 (-1.85, 4.38)	-4.78 (-11.16, 1.64)	NA	1.23 (-2.00, 4.34)	2.89 (-0.57, 6.30)	-5.94 (-10.15, -1.67)	2.33 (-1.65, 6.31)	-2.04 (-6.06, 2.01)	1.03 (-1.22, 3.26)	Zone

The values correspond to the difference in median weight loss between the row and column at 6 months (e.g., the difference in median weight loss between the Atkins diet and Usual diet at 6 months is 4.68 kg when restricting to low risk of bias studies). Diets with underline indicate statistical significance change compared with the primary analysis between diets and usual diet.

Table S44: 6-month weight loss across all individual popular diets when restricted to studies without diet company support (β -coefficient =1.65, 95%CrI: -0.60 to 3.81)

Usual diet														
0.08 (-1.39, 1.64)	Dietary advice													
3.37 (2.12, 4.67)	3.29 (1.77, 4.77)	Low fat advice												
5.34 (3.82, 6.9)	5.25 (3.52, 6.94)	1.96 (1.01, 2.91)	Atkins											
3.55 (2.33, 4.8)	3.46 (1.83, 5.05)	0.17 (-1.25, 1.58)	-1.79 (-3.46, -0.13)	DASH										
3.49 (-3.50, 10.5)	3.4 (-3.60, 10.37)	0.11 (-6.93, 7.14)	-1.85 (-8.93, 5.22)	-0.06 (-7.12, 7.00)	Jenny Craig									
2.44 (0.93, 4.06)	2.35 (0.46, 4.28)	-0.94 (-2.52, 0.71)	-2.9 (-4.71, -1.02)	-1.11 (-2.91, 0.77)	-1.04 (-8.17, 6.08)	Mediterranean								
3.37 (0.94, 5.88)	3.28 (0.90, 5.67)	-0.01 (-2.24, 2.28)	-1.97 (-4.28, 0.39)	-0.18 (-2.70, 2.40)	-0.12 (-7.38, 7.18)	0.93 (-1.76, 3.61)	Ornish							
4.91 (1.39, 8.59)	4.82 (1.14, 8.62)	1.53 (-1.95, 5.14)	-0.43 (-4.03, 3.3)	1.36 (-2.28, 5.13)	1.44 (-6.38, 9.25)	2.46 (-0.88, 5.88)	1.54 (-2.57, 5.73)	Paleolithic						
3.26 (-1.19, 7.73)	3.18 (-1.39, 7.68)	-0.11 (-4.39, 4.16)	-2.08 (-6.46, 2.30)	-0.29 (-4.78, 4.20)	-0.23 (-8.45, 8.01)	0.82 (-3.78, 5.35)	-0.11 (-4.97, 4.69)	-1.65 (-7.28, 3.87)	Portfolio					
3.58 (0.84, 6.45)	3.49 (0.74, 6.3)	0.2 (-2.61, 3.11)	-1.76 (-4.65, 1.23)	0.03 (-2.86, 3.02)	0.10 (-7.28, 7.5)	1.14 (-1.93, 4.24)	0.22 (-3.22, 3.67)	-1.33 (-5.79, 3.11)	0.32 (-4.8, 5.51)	Rosemary Conley				
1.95 (-1.12, 5.09)	1.87 (-1.2, 4.92)	-1.42 (-4.57, 1.76)	-3.39 (-6.63, -0.11)	-1.6 (-4.80, 1.65)	-1.53 (-9.03, 5.99)	-0.49 (-3.88, 2.86)	-1.41 (-5.14, 2.29)	-2.95 (-7.65, 1.64)	-1.31 (-6.63, 4.04)	-1.62 (-5.13, 1.81)	Slimming World			
3.52 (1.50, 5.61)	3.44 (1.51, 5.35)	0.15 (-1.89, 2.20)	-1.81 (-3.96, 0.35)	-0.02 (-2.20, 2.19)	0.04 (-6.95, 7.03)	1.08 (-1.33, 3.46)	0.16 (-2.62, 2.9)	-1.38 (-5.43, 2.56)	0.27 (-4.47, 5.03)	-0.06 (-2.96, 2.79)	1.57 (-1.59, 4.73)	Weight Watchers		
3.67 (1.97, 5.44)	3.58 (1.70, 5.46)	0.30 (-0.92, 1.54)	-1.67 (-3.13, -0.18)	0.12 (-1.70, 1.98)	0.19 (-6.91, 7.32)	1.23 (-0.79, 3.22)	0.31 (-2.10, 2.68)	-1.23 (-5.03, 2.46)	0.41 (-4.03, 4.88)	0.09 (-3.00, 3.12)	1.72 (-1.65, 5.07)	0.14 (-2.13, 2.43)	Zone	

The values correspond to the difference in median weight loss between the row and column at 6 months (e.g., the difference in median weight loss between the Atkins diet and Usual diet at 6 months is 5.34 kg when restricting to studies without diet company support).

Table S45: 6-month weight loss across all individual popular diets accounting for both of behavior support and exercise

Usual diet																		
1.41 (-0.34, 3.20)	Dietary advice																	
4.87 (2.99, 6.81)	3.47 (2.04, 4.90)	Low fat																
6.55 (4.58, 8.56)	5.14 (3.60, 6.68)	1.67 (1.00, 2.35)	Atkins															
5.00 (3.00, 7.05)	3.60 (1.76, 5.39)	0.13 (-1.26, 1.48)	-1.55 (-3.09, -0.05)	DASH														
7.22 (3.74, 10.80)	5.81 (2.75, 8.90)	2.34 (-1.03, 5.74)	0.67 (-2.75, 4.12)	2.22 (-1.30, 5.82)	Jenny Craig													
4.70 (2.16, 7.33)	3.29 (1.14, 5.48)	-0.18 (-1.91, 1.58)	-1.85 (-3.72, 0.03)	-0.30 (-2.48, 1.92)	-2.52 (-6.30, 1.25)	Mediterranean												
4.63 (2.04, 7.29)	3.23 (1.07, 5.41)	-0.25 (-2.27, 1.81)	-1.92 (-3.99, 0.18)	-0.37 (-2.75, 2.08)	-2.59 (-6.34, 1.17)	-0.07 (-2.72, 2.59)	Ornish											
6.87 (3.05, 10.78)	5.47 (1.88, 9.10)	2.00 (-1.34, 5.39)	0.32 (-3.08, 3.78)	1.87 (-1.72, 5.52)	-0.35 (-5.09, 4.39)	2.17 (-0.94, 5.32)	2.24 (-1.68, 6.17)	Paleolithic										
-25.57 (-157.20, 87.76)	-26.81 (-158.50, 86.45)	-30.24 (-161.90, 82.87)	-31.92 (-163.50, 81.23)	-30.4 (-162.00, 82.76)	-32.67 (-164.50, 80.54)	-29.88 (-161.60, 83.13)	-30.00 (-161.70, 83.25)	-32.10 (-163.90, 80.96)	Portfolio									
8.46 (-56.01, 75.26)	7.18 (-57.56, 73.76)	3.73 (-61.06, 70.28)	2.04 (-62.72, 68.62)	3.60 (-61.14, 70.27)	1.35 (-63.42, 68.02)	3.90 (-61.00, 70.56)	3.94 (-60.77, 70.64)	1.70 (-63.15, 68.53)	31.05 (-122.90, 175.30)	Rosemary Conley								
2.81 (-0.35, 5.97)	1.41 (-1.32, 4.10)	-2.07 (-4.95, 0.78)	-3.74 (-6.68, 0.84)	-2.19 (-5.28, 0.87)	-4.41 (-8.53, 0.35)	-1.89 (-5.20, 1.38)	-1.82 (-5.20, 1.49)	-4.06 (-8.48, 0.27)	28.23 (-84.96, 159.80)	-5.79 (-72.42, 59.01)	Slimming World							
10.98 (6.74, 15.24)	9.57 (5.52, 13.63)	6.10 (2.32, 9.88)	4.43 (0.59, 8.27)	5.97 (1.96, 10.01)	3.76 (-1.37, 8.85)	6.27 (2.10, 10.45)	6.35 (2.05, 10.64)	4.10 (-0.98, 9.14)	36.37 (-76.91, 168.00)	2.42 (-64.44, 67.26)	8.17 (3.44, 12.93)	South Beach						

92.30 (-0.02, 219.40)	90.98 (-1.32, 218.20)	87.53 (-4.71, 214.70)	85.84 (-6.40, 213)	87.41 (-4.75, 214.5)	85.22 (-7.45, 212.4)	87.71 (-4.58, 215)	87.75 (-4.54, 215)	85.55 (-6.84, 212.9)	123.10 (-25.82, 326.20)	85.58 (-35.08, 241.5)	89.61 (-2.76, 216.90)	81.39 (-11.07, 208.70)	The Biggest Loser			
7.08 (3.07, 11.12)	5.67 (1.84, 9.51)	2.20 (-1.36, 5.76)	0.53 (-3.10, 4.14)	2.08 (-1.73, 5.90)	-0.14 (-5.06, 4.75)	2.37 (-1.59, 6.33)	2.45 (-1.67, 6.53)	0.21 (-4.70, 5.06)	32.40 (-80.73, 164.00)	-1.51 (-68.33, 63.37)	4.27 (-0.29, 8.85)	-3.90 (-9.10, 1.28)	-85.35 (-212.60, 6.98)	Volumetrics		
4.27 (1.94, 6.60)	2.86 (1.26, 4.44)	-0.61 (-2.33, 1.12)	-2.29 (-4.09, -0.47)	-0.74 (-2.83, 1.40)	-2.96 (-6.44, 0.49)	-0.44 (-2.82, 1.92)	-0.36 (-2.82, 2.04)	-2.61 (-6.37, 1.11)	29.67 (-83.58, 161.30)	-4.34 (-70.88, 60.41)	1.46 (-1.33, 4.26)	-6.71 (-10.89, -2.56)	-88.23 (-215.40, 4.19)	-2.82 (-6.77, 1.15)	Weight Watchers	
5.14 (3.04, 7.30)	3.74 (2.05, 5.44)	0.27 (-0.73, 1.28)	-1.41 (-2.56, -0.25)	0.14 (-1.52, 1.86)	-2.08 (-5.60, 1.42)	0.44 (-1.57, 2.44)	0.51 (-1.64, 2.65)	-1.73 (-5.24, 1.76)	30.51 (-82.66, 162.20)	-3.45 (-70.05, 61.30)	2.33 (-0.64, 5.35)	-5.83 (-9.73, -1.92)	-87.28 (-214.50, 4.96)	-1.94 (-5.63, 1.77)	0.88 (-1.05, 2.82)	Zone

The values correspond to the difference in median weight loss between the row and column at 6 months (eg, the difference in median weight loss between the Atkins diet and Usual diet at 6 months is 6.55 kg).

Table S46: 6-month SBP reduction across all individual popular diets when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies (β -coefficient = 0.29, 95%CrI: -3.21 to 3.78)													
Healthy populations (β -coefficient = -1.03, 95%CrI: -4.28 to 2.27)	Usual diet	1.48 (-1.83, 4.75)	3.21 (0.64, 5.80)	4.24 (1.23, 7.26)	4.68 (2.68, 6.79)	7.13 (0.48, 13.78)	3.06 (0.95, 5.27)	0.38 (-3.74, 4.47)	13.86 (6.34, 21.41)	NA	5.23 (-0.39, 10.86)	3.18 (-1.70, 8.05)	NA	3.42 (-0.50, 7.47)	3.18 (-0.26, 6.72)
	-0.38 (-4.48, 3.59)	Dietary advice	1.73 (-1.42, 4.94)	2.75 (-0.62, 6.19)	3.19 (0.24, 6.36)	5.65 (-1.24, 12.56)	1.58 (-1.81, 5.11)	-1.10 (-5.10, 2.90)	12.39 (4.68, 20.16)	NA	3.75 (-2.18, 9.72)	1.70 (-4.16, 7.61)	NA	1.93 (-0.52, 4.59)	1.70 (-1.72, 5.25)
	5.67 (1.64, 9.47)	6.06 (3.02, 8.97)	Low fat	1.03 (-0.91, 2.68)	1.46 (-0.91, 3.98)	3.92 (-2.20, 10.02)	-0.15 (-3.06, 2.83)	-2.84 (-6.31, 0.62)	10.66 (3.56, 17.73)	NA	2.01 (-2.99, 7.02)	-0.03 (-5.56, 5.47)	NA	0.21 (-3.56, 4.09)	-0.03 (-2.64, 2.66)
	6.27 (2.28, 10.16)	6.67 (3.56, 9.81)	0.60 (-0.73, 2.11)	Atkins	0.44 (-2.39, 3.40)	2.89 (-4.18, 9.22)	-1.18 (-4.47, 2.18)	-3.86 (-7.41, 0.34)	9.63 (2.36, 16.90)	NA	0.99 (-4.26, 6.26)	-1.06 (-6.81, 4.65)	NA	-0.82 (-4.75, 3.23)	-1.06 (-3.85, 1.81)
	NA	NA	NA	NA	DASH	2.45 (-4.18, 9.00)	-1.62 (-4.28, 1.03)	-4.30 (-10.83, -0.37)	9.18 (1.66, 16.64)	NA	0.56 (-5.10, 6.06)	-1.49 (-6.86, 3.71)	NA	-1.26 (-5.08, 2.53)	-1.50 (-4.87, 1.84)
	NA	NA	NA	NA	NA	Jenny Craig	-4.07 (-10.83, 2.78)	-6.75 (-13.81, 0.23)	6.75 (-2.63, 16.06)	NA	-1.91 (-9.82, 6.01)	-3.95 (-12.2, 4.25)	NA	-3.70 (-10.90, 3.57)	-3.95 (-10.58, 2.74)
	3.67 (0.50, 7.12)	4.09 (-1.02, 9.39)	-1.94 (-7.00, 3.28)	-2.53 (-7.67, 2.64)	NA	NA	Mediterranean	-2.68 (-7.06, 1.58)	10.81 (3.08, 18.46)	NA	2.18 (-3.69, 7.93)	0.13 (-5.30, 5.39)	NA	0.36 (-3.76, 4.49)	0.12 (-3.62, 3.86)
	3.00 (-1.97, 7.82)	3.41 (-0.78, 7.44)	-2.66 (-5.76, 0.50)	-3.26 (-6.75, 0.07)	NA	NA	-0.70 (-6.77, 5.12)	Ornish	13.50 (5.63, 21.32)	NA	4.85 (-1.23, 10.95)	2.81 (-3.56, 9.20)	NA	3.04 (-1.35, 7.58)	2.80 (-0.81, 6.54)
	16.41 (9.01, 23.58)	16.78 (9.85, 23.58)	10.72 (4.57, 16.87)	10.11 (3.70, 16.33)	NA	NA	12.65 (4.63, 20.57)	13.36 (6.51, 20.33)	Paleolithic	NA	-8.65 (-17.26, 0.05)	-10.69 (-19.62, -1.70)	NA	-10.45 (-18.43, -2.37)	-10.69 (-18.19, -3.10)
	2.78 (-1.90, 7.48)	3.20 (-1.55, 7.85)	-2.88 (-7.47, 1.80)	-3.48 (-8.06, 1.11)	NA	NA	-0.93 (-6.75, 4.72)	-0.21 (-5.71, 5.29)	-13.59 (-21.19, -5.87)	Rosemary Conley	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Portfolio	-2.05 (-9.51, 5.41)	NA	-1.82 (-8.06, 4.58)	-2.05 (-7.67, 3.68)
	3.16 (-0.17, 6.5)	3.55 (-1.66, 8.78)	-2.53 (-7.50, 2.73)	-3.10 (-8.21, 2.10)	NA	NA	-0.53 (-5.34, 4.06)	0.15 (-5.68, 6.16)	-13.22 (-21.14, -5.19)	0.42 (-5.42, 6.13)	NA	The Biggest Loser	NA	0.24 (-5.98, 6.61)	0.00 (-5.96, 6.05)

	4.67 (-1.88, 10.97)	5.05 (-1.00, 10.93)	-1.01 (-6.21, 4.14)	-1.60 (-6.99, 3.71)	NA	NA	0.95 (-6.40, 8.04)	1.66 (-4.47, 7.66)	-11.74 (-19.71, -3.52)	1.87 (-5.02, 8.65)	NA	1.50 (-5.82, 8.65)	Volumetrics	NA	NA
	2.56 (-1.42, 6.37)	2.93 (0.76 , 5.10)	-3.14 (-6.3, 0.18)	-3.72 (-7.05, -0.44)	NA	NA	-1.16 (-6.34, 3.87)	-0.47 (-4.76, 3.93)	-13.84 (-20.76, -6.80)	-0.25 (-4.71, 4.24)	NA	-0.64 (-5.73, 4.46)	-2.13 (-8.12, 4.04)	Weight Watchers	-0.24 (-4.31, 3.81)
	4.84 (0.49 , 9.12)	5.25 (2.00 , 8.39)	-0.84 (-2.98, 1.44)	-1.41 (-4.00, 1.07)	NA	NA	1.12 (-4.37, 6.56)	1.82 (-1.30, 5.02)	-11.55 (-18.10, -5.02)	2.08 (-2.88, 6.96)	NA	1.69 (-3.80, 7.03)	0.17 (-5.36, 5.84)	2.33 (-1.23, 5.79)	Zone

The values correspond to the difference in median SBP reduction between the row and column at 6 months (e.g., the difference in median SBP reduction between the Atkins diet and usual diet at 6 months is 4.24 mm Hg when restricting to low risk of bias studies). NA means not available in this subgroup. Diets with underline indicate statistical significance change compared with the primary analysis between diets and usual diet.

Table S47: 6-month SBP reduction across all individual popular diets when restricted to studies without diet company support (β -coefficient = 0.29, 95%CrI: -3.19 to 3.70)

Usual diet				-	-				-	-
1.23 (-2.53, 4.90)	Dietary advice									
2.78 (-0.79, 6.29)	1.55 (-2.82, 5.93)	Low fat								
3.53 (-0.62, 7.75)	2.30 (-2.54, 7.29)	0.76 (-1.43, 3.06)	Atkins							
4.30 (1.64, 7.07)	3.07 (-0.55, 6.90)	1.52 (-1.66, 4.89)	0.78 (-3.17, 4.75)	DASH						
3.16 (0.41, 5.95)	1.93 (-1.93, 5.89)	0.39 (-3.50, 4.37)	-0.37 (-4.91, 4.14)	-1.14 (-4.70, 2.34)	Mediterranean					
13.42 (4.74, 22.06)	12.20 (3.19, 21.21)	10.65 (2.74, 18.56)	9.90 (1.63, 18.08)	9.12 (0.50, 17.64)	10.26 (1.36, 19.06)	Paleolithic				
4.81 (-2.30, 11.86)	3.57 (-3.95, 11.12)	2.03 (-4.09, 8.17)	1.28 (-5.32, 7.74)	0.51 (-6.53, 7.36)	1.65 (-5.69, 8.86)	-8.64 (-18.63, 1.35)	Portfolio			
3.15 (-2.89, 9.17)	1.91 (-5.11, 9.03)	0.37 (-6.60, 7.37)	-0.37 (-7.77, 6.91)	-1.15 (-7.84, 5.41)	-0.01 (-6.66, 6.60)	-10.28 (-20.81, 0.28)	-1.65 (-10.93, 7.65)	The Biggest Loser		
2.70 (-1.59, 7.01)	1.46 (-2.06, 5.11)	-0.07 (-5.13, 5.06)	-0.82 (-6.42, 4.70)	-1.60 (-6.18, 2.89)	-0.46 (-5.15, 4.20)	-10.73 (-20.04, -1.28)	-2.11 (-10.00, 5.91)	-0.45 (-7.84, 6.96)	Weight Watchers	
2.33 (-3.99, 8.48)	1.10 (-4.64, 6.76)	-0.44 (-6.61, 5.60)	-1.20 (-7.80, 5.18)	-1.96 (-8.28, 4.08)	-0.82 (-7.33, 5.47)	-11.11 (-21.14, -1.16)	-2.46 (-11.15, 6.10)	-0.81 (-9.55, 7.75)	-0.37 (-7.02, 6.11)	Zone

The values correspond to the difference in median SBP reduction between the row and column at 6 months (e.g., the difference in median SBP reduction between the Atkins diet and usual diet at 6 months is 6.35 mm Hg when restricting to studies without diet company support). NA means not available in this subgroup. Diets with underline indicate statistical significance change compared with the primary analysis between diets and usual diet.

Table S48: 6-month SBP reduction across all individual popular diets accounting for both of behavior support and exercise

Usual diet														
0.40 (-2.02, 2.96)	Dietary advice													
3.17 (0.89, 5.38)	2.77 (0.01, 5.34)	Low fat												
4.34 (1.96, 6.80)	3.94 (1.15, 6.66)	1.17 (0.02, 2.43)	Atkins											
4.78 (2.17, 7.52)	4.41 (1.16, 7.54)	1.61 (-0.69, 4.12)	0.44 (-2.15, 3.09)	DASH										
18.07 (-84.34, 151.10)	17.68 (-84.67, 150.50)	14.95 (-87.54, 148.10)	13.79 (-88.66, 146.90)	13.31 (-89.29, 146.70)	Jenny Craig									
3.11 (0.19, 6.08)	2.71 (-0.48, 5.86)	-0.06 (-3.06, 3.04)	-1.23 (-4.44, 1.96)	-1.68 (-5.06, 1.67)	-15.00 (-148.30, 87.56)	Mediterranean								
0.06 (-3.47, 3.53)	-0.34 (-3.96, 3.07)	-3.11 (-6.09, -0.13)	-4.28 (-7.36, -1.33)	-4.73 (-8.53, -1.07)	-18.08 (-151.20, 84.42)	-2.26 (-6.34, 1.66)	Ornish							
13.84 (6.91, 20.81)	13.44 (6.29, 20.53)	10.67 (4.14, 17.30)	9.51 (2.82, 16.28)	9.06 (2.03, 15.99)	-4.19 (-137.50, 98.44)	11.62 (4.22, 19.02)	13.80 (6.58, 21.12)	Paleolithic						
10.97 (-150.00, 118.70)	10.39 (-150.20, 118.00)	7.71 (-152.70, 115.40)	6.53 (-154.00, 114.30)	6.13 (-154.40, 113.70)	-12.06 (-188.40, 137.20)	3.02 (-2.46, 8.40)	10.77 (-149.70, 118.40)	-3.00 (-165.00, 105.50)	Portfolio					
0.76 (-196.40, 150.40)	0.35 (-196.70, 150.20)	-2.25 (-199.40, 147.10)	-3.41 (-200.60, 146.00)	-3.94 (-201.20, 145.60)	-18.19 (-276.40, 161.70)	-2.31 (-199.40, 147.20)	0.99 (-196.20, 150.60)	-12.88 (-210.20, 136.30)	-7.96 (-260.00, 159.00)	Rosemary Conley				

-8.46 (-143.90, 154.80)	-8.83 (-144.40, 154.40)	-11.58 (-147.10, 151.70)	-12.81 (-148.30, 150.60)	-13.28 (-148.70, 150.00)	-27.88 (-222.90, 156.50)	-11.51 (-146.80, 151.80)	-8.46 (-144.00, 154.80)	-22.01 (-157.90, 141.10)	-15.39 (-159.20, 182.00)	-3.89 (-216.50, 263.20)	The Biggest Loser			
2.13 (-3.94, 8.22)	1.73 (-4.55, 7.94)	-1.04 (-6.66, 4.65)	-2.22 (-8.00, 3.57)	-2.67 (-8.84, 3.47)	-16.02 (-149.40, 86.41)	-0.97 (-7.43, 5.40)	2.08 (-4.25, 8.48)	-11.72 (-20.39, -3.02)	-8.98 (-116.40, 152.30)	1.10 (-148.60, 198.40)	10.45 (-152.80, 146.10)	Volumetrics		
1.17 (-2.24, 5.34)	0.72 (-2.02, 4.19)	-1.98 (-5.46, 2.18)	-3.14 (-6.72, 0.95)	-3.61 (-7.55, 0.92)	-16.84 (-149.50, 85.61)	-1.90 (-5.94, 2.65)	1.15 (-2.90, 5.79)	-12.63 (-20.06, -4.82)	-9.40 (-117.10, 151.30)	0.38 (-149.40, 197.20)	9.68 (-153.70, 145.30)	-0.92 (-7.53, 6.15)	Weight Watchers	
2.74 (-0.10, 5.68)	2.35 (-0.64, 5.27)	-0.42 (-2.53, 1.82)	-1.59 (-3.88, 0.70)	-2.05 (-5.18, 1.09)	-15.32 (-148.40, 87.05)	-0.38 (-3.90, 3.21)	2.69 (-0.43, 5.93)	-11.10 (-18.00, -4.16)	-8.05 (-115.90, 152.40)	1.86 (-147.70, 199.00)	11.16 (-152.40, 146.70)	0.62 (-5.42, 6.70)	1.55 (-2.68, 5.27)	Zone

The values correspond to the difference in median SBP reduction between the row and column at 6 months (eg, the difference in median SBP reduction between the Atkins diet and Usual diet at 6 months is 4.34 mm Hg).

Table S49: 6-month DBP reduction across all individual popular diets when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies (β -coefficient = 0.05, 95%CrI: -2.80 to 2.96)													
		Usual diet	0.54 (-1.82, 2.77)	1.99 (0.23, 3.80)	3.15 (1.09, 5.24)	2.82 (1.48, 4.25)	7.55 (2.91, 12.25)	1.15 (-0.41, 2.72)	0.07 (-2.86, 2.93)	3.60 (-1.42, 8.65)	3.73 (-0.15, 7.64)	NA	2.20 (-1.23, 5.63)	NA	1.13 (-1.65, 3.80)
Healthy populations (β -coefficient = 0.81, 95%CrI: -3.14 to 1.49)	0.53 (-2.26, 3.33)	Dietary advice	1.46 (-0.69, 3.78)	2.61 (0.32, 5.08)	2.28 (0.25, 4.57)	7.02 (2.22, 11.96)	0.62 (-1.77, 3.13)	-0.46 (-3.24, 2.33)	3.07 (-2.07, 8.35)	3.19 (-0.84, 7.41)	NA	1.66 (-2.39, 5.87)	NA	0.60 (-1.15, 2.36)	1.67 (-0.73, 4.24)
	3.23 (0.50, 5.96)	2.70 (0.42, 4.96)	Low fat	1.15 (0.03, 2.29)	0.83 (-0.87, 2.56)	5.56 (1.26, 9.86)	-0.85 (-3.00, 1.27)	-1.93 (-4.48, 0.5)	1.60 (-3.10, 6.31)	1.74 (-1.73, 5.19)	NA	0.21 (-3.69, 4.06)	NA	-0.86 (-3.55, 1.67)	0.20 (-1.67, 2.10)
	4.49 (1.78, 7.22)	3.97 (1.61, 6.30)	1.26 (0.29, 2.24)	Atkins	-0.33 (-2.31, 1.68)	4.40 (-0.04, 8.87)	-2.00 (-4.39, 0.35)	-3.08 (-5.67, 0.62)	0.45 (-4.39, 5.29)	0.58 (-3.07, 4.21)	NA	-0.94 (-4.98, 3.03)	NA	-2.02 (-4.80, 0.60)	-0.95 (-2.93, 1.04)
	NA	NA	NA	NA	DASH	4.73 (0.08, 9.35)	-1.68 (-3.59, 0.19)	-2.75 (-5.67, 0.00)	0.77 (-4.24, 5.76)	0.91 (-2.97, 4.73)	NA	-0.62 (-4.37, 3.05)	NA	-1.68 (-2.94, 0.82)	-0.63 (-3.00, 1.75)
	NA	NA	NA	NA	NA	Jenny Craig	-6.41 (-11.24, -1.61)	-7.49 (-12.51, -2.56)	-3.96 (-10.35, 2.42)	-3.82 (-9.35, 1.67)	NA	-5.36 (-11.17, 0.41)	NA	-6.43 (-11.55, -1.44)	-5.36 (-10.05, -0.66)
	0.85 (-1.52, 3.31)	0.31 (-3.33, 4.07)	-2.40 (-6.01, 1.31)	-3.66 (-7.25, 0.05)	NA	NA	Mediterranean	-1.08 (-4.20, 1.98)	2.45 (-2.69, 7.63)	2.59 (-1.46, 6.64)	NA	1.06 (-2.71, 4.83)	NA	-0.01 (-2.94, 2.79)	1.05 (-1.60, 3.77)
	1.98 (-1.68, 5.54)	1.46 (-1.71, 4.62)	-1.27 (-3.66, 1.20)	-2.52 (-5.09, 0.09)	NA	NA	1.13 (-3.28, 5.4)	Ornish	3.53 (-1.74, 8.89)	3.65 (-0.53, 7.99)	NA	2.13 (-2.31, 6.67)	NA	1.06 (-1.98, 4.10)	2.13 (-0.45, 4.85)
	4.86 (0.03, 9.70)	4.31 (-0.28, 8.93)	1.61 (-2.41, 5.60)	0.35 (-3.79, 4.44)	NA	NA	4.02 (-1.44, 9.38)	2.87 (-1.84, 7.52)	Paleolithic	0.13 (-5.69, 5.97)	NA	-1.39 (-7.51, 4.68)	NA	-2.47 (-7.90, 2.84)	-1.40 (-6.46, 3.69)
	NA	NA	NA	NA	NA	NA	NA	NA	NA	Portfolio	NA	-1.52 (-6.73, 3.64)	NA	-2.59 (-7.01, 1.65)	-1.53 (-5.45, 2.41)
	2.21 (-0.86, 5.34)	1.69 (-1.50, 4.94)	-1.02 (-4.10, 2.15)	-2.27 (-5.31, 0.90)	NA	NA	1.39 (-2.59, 5.25)	0.22 (-3.61, 4.18)	-2.61 (-7.65, 2.48)	NA	Rosemary Conley	NA	NA	NA	NA
	2.21 (-0.23, 4.63)	1.65 (-2.00, 5.39)	-1.04 (-4.64, 2.62)	-2.31 (-5.9, 1.36)	NA	NA	1.37 (-2.10, 4.71)	0.21 (-4.04, 4.58)	-2.66 (-8.04, 2.76)	NA	-0.01 (-3.96, 3.88)	The Biggest Loser	NA	-1.07 (-5.51, 3.25)	-0.01 (-4.20, 4.26)

	2.94 (-1.65, 7.45)	2.42 (-1.92, 6.72)	-0.30 (-3.92, 3.32)	-1.55 (-5.32, 2.19)	NA	NA	2.08 (-3.12, 7.19)	0.97 (-3.44, 5.32)	-1.90 (-7.31, 3.55)	NA	0.73 (-4.11, 5.48)	0.75 (-4.45, 5.85)	Volumetrics	NA	NA
	2.41 (-0.22, 5.13)	1.87 (0.39, 3.53)	-0.83 (-3.19, 1.66)	-2.08 (-4.47, 0.42)	NA	NA	1.58 (-2.03, 5.16)	0.42 (-2.79, 3.8)	-2.43 (-7.07, 2.28)	NA	0.2 (-2.90, 3.29)	0.22 (-3.35, 3.84)	-0.53 (-4.89, 3.93)	Weight Watchers	1.07 (-1.64, 3.96)
3 (-0.03, 6.05)	2.47 (0.03, 4.96)	-0.24 (-1.86, 1.47)	-1.49 (-3.32, 0.40)	NA	NA	2.17 (-1.77, 5.99)	1.02 (-1.38, 3.47)	-1.85 (-6.13, 2.52)	NA	0.79 (-2.63, 4.18)	0.81 (-3.06, 4.69)	0.06 (-3.91, 4.09)	0.61 (-2.09, 3.19)	Zone	

The values correspond to the difference in median DBP reduction between the row and column at 6 months (e.g., the difference in median DBP reduction between the Atkins diet and usual diet at 6 months is 4.49 mm Hg).

Table S50: 6-month DBP reduction across all individual popular diets when restricted to studies without diet company support (β -coefficient = -0.36, 95%CrI: -2.85 to 2.23)

Usual diet											
1.14 (-0.97, 3.26)	Dietary advice										
2.83 (1.06, 4.68)	1.69 (-0.37, 3.83)	Low fat									
3.95 (1.98, 6.01)	2.81 (0.61, 5.09)	1.11 (-0.02, 2.27)	Atkins								
2.67 (1.21, 4.19)	1.54 (-0.62, 3.72)	-0.16 (-2.22, 1.86)	-1.27 (-3.52, 0.92)	DASH							
1.02 (-0.87, 2.92)	-0.11 (-2.52, 2.27)	-1.81 (-4.16, 0.47)	-2.93 (-5.44, -0.49)	-1.65 (-3.85, 0.51)	Mediterranean						
0.70 (-2.25, 3.61)	-0.44 (-3.32, 2.40)	-2.13 (-4.77, 0.38)	-3.25 (-5.91, -0.71)	-1.98 (-5.06, 1.04)	-0.33 (-3.59, 2.90)	Ornish					
4.42 (-0.76, 9.67)	3.29 (-2.01, 8.64)	1.59 (-3.31, 6.48)	0.47 (-4.56, 5.48)	1.74 (-3.52, 7.06)	3.40 (-1.98, 8.85)	3.73 (-1.76, 9.29)	Paleolithic				
4.57 (0.49, 8.75)	3.44 (-0.79, 7.74)	1.74 (-1.98, 5.46)	0.63 (-3.28, 4.50)	1.90 (-2.33, 6.16)	3.55 (-0.79, 7.97)	3.87 (-0.59, 8.46)	0.15 (-5.99, 6.28)	Portfolio			
1.69 (-2.01, 5.48)	0.55 (-3.35, 4.55)	-1.14 (-4.91, 2.63)	-2.26 (-6.01, 1.50)	-0.98 (-4.87, 2.97)	0.67 (-3.37, 4.78)	1.00 (-3.3, 5.41)	-2.72 (-8.91, 3.42)	-2.88 (-8.16, 2.40)	Rosemary Conley		
1.25 (-1.37, 3.97)	0.11 (-2.29, 2.6)	-1.58 (-4.15, 0.99)	-2.7 (-5.28, -0.11)	-1.43 (-4.19, 1.41)	0.23 (-2.72, 3.27)	0.56 (-2.6, 3.81)	-3.17 (-8.68, 2.36)	-3.33 (-7.83, 1.20)	-0.44 (-4.32, 3.44)	Weight Watchers	
2.81 (0.39, 5.33)	1.67 (-0.75, 4.18)	-0.02 (-1.91, 1.89)	-1.14 (-3.15, 0.88)	0.13 (-2.44, 2.78)	1.79 (-0.99, 4.66)	2.11 (-0.58, 4.94)	-1.61 (-6.83, 3.66)	-1.77 (-5.93, 2.42)	1.12 (-2.96, 5.19)	1.56 (-1.32, 4.43)	Zone

The values correspond to the difference in median DBP reduction between the row and column at 6 months (e.g., the difference in median DBP reduction between the Atkins diet and usual diet at 6 months is 3.37 mm Hg when restricting to studies without diet company support). NA means not available in this subgroup. Diets with underline indicate statistical significance change compared with the primary analysis between diets and usual diet.

Table S51: 6-month DBP reduction across all individual popular diets accounting for both of behavior support and exercise

Usual diet														
-0.44 (-2.15, 1.40)	Dietary advice													
1.71 (0.13, 3.36)	2.16 (0.22, 4.01)	Low fat												
2.78 (1.09, 4.53)	3.22 (1.24, 5.14)	1.07 (0.23, 1.90)	Atkins											
3.11 (1.26, 5.21)	3.56 (1.29, 5.85)	1.40 (-0.29, 3.21)	0.33 (-1.51, 2.29)	DASH										
-30.01 (-169.90, 133.20)	-29.58 (-169.30, 133.70)	-31.75 (-171.50, 131.40)	-32.84 (-172.60, 130.40)	-33.18 (-172.80, 130.00)	Jenny Craig									
0.27 (-1.94, 2.46)	0.70 (-1.67, 3.00)	-1.45 (-3.77, 0.81)	-2.52 (-4.93, 0.16)	-2.85 (-5.41, 0.44)	30.32 (-133.00, 170.20)	Mediterranean								
-0.45 (-3.05, 2.09)	-0.01 (-2.63, 2.45)	-2.15 (-4.46, 0.00)	-3.22 (-5.54, 1.04)	-3.57 (-6.44, 0.90)	29.60 (-133.60, 169.50)	-0.72 (-3.78, 2.27)	Ornish							
3.33 (-1.35, 8.01)	3.76 (-1.08, 8.50)	1.61 (-2.79, 5.99)	0.54 (-3.94, 5.01)	0.20 (-4.58, 4.88)	33.47 (-130.00, 173.30)	3.06 (-1.88, 8.01)	3.78 (-1.12, 8.76)	Paleolithic						
-51.31 (-133.10, 112.40)	-50.84 (-132.70, 112.90)	-53.10 (-134.90, 110.80)	-54.18 (-136.00, 109.80)	-54.48 (-136.40, 109.20)	-10.85 (-204.60, 175.40)	-51.50 (-133.50, 112.00)	-50.80 (-132.80, 112.90)	-54.49 (-137.00, 109.00)	Portfolio					
13.94 (-195.70, 229.30)	14.38 (-195.30, 229.70)	12.31 (-197.50, 227.50)	11.20 (-198.60, 226.50)	10.85 (-198.90, 226.10)	53.39 (-283.10, 288.10)	13.63 (-196.20, 229.10)	14.40 (-195.00, 229.80)	10.64 (-198.80, 226.30)	56.31 (-185.30, 298.70)	Rosemary Conley				

-17.58 (-142.50, 139.30)	-17.09 (-142.00, 140.00)	-19.25 (-144.00, 137.80)	-20.30 (-145.00, 136.70)	-20.65 (-145.40, 136.30)	29.41 (-178.90, 182.90)	-17.79 (-142.70, 139.10)	-17.02 (-141.80, 140.00)	-20.64 (-145.50, 135.90)	23.30 (-100.60, 222.30)	-26.63 (-250.50, 218.90)	The Biggest Loser			
1.38 (-2.93, 5.77)	1.82 (-2.65, 6.28)	-0.33 (-4.36, 3.73)	-1.40 (-5.51, 2.75)	-1.73 (-6.17, 2.62)	31.51 (-131.80, 171.00)	1.13 (-3.54, 5.79)	1.84 (-2.73, 6.53)	-1.94 (-7.89, 4.04)	52.66 (-110.90, 134.90)	-12.58 (-228.00, 196.90)	18.79 (-138.30, 143.50)	Volumetrics		
-0.91 (-3.47, 1.83)	-0.45 (-2.66, 1.75)	-2.62 (-5.14, 0.02)	-3.68 (-6.22, 1.03)	-4.02 (-6.93, 1.07)	29.11 (-134.40, 168.70)	-1.16 (-4.16, 1.94)	-0.46 (-3.34, 2.68)	-4.21 (-9.25, 0.93)	50.30 (-113.10, 132.30)	-14.76 (-230.30, 194.70)	16.50 (-140.70, 141.60)	-2.27 (-7.07, 2.52)	Weight Watchers	
1.65 (-0.43, 3.84)	2.08 (-0.08, 4.24)	-0.06 (-1.65, 1.56)	-1.13 (-2.78, 0.57)	-1.47 (-3.79, 0.81)	31.70 (-131.50, 171.40)	1.37 (-1.23, 4.12)	2.09 (-0.21, 4.58)	-1.68 (-6.32, 3.05)	53.00 (-110.70, 134.90)	-12.32 (-227.50, 197.20)	19.18 (-137.70, 144.00)	0.27 (-4.10, 4.61)	2.55 (-0.21, 5.28)	Zone

The values correspond to the difference in median DBP reduction between the row and column at 6 months (eg, the difference in median DBP reduction between the Atkins diet and Usual diet at 6 months is 2.78 mm Hg).

Table S52: 6-month LDL reduction across all individual popular diets when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies (β -coefficient = 7.55, 95%CrI: -2.28 to 17.43)																
		0Ctl_usual_diet	1Ctl_dietary_advice	2Ctl_low_fat_advice	Atkins	DASH	Jenny_Craig	Mediterranean	Ornish	Paleolithic	Portfolio	Rosemary_Conley	South_Beach	NA	NA	NA	NA	NA
Healthy populations (β -coefficient = -2.99, 95%CrI: -10.19 to 4.36)		-1.90 (-25.71, 21.61)	10.00 (-13.21, 33.31)	4.64 (-21.70, 28.84)	12.02 (-28.57, 51.39)	-1.02 (-33.82, 31.86)	12.04 (-19.09, 41.99)	NA	15.44 (-18.22, 49.09)	29.45 (-2.94, 61.76)	NA	NA	NA	NA	NA	NA	4.21 (-23.40, 35.88)	
		0.94 (-9.84, 11.69)	11.89 (-11.12, 34.93)	6.55 (-19.61, 30.51)	13.97 (-26.53, 53.42)	0.91 (-21.92, 23.88)	13.96 (-17.01, 43.84)	NA	17.33 (-16.08, 50.91)	31.38 (-0.76, 63.61)	NA	NA	NA	NA	NA	NA	NA	6.11 (-21.33, 37.60)
		8.23 (-2.88, 18.76)	7.30 (-4.29, 18.2)	-5.34 (-16.44, 3.56)	2.03 (-31.30, 34.18)	-11.00 (-43.53, 21.35)	2.11 (-18.43, 21.28)	NA	5.44 (-18.85, 29.74)	19.46 (-3.23, 42.13)	NA	NA	NA	NA	NA	NA	NA	-5.70 (-22.46, 14.32)
		3.56 (-7.62, 14.26)	2.66 (-9.1, 13.78)	-4.66 (-8.75, 0.48)	7.47 (-24.77, 40.51)	-5.69 (-38.46, 29.28)	7.32 (-11.96, 27.72)	NA	10.84 (-14.43, 38.05)	24.76 (1.16, 50.7)	NA	NA	NA	NA	NA	NA	NA	-0.31 (-18.67, 23.25)
		NA	NA	NA	NA	-13.11 (-58.41, 33.65)	-0.02 (-26.19, 26.29)	NA	3.45 (-36.64, 44.67)	17.36 (-21.74, 57.8)	NA	NA	NA	NA	NA	NA	NA	-7.73 (-42.93, 31.93)
		2.07 (-11.18, 15.21)	1.13 (-8.00, 10.20)	-6.17 (-19.71, 7.92)	-1.52 (-15.21, 12.71)	NA	13.06 (-25.57, 50.64)	NA	16.47 (-23.97, 57.18)	30.47 (-9.16, 70.08)	NA	NA	NA	NA	NA	NA	NA	5.18 (-30.02, 44.60)
		4.21 (-3.17, 11.81)	3.29 (-9.76, 16.43)	-4.00 (-16.77, 9.48)	0.65 (-12.28, 14.23)	NA	2.15 (-12.88, 17.44)	NA	3.41 (-27.37, 35.08)	17.35 (-12.26, 47.98)	NA	NA	NA	NA	NA	NA	NA	-7.86 (-32.43, 21.47)
		7.97 (-7.87, 23.2)	7.07 (-9.14, 22.59)	-0.25 (-11.62, 11.17)	4.41 (-7.17, 15.99)	NA	5.92 (-12.14, 23.43)	NA	3.77 (-13.92, 20.6)	NA	NA	NA	NA	NA	NA	NA	NA	NA
		13.73 (-6.17, 32.88)	12.81 (-7.33, 32.20)	5.5 (-10.85, 21.74)	10.15 (-6.76, 26.93)	NA	11.66 (-10.06, 32.68)	NA	9.51 (-11.90, 29.98)	5.76 (-14.26, 25.50)	14.00 (-19.28, 47.07)	NA	NA	NA	NA	NA	NA	-11.17 (-40.00, 21.09)
		NA	NA	NA	NA	NA	NA	NA	NA	NA	Portfolio	NA	NA	NA	NA	NA	NA	-25.29 (-52.50, 5.69)
		10.57 (-4.21, 25.15)	9.63 (-5.91, 25.03)	2.34 (-12.36, 17.41)	6.99 (-7.58, 21.87)	NA	8.52 (-8.77, 25.7)	NA	6.34 (-10.27, 22.65)	2.58 (-15.74, 21.23)	-3.17 (-25.03, 19.18)	NA	Rosemary_Conley	NA	NA	NA	NA	NA
		5.78 (-15.14, 26.15)	4.84 (-16.27, 25.45)	-2.42 (-20.00, 15.04)	2.24 (-15.88, 20.19)	NA	3.73 (-18.84, 25.85)	NA	1.55 (-20.75, 23.21)	-2.19 (-23.17, 18.71)	-7.95 (-31.89, 16)	NA	-4.78 (-28.03, 18.02)	South_Beach	NA	NA	NA	NA

	3.92 (-8.71, 16.48)	2.98 (-13.60, 19.55)	-4.33 (-20.55, 12.64)	0.34 (-16.04, 17.35)	NA	1.86 (-16.33, 20.17)	-0.29 (-15.07, 14.21)	-4.07 (-23.83, 16.23)	-9.83 (-32.57, 13.81)	NA	-6.66 (-25.86, 12.80)	-1.91 (-25.67, 22.62)	The_Biggest_Loser	NA	NA	NA
	13.50 (-5.14, 31.68)	12.59 (-6.39, 31.03)	5.27 (-9.66, 20.33)	9.93 (-5.59, 25.49)	NA	11.44 (-9.18, 31.63)	9.26 (-10.94, 28.82)	5.52 (-13.35, 24.35)	-0.21 (-22.39, 22.02)	NA	2.93 (-18.30, 23.87)	7.73 (-15.33, 30.88)	9.60 (-12.97, 31.60)	Volumetrics	NA	
	4.48 (-7.12, 15.56)	3.56 (-6.04, 12.62)	-3.76 (-15.56, 8.21)	0.90 (-11.01, 12.89)	NA	2.41 (-9.67, 14.10)	0.26 (-13.65, 13.54)	-3.50 (-19.76, 12.81)	-9.26 (-29.27, 11.06)	NA	-6.09 (-20.88, 8.45)	-1.32 (-22.45, 20.00)	0.58 (-16.69, 17.20)	-9.02 (-28.18, 10.10)	Weight_Watchers	
	2.96 (-9.58, 14.86)	2.06 (-10.92, 14.27)	-5.26 (-11.19, 0.61)	-0.61 (-7.41, 6.09)	NA	0.92 (-14.36, 15.54)	-1.24 (-16.00, 12.63)	-5.01 (-16.81, 6.70)	-10.75 (-28.09, 6.61)	NA	-7.61 (-23.73, 8.11)	-2.83 (-21.34, 15.71)	-0.94 (-18.87, 16.19)	-10.54 (-26.73, 5.49)	-1.50 (-14.75, 11.55)	Zone

Table S53: 6-month LDL reduction across all individual popular diets when restricted to studies without diet company support (β -coefficient = -3.41, 95%CrI: -11.35 to 4.40)

0Ctl_usual_diet												
-0.95 (-8.19, 6.46)	1Ctl_dietary_advice											
3.36 (-3.53, 10.04)	4.31 (-3.44, 11.72)	2Ctl_low_fat_advice										
-0.71 (-8.06, 6.48)	0.23 (-7.93, 8.13)	-4.07 (-7.53, -0.57)	Atkins									
3.34 (-4.13, 11.01)	4.27 (-5.83, 14.6)	-0.02 (-9.74, 10.09)	4.06 (-6.03, 14.50)	DASH								
0.04 (-16.16, 16.12)	0.99 (-15.02, 16.70)	-3.32 (-19.59, 12.89)	0.75 (-15.73, 17.14)	-3.33 (-21.17, 14.27)	Jenny_Craig							
6.16 (1.27, 11.48)	7.08 (0.58, 13.99)	2.81 (-3.69, 9.87)	6.87 (-0.17, 14.43)	2.84 (-5.71, 11.46)	6.14 (-9.92, 22.56)	Mediterranean						
6.57 (-3.06, 16.47)	7.52 (-2.06, 17.27)	3.21 (-4.66, 11.53)	7.28 (-0.73, 15.71)	3.24 (-8.93, 15.37)	6.55 (-10.72, 24.12)	0.40 (-9.34, 10.01)	Ornish					
8.72 (-8.13, 25.52)	9.68 (-7.53, 26.73)	5.38 (-9.99, 20.84)	9.45 (-6.35, 25.25)	5.38 (-13.04, 23.59)	8.70 (-13.63, 31.09)	2.55 (-14.41, 19.17)	2.15 (-15.31, 19.42)	Paleolithic				
22.81 (9.06, 36.27)	23.75 (9.55, 37.61)	19.45 (7.65, 31.25)	23.51 (11.17, 35.81)	19.47 (3.84, 34.61)	22.74 (2.74, 42.87)	16.66 (2.69, 29.87)	16.23 (1.70, 30.25)	14.05 (-5.32, 33.36)	Portfolio			
8.04 (-5.30, 21.39)	9.00 (-5.24, 23.12)	4.70 (-8.45, 17.97)	8.77 (-4.31, 21.89)	4.70 (-10.63, 19.86)	8 (-11.62, 27.78)	1.88 (-12.02, 15.42)	1.48 (-13.59, 16.22)	-0.7 (-20.95, 19.69)	-14.74 (-32.34, 3.00)	Rosemary_Conley		
1.61 (-8.27, 11.23)	2.55 (-7.85, 12.61)	-1.74 (-10.99, 7.39)	2.32 (-6.93, 11.39)	-1.74 (-14.14, 10.24)	1.56 (-14.49, 17.54)	-4.58 (-14.89, 5.18)	-4.99 (-16.29, 5.9)	-7.12 (-25.12, 10.65)	-21.19 (-36.23, -6.35)	-6.43 (-20.06, 6.90)	Weight_Watchers	
-0.72 (-9.02, 7.48)	0.25 (-8.68, 8.89)	-4.06 (-9.09, 1.03)	0.01 (-5.63, 5.66)	-4.04 (-15.18, 6.79)	-0.75 (-17.49, 16.09)	-6.87 (-15.34, 1.10)	-7.28 (-16.02, 1.05)	-9.45 (-25.70, 6.72)	-23.5 (-36.31, -10.67)	-8.76 (-22.65, 5.04)	-2.30 (-12.17, 7.68)	Zone

Table S54: Network meta-regression adjusting for behavior support and exercise for 6-month LDL reduction

Usual diet															
1.38 (-5.14, 7.92)	Dietary advice														
4.02 (-2.84, 10.80)	2.64 (-4.03, 9.34)	Low fat													
-0.46 (-7.42, 6.41)	-1.84 (-8.64, 4.94)	-4.48 (-7.02, -1.98)	Atkins												
10.39 (-3.85, 24.69)	8.99 (-4.96, 23.20)	6.38 (-6.78, 19.68)	10.84 (-2.44, 24.32)	DASH											
2.18 (-10.06, 14.55)	0.80 (-9.58, 11.29)	-1.82 (-14.26, 10.66)	2.64 (-9.83, 15.18)	-8.20 (-25.74, 9.15)	Jenny Craig										
9.19 (2.97, 15.56)	7.80 (2.03, 13.77)	5.17 (0.22, 10.29)	9.65 (4.50, 14.98)	-1.19 (-14.42, 11.97)	6.99 (-4.93, 19.07)	Mediterranean									
6.91 (-2.36, 16.25)	5.52 (-3.24, 14.36)	2.89 (-4.29, 10.11)	7.37 (0.15, 14.67)	-3.48 (-18.41, 11.35)	4.71 (-8.96, 18.40)	-2.28 (-10.60, 5.97)	Ornish								
9.40 (-6.29, 24.92)	8.01 (-7.56, 23.55)	5.39 (-8.75, 19.33)	9.86 (-4.44, 24.06)	-1.00 (-20.48, 18.16)	7.19 (-11.65, 26.02)	0.21 (-14.86, 15.02)	2.48 (-13.34, 18.13)	Paleolithic							
23.10 (-109.20, 135.20)	21.73 (-110.70, 134.10)	19.10 (-113.10, 131.80)	23.62 (-108.70, 136.30)	12.21 (-120.20, 126.70)	20.80 (-111.80, 133.50)	13.87 (-118.30, 126.60)	16.18 (-116.10, 129.00)	13.61 (-119.70, 127.40)	Portfolio						
-11.77 (-174.80, 130.80)	-13.25 (-176.10, 129.30)	-15.89 (-178.50, 126.20)	-11.42 (-174.00, 130.70)	-22.22 (-185.50, 119.40)	-14.30 (-177.40, 129.10)	-21.16 (-183.70, 121.00)	-18.88 (-181.50, 123.20)	-21.36 (-184.50, 121.30)	-28.62 (-228.00, 143.50)	Rosemary Conley					

1.44 (-15.44, 18.31)	0.07 (-16.78, 16.94)	-2.57 (-18.06, 12.94)	1.90 (-13.77, 17.60)	-8.92 (-29.36, 11.30)	-0.75 (-20.59, 19.08)	-7.75 (-24.02, 8.42)	-5.48 (-22.50, 11.64)	-7.93 (-28.87, 13.02)	-21.39 (-134.90, 112.00)	13.45 (-129.80, 176.70)	South Beach				
27.79 (-103.90, 168.00)	26.33 (-105.30, 166.40)	23.79 (-108.00, 163.60)	28.27 (-103.50, 168.10)	17.50 (-115.30, 157.70)	25.46 (-106.60, 165.70)	18.56 (-113.10, 158.50)	20.87 (-110.90, 160.90)	18.40 (-114.00, 158.60)	14.87 (-173.60, 186.30)	41.46 (-155.30, 262.30)	26.16 (-106.10, 166.30)	The Biggest Loser			
9.31 (-4.83, 23.43)	7.92 (-6.15, 22.05)	5.29 (-7.20, 17.74)	9.77 (-2.98, 22.45)	-1.10 (-19.23, 16.91)	7.12 (-10.47, 24.66)	0.12 (-13.39, 13.47)	2.41 (-12.01, 16.76)	-0.08 (-18.83, 18.78)	-13.53 (-127.00, 119.40)	21.31 (-121.70, 183.70)	7.84 (-12.00, 27.90)	-18.57 (-158.40, 113.80)	Volumetrics		
0.45 (-14.37, 15.21)	-0.95 (-15.69, 13.60)	-3.56 (-17.05, 9.67)	0.92 (-12.55, 14.15)	-9.92 (-28.74, 8.59)	-1.78 (-19.87, 16.28)	-8.75 (-22.96, 5.17)	-6.46 (-20.58, 7.47)	-8.98 (-28.36, 10.35)	-22.43 (-136.00, 110.70)	12.60 (-130.00, 174.90)	-0.99 (-21.52, 19.33)	-26.91 (-167.60, 104.80)	-8.87 (-27.12, 9.25)	Weight Watchers	
-0.82 (-8.80, 7.07)	-2.21 (-10.00, 5.57)	-4.85 (-9.22, 0.49)	-0.37 (-5.10, 4.37)	-11.22 (-25.17, 2.65)	-3.02 (-16.17, 10.00)	-10.01 (-16.61, -3.58)	-7.74 (-15.33, -0.19)	-10.24 (-24.83, 4.53)	-23.98 (-136.60, 108.30)	11.06 (-131.10, 173.60)	-2.27 (-18.42, 13.77)	-28.60 (-168.60, 103.20)	-10.15 (-23.31, 3.01)	-1.29 (-14.61, 12.35)	Zone

The values correspond to the difference in median LDL reduction between the row and column at 6 months (eg, the difference in median LDL reduction between the Atkins diet and Usual diet at 6 months is -0.46 mg/dL).

Table S55: 6-month HDL increase across all individual popular diets when restricted to overweight/obese yet otherwise healthy populations (below left) and restricted to low risk of bias studies (above right)

		Low risk of bias studies (β -coefficient = -1.76, 95%CrI: -5.07 to 1.57)																
		Usual diet	-0.95 (-3.85, 2.10)	-1.10 (-3.63, 1.41)	2.17 (-0.49, 4.85)	-1.66 (-4.22, 0.93)	-2.01 (-5.54, 1.63)	-0.34 (-2.13, 1.34)	-4.00 (-7.64, -0.41)	-1.50 (-8.18, 5.17)	-2.22 (-7.64, 3.15)	NA	1.40 (-5.17, 8.01)	-0.02 (-4.11, 4.08)	NA	0.56 (-2.93, 4.09)	1.00 (-2.22, 4.18)	
Healthy populations (β -coefficient = 0.27, 95%CrI: -2.46 to 2.94)		-0.92 (-4.05, 2.26)	Dietary advice	-0.15 (-3.01, 2.56)	3.12 (0.18, 5.94)	-0.71 (-4.39, 2.89)	-1.06 (-3.97, 1.85)	0.62 (-2.25, 3.17)	-3.05 (-6.41, 0.12)	-0.55 (-7.41, 6.19)	-1.27 (-6.89, 4.16)	NA	2.35 (-4.36, 9.00)	0.94 (-4.20, 5.93)	NA	1.51 (-1.07, 3.98)	1.95 (-1.45, 5.17)	
		-2.80 (-5.96, 0.64)	-1.89 (-5.10, 1.58)	Low fat	3.27 (2.02, 4.57)	-0.56 (-3.67, 2.61)	-0.91 (-4.11, 2.42)	0.76 (-1.48, 2.90)	-2.90 (-5.93, 0.09)	-0.40 (-6.60, 5.80)	-1.13 (-5.90, 3.63)	NA	2.50 (-3.55, 8.61)	1.08 (-3.71, 5.92)	NA	1.66 (-1.56, 4.96)	2.10 (-0.03, 4.23)	
		0.91 (-2.35, 4.46)	1.82 (-1.51, 5.42)	3.71 (2.34, 5.11)	Atkins	-3.84 (-7.10, 0.54)	-4.18 (-7.52, 0.75)	-2.51 (-4.93, -0.23)	-6.17 (-9.26, -3.16)	-3.68 (-10.01, 2.64)	-4.40 (-9.37, 0.51)	NA	-0.78 (-6.97, 5.45)	-2.19 (-7.08, 2.69)	NA	-1.61 (-4.91, 1.73)	-1.17 (-3.50, 1.12)	
		NA	NA	NA	NA	DASH	-0.34 (-4.45, 3.81)	1.32 (-1.52, 4.03)	-2.34 (-6.52, 1.73)	0.16 (-6.80, 7.04)	-0.57 (-6.29, 5.12)	NA	3.07 (-3.77, 9.91)	1.65 (-3.22, 6.44)	NA	2.23 (-1.86, 6.30)	2.66 (-1.09, 6.34)	
		-3.58 (-7.57, 0.75)	-2.65 (-5.64, 0.64)	-0.78 (-5.06, 3.68)	-4.49 (-8.86, 0.05)	NA	Jenny Craig	1.67 (-1.86, 4.97)	-2.00 (-6.01, 1.88)	0.50 (-6.53, 7.48)	-0.22 (-6.06, 5.49)	NA	3.40 (-3.49, 10.27)	2.00 (-3.51, 7.36)	NA	2.57 (-1.03, 6.09)	3.01 (-0.84, 6.72)	
		-0.76 (-3.38, 1.69)	0.17 (-4.01, 4.11)	2.05 (-2.39, 6.01)	-1.66 (-6.17, 2.38)	NA	2.82 (-2.34, 7.44)	Mediterranean	-3.66 (-7.01, -0.24)	-1.16 (-7.69, 5.45)	-1.89 (-7.09, 3.41)	NA	1.75 (-4.66, 8.29)	0.32 (-4.05, 4.84)	NA	0.90 (-2.31, 4.29)	1.34 (-1.57, 4.32)	
		-4.31 (-9.23, 0.87)	-3.39 (-8.35, 1.78)	-1.51 (-5.39, 2.37)	-5.22 (-9.18, 1.29)	NA	-0.73 (-6.64, 4.99)	-3.55 (-9.00, 2.33)	Ornish	2.50 (-4.35, 9.41)	1.77 (-3.84, 7.42)	NA	5.40 (-1.32, 12.22)	3.98 (-1.45, 9.49)	NA	4.56 (0.92, 8.3)	5.00 (1.72, 8.31)	
		-3.18 (-9.89, 3.68)	-2.26 (-8.97, 4.57)	-0.39 (-6.32, 5.54)	-4.10 (-10.21, 1.98)	NA	0.38 (-7.03, 7.67)	-2.4 (-9.53, 4.98)	1.11 (-5.97, 8.20)	Paleolithic	-0.72 (-8.54, 7.08)	NA	2.90 (-5.76, 11.59)	1.48 (-6.31, 9.32)	NA	2.06 (-4.94, 9.07)	2.50 (-4.05, 9.03)	
		NA	NA	NA	NA	NA	NA	NA	NA	NA	Portfolio	NA	3.62 (-4.07, 11.39)	2.21 (-4.54, 8.99)	NA	2.78 (-2.94, 8.60)	3.23 (-2.00, 8.45)	
		-2.24 (-7.17, 2.76)	-1.31 (-6.55, 3.95)	0.57 (-4.74, 5.73)	-3.14 (-8.45, 2.02)	NA	1.34 (-4.70, 7.09)	-1.47 (-6.94, 4.20)	2.08 (-4.44, 8.44)	0.95 (-7.01, 8.78)	NA	Rosemary_Conley	NA	NA	NA	NA	NA	NA
		-0.29 (-6.93, 6.52)	0.63 (-6.02, 7.40)	2.50 (-3.35, 8.32)	-1.20 (-7.23, 4.78)	NA	3.29 (-4.11, 10.48)	0.46 (-6.57, 7.86)	3.99 (-2.97, 10.98)	2.9 (-5.45, 11.22)	NA	1.94 (-5.83, 9.83)	South_Beach	-1.41 (-9.17, 6.32)	NA	-0.84 (-7.74, 6.04)	-0.40 (-6.86, 6.00)	

	-0.01 (-3.77, 3.76)	0.92 (-4.02, 5.78)	2.81 (-2.34, 7.62)	-0.90 (-6.15, 3.97)	NA	3.59 (-2.26, 8.92)	0.73 (-3.66, 5.39)	4.31 (-2.11, 10.41)	3.18 (-4.67, 10.81)	NA	2.24 (-3.99, 8.38)	0.29 (-7.47, 7.81)	The Biggest Loser	NA	0.58 (-4.80, 5.99)	1.02 (-4.21, 6.20)
	-0.80 (-6.31, 4.98)	0.13 (-5.42, 5.89)	2.01 (-2.58, 6.57)	-1.70 (-6.51, 3.06)	NA	2.78 (-3.63, 9.04)	-0.04 (-6.01, 6.38)	3.51 (-2.45, 9.49)	2.38 (-5.06, 9.85)	NA	1.44 (-5.42, 8.47)	-0.51 (-7.92, 6.88)	-0.8 (-7.40, 6.13)	Volumetrics	NA	NA
	-0.96 (-4.28, 2.58)	-0.03 (-3.05, 3.13)	1.85 (-1.91, 5.58)	-1.86 (-5.69, 1.92)	NA	2.63 (-1.55, 6.62)	-0.2 (-4.30, 4.28)	3.36 (-2.02, 8.70)	2.24 (-4.81, 9.23)	NA	1.29 (-3.68, 6.33)	-0.66 (-7.58, 6.29)	-0.97 (-5.90, 4.25)	-0.15 (-6.12, 5.74)	Weight Watchers	0.44 (-3.27, 4.06)
	-0.52 (-4.22, 3.43)	0.41 (-3.38, 4.36)	2.29 (0.23, 4.30)	-1.42 (-3.77, 0.85)	NA	3.07 (-1.85, 7.73)	0.24 (-4.18, 5.07)	3.79 (-0.22, 7.77)	2.67 (-3.61, 8.93)	NA	1.72 (-3.79, 7.36)	-0.22 (-6.41, 5.95)	-0.52 (-5.73, 4.98)	0.28 (-4.73, 5.26)	0.44 (-3.79, 4.66)	Zone

Table S56: 6-month HDL increase across all individual popular diets when restricted to studies without diet company support (β -coefficient = 0.37, 95%CrI: -2.70 to 3.42)

0Ctl_usual_diet													
-2.31 (-4.42, -0.06)	1Ctl_dietary_advice												
-2.47 (-4.7, -0.06)	-0.18 (-2.39, 2.19)	2Ctl_low_fat_advice											
0.94 (-1.44, 3.50)	3.24 (0.86, 5.74)	3.41 (2.18, 4.63)	Atkins										
-1.48 (-4.03, 1.16)	0.83 (-2.42, 4.08)	1.00 (-2.41, 4.3)	-2.41 (-5.93, 1.00)	DASH									
-2.74 (-8.49, 2.99)	-0.44 (-6.18, 5.22)	-0.28 (-6.28, 5.60)	-3.7 (-9.74, 2.25)	-1.27 (-7.6, 5.00)	Jenny_Craig								
-0.82 (-2.64, 0.85)	1.50 (-0.78, 3.42)	1.65 (-0.97, 3.93)	-1.77 (-4.53, 0.68)	0.64 (-2.35, 3.45)	1.91 (-3.93, 7.71)	Mediterranean							
-5.28 (-8.44, -2.1)	-2.99 (-5.90, -0.13)	-2.81 (-5.60, -0.19)	-6.22 (-9.07, -3.53)	-3.81 (-7.83, 0.17)	-2.54 (-8.74, 3.71)	-4.46 (-7.56, -1.15)	Ornish						
-2.87 (-9.03, 3.50)	-0.58 (-6.75, 5.74)	-0.40 (-6.19, 5.43)	-3.82 (-9.73, 2.15)	-1.40 (-8.07, 5.38)	-0.12 (-8.37, 8.31)	-2.05 (-8.2, 4.45)	2.41 (-3.9, 8.94)	Paleolithic					
-3.58 (-8.32, 1.40)	-1.27 (-6.04, 3.66)	-1.09 (-5.37, 3.19)	-4.51 (-8.95, -0.03)	-2.10 (-7.46, 3.4)	-0.83 (-8.01, 6.6)	-2.76 (-7.47, 2.37)	1.71 (-3.27, 6.85)	-0.69 (-7.95, 6.50)	Portfolio				
-2.01 (-6.76, 2.69)	0.28 (-4.61, 5.08)	0.44 (-4.49, 5.23)	-2.97 (-7.91, 1.82)	-0.53 (-5.94, 4.73)	0.73 (-6.47, 7.91)	-1.19 (-6.01, 3.72)	3.26 (-2.04, 8.54)	0.84 (-6.84, 8.37)	1.55 (-5.00, 7.90)	Rosemary_Conley			
-0.48 (-3.17, 2.13)	1.84 (-0.67, 4.08)	1.99 (-0.87, 4.56)	-1.42 (-4.32, 1.21)	0.99 (-2.71, 4.51)	2.25 (-3.52, 8.02)	0.33 (-2.35, 3.14)	4.81 (1.47, 8.00)	2.39 (-4.17, 8.68)	3.09 (-2.13, 7.99)	1.53 (-3.21, 6.25)	Weight_Watchers		
-0.60 (-3.36, 2.30)	1.70 (-1.02, 4.52)	1.87 (0.05, 3.67)	-1.54 (-3.58, 0.49)	0.88 (-2.82, 4.64)	2.15 (-3.92, 8.33)	0.23 (-2.56, 3.31)	4.69 (1.80, 7.69)	2.27 (-3.86, 8.31)	2.97 (-1.70, 7.58)	1.43 (-3.62, 6.60)	-0.12 (-3.08, 3.09)	Zone	

Table S57: 6-month HDL increase across all individual popular diets accounting for both of behavior support and exercise

Usual diet															
-1.24 (-3.44, 0.96)	Dietary advice														
-0.34 (-2.94, 1.97)	0.91 (-1.49, 2.96)	Low fat													
3.41 (0.83, 5.75)	4.65 (2.27, 6.76)	3.74 (2.86, 4.71)	Atkins												
-0.98 (-5.34, 3.17)	0.26 (-3.99, 4.28)	-0.62 (-4.45, 3.16)	-4.36 (-8.29, -0.55)	DASH											
-5.22 (-9.71, -0.62)	-3.97 (-7.94, 0.02)	-4.87 (-9.24, -0.13)	-8.61 (-13.04, -3.91)	-4.24 (-9.79, 1.60)	Jenny Craig										
0.53 (-1.85, 2.66)	1.78 (-0.41, 3.61)	0.85 (-0.95, 2.70)	-2.87 (-4.80, -1.02)	1.49 (-2.25, 5.27)	5.74 (1.11, 10.03)	Mediterranean									
-3.48 (-6.80, -0.40)	-2.24 (-5.15, 0.44)	-3.13 (-5.73, -0.52)	-6.87 (-9.52, -4.27)	-2.50 (-7.00, 2.03)	1.73 (-3.28, 6.46)	-4.00 (-6.87, -1.13)	Ornish								
-0.81 (-7.06, 5.36)	0.43 (-5.73, 6.51)	-0.44 (-6.14, 5.30)	-4.19 (-9.96, 1.61)	0.18 (-6.60, 7.07)	4.43 (-3.01, 11.62)	-1.31 (-7.27, 4.71)	2.68 (-3.57, 8.97)	Paleolithic							
7.47 (-95.92, 145.80)	8.69 (-94.51, 147.30)	7.85 (-95.26, 146.40)	4.11 (-99.13, 142.60)	8.57 (-94.75, 147.30)	12.64 (-90.47, 151.30)	6.98 (-96.26, 145.50)	10.95 (-92.09, 149.50)	8.28 (-95.28, 146.60)	Portfolio						
27.04 (-151.00, 222.50)	28.35 (-149.50, 223.80)	27.50 (-150.20, 222.60)	23.76 (-153.90, 218.90)	28.07 (-149.40, 222.70)	32.64 (-145.60, 228.30)	26.65 (-151.20, 221.90)	30.67 (-147.10, 225.80)	27.96 (-149.40, 223.20)	14.04 (-221.70, 220.70)	Rosemary Conley					

2.13 (-3.99, 8.16)	3.37 (-2.70, 9.28)	2.51 (-3.05, 8.05)	-1.24 (-6.88, 4.36)	3.13 (-3.56, 9.86)	7.35 (0.06, 14.43)	1.64 (-4.20, 7.46)	5.63 (-0.50, 11.73)	2.94 (-5.03, 10.89)	-5.31 (-143.80, 97.97)	-25.06 (-220.60, 152.20)	South Beach				
-65.18 (-276.90, 23.33)	-63.82 (-276.30, 24.62)	-64.66 (-277.60, 23.75)	-68.42 (-281.30, 19.98)	-63.95 (-276.70, 24.28)	-59.68 (-271.80, 28.94)	-65.54 (-278.20, 22.86)	-61.50 (-274.20, 26.87)	-64.16 (-276.50, 24.47)	-98.37 (-362.00, 77.44)	-128.30 (-326.10, 125.80)	-67.03 (-279.70, 21.61)	The Biggest Loser			
1.64 (-3.37, 6.41)	2.89 (-2.02, 7.54)	2.00 (-2.23, 6.22)	-1.75 (-6.10, 2.55)	2.63 (-3.04, 8.30)	6.87 (0.45, 12.91)	1.13 (-3.49, 5.72)	5.12 (0.16, 10.08)	2.43 (-4.66, 9.53)	-5.84 (-144.50, 97.50)	-25.58 (-220.60, 152.20)	-0.51 (-7.49, 6.47)	66.52 (-21.77, 279.60)	Volumetrics		
1.07 (-2.32, 4.26)	2.32 (-0.43, 4.85)	1.38 (-1.58, 4.58)	-2.35 (-5.37, 0.79)	2.03 (-2.61, 6.81)	6.28 (1.37, 10.98)	0.52 (-2.47, 3.71)	4.53 (1.14, 8.05)	1.85 (-4.62, 8.33)	-6.44 (-144.90, 96.92)	-26.07 (-221.40, 151.70)	-1.10 (-7.36, 5.30)	66.10 (-22.43, 278.60)	-0.59 (-5.76, 4.69)	Weight Watchers	
1.41 (-1.58, 4.14)	2.65 (-0.09, 5.13)	1.76 (0.15, 3.37)	-1.98 (-3.78, 0.24)	2.39 (-1.69, 6.51)	6.63 (1.68, 11.22)	0.89 (-1.48, 3.25)	4.89 (2.08, 7.69)	2.20 (-3.75, 8.11)	-6.09 (-144.60, 97.07)	-25.77 (-221.00, 151.90)	-0.75 (-6.50, 5.03)	66.40 (-22.05, 279.30)	-0.24 (-4.75, 4.28)	0.36 (-3.04, 3.59)	Zone

The values correspond to the difference in median HDL reduction between the row and column at 6 months (eg, the difference in median HDL reduction between the Atkins diet and Usual diet at 6 months is 3.41 mg/dL).

Table S58: GRADE assessment for 12-month weight loss in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95% CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet	3	591	0.0	5.65 (2.27, 9.03)	Serious	No	No	Undetected	Mod	No	Mod	Yes	Yes
Low CHO	Usual diet	1	36	NA	2.11 (-1.51, 5.72)	Serious	No	Serious	Undetected	Low	V serious	V low	No	Yes
Moderate Macro	Usual diet	5	1101	79.7	1.69 (0.109, 3.19)	Serious	No	Serious	Undetected	Low	Serious	V low	Yes	Yes
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	5	2111	71.1	4.00 (2.59, 5.59)	No	Serious	No	Undetected	Mod	No	Mod	NA	No
Low CHO	Low fat	4	382	35.9	0.481 (-1.36, 2.22)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Moderate Macro	Low fat	8	2199	90.5	-1.54 (-2.85, -0.288)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Moderate Macro	Low CHO	21	2614	37.6	-1.19 (-2.01, -0.351)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes

Table S58 continued: GRADE assessment for 12-month weight loss in macronutrient composition NMA

Comparison groups		Indirect evidence						Network evidence					
Arm 1	Arm 2 (Ref)	MD (95% CrI)	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95% CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-2.13 (-4.35, -0.13)	Low	No	Low	Serious	V low	-2.13 (-4.35, -0.13)	NA	Low	No	Serious	V low
Low fat	Usual diet	3.04 (0.929, 5.11)	Low	No	Low	Serious	V low	3.34 (1.70, 5.00)	0.536	Mod	No	No	Mod
Low CHO	Usual diet	3.25 (1.47, 4.97)	Low	No	Low	No	Low	3.17 (1.56, 4.71)	0.618	Low	No	No	Low
Moderate Macro	Usual diet	10.6 (-2.19, 23.0)	Low	No	Low	Serious	V low	1.90 (0.44, 3.30)	0.170	Low	No	Serious	V low
Low fat	Dietary advice	5.47 (3.67, 7.5)	Mod	No	Mod	No	Mod	5.47 (3.67, 7.5)	NA	Mod	No	No	Mod
Low CHO	Dietary advice	5.31 (3.64, 7.11)	Mod	No	Mod	No	Mod	5.31 (3.64, 7.11)	NA	Mod	No	No	Mod
Moderate Macro	Dietary advice							4.03 (2.57, 5.66)	NA	Mod	No	No	Mod
Low CHO	Low fat	-0.679 (-2.39, 0.937)	Mod	No	Mod	Serious	Low	-0.17 (-1.43, 1.00)	0.378	High	No	Serious	Mod
Moderate Macro	Low fat	-1.51 (-4.38, 1.20)	Mod	No	Mod	Serious	Low	-1.44 (-2.58, -0.38)	0.985	Mod	No	Serious	Low
Moderate Macro	Low CHO	-1.98 (-4.89, 0.906)	Mod	No	Mod	Serious	Low	-1.27 (-2.06, -0.46)	0.573	Mod	No	Serious	Low

Table S59: GRADE assessment for 12-month SBP reduction in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95% CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet	2	132	0.0	0.17 (-6.11, 6.34)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Low CHO	Usual diet	1	51	NA	12.50 (5.62, 19.3)	Serious	No	Serious	Undetected	Low	Serious	V low	No	Yes
Moderate Macro	Usual diet	4	851	63.4	-1.20 (-3.87, 1.47)	Serious	No	Serious	Undetected	Low	No	Low	Yes	Yes
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	3	2050	0.0	1.03 (-0.84, 2.95)	No	No	No	Undetected	High	Serious	Mod	NA	No
Low CHO	Low fat	3	463	0.0	2.07 (-0.68, 4.60)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Moderate Macro	Low fat	6	896	0.0	0.63 (-1.72, 3.06)	No	No	Serious	Undetected	Mod	Serious	Low	No	Yes
Moderate Macro	Low CHO	15	2022	16.8	-0.38 (-1.76, 1.02)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes

Table S59 continued: GRADE assessment for 12-month SBP reduction in macronutrient composition NMA

Comparison groups		Indirect evidence						Network evidence					
Arm 1	Arm 2 (Ref)	MD (95% CrI)	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95% CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-0.53 (-4.18, 3.50)	Low	No	Low	Serious	V low	-0.53 (-4.18, 3.50)	NA	Low	No	Serious	V low
Low fat	Usual diet	-0.58 (-4.43, 3.94)	Low	No	Low	Serious	V low	-0.32 (-3.47, 3.20)	0.858	Mod	No	Serious	Low
Low CHO	Usual diet	-1.01 (-4.03, 1.85)	Low	No	Low	Serious	V low	1.32 (-1.64, 4.59)	0.001	Low	Serious	Serious	V low
Moderate Macro	Usual diet	-0.61 (-12.50, 11.70)	Low	No	Low	Serious	V low	0.49 (-2.18, 3.51)	0.968	Low	No	Serious	V low
Low fat	Dietary advice	0.23 (-3.15, 3.61)	Mod	No	Mod	Serious	Low	0.23 (-3.15, 3.61)	NA	Mod	No	Serious	Low
Low CHO	Dietary advice	1.04 (-1.57, 3.62)	Mod	No	Mod	Serious	Low	1.04 (-1.57, 3.62)	NA	Mod	No	Serious	Low
Moderate Macro	Dietary advice							1.03 (-0.84, 2.95)	NA	High	No	Serious	Mod
Low CHO	Low fat	1.32 (-2.22, 5.18)	Low	No	Low	Serious	V low	1.63 (-0.73, 3.96)	0.845	High	No	Serious	Mod
Moderate Macro	Low fat	0.37 (-5.93, 6.77)	Low	No	Low	Serious	V low	0.81 (-1.37, 2.97)	0.859	Mod	No	Serious	Low
Moderate Macro	Low CHO	-0.65 (-7.10, 5.90)	Low	No	Low	Serious	V low	-0.82 (-2.37, 0.78)	0.945	Mod	No	Serious	Low

Table S60: GRADE assessment for 12-month DBP reduction in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95% CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet	2	161	0.0	-0.947 (-4.89, 3.02)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes
Low CHO	Usual diet	1	51	NA	9.51 (1.34, 17.7)	Serious	No	Serious	Undetected	Low	Serious	V low	No	Yes
Moderate Macro	Usual diet	4	851	84.6	-0.18 (-2.39, 2.25)	Serious	Serious	Serious	Undetected	V low	Serious	V low	Yes	Yes
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	3	2050	0.0	1.19 (-0.397, 2.76)	No	No	No	Undetected	High	Serious	Mod	NA	No
Low CHO	Low fat	3	463	0.0	1.67 (-0.46, 3.71)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Moderate Macro	Low fat	6	2066	24.1	-1.03 (-2.76, 0.81)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Moderate Macro	Low CHO	15	2022	6.9	-0.35 (-1.33, 0.76)	Serious	No	No	Undetected	Mod	Serious	Low	Yes	Yes

Table S60 continued: GRADE assessment for 12-month DBP reduction in macronutrient composition NMA

Comparison groups		Indirect evidence						Network evidence					
Arm 1	Arm 2 (Ref)	MD (95% CrI)	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95% CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-1.06 (-3.97, 2.34)	V low	No	V low	Serious	V low	-1.06 (-3.97, 2.34)	NA	V low	No	Serious	V low
Low fat	Usual diet	0.87 (-2.28, 4.85)	V low	No	V low	Serious	V low	0.24 (-2.23, 2.99)	0.479	Mod	No	Serious	Low
Low CHO	Usual diet	-0.80 (-3.07, 1.38)	Mod	No	V low	Serious	V low	0.78 (-1.63, 3.39)	0.007	Low	No	Serious	Low
Moderate Macro	Usual diet	-0.85 (-8.32, 6.41)	Low	No	Low	Serious	V low	0.16 (-2.02, 2.63)	0.863	Low	No	Serious	V low
Low fat	Dietary advice	1.28 (-1.44, 4.00)	Mod	No	Mod	Serious	Low	1.28 (-1.44, 4.00)	NA	Mod	No	Serious	Low
Low CHO	Dietary advice	1.83 (-0.75, 4.21)	Mod	No	Mod	Serious	Low	1.83 (-0.75, 4.21)	NA	Mod	No	Serious	Low
Moderate Macro	Dietary advice							1.19 (-0.397, 2.76)	NA	High	No	Serious	Mod
Low CHO	Low fat	-0.98 (-3.53, 1.71)	Low	No	Low	Serious	V low	0.55 (-1.33, 2.27)	0.143	High	No	Serious	Mod
Moderate Macro	Low fat	0.16 (-4.59, 5.30)	V low	No	V low	Serious	V low	-0.07 (-1.74, 1.58)	0.799	Mod	No	Serious	Low
Moderate Macro	Low CHO	-1.27 (-5.75, 3.25)	V low	No	V low	Serious	V low	-0.62 (-1.77, 0.65)	0.695	Mod	No	Serious	Low

Table S61: GRADE assessment for 12-month LDL reduction in macronutrient composition NMA

Comparison groups		Direct evidence													
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95% CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?	
Dietary advice	Usual diet														
Low fat	Usual diet	2	161	88.5	5.59 (-4.07, 15.60)	Serious	Serious	No	Undetected	Low	Serious	V low	No	Yes	
Low CHO	Usual diet	1	51	NA	27.00 (7.81, 46.30)	Serious	No	Serious	Undetected	Low	Serious	V low	No	Yes	
Moderate Macro	Usual diet	5	952	0.0	-1.24 (-6.67, 4.37)	Serious	No	Serious	Undetected	Low	Serious	V low	Yes	Yes	
Low fat	Dietary advice														
Low CHO	Dietary advice														
Moderate Macro	Dietary advice	4	1648	54.6	2.04 (-1.18, 5.78)	No	No	No	Undetected	High	Serious	Mod	NA	NA	
Low CHO	Low fat	4	463	0.0	-4.02 (-9.34, 1.25)	No	No	No	Undetected	High	Serious	Mod	Yes	Yes	
Moderate Macro	Low fat	6	888	0.0	-0.28 (-5.54, 4.78)	No	No	No	Undetected	High	Serious	Mod	Yes	Yes	
Moderate Macro	Low CHO	17	2217	0.7	0.38 (-2.16, 3.06)	Serious	No	Serious	Undetected	Low	Serious	V low	Yes	Yes	

Table S61 continued: GRADE assessment for 12-month LDL reduction in macronutrient composition NMA

Comparison groups		Indirect evidence						Network evidence					
Arm 1	Arm 2 (Ref)	MD (95% CrI)	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95% CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-0.70 (-6.82, 5.70)	Low	No	Low	Serious	V low	-0.70 (-6.82, 5.70)	NA	Low	No	Serious	V low
Low fat	Usual diet	2.92 (-4.22, 10.40)	Low	No	Low	Serious	V low	3.74 (-2.11, 9.79)	0.68	Low	No	Serious	V low
Low CHO	Usual diet	-1.28 (-6.63, 4.13)	Low	No	Low	Serious	V low	1.14 (-4.21, 6.72)	0.005	Low	No	Serious	V low
Moderate Macro	Usual diet	45.30 (15.10, 75.40)	Low	No	Low	Serious	V low	1.43 (-3.51, 6.60)	0.002	Low	No	Serious	V low
Low fat	Dietary advice	4.47 (-0.72, 10.24)	High	No	High	Serious	Mod	4.47 (-0.72, 10.24)	NA	High	No	Serious	Mod
Low CHO	Dietary advice	1.85 (-2.55, 6.80)	Low	No	Low	Serious	V low	1.85 (-2.55, 6.80)	NA	Low	No	Serious	V low
Moderate Macro	Dietary advice							1.04 (-1.57, 3.62)	NA	High	No	Serious	Mod
Low CHO	Low fat	-0.08 (-6.81, 6.32)	Low	No	Low	Serious	V low	-2.61 (-6.67, 1.36)	0.32	High	No	Serious	Mod
Moderate Macro	Low fat	-5.78 (-17.00, 4.70)	Low	No	Low	Serious	V low	-2.29 (-6.14, 1.55)	0.49	High	No	Serious	Mod
Moderate Macro	Low CHO	0.28 (-11.20, 11.60)	Low	No	Low	Serious	V low	0.31 (-2.28, 2.95)	0.99	Low	No	Serious	V low

Table S62: GRADE assessment for 12-month HDL increase in macronutrient composition NMA

Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95% CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet	2	161	0.0	-1.57 (-6.25, 3.17)	Serious	No	No	Undetected	Mod	Serious	Low	No	Yes
Low CHO	Usual diet	1	51	NA	0.02 (-8.16, 8.19)	Serious	No	Serious	Undetected	Low	Serious	V low	No	Yes
Moderate Macro	Usual diet	5	952	69.8	-3.21 (-5.84, -0.62)	Serious	No	Serious	Undetected	Low	Serious	V low	Yes	Yes
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice	4	1663	0.0	1.50 (-1.26, 4.28)	No	No	No	Undetected	High	Serious	Mod	NA	No
Low CHO	Low fat	4	463	53.4	2.52 (-0.59, 5.55)	No	No	No	Undetected	High	Serious	Mod	No	Yes
Moderate Macro	Low fat	6	652	5.7	0.67 (-1.67, 3.11)	No	No	Serious	Undetected	Mod	Serious	Low	Yes	Yes
Moderate Macro	Low CHO	17	2155	65.3	-2.94 (-4.37, -1.57)	Serious	No	Serious	Undetected	Low	Serious	V low	Yes	Yes

Table S62 continued: GRADE assessment for 12-month HDL increase in macronutrient composition NMA

Comparison groups		Indirect evidence						Network evidence					
Arm 1	Arm 2 (Ref)	MD (95% CrI)	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95% CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet	-4.32 (-7.88, -0.75)	Low	No	Low	Serious	V low	-4.32 (-7.88, -0.75)	NA	Low	No	Serious	V low
Low fat	Usual diet	-3.63 (-7.14, -0.0823)	Low	No	Low	Serious	V low	-2.89 (-5.62, -0.13)	0.484	Mod	No	Serious	Low
Low CHO	Usual diet	0.51 (-2.21, 3.33)	Low	No	Low	Serious	V low	0.09 (-2.46, 2.68)	0.896	Low	No	Serious	V low
Moderate Macro	Usual diet	0.96 (-10.10, 12.00)	Low	No	Low	Serious	V low	-2.80 (-5.09, -0.49)	0.461	Low	No	Serious	V low
Low fat	Dietary advice	1.41 (-1.9, 4.76)	Mod	No	Mod	Serious	Low	1.41 (-1.9, 4.76)	NA	Mod	No	Serious	Low
Low CHO	Dietary advice	4.38 (1.37, 7.45)	Low	No	Low	Serious	V low	4.38 (1.37, 7.45)	NA	Low	No	Serious	V low
Moderate Macro	Dietary advice							1.50 (-1.23, 4.25)	NA	High	No	Serious	Mod
Low CHO	Low fat	2.99 (0.120, 5.93)	Low	No	Low	Serious	V low	2.97 (0.93, 5.04)	0.860	High	No	Serious	Mod
Moderate Macro	Low fat	-4.41 (-9.41, 0.578)	Low	No	Low	Serious	V low	0.089 (-1.83, 1.99)	0.047	Mod	No	Serious	Low
Moderate Macro	Low CHO	1.13 (-4.68, 6.92)	Low	No	Low	Serious	V low	-2.89 (-4.22, -1.58)	0.174	Low	No	Serious	V low

Table S63: GRADE assessment for 12-month CRP reduction in macronutrient composition NMA

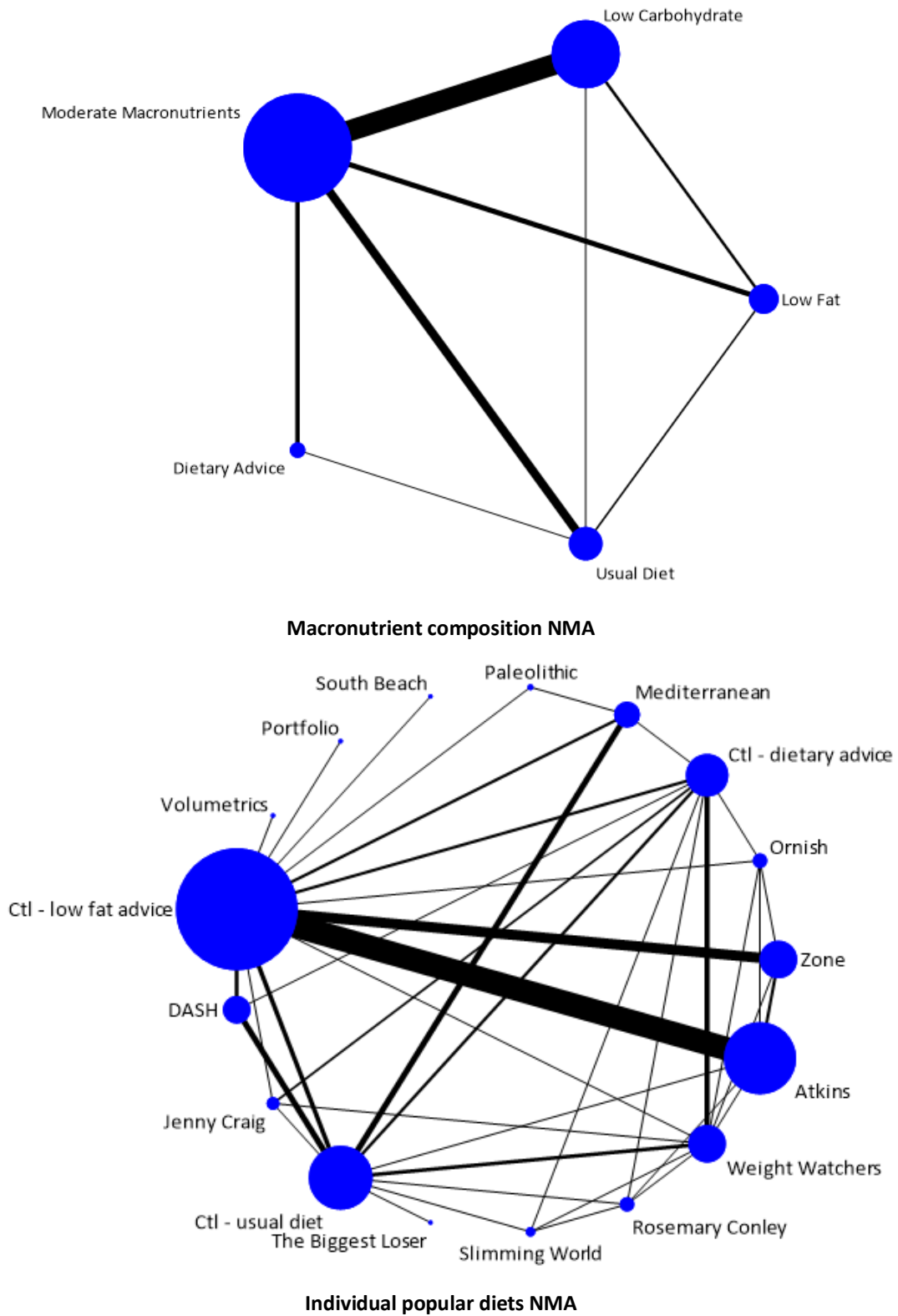
Comparison groups		Direct evidence												
Arm 1	Arm 2 (Ref)	No. of study	No. of patients	I-square, %	MD (95% CrI)	RoB	Inconsistency	Indirectness	Publication bias	Direct rating without imprecision	Imprecision	Direct rating with imprecision	Direct is more precise than indirect?	Need to rate indirect?
Dietary advice	Usual diet													
Low fat	Usual diet													
Low CHO	Usual diet	1	51	NA	0.26 (-4.44, 5.02)	Serious	No	Serious	Undetected	Low	Serious	V low	No	Yes
Moderate Macro	Usual diet	2	152	0.0	0.15 (-1.01, 1.41)	No	No	Serious	Undetected	Mod	Serious	Low	NA	No
Low fat	Dietary advice													
Low CHO	Dietary advice													
Moderate Macro	Dietary advice													
Low CHO	Low fat	1	93	NA	-0.67 (-2.93, 1.55)	No	No	Serious	Undetected	Mod	Serious	Low	NA	No
Moderate Macro	Low fat	1	93	NA	-0.87 (-3.40, 1.68)	No	No	Serious	Undetected	Mod	Serious	Low	NA	No
Moderate Macro	Low CHO	7	873	39.2	0.16 (-0.62, 0.88)	Serious	No	Serious	Undetected	Low	Serious	V low	NA	No

Table S63 continued: GRADE assessment for 12-month CRP reduction in macronutrient composition NMA

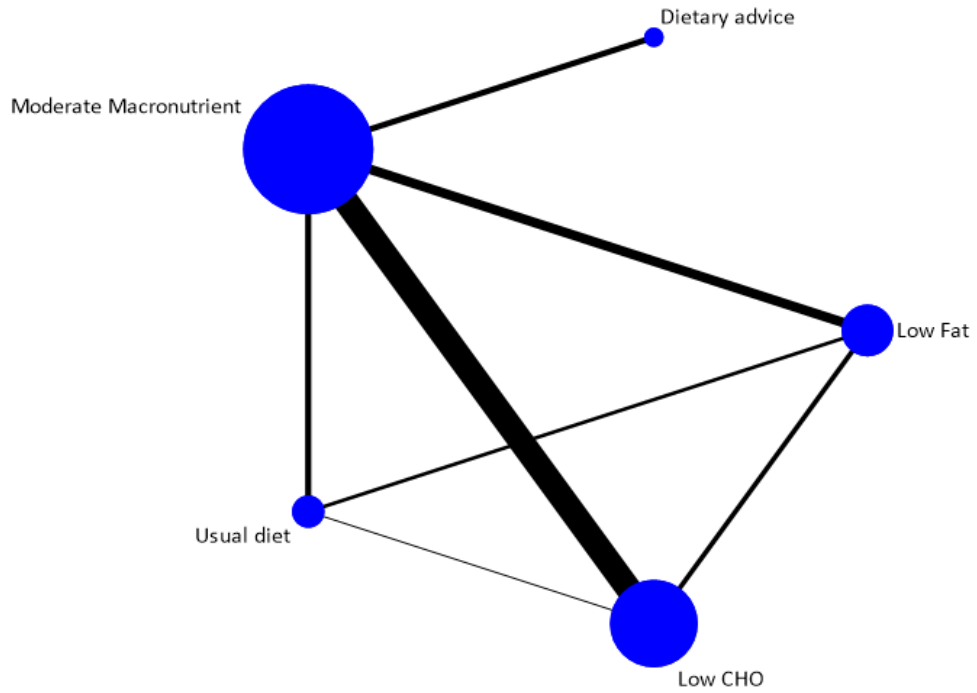
Comparison groups		Indirect evidence						Network evidence					
Arm 1	Arm 2 (Ref)	MD (95% CrI)	Lowest of C1 and C2	Intransitivity	Indirect rating without imprecision	Imprecision	Indirect rating with imprecision	MD (95% CrI)	Incoherence, P-value	Higher rating of direct and indirect without imprecision	Incoherence	NMA Imprecision	Final network rating
Dietary advice	Usual diet												
Low fat	Usual diet	0.86 (-1.18, 3.00)	Low	No	Low	Serious	V low	0.86 (-1.18, 3.00)	NA	Low	No	Serious	V low
Low CHO	Usual diet	-0.02 (-2.34, 2.69)	Low	No	Low	Serious	V low	0.02 (-1.22, 1.39)	0.90	Low	No	Serious	V low
Moderate Macro	Usual diet							0.15 (-0.9, 1.33)	NA	Mod	No	Serious	Low
Low fat	Dietary advice												
Low CHO	Dietary advice												
Moderate Macro	Dietary advice												
Low CHO	Low fat							-0.85 (-2.62, 0.93)	NA	Mod	No	Serious	Low
Moderate Macro	Low fat							-0.7 (-2.51, 1.08)	NA	Mod	No	Serious	Low
Moderate Macro	Low CHO							0.15 (-0.57, 0.83)	NA	Low	No	Serious	V low

Figure S1: Network plots for weight loss

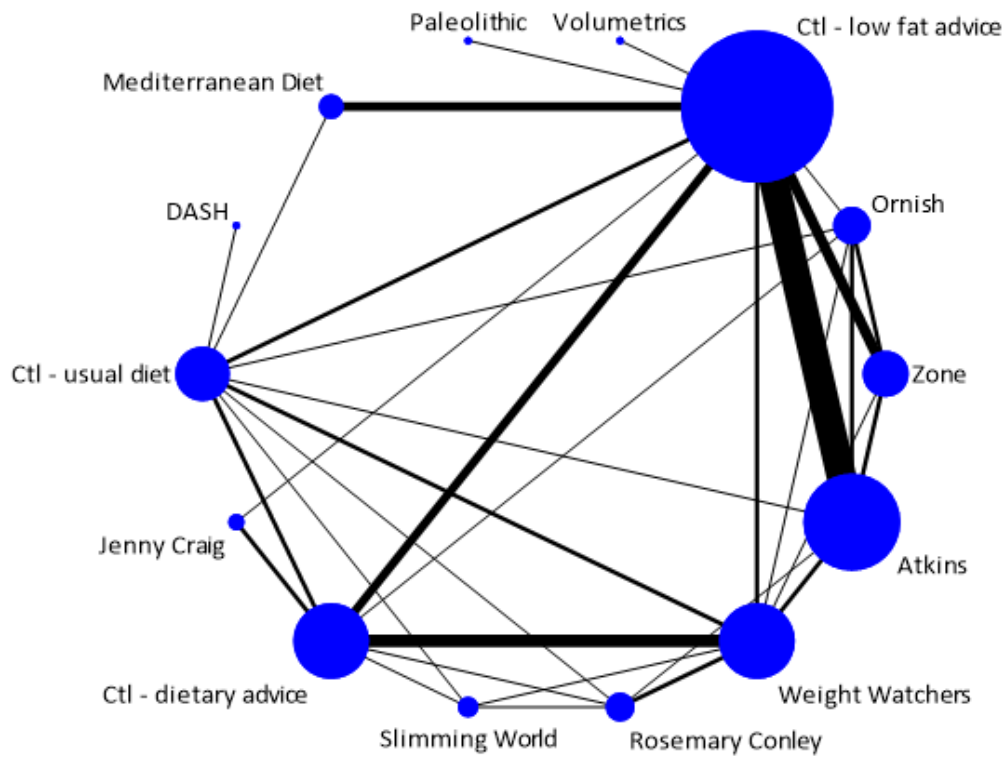
A: 6-month weight loss



B: 12-month weight loss



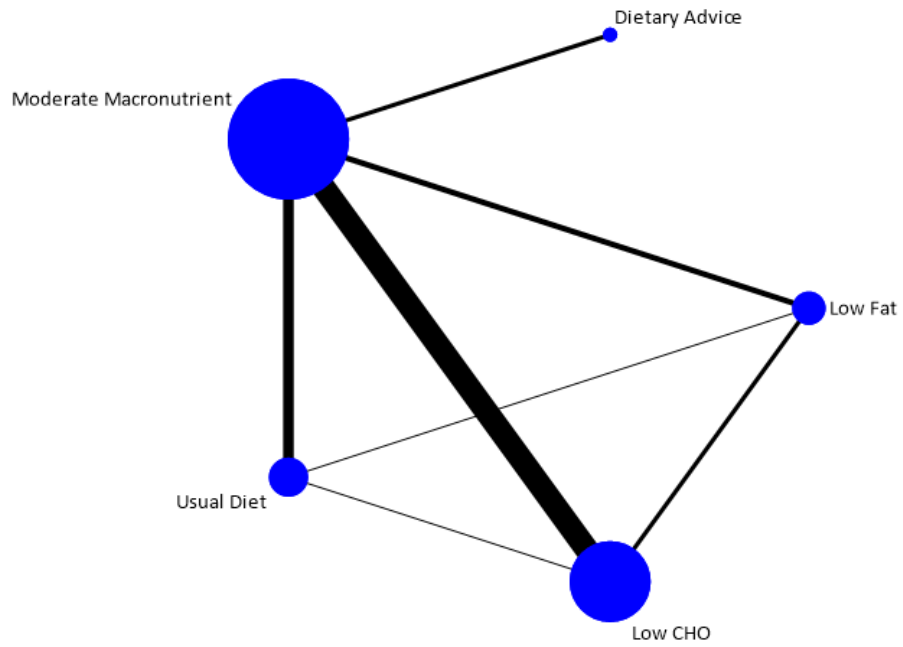
Macronutrient composition NMA



Individual popular diets NMA

Figure S2: Network plots for SBP reduction

A: 6-month SBP reduction

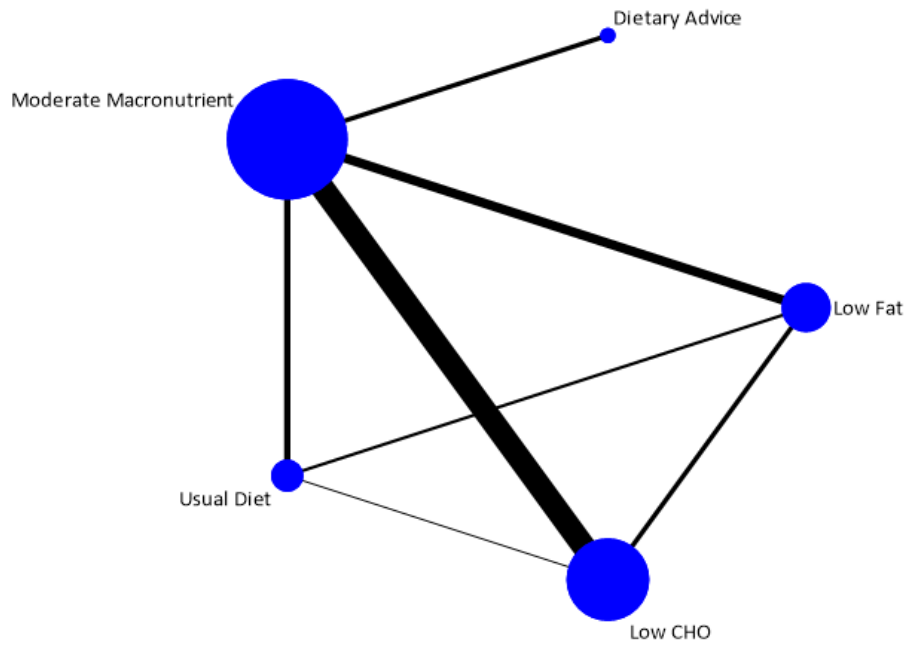


Macronutrient composition NMA

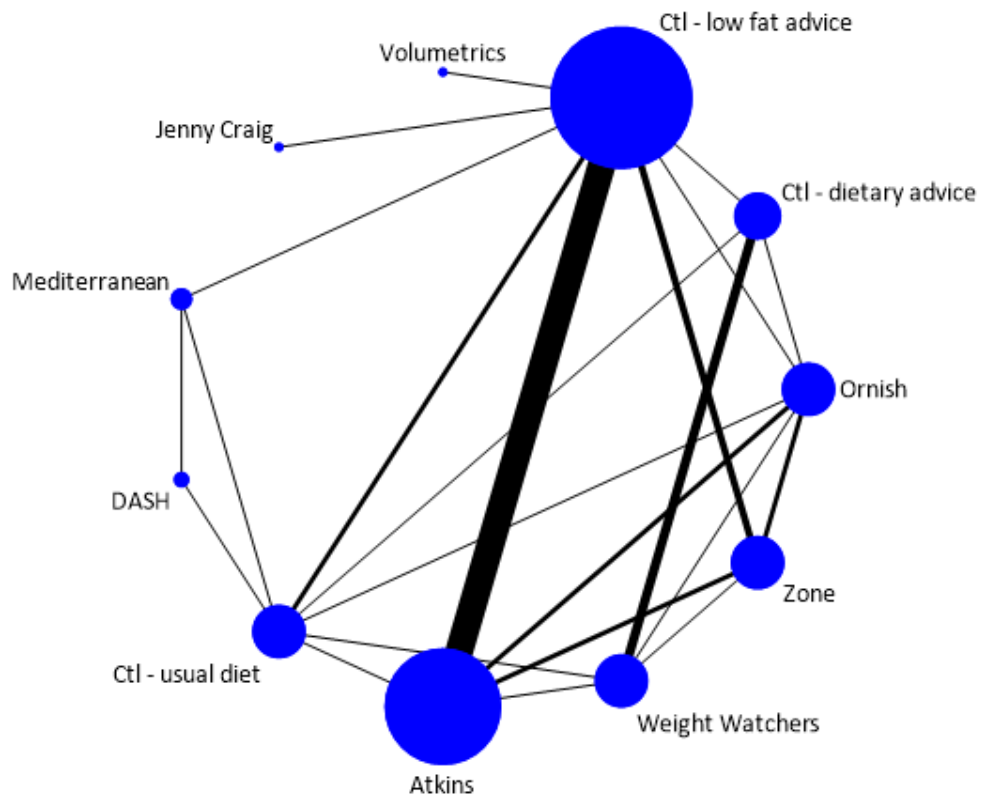


Individual popular diets NMA

B: 12-month SBP reduction



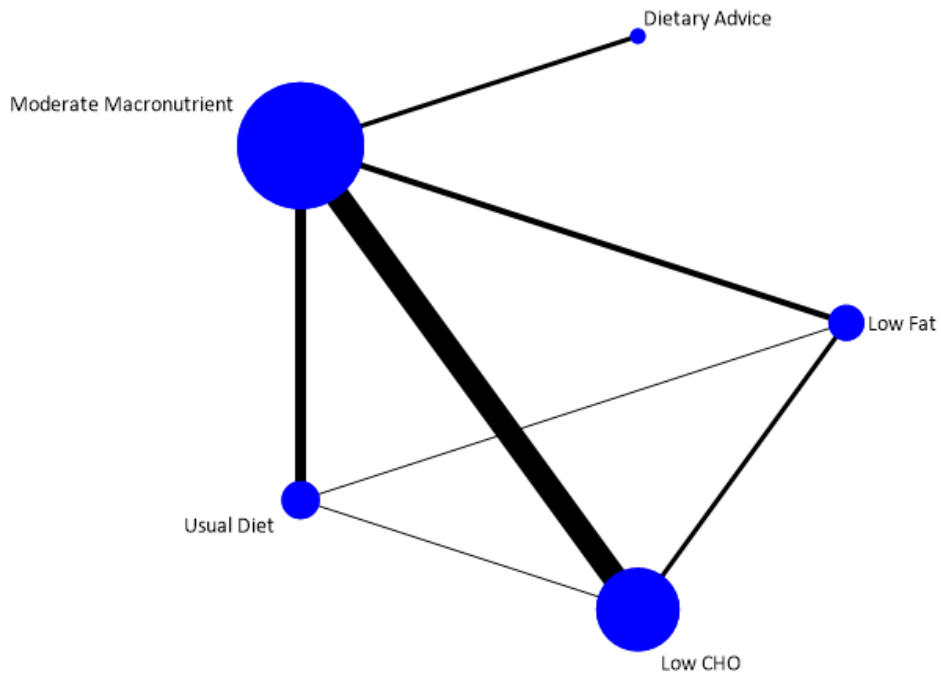
Macronutrient composition NMA



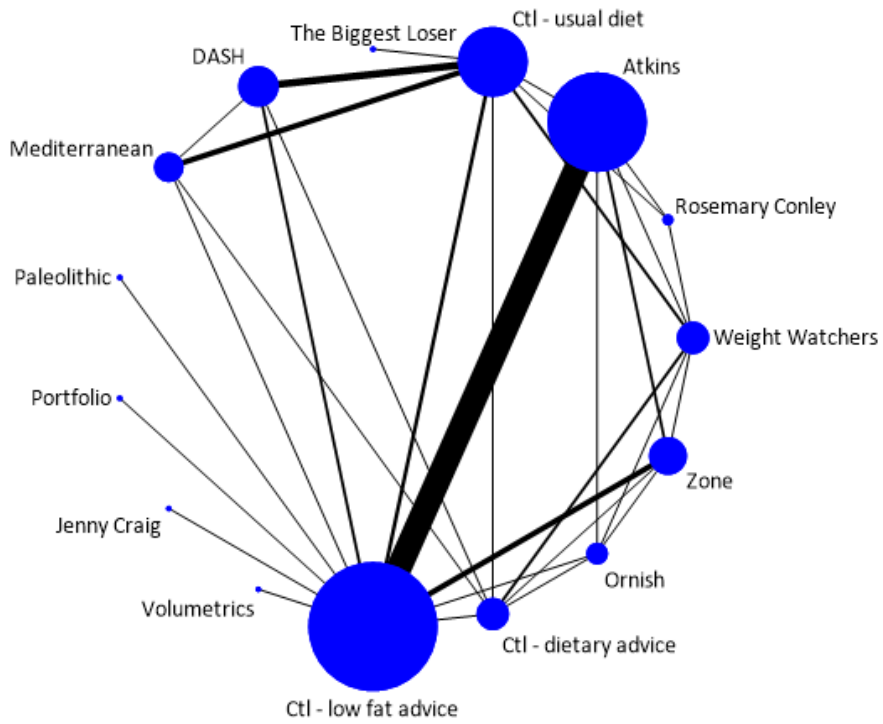
Individual popular diets NMA

Figure S3: Network plots for DBP reduction

A: 6-month DBP reduction

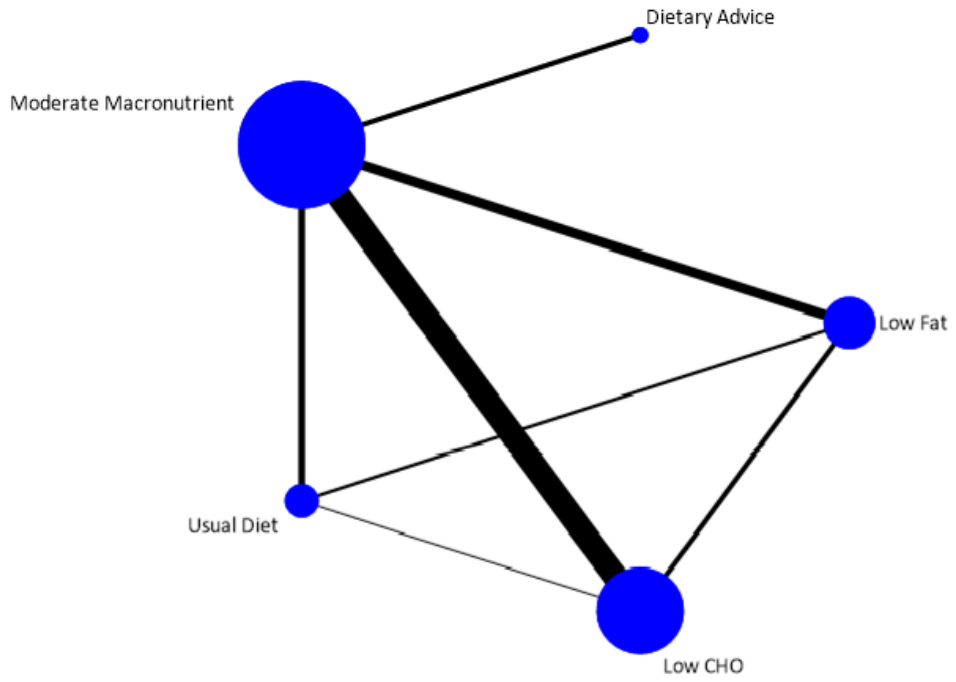


Macronutrient composition NMA

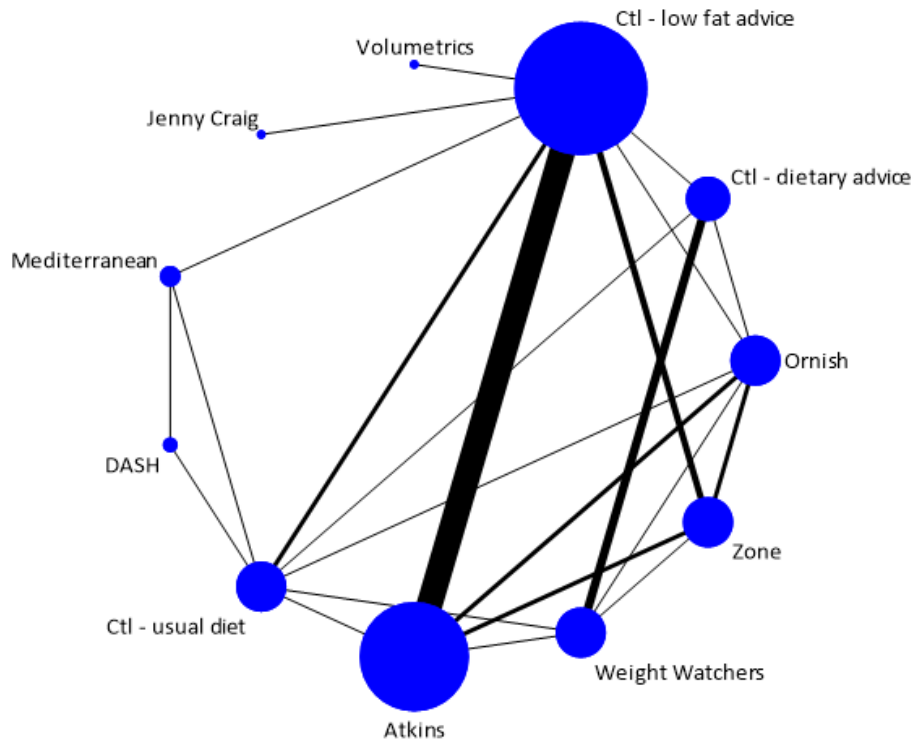


Individual popular diets NMA

B: 12-month DBP reduction



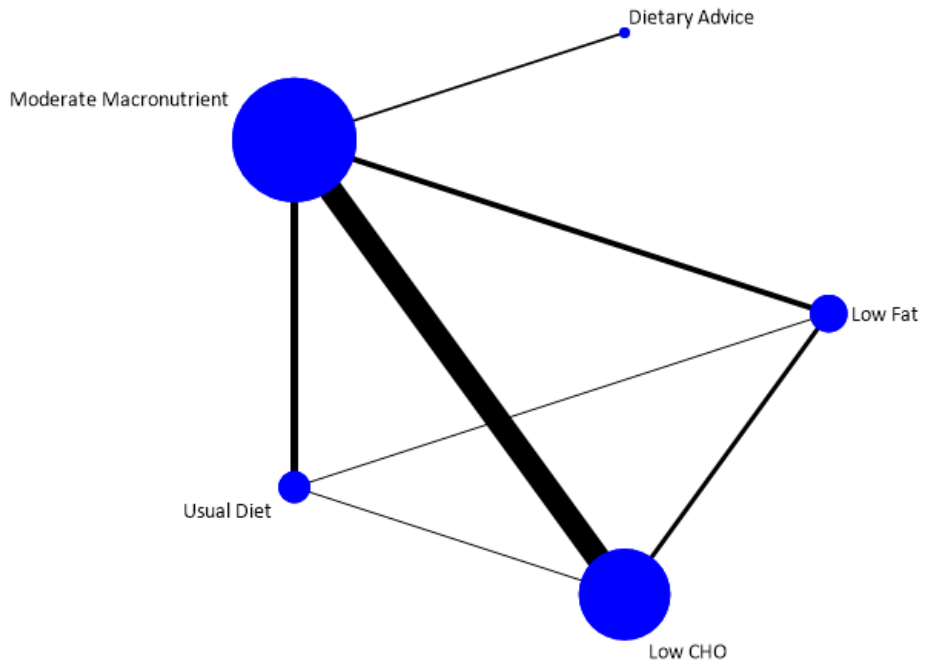
Macronutrient composition NMA



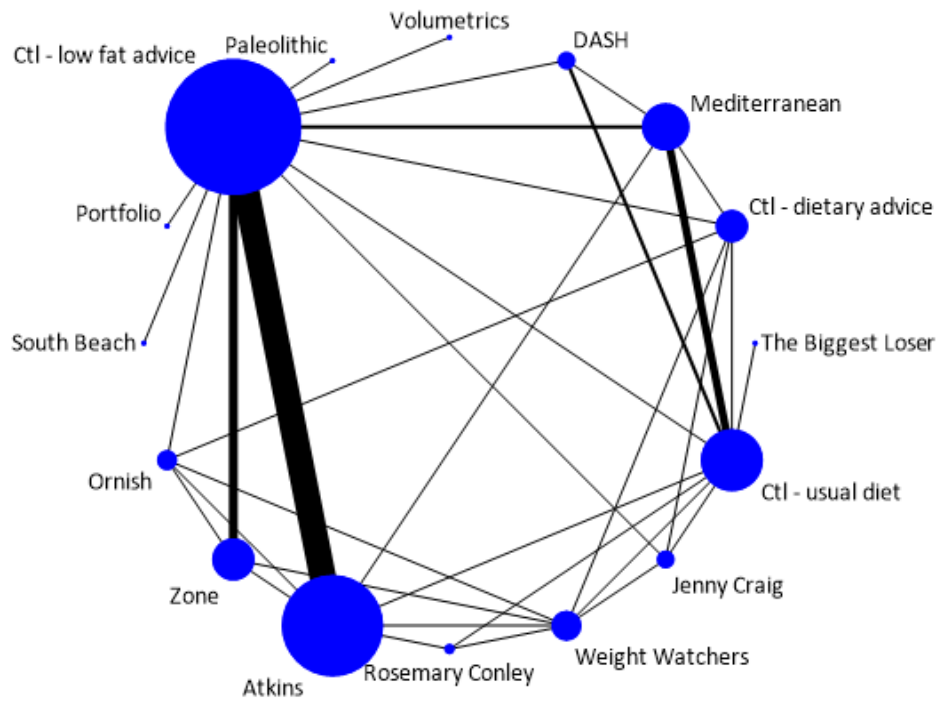
Individual popular diets NMA

Figure S4: Network plots for LDL reduction

A: 6-month LDL reduction

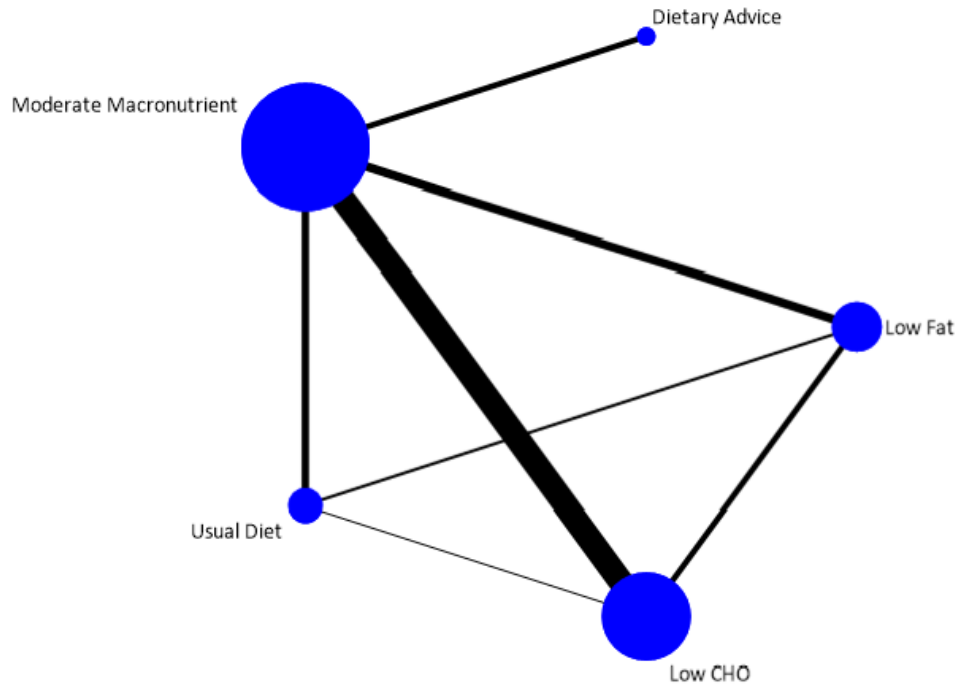


Macronutrient composition NMA

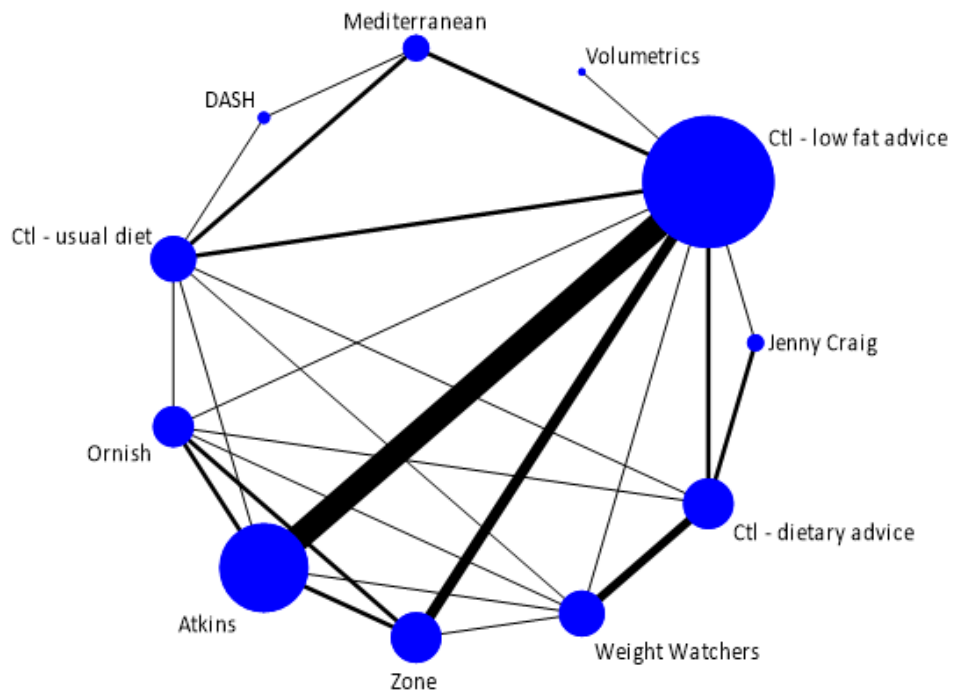


Individual popular diets NMA

B: 12-month LDL reduction



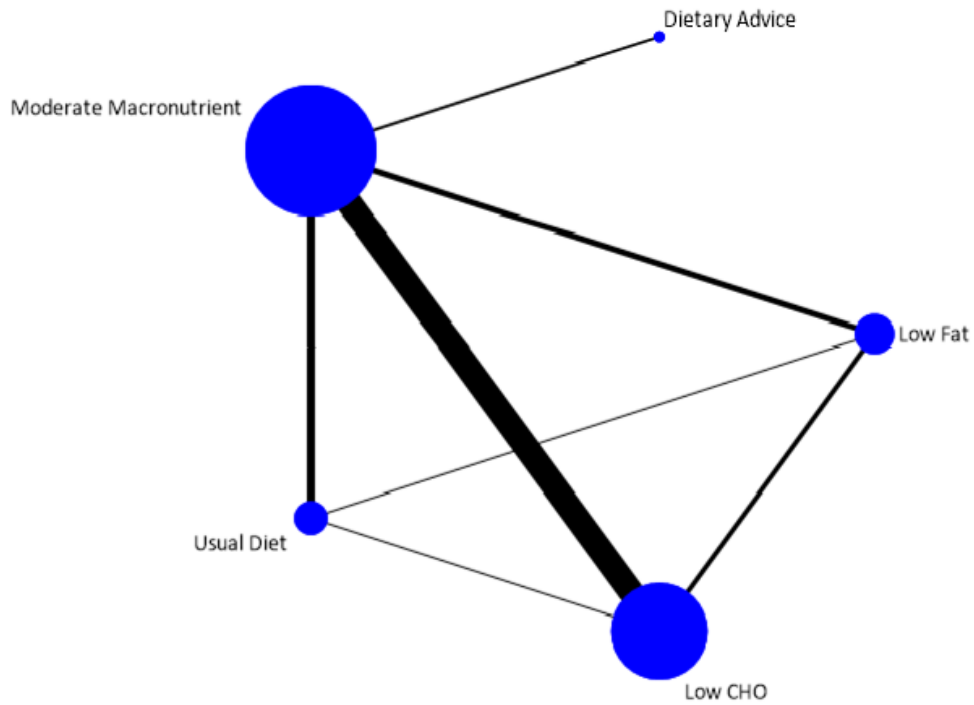
Macronutrient composition NMA



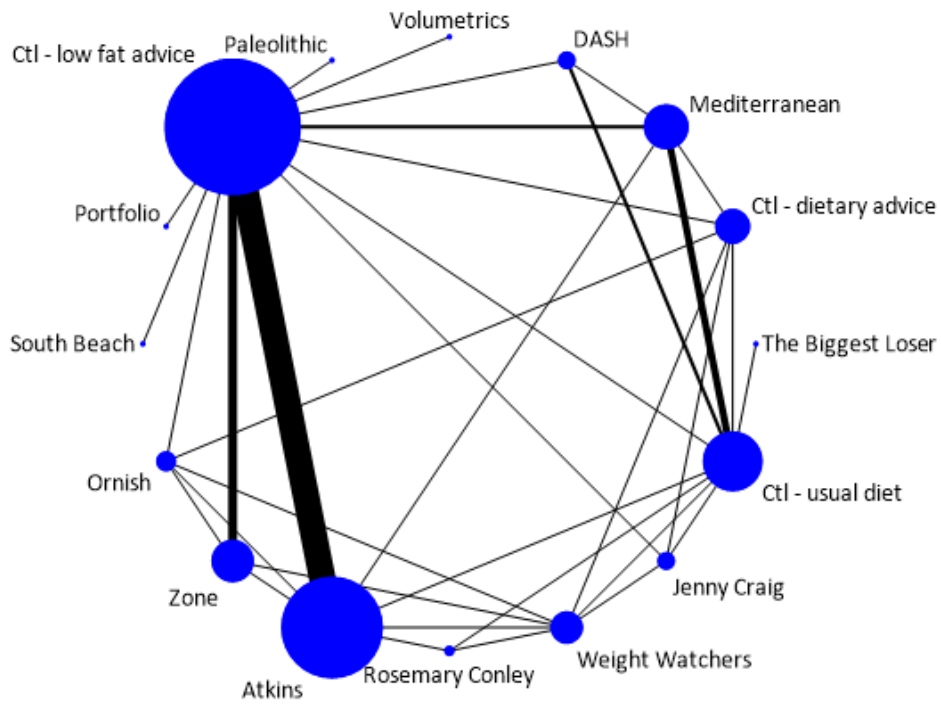
Individual popular diets NMA

Figure S5: Network plots for HDL increase

A: 6-month HDL increase

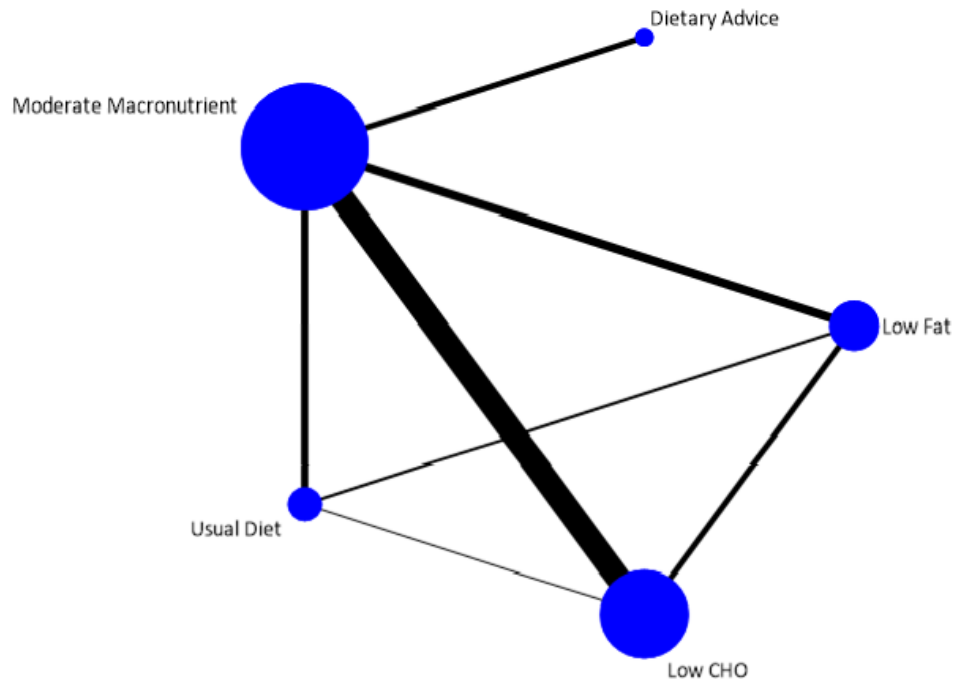


Macronutrient composition NMA

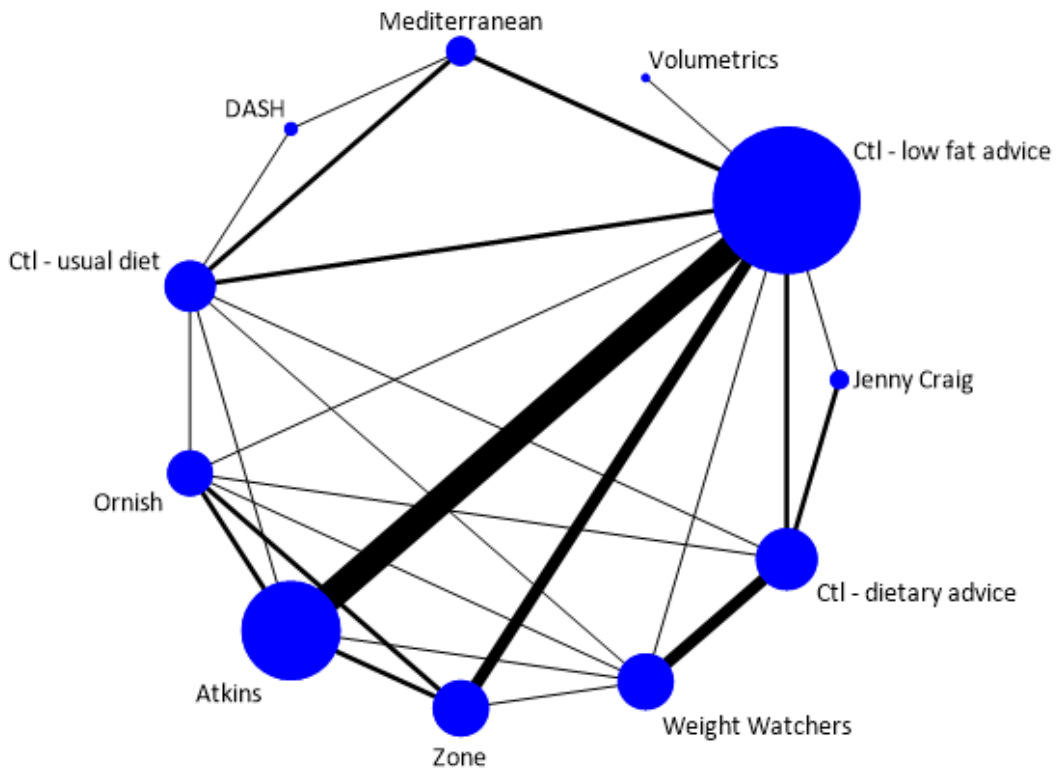


Individual popular diets NMA

B: 12-month HDL increase



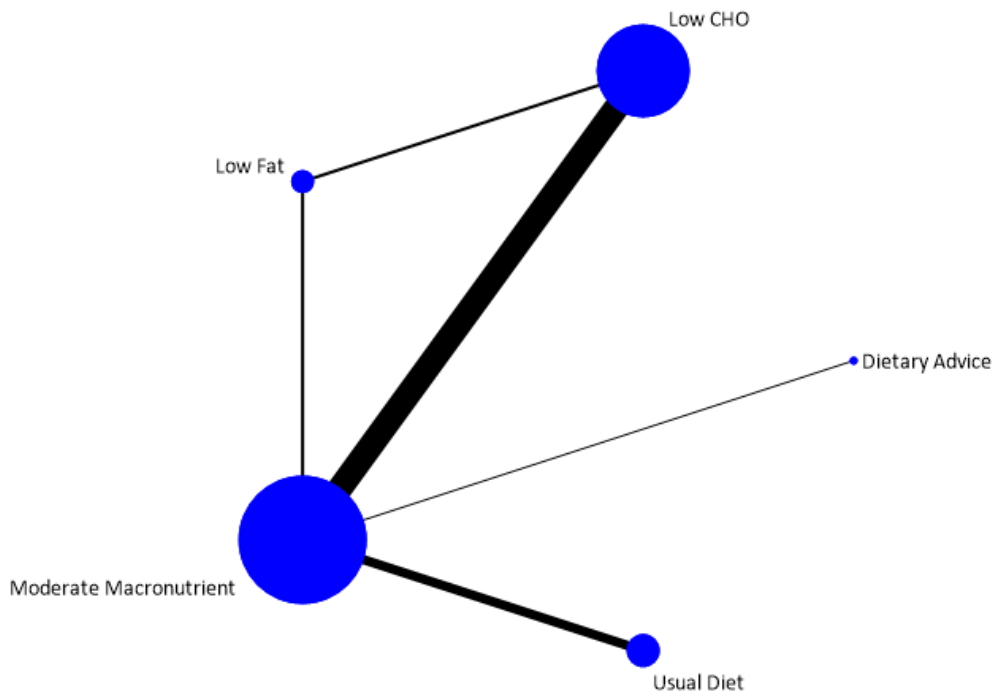
Macronutrient composition NMA



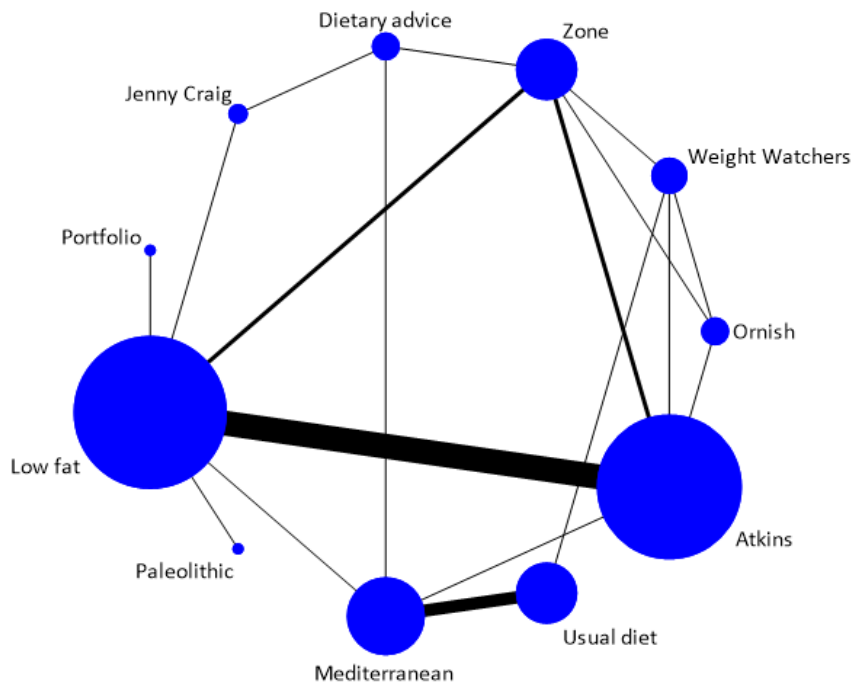
Individual popular diets NMA

Figure S6: Network plots for CRP reduction

A: 6-month CRP reduction

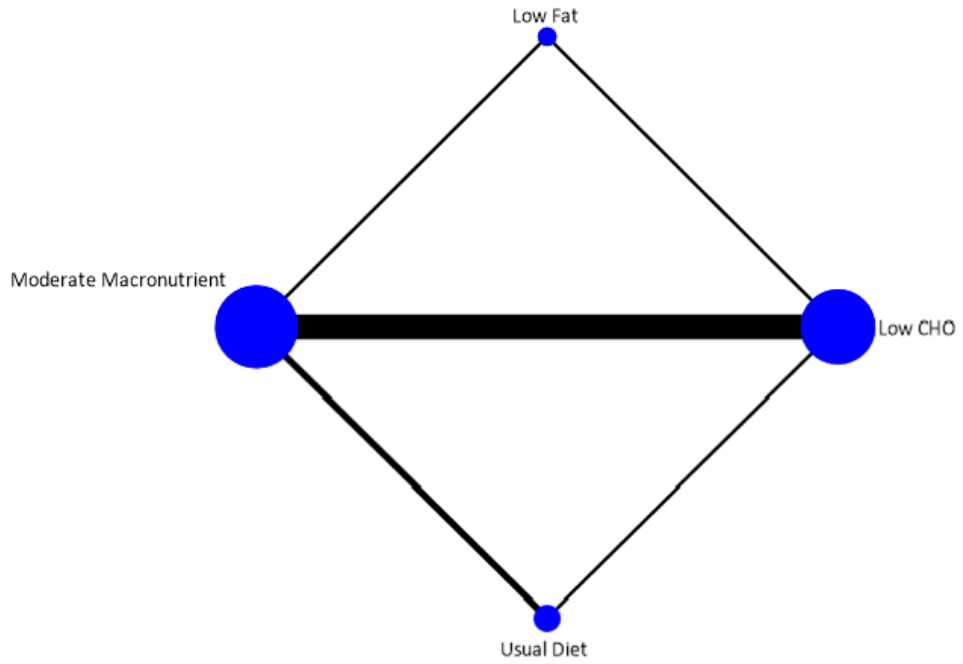


Macronutrient composition NMA

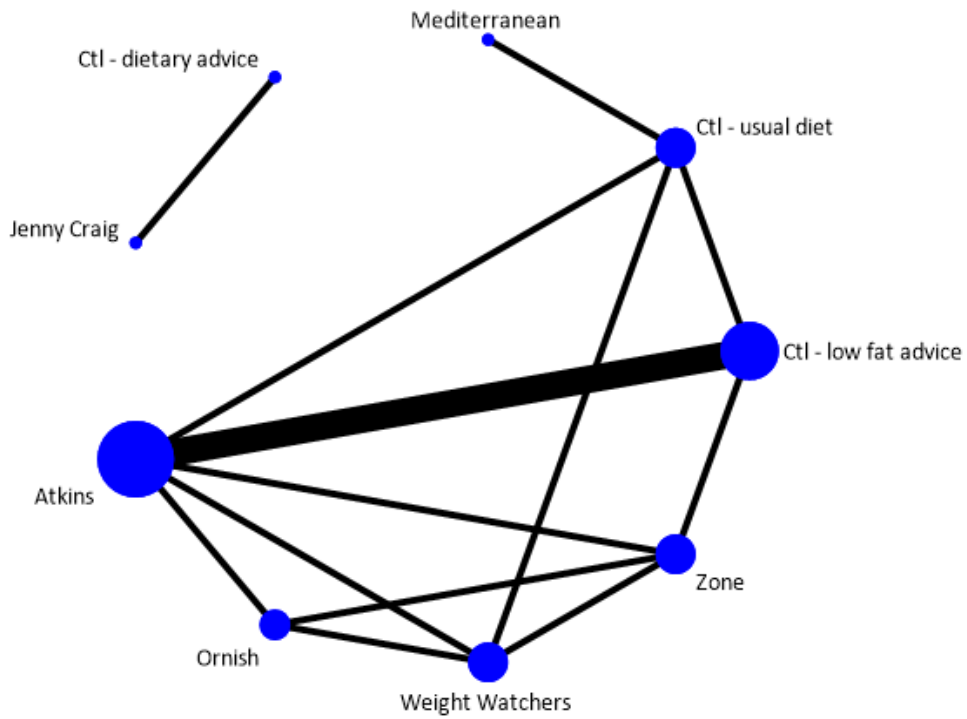


Individual popular diets NMA

B: 12-month CRP reduction



Macronutrient composition NMA



Individual popular diets NMA

Figure S7: SUCRA values (%) for all outcomes at 6 months follow-up in individual popular diets NMA

Diets	Weight loss	SBP	DBP	LDL	HDL	CRP
South Beach	97.59	NA	NA	35.69	67.92	NA
Jenny Craig	92.32	83.96	97.81	36.13	25.54	47.68
Atkins	77.96	74.07	75.96	14.84	93.47	68.07
Volumetrics	75.66	43.38	47.71	69.67	64.61	NA
Paleolithic	69.84	99.11	71.84	68.79	36.59	58.21
Zone	54.96	49.31	56.15	15.38	66.39	49.31
Weight Watchers	51.11	37.49	31.6	41.85	56.87	72.36
Rosemary Conley	48.21	37.36	39.86	71.2	40.22	NA
Low fat diet	47.65	55.73	53.99	48.06	33.03	50.64
Portfolio	46.34	74.44	77.48	98.86	25.65	34.3
Ornish	45.48	16.77	17.49	64.45	7.02	73.47
DASH	44.82	67.56	67.03	59.22	38.65	NA
The Biggest Loser	35.19	46.24	52.52	57.49	67.63	NA
Mediterranean	29.59	42.44	31.04	65.96	61.64	49.7
Slimming World	24.31	NA	NA	NA	NA	NA
Dietary advice	5.9	13.83	18.52	19.35	41.31	8.82
Usual diet	3.06	8.3	10.97	33.06	73.46	37.44