SUPPLEMENTARY FILE

Intermittent fasting strategies on body weight and other cardiometabolic risk factors: A systematic review and network meta-analysis of randomized clinical trials

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Supplementary Methods

Risk of Bias Assessments

Two independent reviewers assessed each study across six domains of bias (sequence generation, allocation concealment, blinding, incomplete outcome data, selective reporting, and other). For each domain, we used a series of 'signaling questions' to derive the risk of bias. Risk of bias was assessed as either 'low' (proper methods taken to reduce bias), 'high' (improper methods creating bias) or 'unclear' (insufficient information provided to determine the bias level). Reviewer discrepancies were resolved by consensus or arbitration by the senior author (JLS). R package 'robvis'[22] was used to generate the risk of bias summary and proportion figures.

Minimally Important Difference (MID)

The minimally important difference (MID) thresholds used in assessing imprecision, heterogeneity, and incoherence, was predetermined for each outcome based on current clinical evidence – an MID of 2.0 kg was set for the primary outcome of body weight. **Supplementary Table 22** outlines the MID for each outcome evaluated in this network meta-analysis. Using the determined thresholds, we evaluate the level of clinical importance for significant associations based on the network estimates for each diet comparison. The table below indicates how this was assessed using body weight MID of 2.0 kg as an example:

MID association	Formula	Example for Body Weight MID of 2.0 kg
Trivial Association	Trivial = < 1* MID	Trivial: <2.0 kg
Small Important Association	Small = ≥1*MID and <2*MID	Small: ≥2.0 kg and <4.0 kg
Moderate Important Association	Moderate = ≥2*MID and <5*MID	Moderate: ≥4.0 kg and <10.0 kg
Large Important Association	Large = ≥5*MID and <10*MID	Large: ≥10.0 kg and <20.0 kg
Very Large Important Association	Very large = ≥10*MID	Very large: ≥20.0 kg

Supplementary Tables

Supplementary Table 1. Search strategy.

	MEDLINE		EMBASE		Cochrane
	Searches		***Searches***		***Searches***
1	alternate day fast*.mp.	**1**	alternate day fast*.mp.	**1**	alternate day fast*.mp.
2	intermittent fast*.mp.	**2**	intermittent fast*.mp.	**2**	intermittent fast*.mp.
3	time restricted feeding.mp.	**3**	time restricted feeding.mp.	**3**	time restricted feeding.mp.
4	meal skipping.mp.	**4**	meal skipping.mp.	**4**	meal skipping.mp.
5	reduced meal frequency.mp.	**5**	reduced meal frequency.mp.	**5**	reduced meal frequency.mp.
6	alternat* calor* diet*.mp.	**6**	alternat* calor* diet*.mp.	**6**	alternat* calor* diet*.mp.
7	intermittent energy restrict*.mp.	**7**	intermittent energy restrict*.mp.	**7**	intermittent energy restrict*.mp.
8	(intermittent adj2 diet*).mp.	**8**	(intermittent adj2 diet*).mp.	**8**	(intermittent adj2 diet*).mp.
9	intermittent calor* restr*.mp.	**9**	intermittent calor* restr*.mp.	**9**	intermittent calor* restr*.mp.
10	(intermittent adj2 restr*).mp.	**10**	(intermittent adj2 restr*).mp.	**10**	(intermittent adj2 restr*).mp.
11	intermittent calori* restr*.mp.	**11**	intermittent calori* restr*.mp.	**11**	intermittent calori* restr*.mp.
12	periodic fasting*.mp.	**12**	periodic fasting*.mp.	**12**	periodic fasting*.mp.
13	periodic diet.mp.	**13**	periodic diet.mp.	**13**	periodic diet.mp.
14	time restricted fasting.mp.	**14**	time restricted fasting.mp.	**14**	time restricted fasting.mp.
15	alternate fasting.mp.	**15**	alternate fasting.mp.	**15**	alternate fasting.mp.
16	whole day fasting.mp.	**16**	whole day fasting.mp.	**16**	whole day fasting.mp.
17	alternate fasting.mp.	**17**	alternate fasting.mp.	**17**	alternate fasting.mp.
18	**or/1-17**	**18**	**or/1-17**	**18**	**or/1-17**
19	"body weight".mp.	**19**	"body weight".mp.	**19**	"body weight".mp.
20	exp Body Weight/	**20**	exp Body Weight/	**20**	exp Body Weight/
21	exp Weight Gain/	**21**	exp Weight Gain/	**21**	exp Weight Gain/
22	bmi.mp.	**22**	bmi.mp.	**22**	bmi.mp.
23	body mass index.mp.	**23**	body mass index.mp.	**23**	body mass index.mp.
24	adiposity.mp.	**24**	adiposity.mp.	**24**	adiposity.mp.
25	hip circum*.mp.	**25**	hip circum*.mp.	**25**	hip circum*.mp.
26	waist circum*.mp.	**26**	waist circum*.mp.	**26**	waist circum*.mp.
27	waist to hip.mp.	**27**	waist to hip.mp.	**27**	waist to hip.mp.
28	fat mass.mp.	**28**	fat mass.mp.	**28**	fat mass.mp.

29	**or/19-28**	**29**	**or/19-28**	**29**	**or/19-28**
30	glyc*m*.mp.	**30**	glyc*m*.mp.	**30**	glyc*m*.mp.
31	Hemoglobin A, Glycosylated/	**31**	Hemoglobin A, Glycosylated/	**31**	Hemoglobin A, Glycosylated/
32	glyc*mia.mp.	**32**	glyc*mia.mp.	**32**	glyc*mia.mp.
33	insulin*.mp.	**33**	insulin*.mp.	**33**	insulin*.mp.
34	gly* albumin.mp.	**34**	gly* albumin.mp.	**34**	gly* albumin.mp.
35	OGTT.mp.	**35**	OGTT.mp.	**35**	OGTT.mp.
36	hba1c.mp.	**36**	hba1c.mp.	**36**	hba1c.mp.
37	HOMA*.mp.	**37**	HOMA*.mp.	**37**	HOMA*.mp.
38	Insulin/	**38**	Insulin/	**38**	Insulin/
39	exp Glucose/	**39**	exp Glucose/	**39**	exp Glucose/
40	Glucose Tolerance Test/	**40**	Glucose Tolerance Test/	**40**	Glucose Tolerance Test/
41	**or/30-40**	**41**	**or/30-40**	**41**	**or/30-40**
42	triglyceride.mp.	**42**	triglyceride.mp.	**42**	triglyceride.mp.
43	triacylglycerol.mp.	**43**	triacylglycerol.mp.	**43**	triacylglycerol.mp.
44	VLDL.mp.	**44**	VLDL.mp.	**44**	VLDL.mp.
45	very low density lipoprotein.mp.	**45**	very low density lipoprotein.mp.	**45**	very low density lipoprotein.mp.
46	lipid*.mp.	**46**	lipid*.mp.	**46**	lipid*.mp.
47	lipids/	**47**	lipids/	**47**	lipids/
48	cholesterol/	**48**	cholesterol/	**48**	cholesterol/
49	cholesterol.mp.	**49**	cholesterol.mp.	**49**	cholesterol.mp.
50	lipoprotein.mp.	**50**	lipoprotein.mp.	**50**	lipoprotein.mp.
51	lipoproteins/	**51**	lipoproteins/	**51**	lipoproteins/
52	(hdl or high density lipoprotein).mp.	**52**	(hdl or high density lipoprotein).mp.	**52**	(hdl or high density lipoprotein).mp.
53	(ldl or low density lipoprotein).mp.	**53**	(ldl or low density lipoprotein).mp.	**53**	(ldl or low density lipoprotein).mp.
54	exp hyperlipidemias/	**54**	exp hyperlipidemias/	**54**	exp hyperlipidemias/
55	apolipoprotein*.mp.	**55**	apolipoprotein*.mp.	**55**	apolipoprotein*.mp.
56	non-hdl.mp.	**56**	non-hdl.mp.	**56**	non-hdl.mp.
57	**or/42-56**	**57**	**or/42-56**	**57**	**or/42-56**
58	CRP.mp.	**58**	CRP.mp.	**58**	CRP.mp.
59	high-sensitivity CRP.mp.	**59**	high-sensitivity CRP.mp.	**59**	high-sensitivity CRP.mp.
60	c-reactive protein.mp.	**60**	c-reactive protein.mp.	**60**	c-reactive protein.mp.

61	hs-CRP.mp.	**61**	hs-CRP.mp.	**61**	hs-CRP.mp.
62	**or/58-61**	**62**	**or/58-61**	**62**	**or/58-61**
63	cpeptide.mp.	**63**	cpeptide.mp.	**63**	cpeptide.mp.
64	c-peptide.mp.	**64**	c-peptide.mp.	**64**	c-peptide.mp.
65	c peptide.mp.	**65**	c peptide.mp.	**65**	c peptide.mp.
66	exp C-peptide/	**66**	exp C-peptide/	**66**	exp C-peptide/
67	**or/63-66**	**67**	**or/63-66**	**67**	**or/63-66**
68	Blood Pressure/	**68**	Blood Pressure/	**68**	Blood Pressure/
69	systolic blood pressure.mp.	**69**	systolic blood pressure.mp.	**69**	systolic blood pressure.mp.
70	SBP.mp.	**70**	SBP.mp.	**70**	SBP.mp.
71	diastolic blood pressure.mp.	**71**	diastolic blood pressure.mp.	**71**	diastolic blood pressure.mp.
72	DBP.mp.	**72**	DBP.mp.	**72**	DBP.mp.
73	or/68-72	**73**	or/68-72	**73**	or/68-72
74	**exp uric acid/**	**74**	**exp uric acid/**	**74**	**exp uric acid/**
75	uric acid.mp.	**75**	uric acid.mp.	**75**	uric acid.mp.
76	urate.mp.	**76**	urate.mp.	**76**	urate.mp.
77	hyperuricemia/	**77**	hyperuricemia/	**77**	hyperuricemia/
78	hyperuricemia.mp.	**78**	hyperuricemia.mp.	**78**	hyperuricemia.mp.
79	hyperuricaemia.mp.	**79**	hyperuricaemia.mp.	**79**	hyperuricaemia.mp.
80	uric.mp.	**80**	uric.mp.	**80**	uric.mp.
81	**or/75-80**	**81**	**or/75-80**	**81**	**or/75-80**
82	fatty liver.mp.	**82**	fatty liver.mp.	**82**	fatty liver.mp.
83	non-alcoholic fatty liver disease/	**83**	non-alcoholic fatty liver disease/	**83**	non-alcoholic fatty liver disease/
84	NAFLD.mp.	**84**	NAFLD.mp.	**84**	NAFLD.mp.
85	transaminases/	**85**	transaminases/	**85**	transaminases/
86	alanine transaminase/	**86**	alanine transaminase/	**86**	alanine transaminase/
87	alt.mp.	**87**	alt.mp.	**87**	alt.mp.
88	aspartate aminotransferase/	**88**	aspartate aminotransferase/	**88**	aspartate aminotransferase/
89	ast.mp.	**89**	ast.mp.	**89**	ast.mp.
90	IHCL.mp.	**90**	IHCL.mp.	**90**	IHCL.mp.
91	intrahepatocellular lipid.mp.	**91**	intrahepatocellular lipid.mp.	**91**	intrahepatocellular lipid.mp.
92	transamin*.mp.	**92**	transamin*.mp.	**92**	transamin*.mp.

93	**or/82-92**	**93**	**or/82-92**	**93**	**or/82-92**
94	**29 or 41 or 57 or 62 or 67 or 74 or 81 or 93**	**94**	**29 or 41 or 57 or 62 or 67 or 74 or 81 or 93**	**94**	**29 or 41 or 57 or 62 or 67 or 74 or 81 or 93**
95	**18 and 94**	**95**	**18 and 94**	**95**	**18 and 94**
96	limit 95 to animals	**96**	limit 95 to animals		
97	**95 not 96**	**97**	**95 not 96**		
98	clinical trial.mp.	**98**	clinical trial.mp.		
99	clinical trial.pt.	**99**	random:.mp.		
100	random:.mp.	**100**	or/98-99		
101	tu.xs	**101**	97 and 100		
102	or/ 98-101				
103	97 and 102				

Supplementary Table 2. PICOTS* framework.

P	Participants	Adult men and women of all health backgrounds
I	Intervention	Alternate day fasting, cyclical whole day fasting, time restricted feeding, continuous energy restriction, or ad libitum diet
C	Comparison	Alternate day fasting, cyclical whole day fasting, time restricted feeding, continuous energy restriction, or ad libitum diet
O	Outcome	Primary outcome: body weight Secondary outcomes: anthropometry, glucose metabolism, lipid profiles, blood pressure, CRP, and markers of liver disease
T	Time	≥ 3 weeks
S	Study Design	Human randomized clinical trials

*Hutton B, Salanti G, Caldwell DM, Chaimani A, Schmid CH, Cameron C, Ioannidis JP, Straus S, Thorlund K, Jansen JP, Mulrow C, Catalá-López F, Gøtzsche PC, Dickersin K, Boutron I, Altman DG, Moher D. The PRISMA extension statement for reporting of systematic reviews incorporating network meta-analyses of health care interventions: checklist and explanations. Ann Intern Med. 2015 Jun 2;162(11):777-84.

Supplementary Table 3: Characteristics of each study (n=99).

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
Andriessen et al. 2022	14 Type 2 Diabetes (7 M, 7 F)	OP, Netherlands	67.5 (5.2)	N/A	30.5 (3.7)	C	DA	Free	3	Not Weight Loss					Hepatic glycogen and insulin sensitivity	Neutral	Agency
											Intervention	TRE	habitual diet within 10h window; last meal no later than 18:00	~56:30:14			
											Control	AdLib	Usual Diet				
Antoni et al. 2018	27 Overweight/Obese (13 M, 14 F)	OP, UK	44.7 (13.5)	89 (14.3)	30.2 (3.6)	P	Supp	Free	9.4	Weight Loss					Postprandial glucose and lipid	Negative	Industry
											Intervention	WDF	5:2 25% of daily energy intake was allowed for the combined 2 days consecutive fasting	~38:26:36			
											Control	CER	Energy reduction by 600 calories of daily requirements				
Arciero et al. 2022	39 Overweight/Obese (13 M, 26F)	OP, USA	50.2 (2.2)	92.9 (5.2)	32.7 (1.7)	P	Met	Free	8	Weight Loss					Body weight and visceral fat loss	Negative	Industry
											Intervention	WDF	400 kcal/day for 1 day/wk or 500 kcal/day for 2 consecutive days/wk + 1350 for women and 1700 kcal/day for men for the remaining days	~35:35:30			
											Control	CER	1200 and 1500 kcal/day for women and men, respectively	~50:35:15			
Bartholomew et al. 2021	103 Type 2 Diabetes (34 M, 69 F)	OP, USA	48.1 (10.9)	101.3 (22.5)	34.5 (7.7)	P	DA	Free	26	Not Weight Loss				NR	LDL-C	Negative	Agency
											Intervention	WDF	6:1 5:2 fasting for 4 weeks and 6:1 fasting for 22 weeks, all on water only diet for fasting days				
											Control	AdLib	Usual Diet				
Beaulieu et al. 2020	46 Overweight/Obese (0 M, 46 F)	OP, UK	34.6 (10.1)	79.96 (11.7)	29.1 (2.4)	P	Met	Supervised	12	Weight Loss					Body weight	Negative	Agency + Industry
											Intervention	ADF	25% daily energy requirement on fasting days. AdLib on alternate days	~36:27:37			
											Control	CER	75% of daily energy intake	~50-55:30-35:15-20			
Betts et al. 2014	33 Normal Weight (12 M, 21 F)	OP, UK	36 (11)	66.7 (7.9)	22.4 (2.2)	P	DA	Free	6	Not Weight Loss				NR	Energy Balance	Negative	Agency
											Intervention	TRE	No breakfast				
											Control	AdLib	Usual Diet				

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
Bhutani et al. 2013	41 Overweight/Obese (2 M, 39 F)	OP, USA	44.7 (2)	93.6 (3.9)	35 (1)	P	Supp	Free	12	Weight Loss					Body weight	Negative	Agency
											Intervention	ADF	very low (25% energy intake) on fast days. AdLib on feed days	~52:24:24			
											Control	AdLib	Usual Diet				
Bilge Sertdemir et al. 2024	20 Healthy	OP, Turkey	69 (9)	81.2 (13.5)	31.2 (3.1)	P	DA	Free	12	Not Weight Loss				NR	Body weight	Negative	NR
											Intervention	WDF	5:2; Two-day food restriction practice (16 hours on Mondays and Thurs- days from 18:00 in the evening to 10:00 the next day)				
											Control	AdLib	Usual Diet				
Cai et al. 2019	264 Non-Alcoholic Fatty Liver Disease (87 M, 177 F)	OP, China	34.5 (5.7)	74.5 (8.2)	26.4 (2.2)	P	Supp	Free	12	Weight Loss					Body weight and dyslipidemia	Negative	No Funding
											Intervention	ADF	very low (25% energy intake) on fast days. AdLib on feed days	~55:30:15			
											Intervention	TRE	Meals consumed in 8h window fasting in other 16 hour window				
											Control	CER	80% of daily energy intake				
Cai et al. 2022	36 Overweight/Obese (5 M, 31 F)	OP, China	44.3 (10)	77.4	29.2	P	DA	Free	12	Weight Loss				NR	Body weight and dyslipidemia	Neutral	Agency
											Intervention	WDF	fast 2 days with 1/4 usual energy intake (~500 and 600 kcal for women and men, respectively); 5 days AdLib				
											Control	CER	reduce energy intake of normal diet by 30-50%; moderatly reduce intake of fat and carbohydrates				
Carter et al. 2016	63 Type 2 Diabetes (30 M, 33 F)	OP, Australia	61.5 (8.4)	99 (15.5)	35.5 (5)	P	DA	Free	12	Weight Loss					Glycemic Control	Negative	Agency
											Intervention	WDF	5:2 399-598 kcal consumed over 2 fasting days combined. AdLib on other 5 days in week	~45:25:30	Glycemic Control		
											Control	CER	Restriction of 1195 kcals to 1553kcals per day	~45:25:30			
Carter et al. 2018	137 Type 2 Diabetes (60 M, 77 F)	OP, Australia	61 (9.1)	101 (18)	36 (5.8)	P	DA	Free	48	Weight Loss					Glycemic Control	Negative	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	WDF	5:2 500-600 kcal consumption for every fasting day. Ad Lib on 5 feed days/ week		Glycemic Control		
											Control	CER	1200-1500kcal consumed per day	~45:25:30			
Castela et al. 2022	28 Obese (6 M, 22 F)	OP, Norway	39.3 (9)	N/A	35.4 (3.7)	P	DA	Free	12	Weight Loss					Inflammatory Biomarkers	Negative	Agency
											Intervention	WDF	3 non-consecutive fasting days (550 and 660 kcal/day for women and men, respectively); Diet matching estimated daily energy needs for feeding days	~50:30:20			
											Control	CER	33% reduction of estimated energy needs	~50:30:20			
Catenacci et al. 2016	25 Overweight/Obese (6 M, 19 F)	OP, USA	41.1 (8.8)	104(15.8)	37.6 (4.9)	P	Met	Free	8	Weight Loss					Body weight	Negative	Agency
											Intervention	ADF	0kcal consumed on fasting days. Alternating fast and feed days	~55:30:15			
											Control	CER	400kcal daily caloric restriction	~55:30:15			
Čermáková et al. 2024	75 Healthy (52 F, 23 M)	OP, Czech Republic	37 (10)	83 (16)	28.4 (4.4)	P	DA	Free	12	Weight loss					Body Composition	Neutral	Agency
											Intervention	TRF	18:6; 75% of energy needs during 6 hours window	NR			
											Intervention	TRF	18:6; 100% of energy needs during 6 hours window	NR			
											Control	CER	75% of energy needs without time restriction	NR			
Che et al. 2021	120 Type 2 Diabetes (65 M, 55 F)	OP, China	48.5 (9.4)	74.9 (4.4)	26.3 (2.1)	P	DA	Free	12	Weight Loss					Glycemic Control	Neutral	Agency
											Intervention	TRE	10 hour feeding window with no caloric restriction	~52:30:18			
											Control	AdLib	Usual Diet	~51:30:19			
Cho et al. 2019	13 Overweight/Obese (5 M, 8 F)	OP, South Korea	37 (7.5)	74.7 (13)	26.8 (3.4)	P	DA	Free	8	Weight Loss					Cholesterol Metabolism	Neutral	Agency + Industry
											Intervention	ADF	Consumed 25% of daily caloric requirement about 500kcal/day on fast days. 3 fast days a week	~56:30:17			
											Control	AdLib	Usual Diet	~64:24:18			
Chow et al. 2020	20 Overweight/Obese (3 M, 17 F)	OP, USA	45.5 (12.1)	97.8 (25.2)	34.1 (7.5)	P	DA	Free	12	Weight Loss				NR	Body weight	Neutral	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	TRE	8 hour eating window of AdLib intake				
											Control	AdLib	Usual Diet				
Cienfuegos et al. 2020	58 Overweight/Obese (5 M, 53 F)	OP, USA	46.3 (2.4)	97.7 (3.7)	36.7 (1)	P	DA	Free	8	Weight Loss				NR	Body weight	Negative	Agency
											Intervention	TRE	6 hour daily feeding window. 18hr fast				
											Intervention	TRE	4 hour daily feeding window. 20 hr fast				
											Control	AdLib	Usual Diet				
Conley et al. 2018	23 Overweight/Obese (23 M, 0 F)	OP, Australia	67.5 (3.4)	103.4 (13.5)	34.9 (3.4)	P	DA	Free	26	Weight Loss					Body weight	Negative	Agency
											Intervention	WDF	2 non-consecutive fasting days per week. Participants allowed to consume 600 kcals on fasting days	~37:38:21			
											Control	CER	500 kcal daily caloric restriction	~39:39:22			
Correia et al. 2024	15 healthy; (15M, 0F)	OP, Portugal	23.7 (2.6)	75.15 (11.05)		C	DA	Free	4	Weight Loss					Body Composition	Negative	Agency
											intervention	TRF	16:8; 8h eating window between 13:00 and 21:00 without restriction	NR			
											control	AdLib	No restriction	NR			
Coutinho et al. 2018	28 Overweight/Obese (6 M, 22 F)	OP, Norway	39.3 (10)	102.4 (13.2)	35.4 (3.7)	P	DA	Free	12	Weight Loss					Body weight	Negative	Agency
											Intervention	ADF	3 non-consecuive fasting days per week with 33% of energy restriction over the week	~50:30:20			
											Control	CER	33% of energy restriction over the week	~50:30:20			
deOliveiraMaranhaoPureza et al. 2020	58 Overweight/Obese (0 M, 58 F)	OP, Brazil	31.4 (7.1)	80.8 (11.8)	33.3 (4.1)	P	DA	Free	52	Weight Loss				NR	Body weight	Negative	Agency
											Intervention	TRE	12-hour daily fasting . 500-1000 kcal daily caloric restriction				
											Control	CER	500-1000 daily kcal caloric restriction				
Domaszewski et al. 2023	108 Overweight/Obese (51 M, 57 F)	OP, Poland	68.9 (3.5)	77.1 (12.1)	28.3 (3.17)	P	DA	Free	6	Weight Loss				NR	Body weight	Neutral	Agency
											Intervention	TRE	16:8; fast for 16 hours/day between 8pm to 12am				
											Control	AdLib	educational program based on previous dietary habits				

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
Dunn et al. 2024	13 obese and cirrhosis (5 M, 8 F)	OP, USA	57 (10)	103.7 (21.3)	36.7 (3.18)	C	DA	Free	24	Weight Loss					Body Composition	Negative	Agency
											control	ADF	600-850 kcal/day on fasting days, 12 weeks of weight loss phase involving ADF and 12 weeks of weight maintenance phase involving fasting for 1-2 days per week	NR			
											intervention	CER	1200-1600 kcal/day during 12 weeks of weight loss phase, adjusted caloric intake for weight maintenance during 12 weeks of weight maintenance phase	NR			
Dutzmann et al. 2024	42 patients with acute STEM (8 F, 34 M)	OP, Germany	59.1 (12.7)		29.1 (4.7)	P	DA	Free	12	Not weight loss					Left ventricular ejection fraction	Negative	Agency
											intervention	TRE	16:8; regular diet for not >8 hours per day alternately with fasting for at least 16 hours per day	NR			
											control	CER	regular diet	NR			
Erdem et al. 2022	263 Overweight/Obese (81 M, 182 F)	OP, Turkey	34.0 (11.5)	84.3 (11.6)	32.5 (3.12)	P	DA	Free	12	Weight Loss					Body weight	Neutral	None
											Intervention	TRE	18:6; fed ad libitum 6h/day (13:00-19:00) and fasted for 18h/day (19:00-13:00)	~42:40:18			
											Intervention	WDF	0-500kcal diet for 2 days; ad libitum for 5 days/week	~42:40:18			
											Control	CER	Energy restricted Mediterranean Diet; 70% of energy needs met	~42:40:18			
Ezpeleta et al. 2023	40 Non-Alcoholic Fatty Liver Disease, Obese (8 M, 32 F)	OP, USA	44 (3)	98.0 (5.3)	36.5 (6.6)	P	DA	Free	12	Not Weight Loss					Intrahepatic triglyceride	Neutral	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	ADF	600 kcal for dinner between 5:00 and 8:00pm on fast days and fasted for 17-20h/day from midnight to 5:00 or 8:00 pm; AdLib on other days; participants provided with fast day meals during first month then DA thereafter	~55:30:15			
											Control	AdLib	Habitual diet and physical activity				
Fagundes et al. 2023	36 Overweight/Obese (0 M, 36 F)	OP, Brazil	34.3 (9.1)	82.7 (9.4)	30.4 (3.2)	P	DA	Free	4	Weight Loss					Body weight	Negative	Agency
											Intervention	TRE	16:8; Eating window either between 8:00 and 16:00 or 12:00 and 20:00; caloric restriction of 513-770 kcal/day				
											Control	CER	caloric restriction of 513-770 kcal/day	~40-45:30-35:20-25			
Fitzgerald et al. 2018	36 Multiple Sclerosis (7 M, 29 F)	OP, USA	37.4 (7.4)	N/A	32.6 (7.8)	P	Met	Free	8	Weight Loss					Body weight	Negative	Agency
											Intervention	WDF	2 consecutive days/week of fasting with 25% of caloric requirement. 100% of calorie needs 5 days/week	~55:30:15			
											Intervention	CER	78%of calorie needs 7 days/week	~55:30:15			
											Control	AdLib	Usual Diet	~55:30:15			
Gabel et al. 2019	43 Overweight/Obese (10 M, 33 F)	OP, USA	41.9 (3)	97 (4)	35.1 (1)	P	Met	Free	24	Not Weight Loss					Body weight	Negative	Agency
											Intervention	ADF	25% of energy requirement on fst days and 125% on alternating feeding daus	~47:36:17			
											Intervention	CER	75% of energy needs consumed daily	~48:35:17			
											Control	AdLib	Usual Diet	~47:36:17			
Ghezzi et al. 2024	34 Multiple Sclerosis (6 M, 28 F)	OP, USA	48.2 (9.8)	80.7 (15.2)	28.7 (4.3)	C	DA	Free	12	Weight Loss					Leptin	Negative	Agency
											intervention	ADF	No more than 500kcal/day on two non-consecutive fasting days	NR			
											control	AdLib	Usual Diet	NR			
Gray et al. 2021	121 Overweight/Obese (0 M, 121 F)	OP, Australia	39.6 (9.0)	89.9 (27.1)	32.6 (9.4)	P	DA	Free	52	Weight Loss					Body weight	Negative	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet[b]	Primary	Energy	Funding
											Intervention	ADF	2 fasting days a week. 500kcal on fasting days	~35:25:40			
											Control	CER	1500kcal/day	~45:25:30			
Guevara-Cruz et al. 2024	33 Obese (28 F, 5 M)	OP, Mexico	36.9 (11.0)	90.1 (11.9)	35.3 (4.0)	P	DA	Free	4	Not weight loss					Mitchondrial function	Negative	Agency + Industry
											Intervention	TRF	16:8; 500 kcal restriction from usual energy intake; 16 hrs fasting and 8 hrs to comply with food intake	50:30:25			
											Intervention	CER	500 kcal restriction from usual energy intake	50:30:25			
											Control	AdLib	Habitual diet				
Guner et al. 2024	30 Healthy (8 M, 22 F)	OP, Turkey	28.03 (3.46)	62.8 (21.53)	23.445 (3.39)	P	DA	Free	4	Weight loss					Body weight	Negative	Agency
											Intervention	TRE	16:8; 8h eating window	NR			
											Control	AdLib	0	NR			
Guo et al. 2021	39 Metabolic Syndrome (21 M, 18 F)	OP, China	41.4 (2)	76.1 (11.6)	28.2 (4.2)	P	DA	Free	8	Not Weight Loss				NR	Body weight	Negative	Agency
											Intervention	WDF	2 non-consecutive fasting days per week with 75% energy restriction on fasting days				
											Control	AdLib	Usual Diet				
Hajek et al. 2021	300 Overweight/Obese (101 M, 199 F)	OP, UK	48 (13)	95 (14.83)	34.37 (4.82)	P	DA	Free	52	Weight Loss				NR	Body Weight and Body fat	Negative	Agency
											Intervention	WDF	500-600kcal energy intake on fasting days, 2 non-consecutive days per week (group support)				
											Intervention	WDF	500-600kcal energy intake on fasting days, 2 non-consecutive days per week (self-help)				
											Control	AdLib	Usual Diet				
Harvie et al. 2011	107 Overweight/Obese (0 M, 107 F)	OP, UK	40.1 (4)	83 (15.9)	30.6 (5.1)	P	DA	Free	24	Weight Loss					Body weight	Neutral	Agency
											Intervention	WDF	2 consectuvie days with 75% energy reduction and mediterranean type diet on remaining 5 days	~45:30:25			
											Control	CER	25% daily energy reduction	~45:30:25			
Harvie et al. 2013	77 Overweight/Obese (0 M, 77 F)	OP, UK	46.8 (8.0)	82.8 (15.6)	31 (4.9)	P	DA	Free	12	Weight Loss					Body weight	Negative	NR

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet[b]	Primary	Energy	Funding
											Intervention	WDF	2 consecutive fasting days/week with 70% energy restriction and 40g carbohydrates	~45:30:25			
											Control	CER	25% calorie reduction	~45:30:25			
Harvie et al. 2021	169 Breast Cancer (0 M, 169 F)	OP, UK	51.9 (24-77)	74.4 (16.2)	28.1 (6.1)	P	DA	Free	3	Weight Loss					Body weight	Negative	Agency
											Intervention	WDF	2 consecutive energy restriction days with 650-1000 kcals consumed	~45:30:25			
											Control	CER	Average daily caloric intake was 1208 kcals	~45:30:25			
He et al. 2021	205 Hypertension (87 M, 118 F)	OP, China	50.5 (8.8)	86.3 (14.1)	28.7 (2.7)	P	DA	Free	26	Weight Loss					Blood pressure	Negative	Agency
											Intervention	WDF	2 fasting days with 500-600kcal/day and then adlib on 5 other days.				
											Control	CER	1000-1200 kcals of energy intake	~45-50:30:20-25			
He at al. 2022	162 Metaboic Syndrome (102 M, 60 F)	OP, China	41.1 (1.34)	84.6 (2.01)	29.3 (0.5)	P	DA	Free	12	Weight loss					Body weight and abdominal fat area	Negative	Agency
											Intervention	TRE	16:8; 8h eating window	NR			
											Intervention	TRE+	16:8; 8h eating window and low carb-diet	NR			
											Control	AdLib	Low-carb diet	NR			
Headland et al. 2019	222 Overweight/Obese (40 M, 182 F)	OP, Australia	49.5 (13.8)	91 (16.5)	33.1 (4.9)	P	DA	Free	52	Weight Loss				NR	Body weight	Negative	Agency
											Intervention	WDF	2 fasting days/ week 500kcal energy intake on fasting days				
											Control	CER	1000-1200 kcal energy intake				
Hirsh et al. 2019	22 Overweight/Obese (9 M, 13 F)	OP, USA	41.0 (11.7)	78.0 (9.3)	27.3 (2.6)	P	Supp	Free	7	Weight Loss				NR	Body weight	Negative	Industry
											Intervention	WDF	2 consecutive days, 730kcal/day. Adlib on remaining days				
											Control	AdLib	Usual Diet				
Holmer et al. 2021	49 Non-Alcoholic Fatty Liver Disease (20 M, 29 F)	OP, Sweden	56.5 (9.5)	95.5 (16.3)	32.6 (4.1)	P	DA	Free	12	Weight Loss					Body weight	Negative	Agency
											Intervention	WDF	2 non-consecutive days of fasting/week with 500-600 kcal on these days	~45-60:25:10-20			
											Control	AdLib	Usual Diet				
Hooshiar et al. 2023	47 Overweight/Obese (0 M, 47 F)	OP, Iran	35.6 (8.4)	81.3 (12.9)	31.6 (3.4)	P	DA	Free	8	Weight Loss					Body weight	Negative	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	ADF	25% daily energy requirements on fasting days (meals eaten between 12 and 2 pm) and 100% daily energy requirements on feeding days (breakfast at 8am, lunch at 1pm and dinner at 8pm; snacks at 10am, 4pm and 10pm)	~55:30:15			
											Control	CER	63% of daily energy requirements (3 main meals at 8am, 1pm and 8pm; 3 snacks at 10am, 4pm and 10pm)	~55:30:15			
Hussin et al. 2013	31 Overweight/Obese (31 M, 0 F)	OP, Malaysia	59.7 (6.3)	72 (7.7)	26.7 (2.2)	P	DA	Free	12	Not Weight Loss				NR	Mood	Negative	Agency
											Intervention	WDF	2 fasting days weekly with 300-600kcal on fasting days				
											Control	AdLib	Usual Diet				
Hutchison et al. 2019	63 Overweight/Obese (O M, 63 F)	OP, Australia	50.5 (2.2)	87.9 (3.3)	32.2 (1.0)	P	Met	Free	8	Weight Loss					Insulin sensitivity	Negative	Agency
											Intervention	WDF	3 days fasting - 32% of daily energy intake on fasting days and 100% on non fasting days	~45:31:17			
											Intervention	CER	70% of calculated baseline energy requirements daily	~48:34:21			
											Control	AdLib		~44:40:15			
Hooshiar et al. 2024	49 Overweight/Obese (0M,49F)	OP, Iran	31.94 (8.12)	81.6 (13.04)	31.63 (3.42)	P	DA	Free	8	Weight loss					Premenstral Syndrome	Negative	Agency
											intervention	ADF	On fasting days, 75% calorie restriction consumed between 12pm and 2pm	55:15:30			
											control	CER	63% of their daily calorie requirements (27% restriction)	55:15:30			
Isenmann et al. 2021	35 Overweight/Obese (14 M, 21 F)	OP, Germany	27.7 (5.5)	77.5 (14.8)	26 (3.1)	P	DA	Free	10	Weight Loss					Body weight	Negative	Agency
											Intervention	TRE	16 hours daily fasting with adlibtum eating	~45-65:20-35:20-35			
											Control	AdLib	Usual Diet	~45-65:20-35:20-35			
Jimenez et al. 2019	42 Overweight/Obese (10 M, 32 F)	OP, Spain	47 (7.9)	94.5 (15.6)	34.1 (4.4)	P	Met	Free	6	Weight Loss				NR	Body weight	Negative	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	WDF	5 days of fasting with 600-700 caloric intake on fasting days, non fasting days involved mediterranean diet				
											Control	AdLib	No fasting but Mediteranean diet				
Johari et al. 2019	43 Non-Alcoholic Fatty Liver Disease (33 M, 10 F)	OP, Malaysia	47 (14.8)	80.3	30.8 (6.5)	P	DA	Free	8	Weight Loss				NR	BMI	Negative	Agency
											Intervention	ADF	70% restriction on fasting days. AdLib on non fasting days				
											Control	AdLib	Usual Diet				
Kahleova et al. 2014	54 Type 2 Diabetes Overweight/Obese (29 M, 25 F)	OP, Czech Republic	59.4 (7)	94.1 (15.5)	32.6 (4.9)	C	DA	Free	12	Weight Loss					Body weight	Negative	Agency
											Intervention	TRE	Reduction of 500kcal/day. 2 meals a day breakfast btw 6:00-10:00 hours, lunch btw 12:00 - 16:00	~50-55:30:20-25			
											Control	AdLib	3 meals a day and 3 snacks				
Irani et al. 2023	56 Overweight/Obese (0 M, 56 F)	OP, Iran	42.31 (8.82)	81.89 (9.59)	31.27 (3.49)	P	DA	Free	8	Weight loss					Body weight	Negative	Agency
											intervention	TRE	14:10; 10h eating window from 10am-8pm of a low calorie diet (300-500kcal deficit)	52:18:30			
											control	CER	300-500kcal deficit	52:18:30			
Kapogiannis et al. 2024	40 Overweight/Obese (24 F, 16 M)	OP, USA	63.3 (5.2)	97.2 (13.6)	34.4 (3.6)	P	I = Supp; C = DA	Free	8	Not weight loss					Body weight	Negative	Agency
											Intervention	WDF	5:2; healthy living (HL) diet with education on portion control and calorie intake according to U.S. Department of Agriculture (USDA) recommendations for 5 days/week; 2 consecutive days drinking only two meal replacement shakes (480kcal/day)	NR			
											Control	AdLib	HL diet with education on portion control and calorie intake according to U.S. Department of Agriculture (USDA) recommendations	NR			

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
Kord Varkaneh et al. 2022	44 Non-Alcoholic Fatty Liver Disease (27 M, 17 F)	OP, Iran	45.3 (9.8)	88.1 (15.8)	30.5 (2.7)	P	DA	Free	12	Weight Loss					Body weight	Negative	Agency
											Intervention	WDF	5:2; 2 consecutive fasting days with 25% of recommended calories intake over 2h (12-2pm)	~55:30:15			
											Control	AdLib	Usual Diet				
Kotarsky et al. 2021	21 Overweight/Obese with Insulin Resistance (2 M, 19 F)	OP, USA	44.5 (2.6)	82.5 (3)	29.6 (0.8)	P	DA	Free	8	Weight Loss					Fat mass	Negative	Agency
											Intervention	TRE	16 h daily fasting. Average caloric restriction observed was 300 kcals per day	~48:35:16			
											Control	AdLib	average caloric restriction observed was 250 kcals per day	~49:33:14			
Keawtep et al. 2024	46 Obese and Postmenopausal (46 F)	OP, Thailand	53.2 (3.4)	70.4 (9.6)	28.7 (2.8)	P	DA	Free	12	Not weight loss					Executive functions, memory, and plasma BDNF levels	Negative	Agency
											Intervention	WDF	5:2; Gradually reduced calorie consumption on fasting days (75% of energy requirements for weeks 1–4, 50% of energy requirements for weeks 5–8, and 25% of energy requirements for weeks 9–12); AdLib for non-fasting days	NR			
											Control	AdLib	Usual diet	NR			
Kunduraci et al. 2020	65 Metabolic Syndrome (31 M, 34 F)	OP, Turkey	48.1 (2.15)	92.9 (2.4)	34.7 (0.83)	P	DA	Free	12	Weight Loss					Body weight	Negative	Agency
											Intervention	TRE	16-h daily fast. 25% energy intake reduction on daily basis.	~39:43:17			
											Control	CER	25% energy intake reduction on daily basis	~42:19:37			
Kramer, 2024	39 Overweight with T2DM (14 M, 25 F)	OP, Canada	56.3 (9.4)	89 (18.3)	32.4 (5.7)	C	DA	Free	6	Weight loss					Beta-cell function	Negative	Agency
											intervention	TRE	20:4; 4h eating window	NR			
											control	AdLib					
Lee et al. 2024	63 Metabolic dysfunction-associated liver disease (34 F, 29 M)	OP, Korea	49.2 (12.7)	73.9 (22.1)	27.4 (4.3)	P	DA	Free	12	Not weight loss						Neutral	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											intervention	WDF	5:2; Women and men were instructed to consume 500 kcal/d and 600 kcal/d, respectively, on 2 nonconsecutive days per week without time restrictions; non-fasting days followed Korean Dietary Reference Intakes with limit of 2000 kcal/day for women and 2500 kcal/day for men	60:22.5:13.5			
											control	CER	80% of the standard calories (1200–1500 kcal/d for women and 1500–1800 kcal/d for men or a reduction of 500–1000 kcal/d from the standard calories)	60:22.5:13.5			
Lin et al. 2022	63 Overweight/Obese (0 M, 63 F)	OP, Taiwan	52.2 (7.6)	65.8 (9.2)	25.8 (3.7)	P	DA	Free	8	Weight Loss					Body weight	Negative	Agency
											Intervention	TRE	16 h daily fasting. Daily caloric intake restricted to 1400 kcals	~47:34:15			
											Control	CER	Daily caloric intake restricted to 1400 kcals	~47:34:15			
Lin et al. 2023	77 Obese (11 M, 66 F)	OP, USA	44 (11)	101 (17)	37.3 (5.3)	P	DA	Free	24	Weight Loss					Body weight	Neutral	Agency
											Intervention	TRE	16:8 (ad lib eating between 12-8pm)				
											Control	CER	reduce energy intake by 25%	~50:30:20			
											Control	AdLib	Usual Diet				
Liu et al. 2022	139 Overweight/Obese (71 M, 68 F)	OP, China	31.9 (9.1)	88.1 (11.6)	31.5 (2.8)	P	Supp	Free	52	Weight Loss					Body weight	Negative	Agency
											Intervention	TRE	TRE with of 1500 - 1800 kcals/day withing 8-hr feeding window daily	~40-55:20-30:15-20			
											Control	CER	1500 - 1800 kcals/day	~40-55:20-30:15-20			
Liu et al. 2023	38 Normal/Overweight/ Obese (0 M, 38 F)	OP, China	20.2 (1.8)	55.2 (5.3)	21.0 (1.3)	P	DA	Free	8	Weight Loss				NR	Body weight	Neutral	Agency
											Intervention	TRE	16:8; 8h eating window between 10:00 and 18:00 without restriction				
											Control	AdLib	Usual Diet				
Lowe et al. 2020	116 Overweight/Obese (70 M, 46 F)	OP, USA	46.5 (10.5)	99.2 (16)	32.7 (4.2)	P	DA	Free	12	Weight Loss				NR	Body weight	Neutral	Agency
											Intervention	TRE	16 h daily fasting, AdLib				

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Control	AdLib	Usual Diet				
Manoogian et al. 2022	137 Normal Weight (125 M, 12 F)	OP, USA	40.36 (9)	88.2	36	P	DA	Free	12	Not Weight Loss					Body weight	Neutral	Agency
											Intervention	TRE	14:10; Mediterranean diet	~60:25:15			
											Control	AdLib	Mediterranean Diet				
Manoogian et al. 2024	108 Metabolic Syndrome (53 M, 55 F)	OP, USA	58.6 (10.9)	89.595 (16.7)	31.225. (4.05)	P	DA	Free	12	Weight loss					HbA1c, fasting glucose, fasting insulin, homeostasis model assessment of insulin resistance, and glycemic assessments from continuous glucose monitors.	Negative	Agency
											Intervention	TRE	16:8; 8-10h eating window	NR			
											Control	AdLib	Usual Diet				
Maroofi et al. 2020	88 Overweight/Obese (25 M, 63 F)	OP, Iran	44.6 (10.3)	87 (16.7)	32 (4.3)	P	DA	Free	8	Weight Loss					Body weight	Negative	Agency
											Intervention	WDF	3 fasting days. 30% caloric intake during fasting days	~52:30:18			
											Control	CER	30% caloric intake daily				
Mayra et al. 2022	18 Normal Weight (1 M, 17 F)	OP, USA	23.3 (4.2)	64 (2.1)	23.5 (2.5)	P	DA	Free	4	Weight Loss					Body weight	Neutral	None
											Intervention	TRE	18:6; consume within one hour of waking and for up to a total of 6 hours; one day off per week				
											Control	AdLib	consume within one hour of waking and for up to a toal of 16 hours; one day off per week				
Moro et al. 2016	34 Normal Weight (0 M, 34 F)	OP, Italy	29.2 (3.8)	84.6 (12.9)	26.9 (2.9)	P	DA	Free	8	Not Weight Loss					Body weight	Neutral	Agency
											Intervention	TRE	16h fasting. No caloric restriction	~53:25:22			
											Control	AdLib	Usual Diet	~55:24:21			
Obermayer et al. 2023	46 Type 2 Diabetes (24 M, 22 F)	OP, Austria	63 (7)	100 (15)	34.3 (4.5)	P	DA	Free	12	Weight Loss				NR	HbA1c	Neutral	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	ADF	3 nonconsecutive fasting days of 75% calorie restriction (intake allowed as breakfast and/or lunch to have 18h fasting period); AdLib for other days				
											Control	AdLib	Usual Diet				
Oh et al. 2018	23 Overweight/Obese (7M, 16 F)	OP, South Korea	36.2 (9.2)	72.7 (12.3)	27.0 (2.9)	P	DA	Free	8	Weight Loss				NR	Body weight	Neutral	Agency
											Intervention	ADF	3 nonconsecutive days of fasting with 25% of daily energy intake (400-500kcal, between 12-2pm); AdLib on remaining 4 days				
											Control	AdLib	Usual Diet				
Oustric et al. 2021	30 Overweight/Obese (0 M, 30 F)	OP, UK	34.6 (9.4)	80 (11.1)	29.1 (2.4)	P	Supp	Free	12	Weight Loss				NR	Body weight	Negative	Agency + Industry
											Intervention	ADF	Alternating adlib and 75% energy restriction days				
											Control	CER	25% daily energy restriction				
Overland et al. 2018	10 Type 1 Diabetes (2 M, 8 F)	OP, Australia	46.9 (4.9)	86.26 (18.5)	31.7 (4)	P	Supp	Free	12	Weight Loss				NR	Body weight	Negative	Industry
											Intervention	WDF	2 days of fasting per week with 600kcal on fast fays				
											Control	CER	30% reduction daily				
Parr et al. 2024	43 Overweight/Obese with T2DM (17 F, 26 M)	OP, Australia	55.6 (8.4)	93.9 (16.4)	32.5 (4.5)	P	DA	Free	24	Not weight loss					HbA1c	Neutral	Agency
											intervention	TRE	15:9; limit eating to between 10:00 and 19:00 for as many days as possible	40:18:38			
											control	AdLib	provided with publicly available nutrition guidance for T2DM (Baker Heart and Diabetes Institute resources)	38:20:39			
Parvaresh et al. 2019	69 Metabolic Syndrome (41 M, 28 F)	OP, Iran	45.5 (8.54)	85.5 (11.44)	31.3 (3.59)	P	DA	Free	8	Weight Loss					Body weight	Negative	NR
											Intervention	ADF	3 fast days 75% energy restriction. 100% on feed day	~62:23:14			
											Control	CER	Consumed 75% of daily caloric requirements	~61:24:14			

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
Pinto et al. 2020	43 Overweight/Obese (12 M, 31 F)	OP, UK	53.1 (10.2)	88.5 (18.8)	31.4 (5.1)	P	Supp	Free	4	Weight Loss					Body weight	Negative	Industry
											Intervention	WDF	2 fasting days with 600 kcals on fasting days	~42:38:18			
											Control	CER	500 kcal energy restriction daily	~40:37:16			
Pureza et al. 2020	58 Overweight/Obese (0 M, 58 F)	OP, Brazil	31 (19 - 44)	80.8 (12.3)	33.3 (4.3)	P	DA	Free	3	Weight Loss					Body weight	Negative	Agency
											Intervention	TRE	Eat only during a 12h period. 500-100kcal caloric restriction daily	~52:27:21			
											Control	CER	500-100kcal caloric restriction daily	~53:27:20			
Queiroz et al. 2022	48 Obese (6 M, 42 F)	OP, Brazil	29 (6)	83.9 (11.9)	31.0 (2.8)	P	DA	Free	8	Weight Loss					Body weight	Negative	Agency
											Intervention	TRE	75% daily energy requirements eaten as 3 meals between 8:00-16:00 (first meal could be one hour early or later than this start time; but window is always the same)	~50:20:30			
											Intervention	TRE	75% daily energy requirements eaten as 3 meals between 12:00-20:00 (first meal could be one hour early or later than this start time; but window is always the same)	~50:20:30			
											Control	CER	25% calorie reduction	~50:20:30			
Razavi et al. 2021	69 Metabolic Syndrome (41 M, 28 F)	OP, Iran	42.2 (8.96)	88.3 (7.95)	31.3 (3.56)	P	Supp	Free	16	Weight Loss					Body weight	Negative	NR
											Intervention	ADF	3 fast days with 75% energy restriction on fasting days. AdLib on feed days	~61:26:14			
											Control	CER	Consumed 75% of daily caloric requirements	~59:26:15			
Richardson et al. 2023	15 Normal Weight (15 M, 0 F)	OP, USA	28.7 (5.2)	73.5 (8.6)	23.3 (2.3)	C	DA	Free	4	Not Weight Loss					Body composition	Neutral	Agency
											Intervention	TRE	16:8; consume all meals in same 8h period each day	~60:20:20			
											Control	AdLib	12:12; consume all meals in same 12h period each day	~60:20:20			
Schubel et al. 2018	150 Overweight/Obese (75 M, 75 F)	OP, Germany	50.5 (8.1)	94.1 (14.9)	31.4 (3.8)	P	DA	Free	12	Weight Loss					Body weight	Negative	Agency

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	WDF	2 days with 25% of individual energy requirement	~43:37:15			
											Intervention	CER	80% of individual energy requirement daily	~45:35:15			
											Control	AdLib		~43:36:16			
Steger et al. 2020	35 Overweight/Obese (8 M, 27 F)	OP, USA	45.6 (10.5)	89.1 (10.7)	31.2 (2.4)	P	Supp	Free	12	Weight Loss					Body weight	Negative	Agency
											Intervention	WDF	3 fast days with 550-800kcals consumed on fasting days	~44:38:17			
											Control	CER	1200-1600kcals consumed daily	~46:38:16			
Stote et al. 2007	15 Normal Weight (5 M, 10 F)	OP, USA	45 (0.7)	66.5 (3.1)	23.4 (0.5)	C	Met	Supervised	8	Not Weight Loss					Body weight	Neutral	NR
											Intervention	TRE	1 meal a day	~50:36:15			
											Control	AdLib	3 meals a day	~49:36:15			
Sukkriang et al. 2024	99 Obese with T2DM (58 F, 41 M)	OP, Thailand	45.3 (6.1)	82.3 (15.6)	31.9 (5.2)	P	DA	Free	12	Weight loss					Body weight	Negative	Agency
											Intervention	TRE	16:8; fast for 16 hours 3 days/week (2 weekdays and 1 weekend); follow general diabetic diet	NR			
			ß								Intervention	TRE	14:10; fast for 14 hours 3 days/week (2 weekdays and 1 weekend); follow general diabetic diet	NR			
											Control	AdLib	3 meals on diabetic diet (avoid desserts, sticky rice and high-sugar diets)	NR			
Sun et al. 2024	60 Metabolic dysfunction-associated steatotic liver disease and abnormal glucose metabolism; (24F, 36M)	OP, China	47.9 (10.9)	84.0 (16.5)	30.0 (4.5)	P	I = Supp; C = DA	Free	12	Weight loss					Liver fat content	Neutral	Agency
											Intervention	WDF	5:2; 497.6 kcal/d from plant-based meal replacements on fasting days; balanced diet without calorie restriction on non-fasting days	60:12.5:25			
											Control	CER	Prescribed amount of calories (25kcal/kg x [height (cm) - 100]kg) without time restriction	60:12.5:25			
Sundfor et al. 2018	112 Overweight/Obese (56 M, 56 F)	OP, Norway	48.7 (10.9)	108 (16.2)	35.2 (3.7)	P	DA	Free	26	Weight Loss					Body weight	Negative	NR

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	WDF	400kcal for females & 600kcal for males consumed on 2 fasting days. AdLib on 5 remaining days	~45-50:30-35:20			
											Control	CER	26-28% reduced dietary intake	~45-50:30-35:20			
Talebi et al. 2024	60 Obese with PCOS (60F)	OP, Iran	30.5 (5)	82.5 (12.9)	30.2 (3.6)	P	I = Supp; C = DA	Free	8	Weight loss					Body weight	Neutral	Agency
											Intervention	TRE	14:10; 10-hour adlib eating window between 08:00 AM and 06:00 PM plus daily placebo supplementation	NR			
											Control	CER	consumed prescribed calories without regard to time; the daily prescribed total calories for the DCR group ranged from 1500 to 1800 kcal per day	55:15:30			
Templeman et al. 2021	24 Normal Weight (12 M, 12 F)	OP, UK	43.5 (8.7)	72.2 (9.3)	24 (2.2)	P	DA	Free	3	Weight Loss					Body weight	Negative	Agency
											Intervention	ADF	alternating 0 kcal on fasting days and 150% of energy requirement on feeding days	~38:39:16			
											Control	CER	75% of required energy intake	~40:39:16			
Teong et al. 2023	207 Prediabetic (87 M, 120 F)	OP, Australia	57.8 (10.2)	98.9 (16.5)	34.6 (4.7)	P	Supp	Free	24	Weight Loss					Glycemic Control	Negative	Agency
											Intervention	ADF	20:4; 30% of energy requirements on fasting days followed by 20h fast starting at 12:00 for 3 nonconsecutive days/wk (two meal replacements for breakfast and lunch); usual diet on non-fasting days	~59.4:26.4:14.2			
											Control	CER	30% restriction of energy requirements daily; one meal replacement per day	~59.4:26.4:14.2			
											Control	AdLib	Usual Diet				
Trepanowski et al. 2018	79 Overweight/Obese (13 M, 66 F)	OP, USA	44.6 (2)	95.3 (3)	34.4 (1)	P	Met	Free	24	Weight Loss					Body composition	Negative	Agency
											Intervention	ADF	Alternating 25% of energy needs on fast day and 125% on feed days	~55:30:15			

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
											Intervention	CER	75% of energy needs everyday	~55:30:15			
											Control	AdLib	Normal diet				
Umphonsathien et al. 2022	40 Type 2 Diabetes (11 M, 29 F)	OP, Thailand	49.6 (7.2)	78.1 (6.7)	30. (1.8)	P	Supp	Free	18	Weight Loss					Glycemic Control	Neutral	Agency + Industry
											Intervention	WDF	2 non-consecutive days of fasting (600kcal/day in 3 meals); AdLib for the rest of the days	~55:30:15			
											Intervention	ADF	4 non-consecutive days of fasting (600kcal/day in 3 meals); AdLib for the rest of the days	~55:30:15			
											Control	AdLib	Usual Diet				
Varady et al. 2013	30 Normal Weight/Overweight (8 M, 22 F)	OP, USA	47.5 (2.5)	77 (3)	26 (1)	P	Met	Free	12	Weight Loss					Bodyweight	Negative	Agency
											Intervention	ADF	75% energy restriction on fasting days (alternating)	~55:30:15			
											Control	AdLib	Usual Diet				
Wang, 2024	54 NAFLD (31 M, 23 F)	OP, China	30.5 (8.63)	92.5 (15.5)	32.5 (5)	P	DA	Free	12	Weight loss					Hepatic Steatosis	Negative	Agency
											Intervention	ADF	2 fasting days per week of 600kcal/day for females and 800kcal/day for males	NR			
											Control	CER	1500-1800kcal/day for males 1200-1500kcal/day for females				
Witjaksono et al. 2022	50 Obese (50 M, 0 F)	OP, Indonesia	31 (19 - 54)	90.2 (12.9)	30.6	P	DA	Free	8	Weight Loss					Bodyweight	Neutral	Agency
											Intervention	WDF	5:2; Fasting for 14h on Mondays and Thursdays (from sunrise to sunset or from 4am-6pm); AdLib for non-fasting periods	~50.4:35:13.6			
											Control	AdLib	Usual Diet	~45.5:37:14.5			
Xie et al. 2022	82 Normal Weight (18 M, 64 F)	OP, China	31.1 (10)	61.1 (10.2)	21.9 (2.8)	P	DA	Free	5	Weight Loss				NR	Insulin sensitivity	Negative	Agency
											Intervention	TRE	early TRE between 6:00 AM and 3:00 PM				
											Intervention	TRE	mid-day TRE between 11:00 AM and 8:00 PM				
											Control	AdLib	Usual Diet				
Xu et al. 2021	18 Normal Weight/Overweight (4 M, 14 F)	OP, China	31.3 (6.3)	65.2 (11.2)	23.8 (3.2)	P	DA	Free	4	Weight Loss				NR	Bodyweight	Negative	Agency
											Intervention	WDF	800 kcal/day for 3 days in a row, then AdLib on Day 4				
											Control	CER	500kcal restriction daily				

Author, Year	Participants*	Setting	Mean Age,	Mean	Mean	Design	Feeding	Diet	Follow-	Type of	Treatment	Type of	Description of	Diet [b]	Primary	Energy	Funding
Zhou et al. 2024	20 Healthy (20 F)	OP, China	19.3 (1.2)	52.6 (5.3)	19.2 (1.8)	P	DA	Free	6	Not weight loss					Body composition	Neutral	Agency
											Intervention	TRF	16:8; Instructed to consume all their dietary intake within an 8-hour window (11 a.m. to 7 p.m.); no energy intake beyond the 8-hour eating window was allowed	52:15:33			
											Control	AdLib	habitual eating patterns	49:17:34			

Abbreviations
ADF, alternate day fasting; Adlib, ad libitum; BMI, body mass index; CER, caloric energy restriction; C, Crossover; DA, dietary advice; F, female; IF, intermittent fasting; M, male;NR, not reported; P, parallel; Supp, supplemented; TRE, time restricted eating; WDF, whole day fasting

Footnotes
* Total participant count included in the present network meta-analysis.
[a] Metabolic feeding control included provision of all study foods, supplement feeding control included provision of study supplements only, and dietary advice included
[b] Total energy intake in the form of carbohydrate:fat:protein
[c] Positive energy balance included interventions designed to consume excess calories on top of a baseline diet. Negative energy balance included interventions designed
[d] Agency funding included government, not-for profit health agencies or University

Carbs= 4kcal/g
Fat= 9kcal/g
Protein= 4kcal/g

Supplementary Table 4. Outlined adverse events reported in the intermittent fasting diet strategies, and adherence to diet strategies (n=99).

			Adherence to Diet Strategy					
	Study	Adverse Effects in the Intermittent Fasting Diet Strategy	ADF	WDF	TRE	CER	Ad-Libitum* (not always reported)	Other
1	Andriessen et al. 2022	None	81%				86%	
2	Antoni et al. 2018	NR						34% dropout rate for the whole study
3	Arciero et al. 2022	Mild: Reduced desire to eat		>90%		>90%		
4	Bartholomew et al. 2021	Mild: Constipation, dizziness, diarrhea, Edema, headache, insomnia, light-headed, muscle tension, nausea, and low energy		95 ± 12%				
5	Beaulieu et al. 2020	Mild: Cravings for sweets and savory foods	Not Reported					
6	Betts et al. 2014	NR			Not Reported			
7	Bhutani et al. 2013	NR	80% ± 9%					
8	Bilge Sertdemir et al. 2024	NR		Not Reported			Not Reported	
9	Cai et al. 2019	Mild: Hyperphagic	97.50%		97.50%	97.50%		
10	Cai et al. 2022	NR		Not Reported		Not Reported		
11	Carter et al. 2016	NR		84%		78%		
12	Carter et al. 2018	NR		44%		49%		
13	Castela et al. 2022	NR						80% of participants completed study.
14	Catenacci et al. 2016	None						93% of participants completed study.
15	Čermaková et al. 2024	Mild: Fatigue, headache, concentration disorder, and hunger			84%*	87%*		
16	Che et al. 2021	None			90%		83%	
17	Cho et al. 2019	NR	73%				73%**	
18	Chow et al. 2020	NR			60%***			
19	Cienfuegos et al. 2020	Mild: Nausea, constipa- tion, diarrhea, headaches, fatigue, and irritability did not change			88.60%			
20	Conley et al. 2018	Mild: Increased hunger		73%		75%		
21	Correia et al. 2024	NR		Not Reported	100%		100%	
22	Coutinho et al. 2018	None	78%			83%		
23	DeOliveiraMaranhaoPureza et	NR						53.44% participants completed study.
24	Domaszewski et al. 2023	None			99%			
25	Dunn et al. 2024	NR	72%			89%		
26	Dutzmann et al. 2024	None			83.70%	Not Reported		
27	Erdem et al. 2022	NR		57%	Not Reported.	98%		
28	Ezpeleta et al. 2023	NR	95%				100%	
29	Fagundes et al. 2023	NR			46%	75%		
30	Fitzgerald et al. 2018	Mild: Increased hunger, fatigue, headache.			92%	92%	75%	
31	Gabel et al. 2019	NR	32%			49%	48%	
32	Ghezzi et al. 2024	Mild: Headache, tiredness, loose stool.	98%				Not Reported	
33	Gray et al. 2021	NR	53%			50%		
34	Guevara-Cruz et al. 2024	None			>80%	>80%	Not Reported	
35	Guner et al. 2024	NR			92.4 ± 4.2%		Not Reported	
36	Guo et al. 2021	None		91.30%			78.30%	
37	Hajek et al. 2021	None		22%			Not Reported	
38	Harvie et al. 2021	NR		63%		77%		
39	Harvie et al. 2011	Mild: Lack of energy, headache, feeling cold and constipatio, hunger, lack of concentration, bad temper and preoccupation with food.		44%		32%		

Study	Adverse Effects in the Intermittent Fasting Diet Strategy	Adherence to Diet Strategy					
		ADF	WDF	TRE	CER	Ad-Libitum* (not always reported)	Other
40 Harvie et al. 2013	Mild: Feeling cold, decreased energy levels, constipation, headaches, and bad breath on energy-restricted days		76%		Not Reported		
41 He et al. 2021	Mild: Fatigue, headache, and nausea.		95%*		95%*		
42 He et al. 2022	None			72%*	62%*		
43 Headland et al. 2019	NR		Not Reported		Not Reported		
44 Hirsh et al. 2019	None		98.0 ± 7.3%		Not Reported		
45 Holmer et al. 2021	Severe: Hypoglycemia (resulting in a fall). Remaining sympotoms were mild.		96%		80%		
46 Hooshiar et al. 2023	NR	82%			86%		
47 Hooshiar et al. 2023	Mild: Mood (anger)	81%*			83%*		
48 Hussin et al. 2013	None		Not Reported			Not Reported	
49 Hutchison et al. 2019	NR						Detail on adherence was not provided, however, it was noted that diffculty to adhering to different diets improved over time.
50 Irani et al. 2024	NR			Not Reported	Not Reported		
51 Isenmann et al. 2021	NR			98.40%		88.90%	
52 Jimenez et al. 2019	NR		Not Reported				
53 Johari et al. 2019	None	75-83%					
54 Kahleova et al. 2014	None			93%		93%%	
55 Kapogiannis et al. 2024	NR		Not Reported			Not Reported	
56 Keawtep et al. 2024	None			88.80%		Not Reported	
57 Kord Varkaneh 2022	NR		88%			81%	
58 Kotarsky et al. 2021	None			81%		Not Reported	
59 Kramer et al. 2024	Mild: Fatigue and feeling cold			High (not specified)		Not Reported	
60 Kunduraci et al. 2020	None			97%	94%		
61 Lee et al. 2024	Mild: Fatigue, and nausea.		91.70%		83.90%		
62 Lin et al. 2023	None			87%	61%		
63 Lin et al. 2022	NR			84%		Not Reported	
64 Liu et al. 2022	Mild: Fatigue, dizziness, headache, decreased ap-petite, upper abdominal pain, dyspepsia, and constipation			84.0±16.1%	83.8±12.6%		
65 Liu et al. 2023	Mild			90%%		90%	
66 Lowe et al. 2020	NR			83.50%		92.10%	
67 Manoogian et al. 2022	None			68-77%		Not Reported	
68 Manoogian et al. 2024	Mild: Fatigue, and lack of concentration.			>85%		Not Reported	
69 Maroofi et al. 2020	NR		96%		96%		
70 Mayra et al. 2022	NR			57%%		100%	
71 Moro et al. 2016	NR			Not Reported			
72 Obermayer et al. 2023	None	91%					
73 Oh et al. 2018	NR	90%					
74 Oustric et al. 2021	NR	81.4 ± 14.6%			89.0 ± 9.7%		
75 Overland et al. 2018	None		Not Reported				
76 Parr et al. 2024	NR			>90%		Not Reported	
77 Parvaresh et al. 2019	None	Not Reported			Not Reported		

	Study	Adverse Effects in the Intermittent Fasting Diet Strategy	Adherence to Diet Strategy					
			ADF	WDF	TRE	CER	Ad-Libitum* (not always reported)	Other
78	Pinto et al. 2020	NR		Not Reported		Not Reported		
79	Pureza et al. 2020	NR						Study reports no statistically significant difference between adherence difficulty between TRE and CRE. The participants reported being adherent to both protocols as moderately challenging.
80	Queiroz et al. 2022	Mild: Hunger and headaches			79%****		85%	
81	Razavi et al. 2021	None	Not Reported			Not Reported		
82	Richardson et al. 2023	None			Not Reported		Not Reported	
83	Schubel et al. 2018	Mild: Dizziness and cramps		73.50%		Not Reported		
84	Steger et al. 2021	NR	80%			80%		
85	Stote et al. 2007	NR		Not Reported			Not Reported	
86	Sukkriang et al.	Mild: Palpitations, dizziness, mood change, and abdominal pain			Not Reported		Not Reported	
87	Sun et al.	Mild: fatigue, headache, lack of concentration, insomnia		82.80%		96.30%		
88	Sundfor et al. 2018	None		100%		100%		
89	Talebi et al.	Mild: Headache			82.20%		Not Reported	
90	Templeman et al. 2021	NR						
91	Teong et al. 2023	Mild: Fatigue, and hunger	Not Reported			Not Reported	Not Reported	
92	Trepanowski et al. 2018	NR	Not Reported			Not Reported		
93	Umphonsathien et al. 2022	None	>95%	>95%				
94	Varady et al. 2013	Mild: Headache and constipation	98 ± 5%			Not Reported		
95	Wang et al. 2024	Mild: Hunger and headaches	90%*			90%*		
96	Witjaksono et al. 2022	NR		Not Reported				
97	Xie et al. 2022	none			97.5%****			
98	Xu et al. 2021	Mild: Constipation, fatigue, and mild anxiety.		Not Reported		Not Reported		
99	Zhou et al.	None			Not Reported		Not Reported	

*Calculated based on data reported in the manuscript.

**Determined based on the number of completers. A subset of completers was selected for the biomarkers measured in the study.

***The TRE group was adherent on 55.5% ± 22.4% of days to eating within ±15 minutes of the 8-hour eating time window, on 60% ± 23% of days to within ±30 minutes, and on 66.3% ± 20.7% of days to within ±60 minutes of the 8-hour time window. The average adherence to the intervention was therefore 60%.

**** Averaged adherence data from two arms of the same dietary intervention group. For example, two TRE groups (morning versus afternoon fasting time) were averaged.

Supplementary Table 5. Confidence in effect estimates in network meta-analysis of diet interventions for body weight outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
ADF:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	Some concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
CER:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate

Supplementary Table 6. Confidence in effect estimates in network meta-analysis of diet interventions for ALT outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	Major concerns	Major concerns	No concerns	No concerns	Very low
CER:TRE	No concerns	Low risk	Major concerns	Major concerns	No concerns	No concerns	Very low
TRE:WDF	No concerns	Low risk	Major concerns	Major concerns	No concerns	No concerns	Very low

Supplementary Table 7. Confidence in effect estimates in network meta-analysis of diet interventions for BMI outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
ADF:CER	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate

Supplementary Table 8. Confidence in effect estimates in network meta-analysis of diet interventions for body fat outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	Major concerns	Major concerns	No concerns	Low
TRE:WDF	No concerns	Low risk	No concerns	Major concerns	Major concerns	No concerns	Low

Supplementary Table 9. Confidence in effect estimates in network meta-analysis of diet interventions for CRP outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
AdLib:CER	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
AdLib:WDF	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	Major concerns	Major concerns	No concerns	No concerns	Low
ADF:WDF	No concerns	Low risk	Major concerns	No concerns	No concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	Major concerns	Some concerns	No concerns	No concerns	Moderate

Supplementary Table 10. Confidence in effect estimates in network meta-analysis of diet interventions for DBP outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
AdLib:WDF	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	Major concerns	Some concerns	Some concerns	No concerns	Low
TRE:WDF	No concerns	Low risk	Major concerns	Some concerns	No concerns	No concerns	Moderate

Supplementary Table 11. Confidence in effect estimates in network meta-analysis of diet interventions for fasting glucose outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
ADF:TRE	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
ADF:WDF	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
AdLib:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
CER:WDF	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
TRE:WDF	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High

Supplementary Table 12. Confidence in effect estimates in network meta-analysis of diet interventions for fasting insulin outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Major concerns	No concerns	Major concerns	Low
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
ADF:TRE	Major concerns	Low risk	Major concerns	Major concerns	No concerns	Major concerns	Very low
ADF:WDF	Major concerns	Low risk	Major concerns	Some concerns	Some concerns	Major concerns	Very low
TRE:WDF	Major concerns	Low risk	Major concerns	Some concerns	Some concerns	Major concerns	Very low

Supplementary Table 13. Confidence in effect estimates in network meta-analysis of diet interventions for HbA1c outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	Major concerns	No concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	Major concerns	Major concerns	No concerns	No concerns	Low
TRE:WDF	No concerns	Low risk	Major concerns	Major concerns	No concerns	No concerns	Low

Supplementary Table 14. Confidence in effect estimates in network meta-analysis of diet interventions for HDL outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	Major concerns	No concerns	Some concerns	Some concerns	Low

Supplementary Table 15. Confidence in effect estimates in network meta-analysis of diet interventions for HOMA-IR outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
AdLib:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
CER:WDF	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
ADF:TRE	No concerns	Low risk	Major concerns	No concerns	Some concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	Major concerns	No concerns	No concerns	No concerns	Moderate

Supplementary Table 16. Confidence in effect estimates in network meta-analysis of diet interventions for LDL outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	Major concerns	No concerns	Major concerns	No concerns	Low

Supplementary Table 17. Confidence in effect estimates in network meta-analysis of diet interventions for non-HDL outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	No concerns	No concerns	Some concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	Some concerns	No concerns	Major concerns	Some concerns	Low

Supplementary Table 18. Confidence in effect estimates in network meta-analysis of diet interventions for SBP outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
ADF:CER	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	Some concerns	No concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	Major concerns	No concerns	Some concerns	No concerns	Low
TRE:WDF	No concerns	Low risk	Major concerns	Major concerns	No concerns	No concerns	Low

Supplementary Table 19. Confidence in effect estimates in network meta-analysis of diet interventions for total cholesterol outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	No concerns	Some concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	No concerns	No concerns	Some concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	Major concerns	Low
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	Major concerns	No concerns	Some concerns	Major concerns	Low

Supplementary Table 20. Confidence in effect estimates in network meta-analysis of diet interventions for triglyceride outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	Some concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	Some concerns	Some concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	Major concerns	Major concerns	No concerns	Major concerns	Low

Supplementary Table 21. Confidence in effect estimates in network meta-analysis of diet interventions for waist circumference outcome.

comparison	within study bias	reporting bias	indirectness	imprecision	heterogeneity	incoherence	confidence rating
ADF:AdLib	No concerns	Low risk	No concerns	No concerns	No concerns	No concerns	High
ADF:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:CER	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
AdLib:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:TRE	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
CER:WDF	No concerns	Low risk	No concerns	No concerns	Major concerns	No concerns	Moderate
TRE:WDF	No concerns	Low risk	No concerns	No concerns	Some concerns	No concerns	Moderate
ADF:WDF	No concerns	Low risk	Major concerns	No concerns	Some concerns	No concerns	Moderate

Supplementary Table 22. Minimally important difference (MID) threshold for each outcome.

Outcome	MID Threshold	Rationale and Reference
Body Weight	1.0 kg	1 kg is an MID established by Johnston et al. and Ge et al. [1, 2]
ALT	2.85 U/L	10% of the median reference value (28.5 U/L) for males and females [3]
BMI	0.2 kg/m²	Approximately equivalent to the MID for body weight of 1 kg; adjusted to 0.2 kg/m² for consistency
Body Fat	2%	Absolute reduction based on 5-7% weight loss being clinically meaningful
CRP	0.05 mg/dl	0.5 mg/L (equivalent to 0.05 mg/dl) represents 10% of the cut-off threshold for clinical inflammation [4]
Diastolic Blood Pressure	2 mmHg	1 mmHg reduction in DBP represents reductions seen for average dose-doubling of a BP agent [5]
Fasting Glucose	0.5 mmol/l	Approximately equivalent to the MID for A1C of 0.3% [6]
Fasting Insulin	5 pmol/l	Approximately equivalent to the MID for fasting glucose of 0.5 mmol/L
HbA1c	0.3%	Threshold identified as clinically relevant by EMA [7] and FDA [8, 9]
HDL	0.1 mmol/l	0.1 mmol/L represents the minimum reduction used to support health claims [10, 11] and CCS guidelines [12]
HOMA-IR	1	Proportional reduction to fasting glucose
LDL	0.1 mmol/l	0.1 mmol/L represents the minimum reduction used to support health claims [10, 11] and CCS guidelines [12]
Non-HDL	0.1 mmol/l	0.1 mmol/L represents the minimum reduction used to support health claims [10, 11] and CCS guidelines [12]
Systolic Blood Pressure	2 mmHg	2 mmHg reduction in SBP identified by JNC7 [13] and seen for average dose-doubling of a BP agent [5]
Total Cholesterol	0.1 mmol/l	0.1 mmol/L represents the minimum reduction used to support health claims [10, 11]
Triglyceride	0.1 mmol/l	0.1 mmol/L represents the minimum reduction used to support health claims [10, 11] and CCS guidelines [12]
Waist Circumference	2 cm	Approximately equivalent to the MID for body weight of 1 kg [14]; adjusted to 2 cm for consistency

Footnotes:
[1] Johnston BC, Kanters S, Bandayrel K, et al. Comparison of weight loss among named diet programs in overweight and obese adults: a meta-analysis. JAMA. 2014;312(9):923-33.
[2] Ge L, Sadeghirad B, Ball GDC, et al. Comparison of dietary macronutrient patterns of 14 popular named dietary programmes for weight and cardiovascular risk factor reduction in adults: systematic review and network meta-analysis of randomised trials. BMJ. 2020;369:m696.
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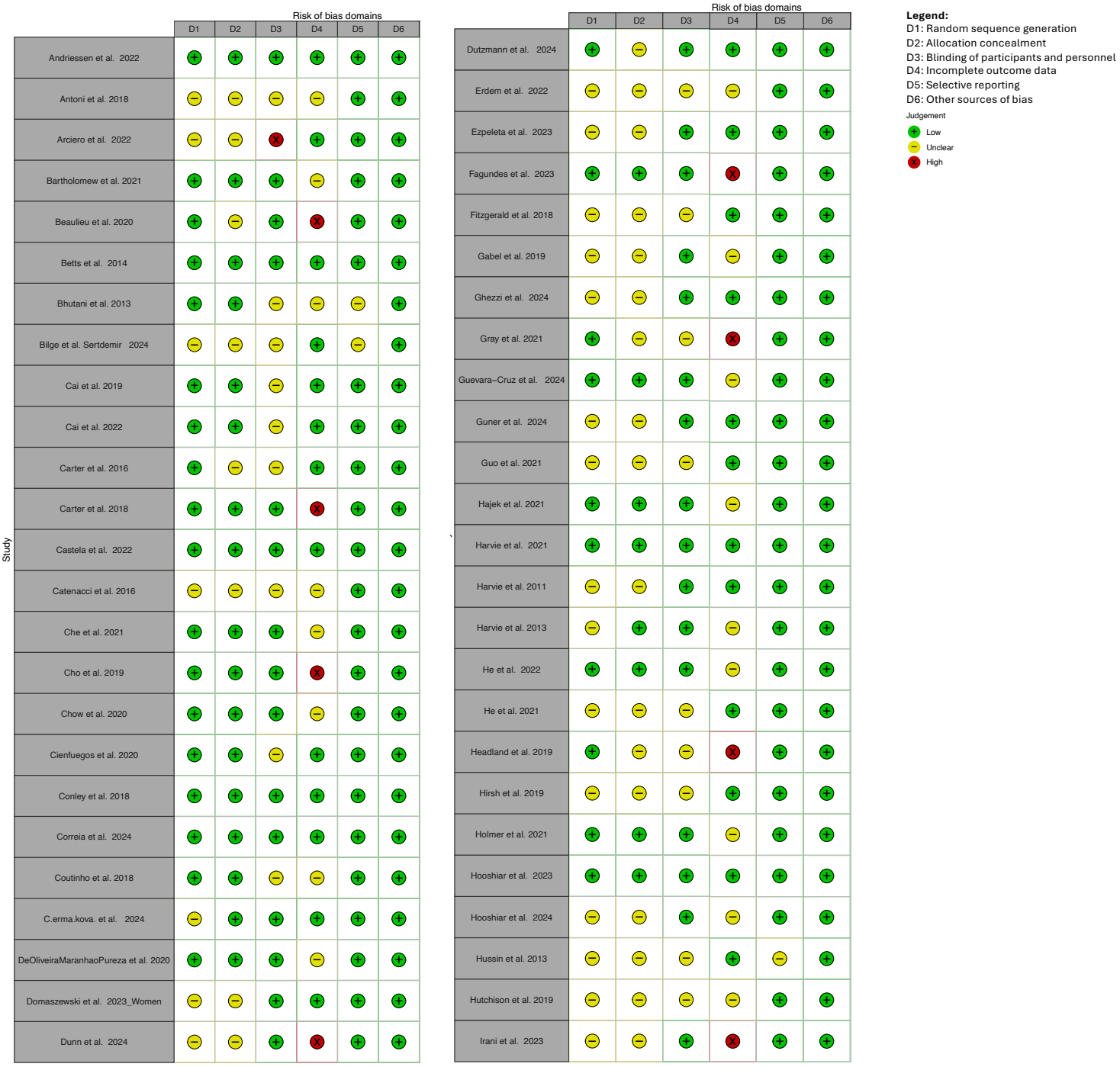
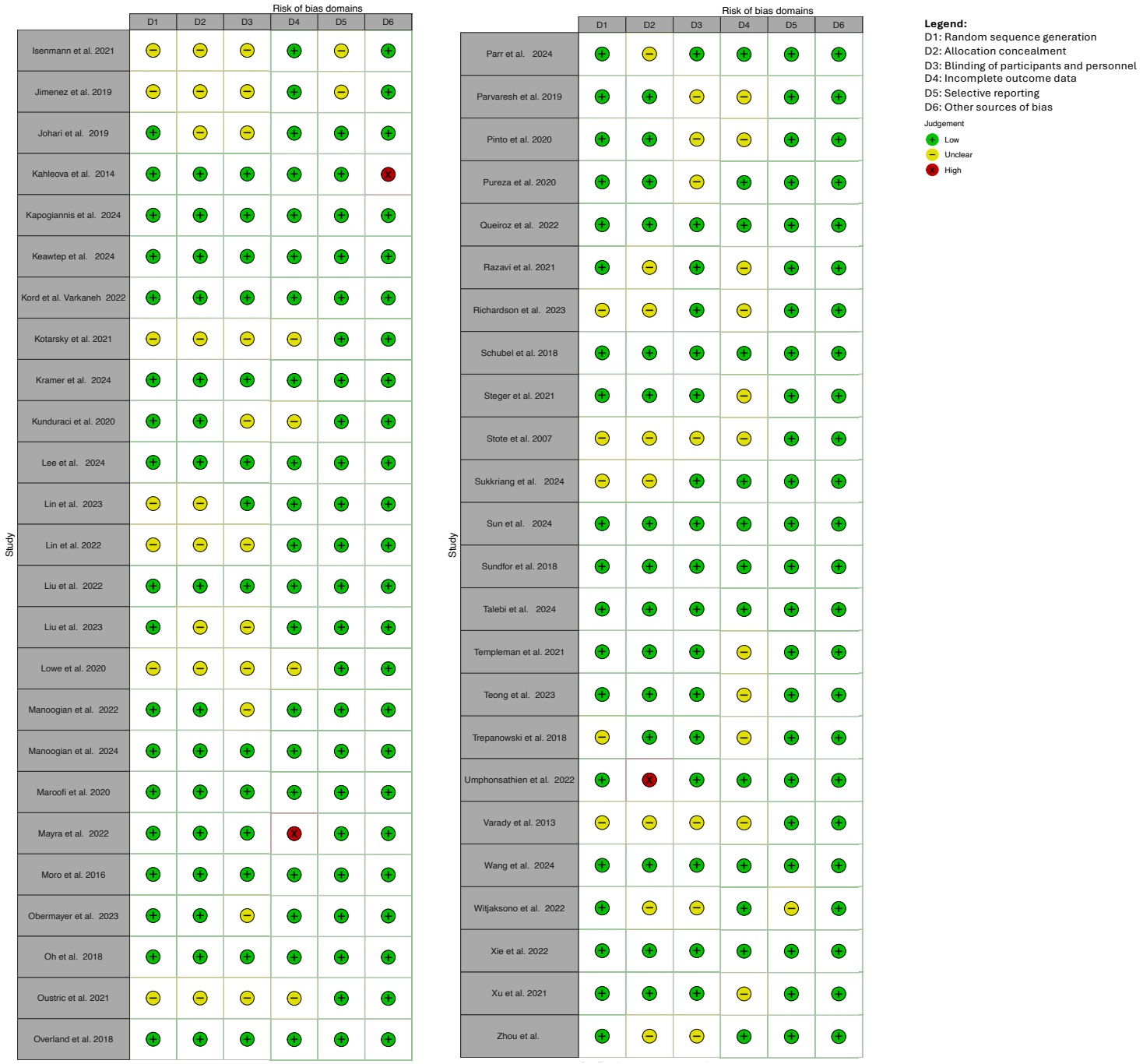
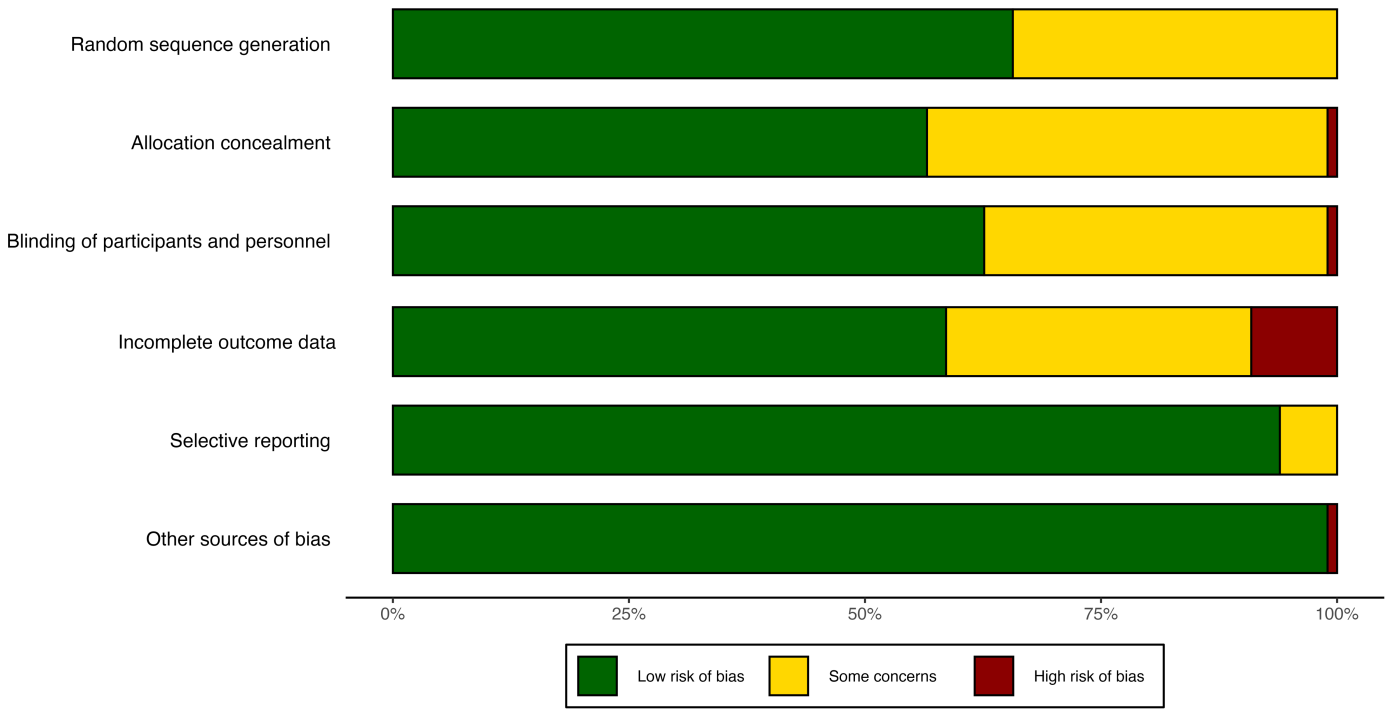
[4] Rifai N, Horvath AR, Wittwer CT, eds. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 6th ed. Elsevier, 2018.
[5] Law MR, Wald NJ, Morris JK, et al. Value of low dose combination treatment with blood pressure lowering drugs: analysis of 354 randomised trials. BMJ. 2003;326(7404):1427. https://www.bmj.com/content/326/7404/1427
[6] Nathan DM, Kuenen J, Borg R, et al. Translating the A1C assay into estimated average glucose values. Diabetes Care. 2008;31(8):1473-8.
[7] European Medicines Agency. Guideline on clinical investigation of medicinal products in the treatment or prevention of diabetes mellitus. CPMP/EWP/1080/00 Rev. 1. 2018. https://www.ema.europa.eu/en/documents/scientific-guideline/draft-guideline-clinical-investigation-medicinal-products-treatment-prevention-diabetes-mellitus_en.pdf
[8] Food and Drug Administration. Guidance for Industry on Diabetes Mellitus-Evaluating Cardiovascular Risk in New Antidiabetic Therapies to Treat Type 2 Diabetes; Availability. 2008. https://www.federalregister.gov/documents/2008/12/19/E8-30086/guidance-for-industry-on-diabetes-mellitus-evaluating-cardiovascular-risk-in-new-antidiabetic
[9] U.S. Food & Drug Administration. Diabetes Mellitus: Efficacy Endpoints for Clinical Trials Investigating Antidiabetic Drugs and Biological Products Guidance for Industry. Draft Guidance. 2023. https://www.fda.gov/media/168475/download
[10] Food Directorate, Health Products and Food Branch, Health Canada. Summary of Health Canada's assessment of a health claim about soy protein and cholesterol lowering. Ottawa: Bureau of Nutritional Sciences. March 2015. https://www.canada.ca/en/health-canada/services/food-nutrition/food-labelling/health-claims/assessments/summary-assessment-health-claim-about-protein-cholesterol-lowering.html
[11] Food Directorate, Health Products and Food Branch, Health Canada. Oat products and blood cholesterol lowering. Ottawa: Bureau of Nutritional Sciences. 2010.
[12] Anderson TJ, Grégoire J, Pearson GJ, et al. 2016 Canadian Cardiovascular Society Guidelines for the Management of Dyslipidemia for the Prevention of Cardiovascular Disease in the Adult. Can J Cardiol. 2016;32(11):1263-82.
[13] Chobanian AV, Bakris GL, Black HR, et al. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Hypertension. 2003;42(6):1206-52.
[14] Sacks FM, Bray GA, Carey VJ, et al. Comparison of weight-loss diets with different compositions of fat, protein, and carbohydrates. N Engl J Med. 2009;360(9):859-73.

Supplementary Figures

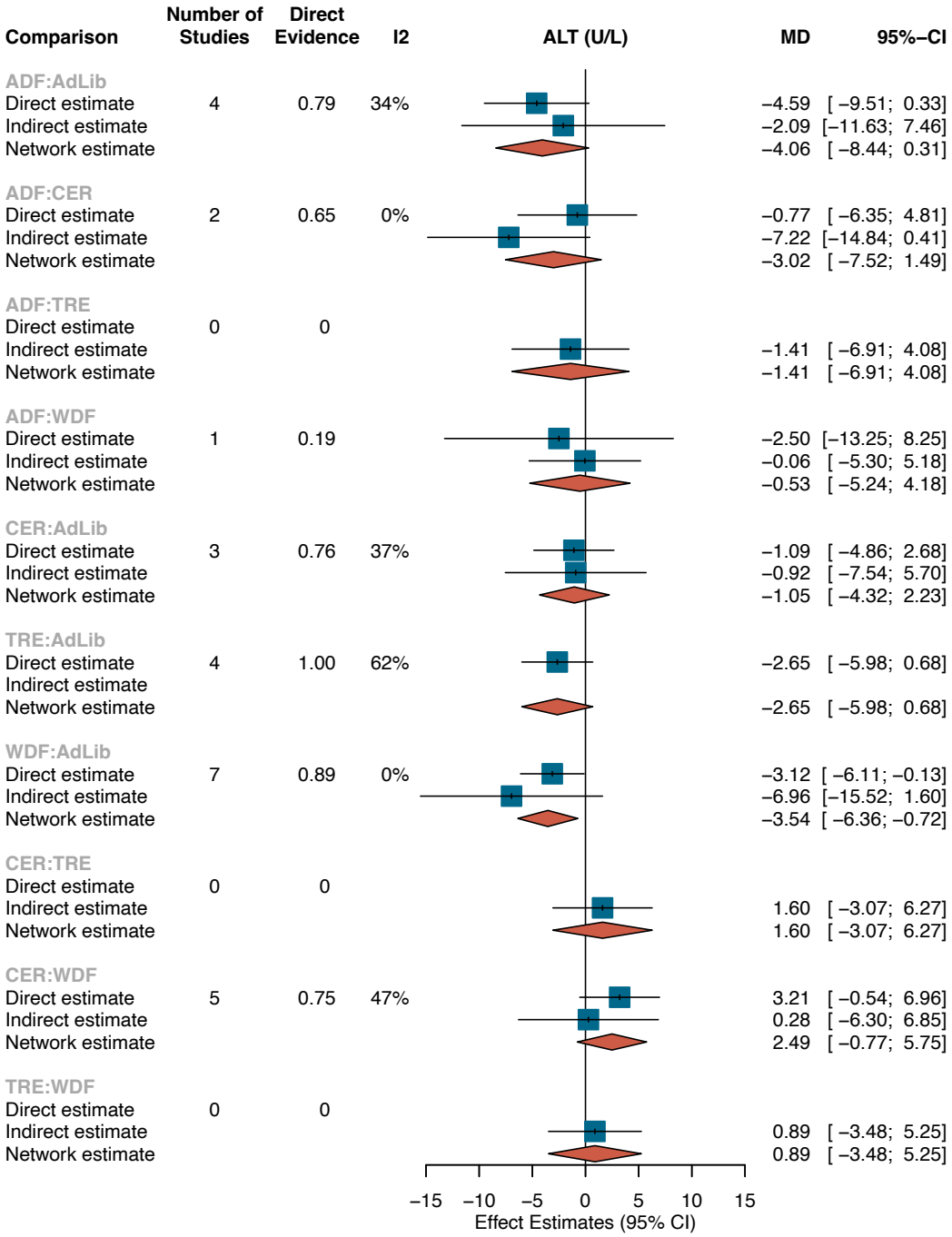

Risk of bias domains
D1
D2
D3
D4
D5
D6
Study
Andriessen et al. 2022
Antoni et al. 2018
Arciero et al. 2022
Bartholomew et al. 2021
Beaulieu et al. 2020
Betts et al. 2014
Bhutani et al. 2013
Bilge et al. Sertdemir 2024
Cai et al. 2019
Cai et al. 2022
Carter et al. 2016
Carter et al. 2018
Castela et al. 2022
Catenacci et al. 2016
Che et al. 2021
Cho et al. 2019
Chow et al. 2020
Cienfuegos et al. 2020
Conley et al. 2018
Correia et al. 2024
Coutinho et al. 2018
C.erma.kova. et al. 2024
DeOliveiraMaranhaoPureza et al. 2020
Domaszewski et al. 2023_Women
Dunn et al. 2024
Dutzmann et al. 2024
Erdem et al. 2022
Ezpeleta et al. 2023
Fagundes et al. 2023
Fitzgerald et al. 2018
Gabel et al. 2019
Ghezzi et al. 2024
Gray et al. 2021
Guevara–Cruz et al. 2024
Guner et al. 2024
Guo et al. 2021
Hajek et al. 2021
Harvie et al. 2021
Harvie et al. 2011
Harvie et al. 2013
He et al. 2022
He et al. 2021
Headland et al. 2019
Hirsh et al. 2019
Holmer et al. 2021
Hooshiar et al. 2023
Hooshiar et al. 2024
Hussin et al. 2013
Hutchison et al. 2019
Irani et al. 2023
Legend:
D1: Random sequence generation
D2: Allocation concealment
D3: Blinding of participants and personnel
D4: Incomplete outcome data
D5: Selective reporting
D6: Other sources of bias
Judgement
Low
Unclear
High



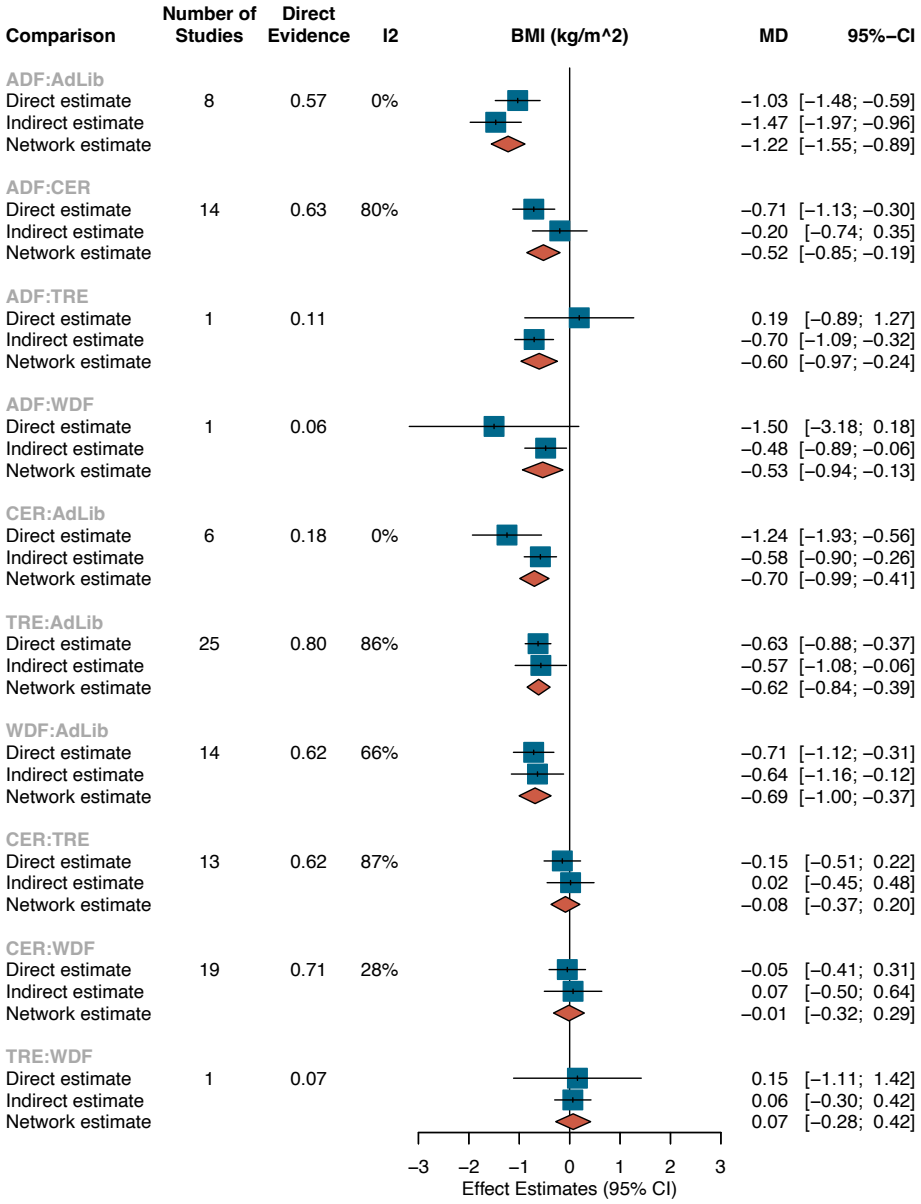
Supplementary Figure 1. Cochrane risk of bias summary of all included studies (n=99). Columns D1-D6 refer to: D1: Random sequence generation (D1) which considers selection bias (biased allocation to interventions) due to inadequate generation of a randomized sequence; D2: Allocation concealment (D2), which considers selection bias (biased allocation to interventions) due to inadequate concealment of allocations prior to assignment; Blinding of participants and personnel (D3) which considers performance bias due to knowledge of the allocated interventions by participants and personnel during the study; Incomplete outcome data (D4), which considers attrition bias due to amount, nature or handling of incomplete outcome data; Selective reporting (D5), which considers reporting bias due to selective outcome reporting; and Other sources of bias (D6), which considers other biases due to other problems not identified by D1-D5. Each individual study was evaluated for these ROB criteria by two independent reviewers.



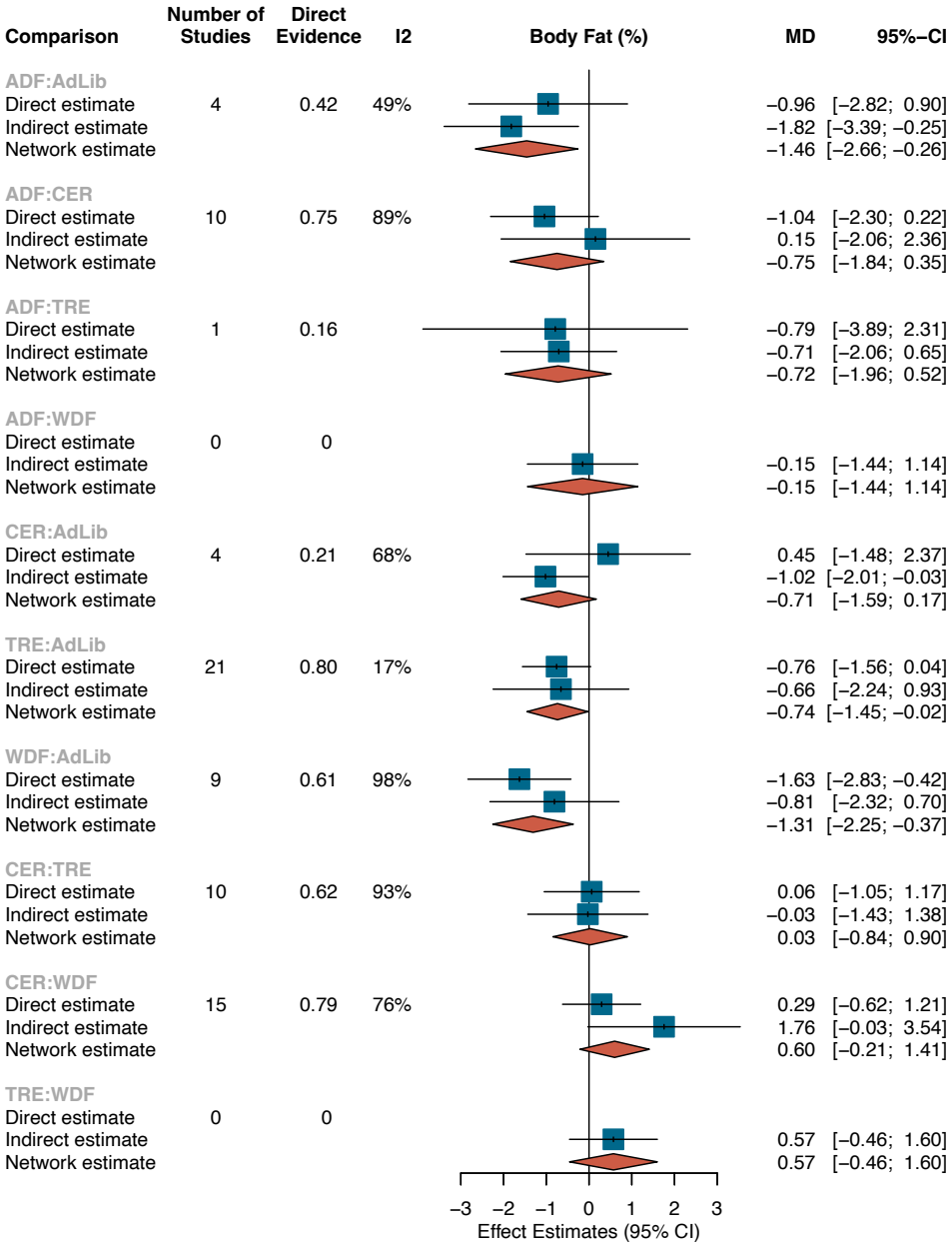
Supplementary Figure 2. Risk of bias proportion for all included trials based on the outlined criteria.



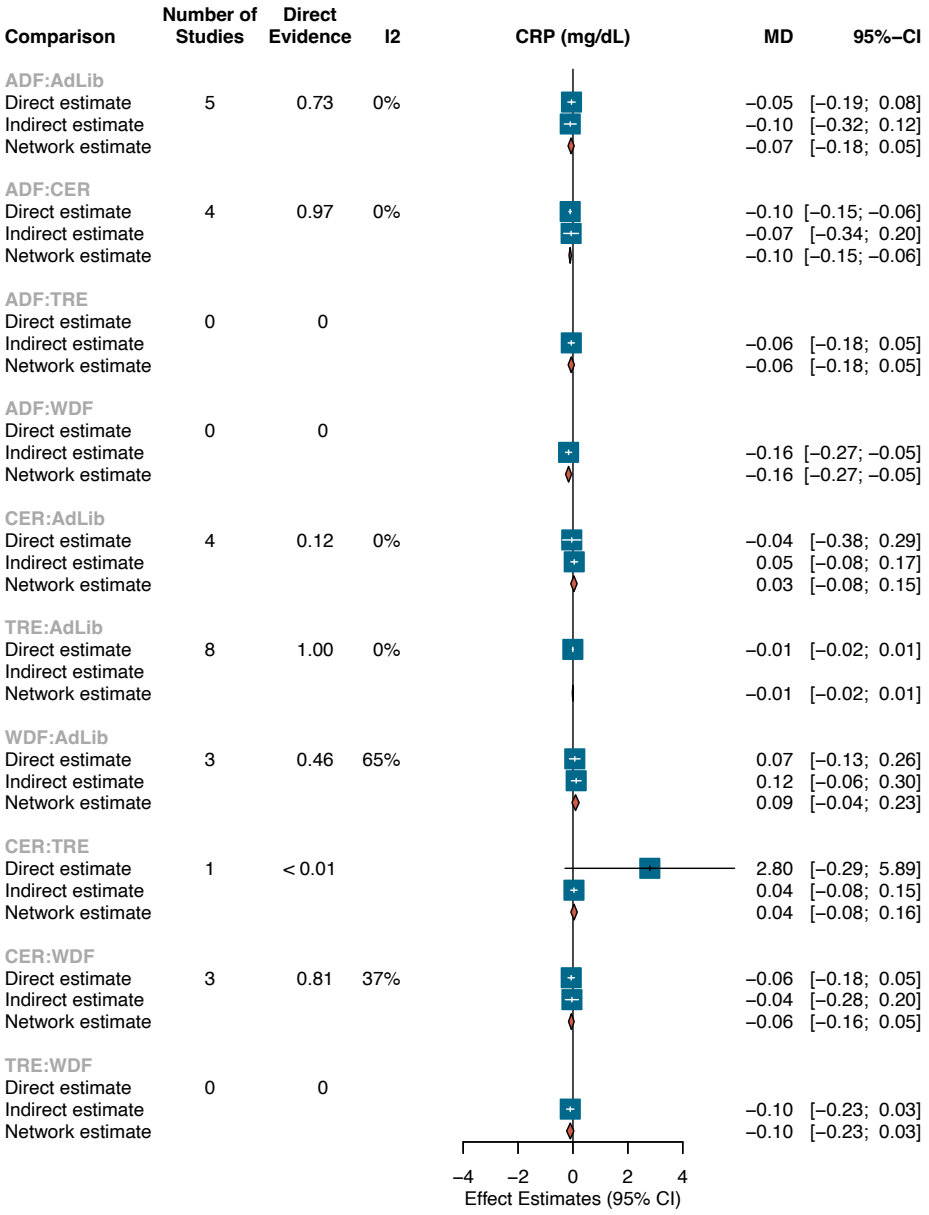
Supplementary Figure 3. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on ALT (U/L). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



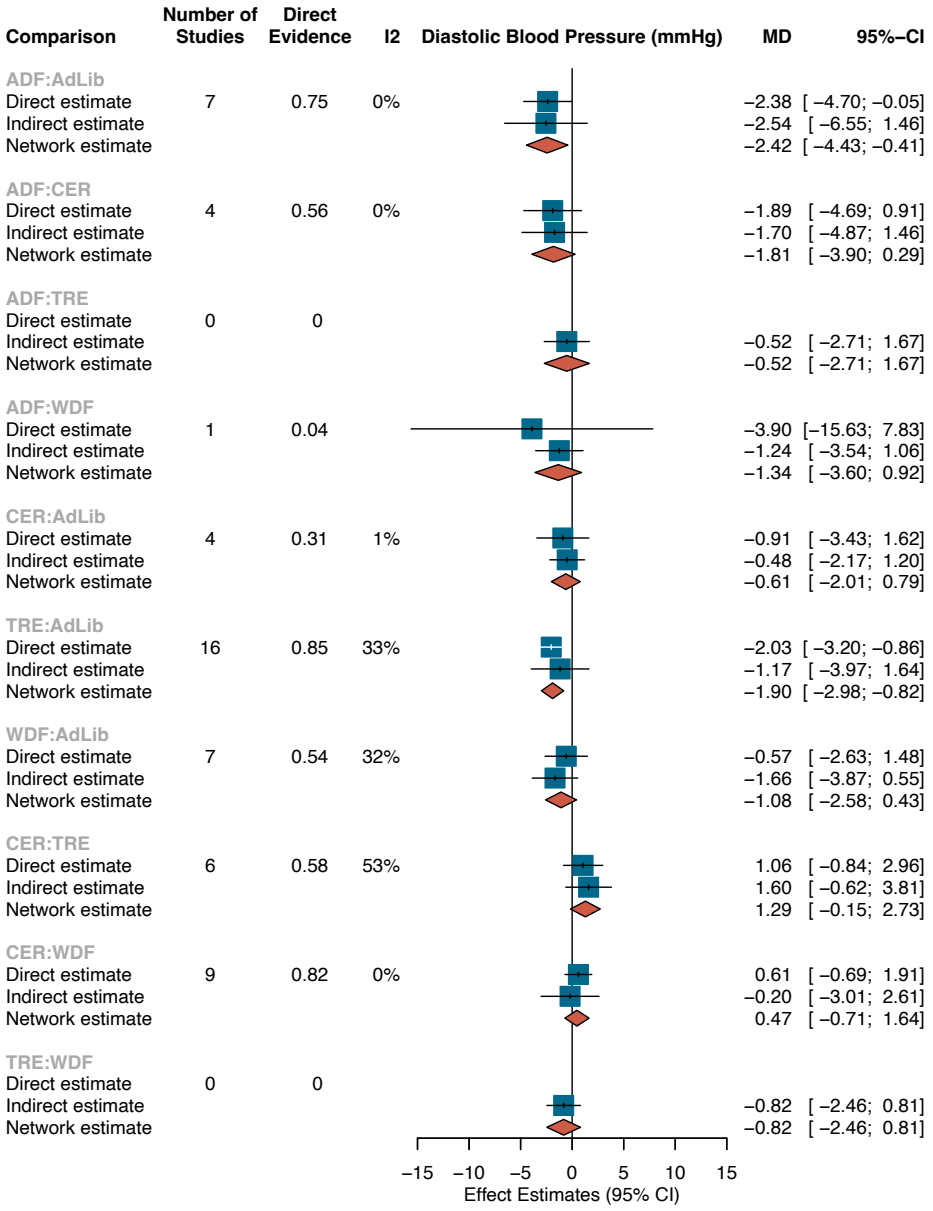
Supplementary Figure 4. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on BMI (kg/m^2). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



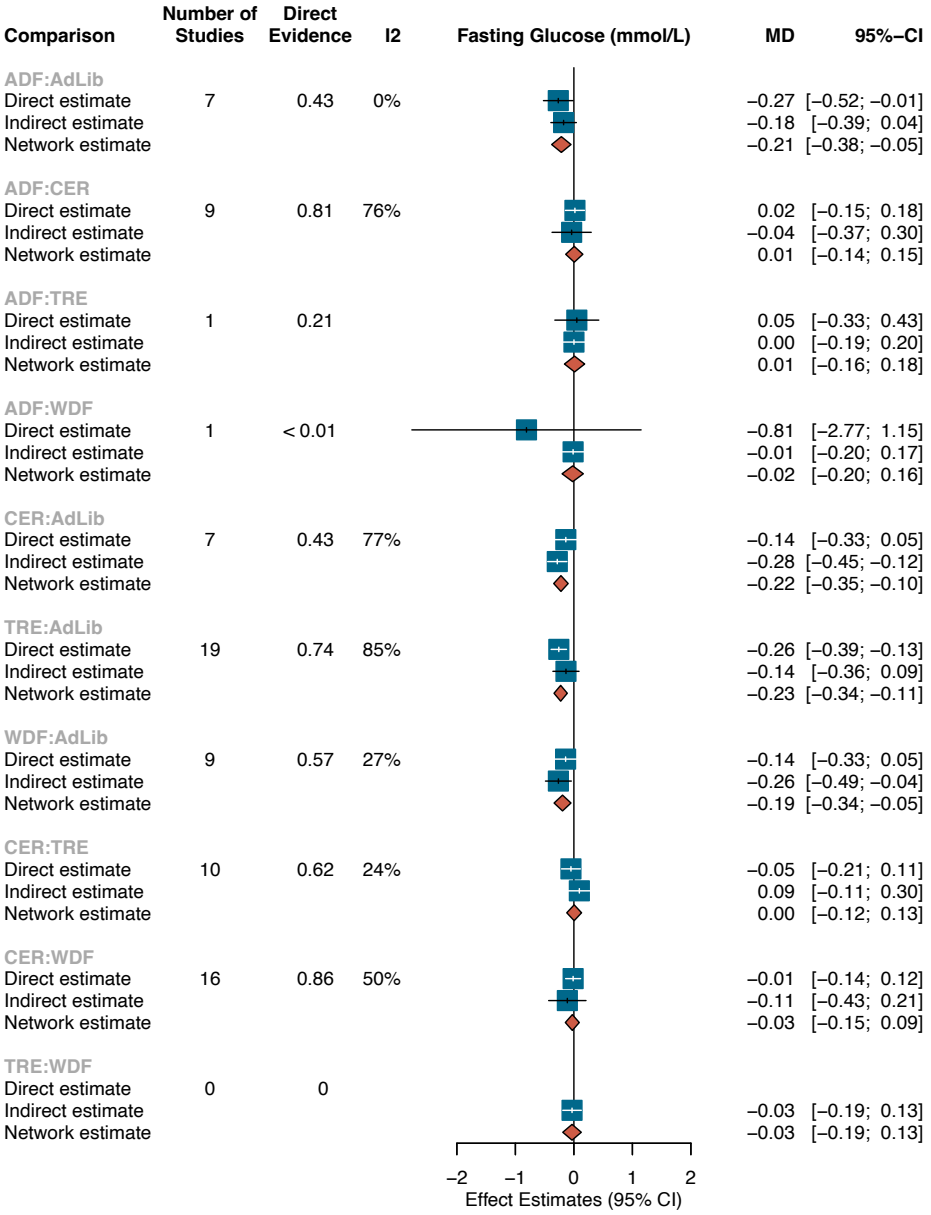
Supplementary Figure 5. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on body fat (%). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



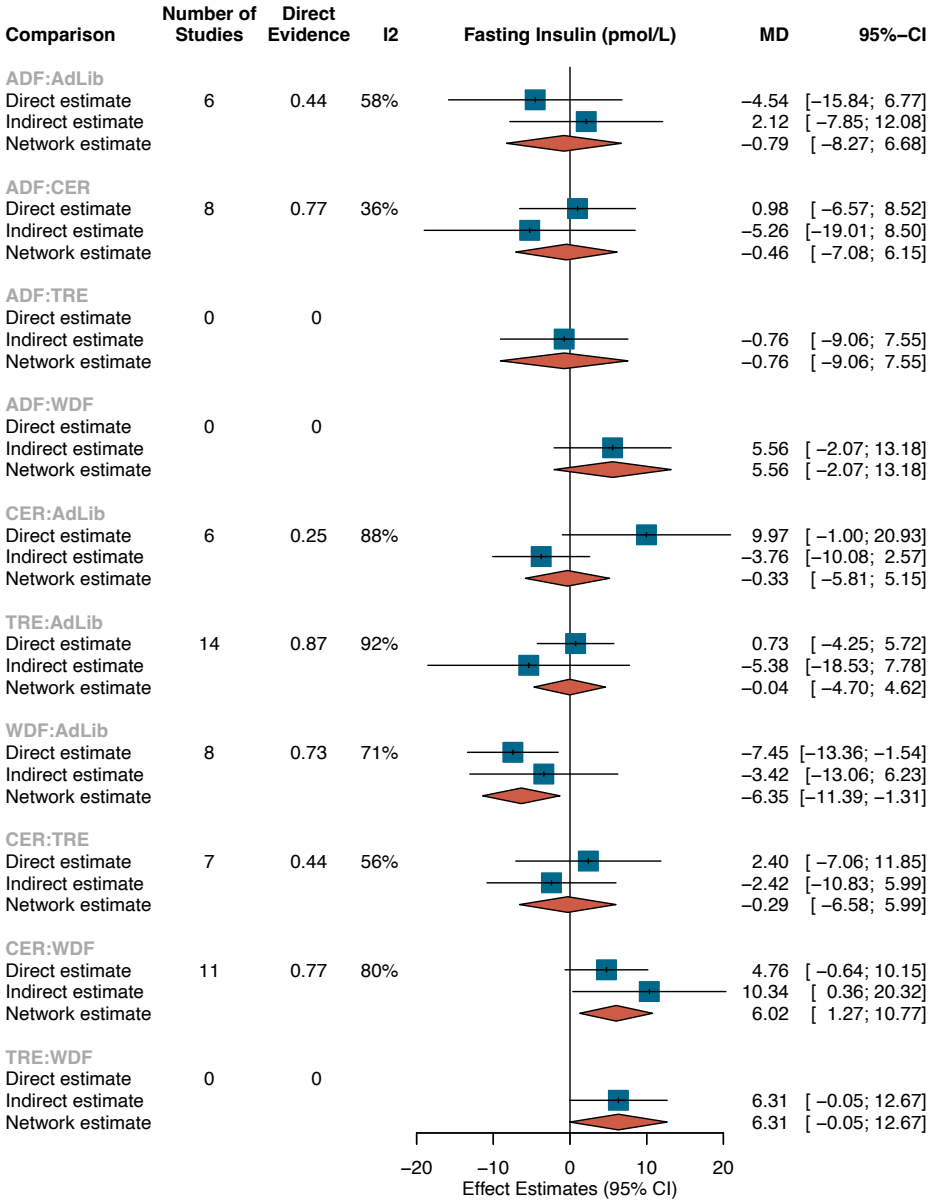
Supplementary Figure 6. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on CRP (mg/dL). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



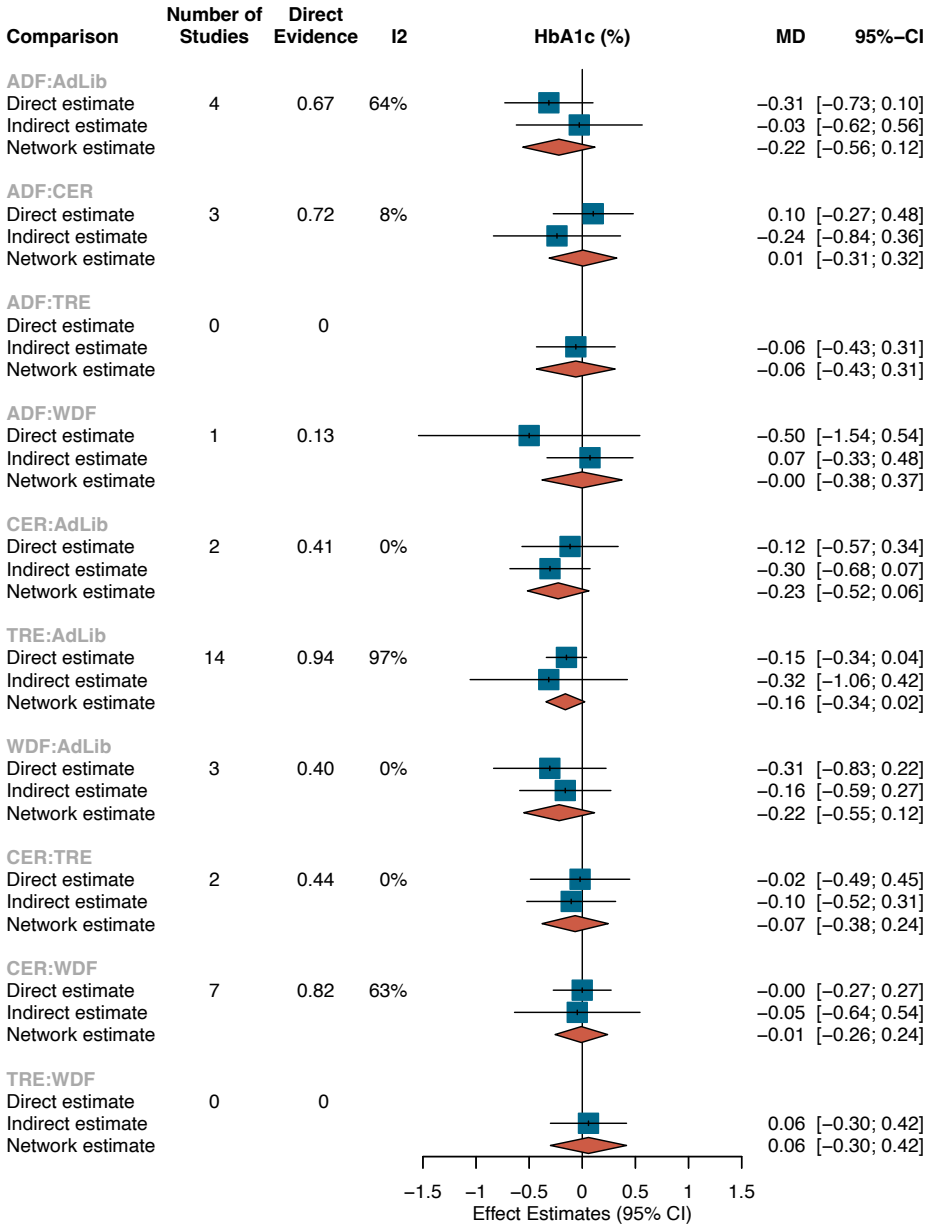
Supplementary Figure 7. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on diastolic blood pressure (mmHg). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



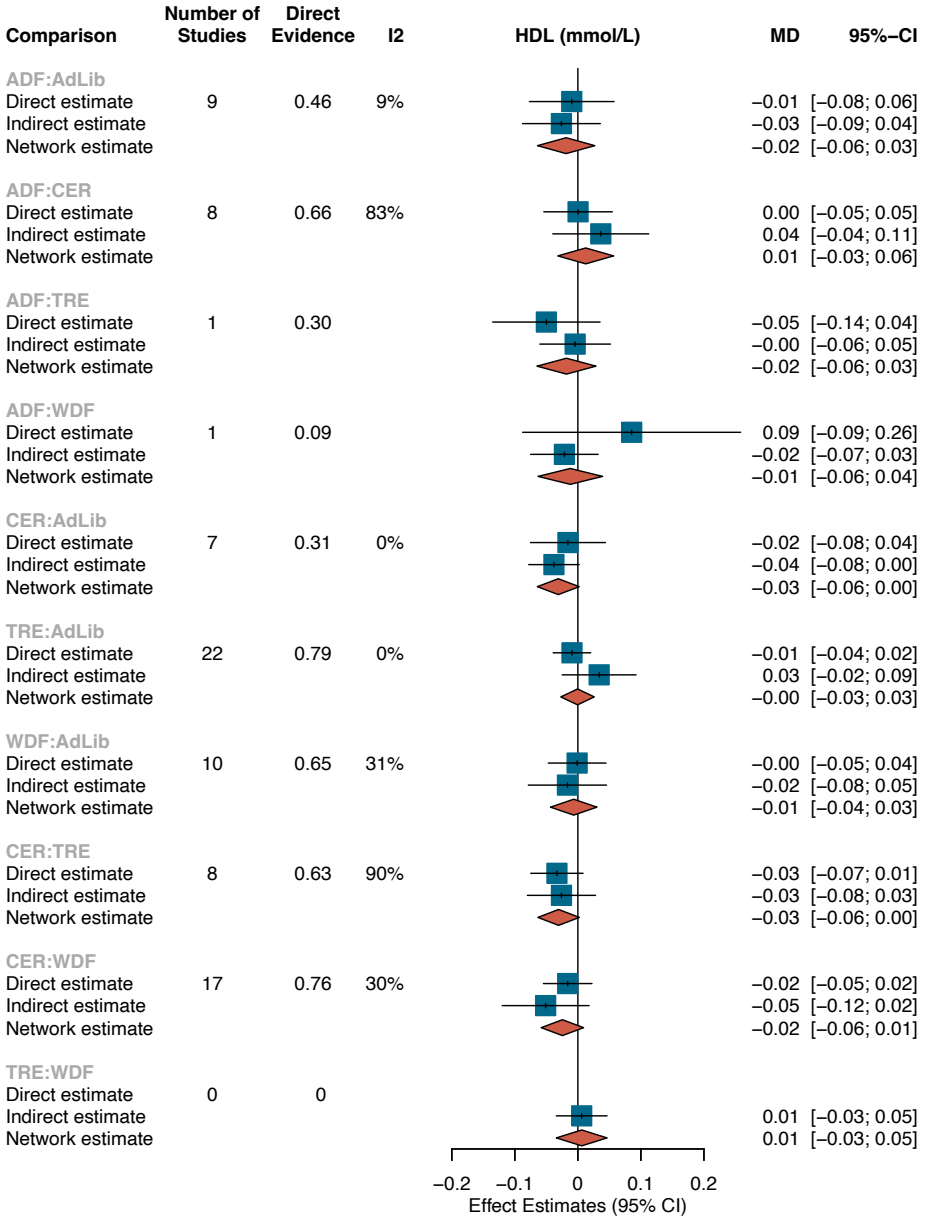
Supplementary Figure 8. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on fasting glucose (mmol/L). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



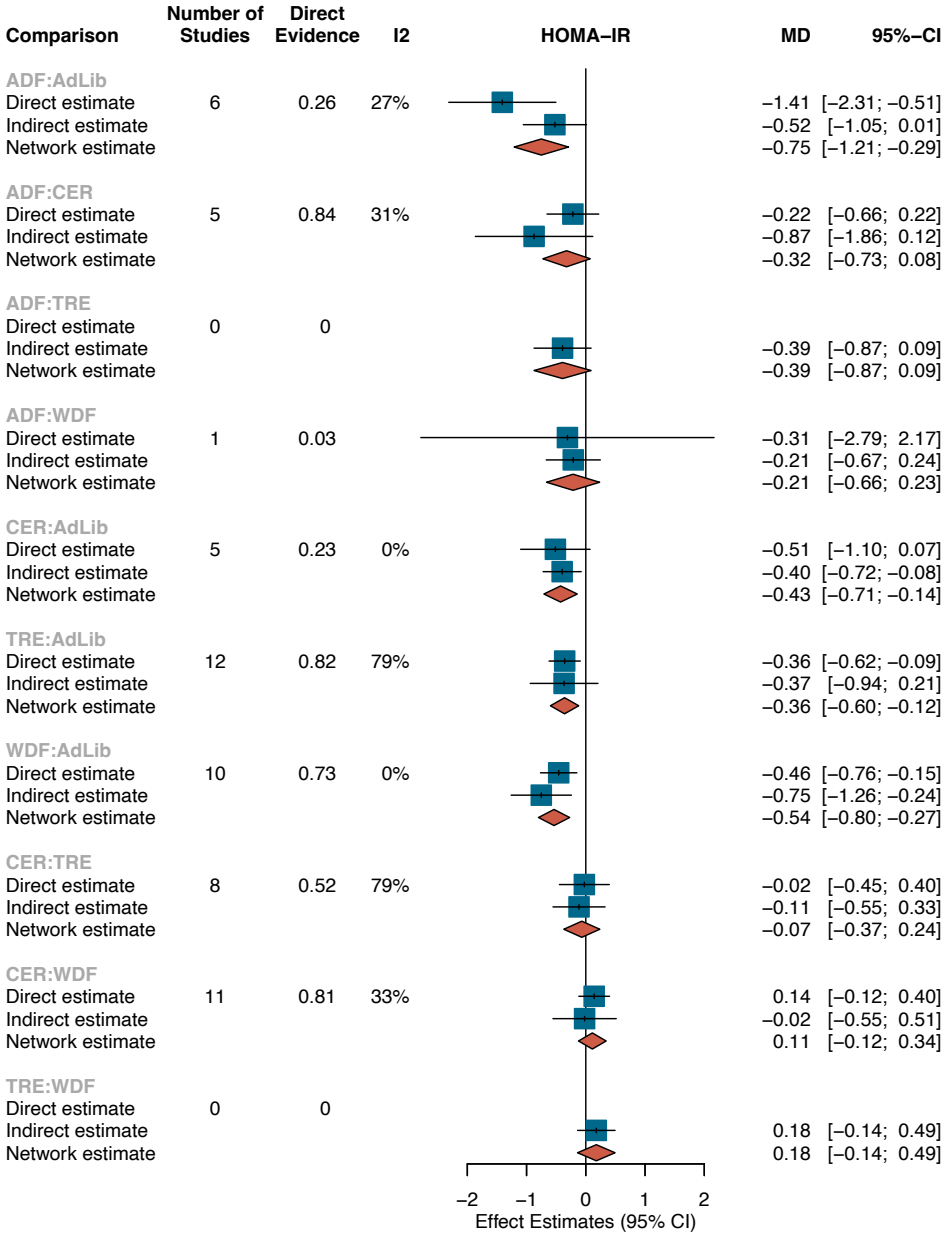
Supplementary Figure 9. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on fasting insulin (pmol/L). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



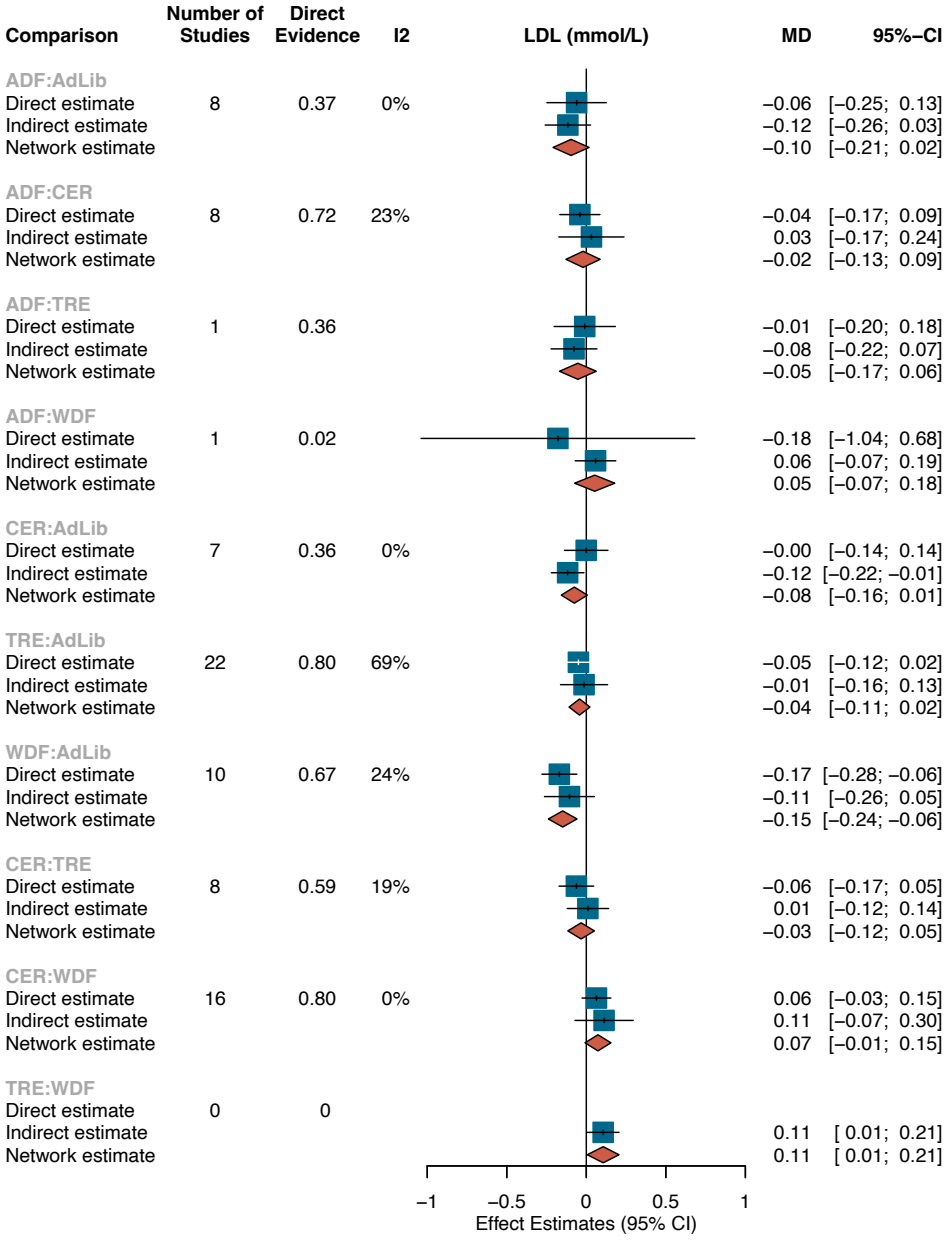
Supplementary Figure 10. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on HbA1c (%). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



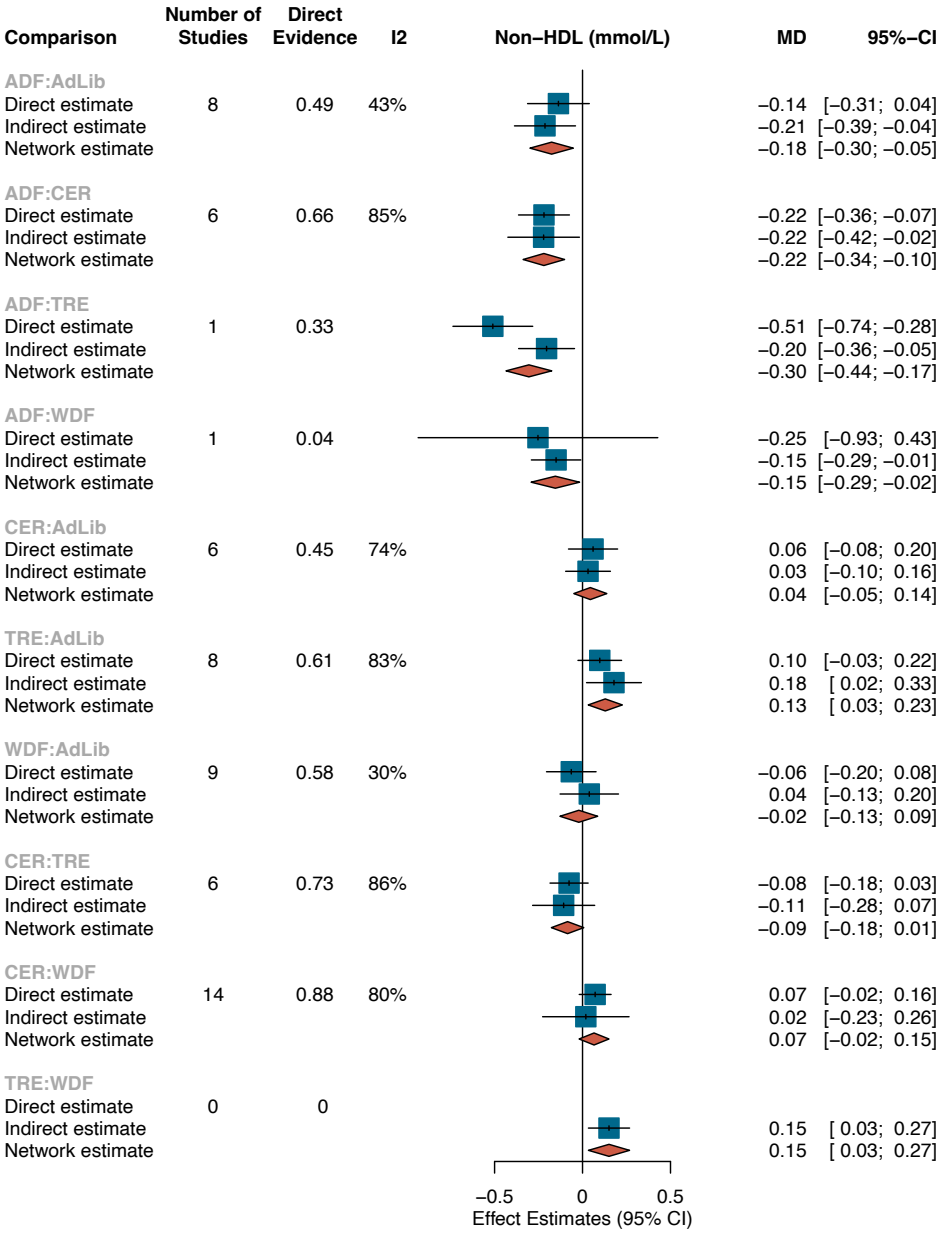
Supplementary Figure 11. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on HDL (mmol/L). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



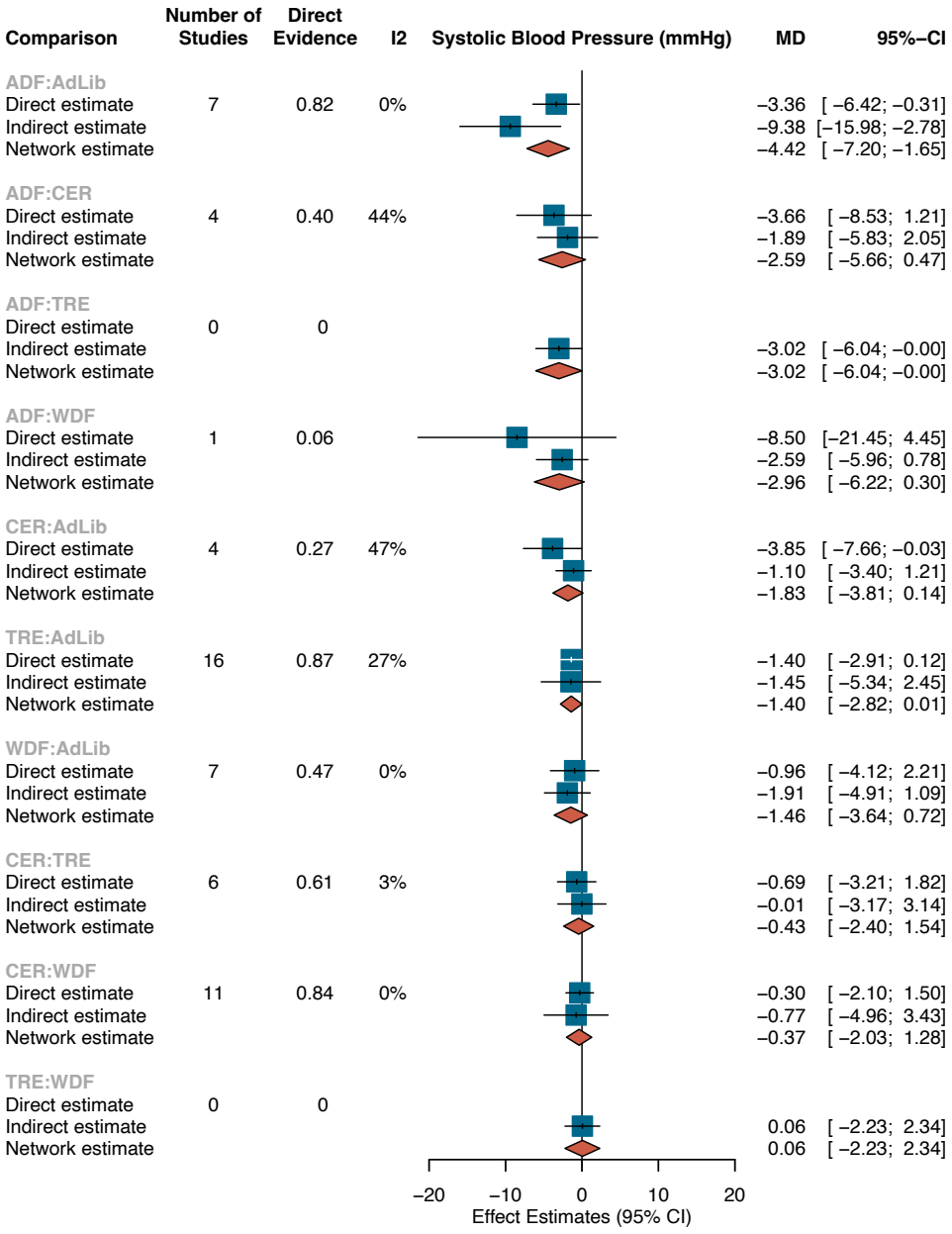
Supplementary Figure 12. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on HOMA-IR. Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



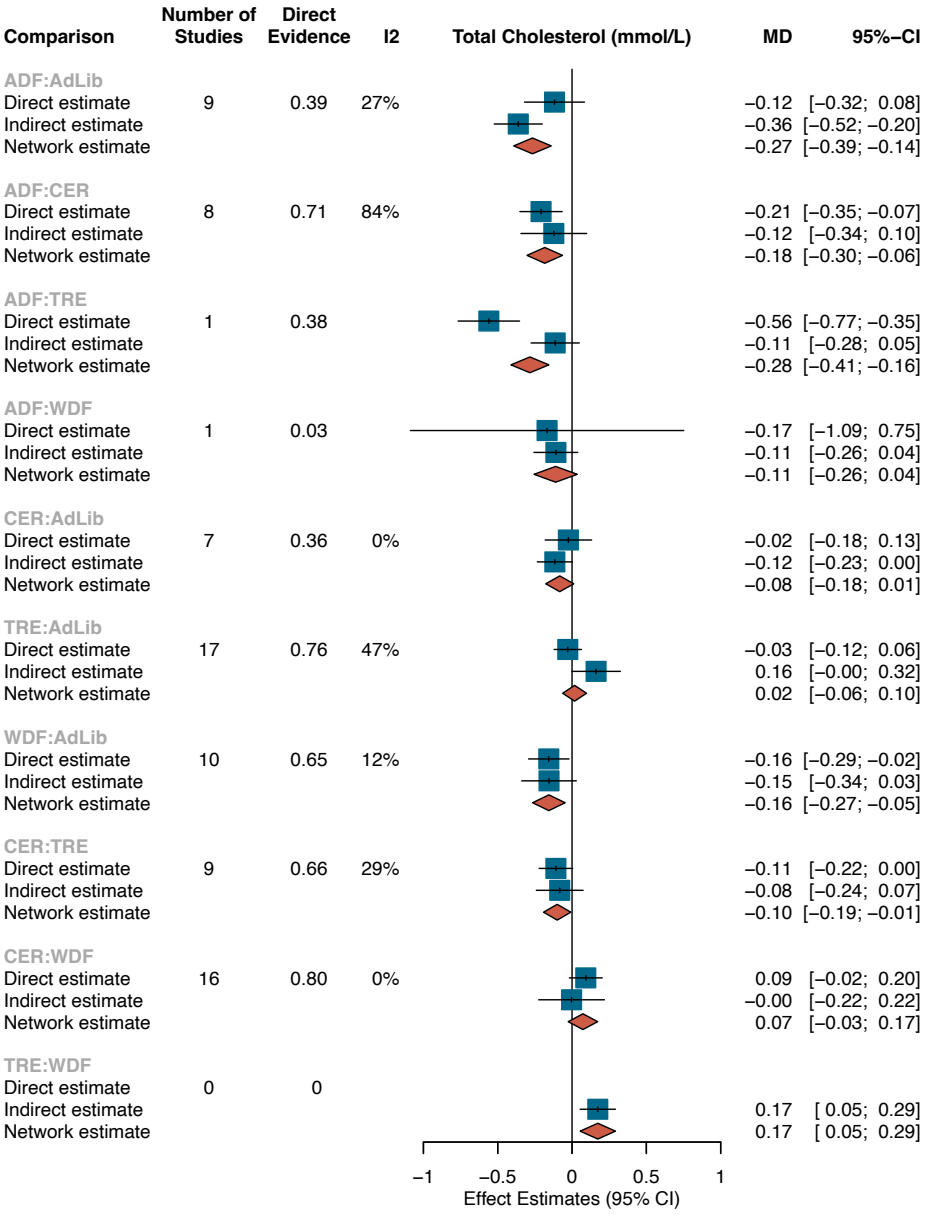
Supplementary Figure 13. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on LDL (mmol/L). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



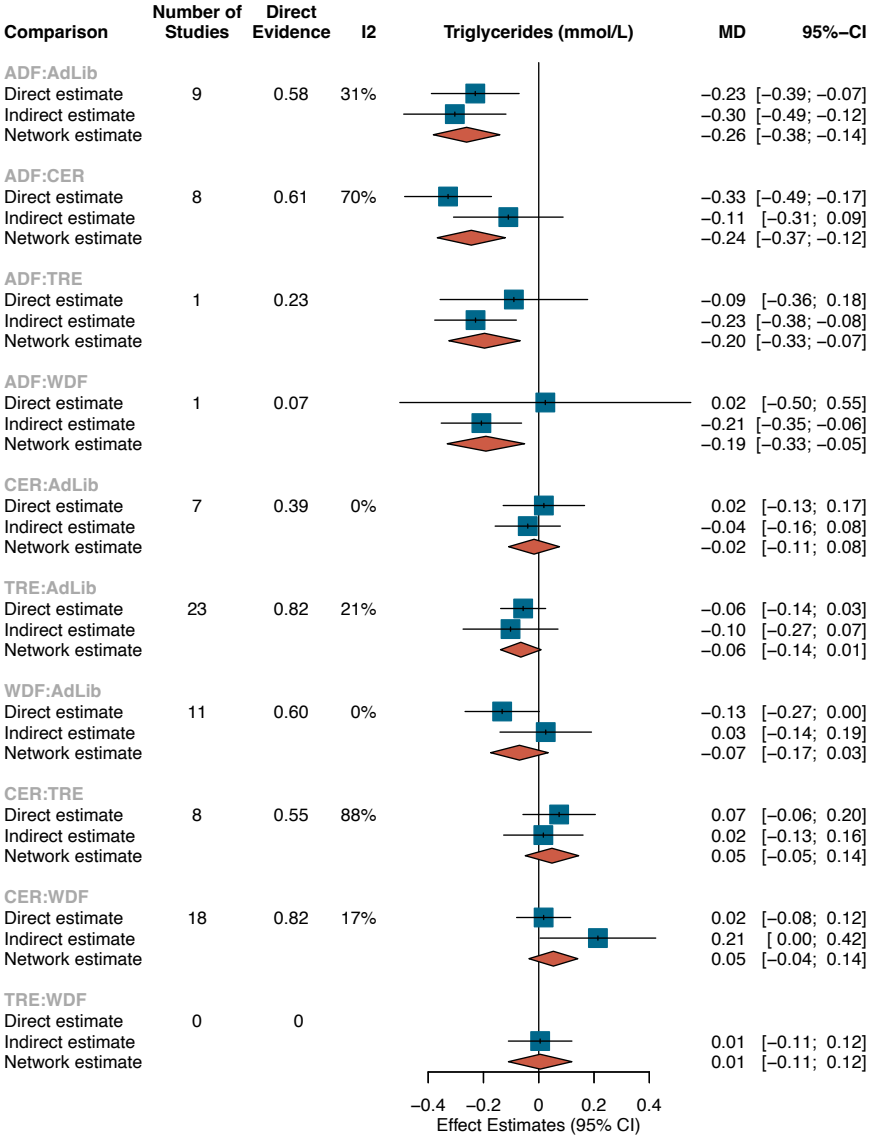
Supplementary Figure 14. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on non-HDL (mmol/L). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



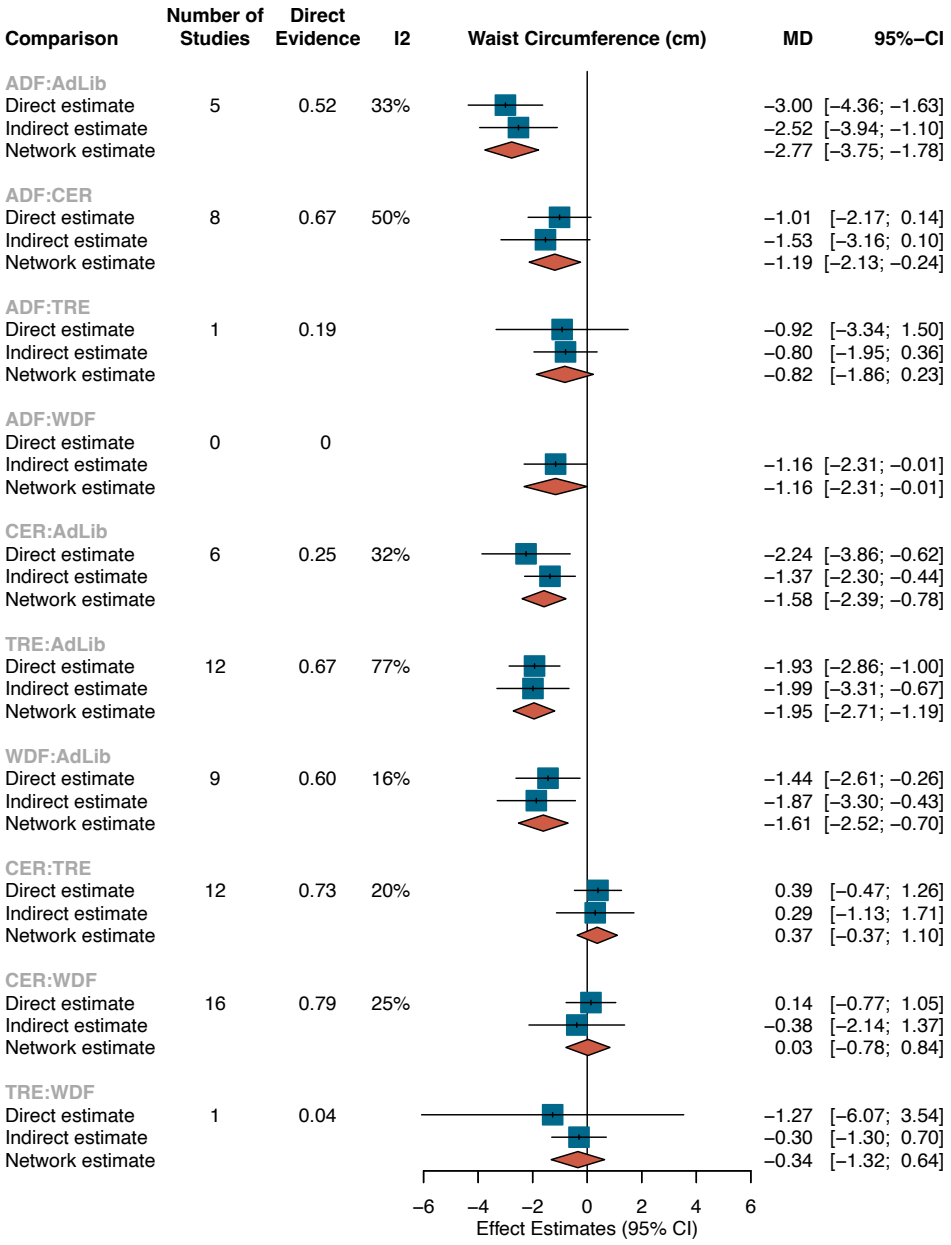
Supplementary Figure 15. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on systolic blood pressure (mmHg). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



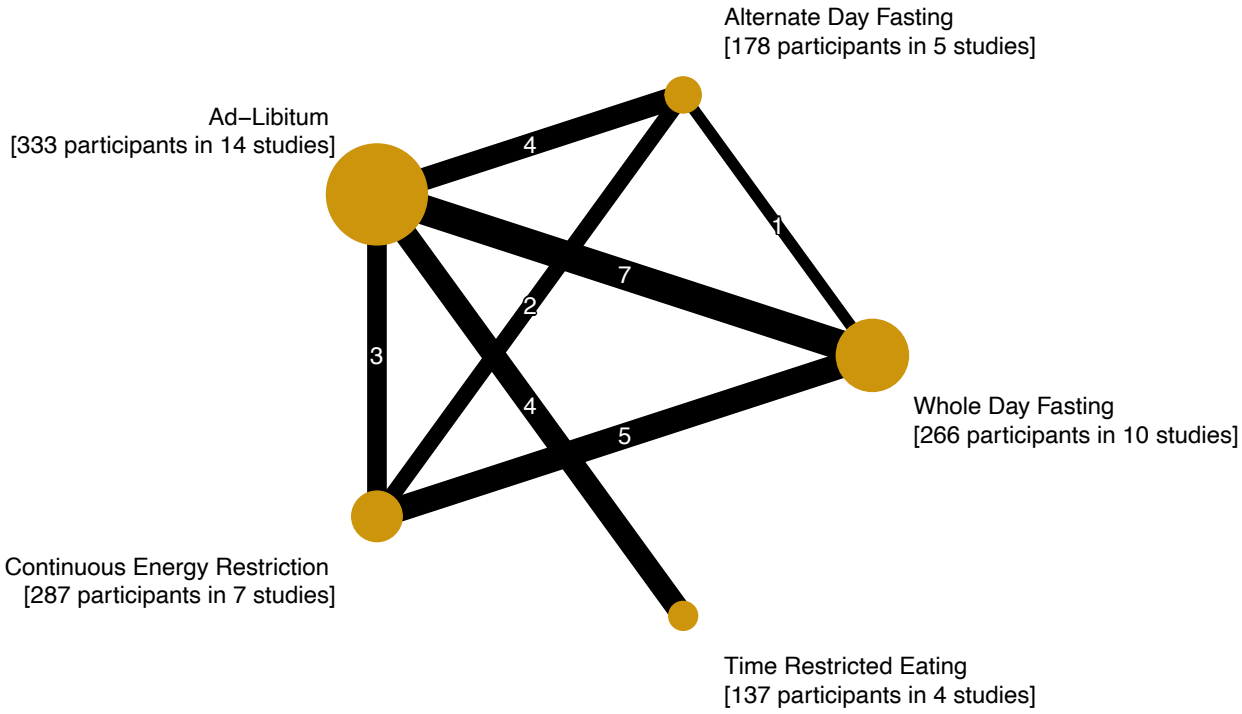
Supplementary Figure 16. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on total cholesterol (mmol/L). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



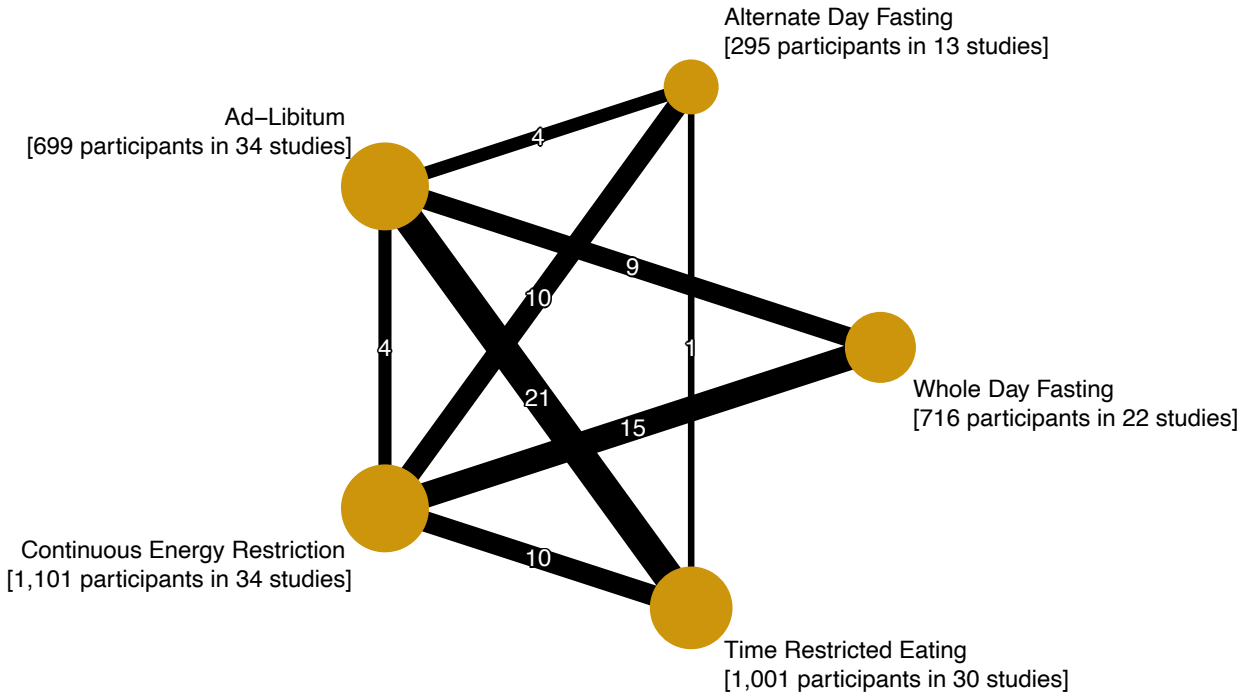
Supplementary Figure 17. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on triglycerides (mmol/L). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



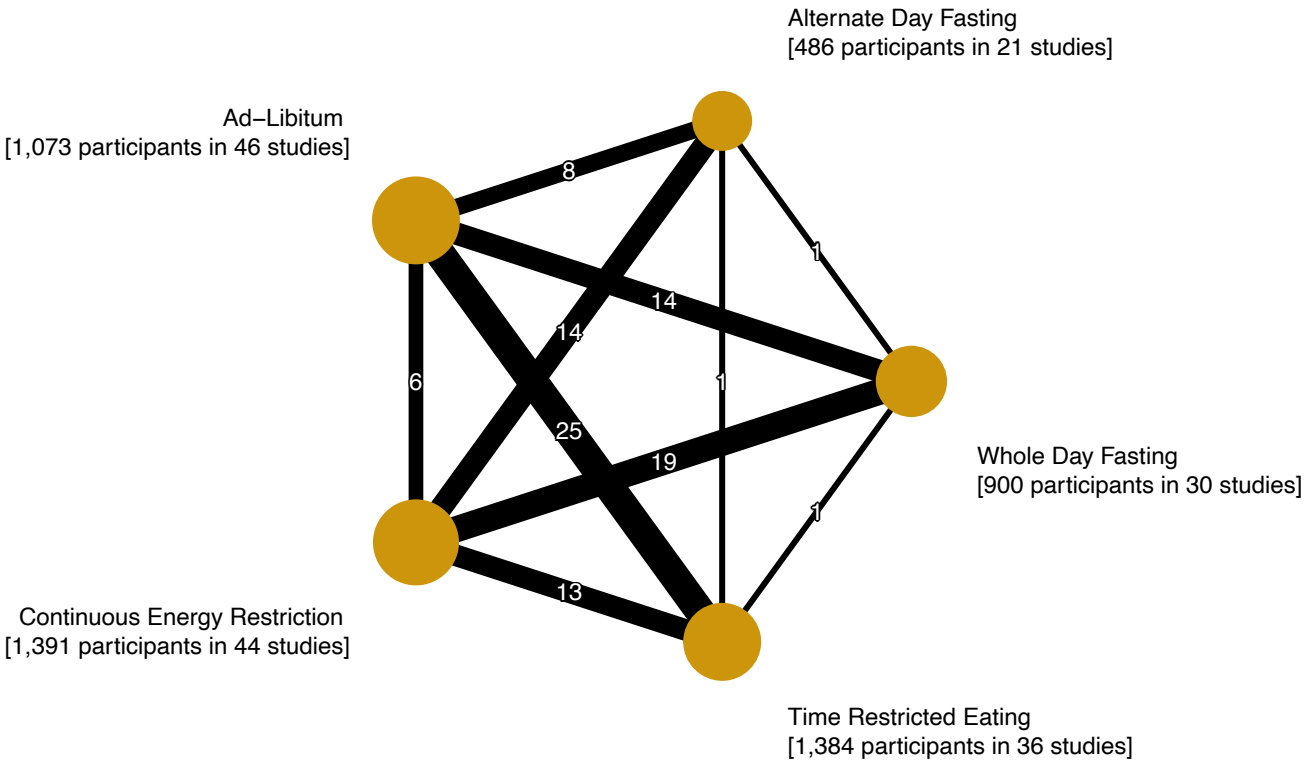
Supplementary Figure 18. Network analysis comparing intermittent fasting strategies, continuous energy restriction, and ad-libitum diets on waist circumference (cm). Each comparison evaluates the assessment of diet arm 1 compared to diet arm 2. The blue box represents the mean difference (MD) and the line represents the 95% confidence intervals (CI). This is presented for direct estimates and indirect estimates. The red diamond represents the overall network estimate for that comparison, which integrates both direct and indirect estimates. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. 'Number of studies' refers to the total number of direct evidence published for the specific comparison. `Direct evidence` refers to the proportion of the evidence available from direct assessments through published literature. 'I^2' refers to the percentage of the total variability in a set of effect sizes due to true heterogeneity.



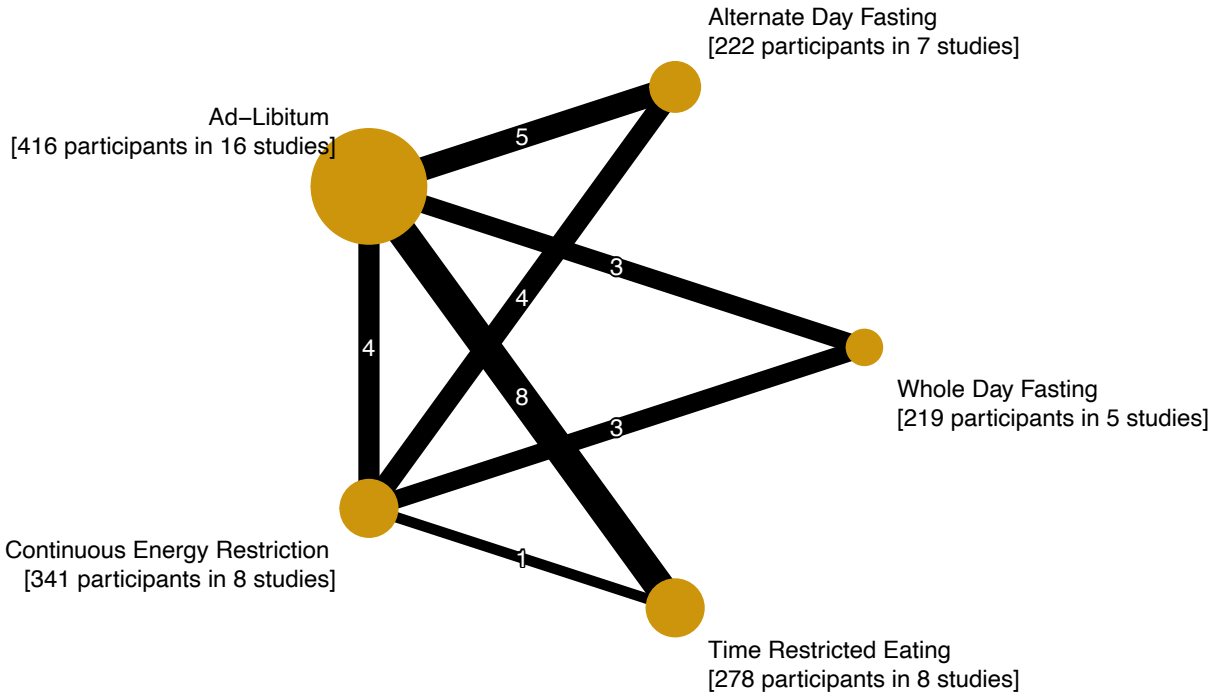
Supplementary Figure 19. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with ALT. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



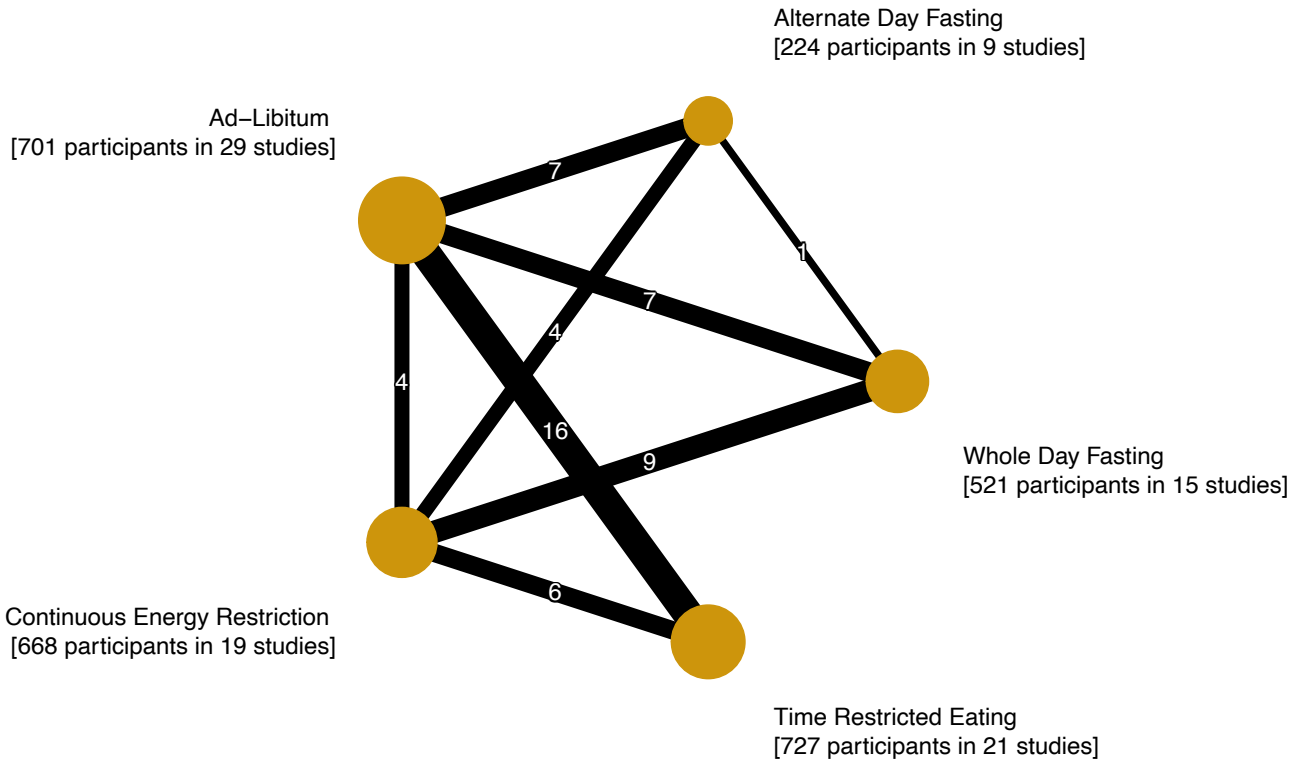
Supplementary Figure 20. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with body fat. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



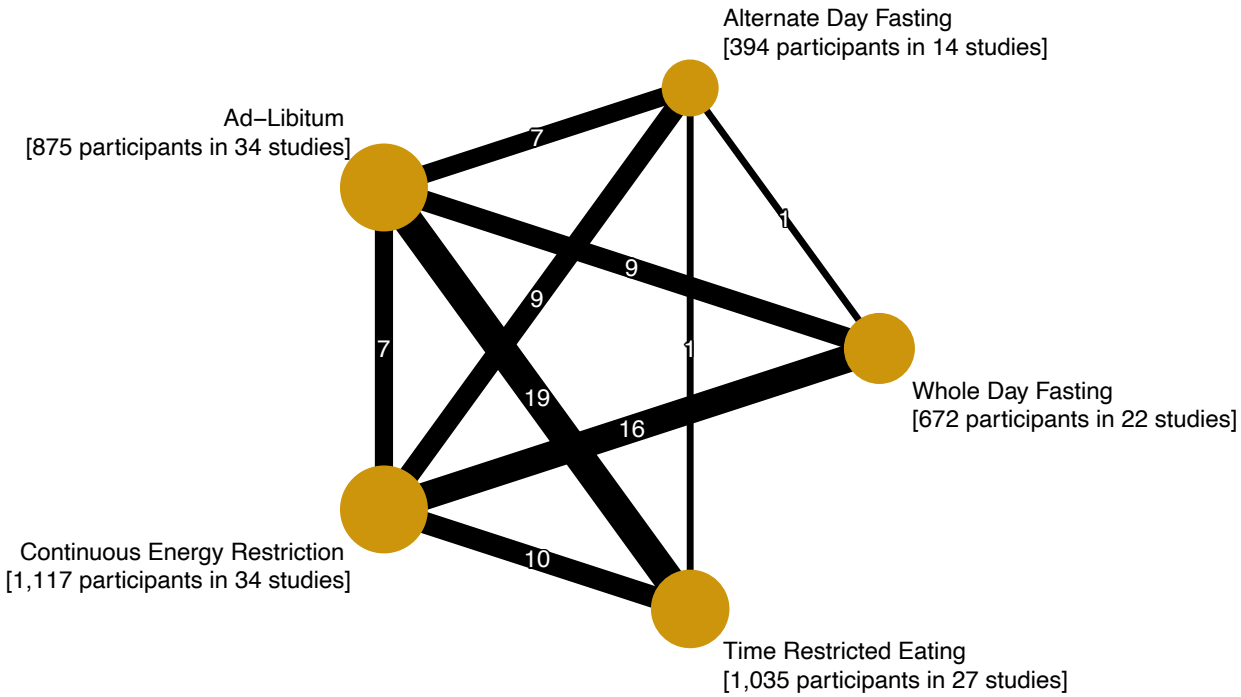
Supplementary Figure 21. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with BMI. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



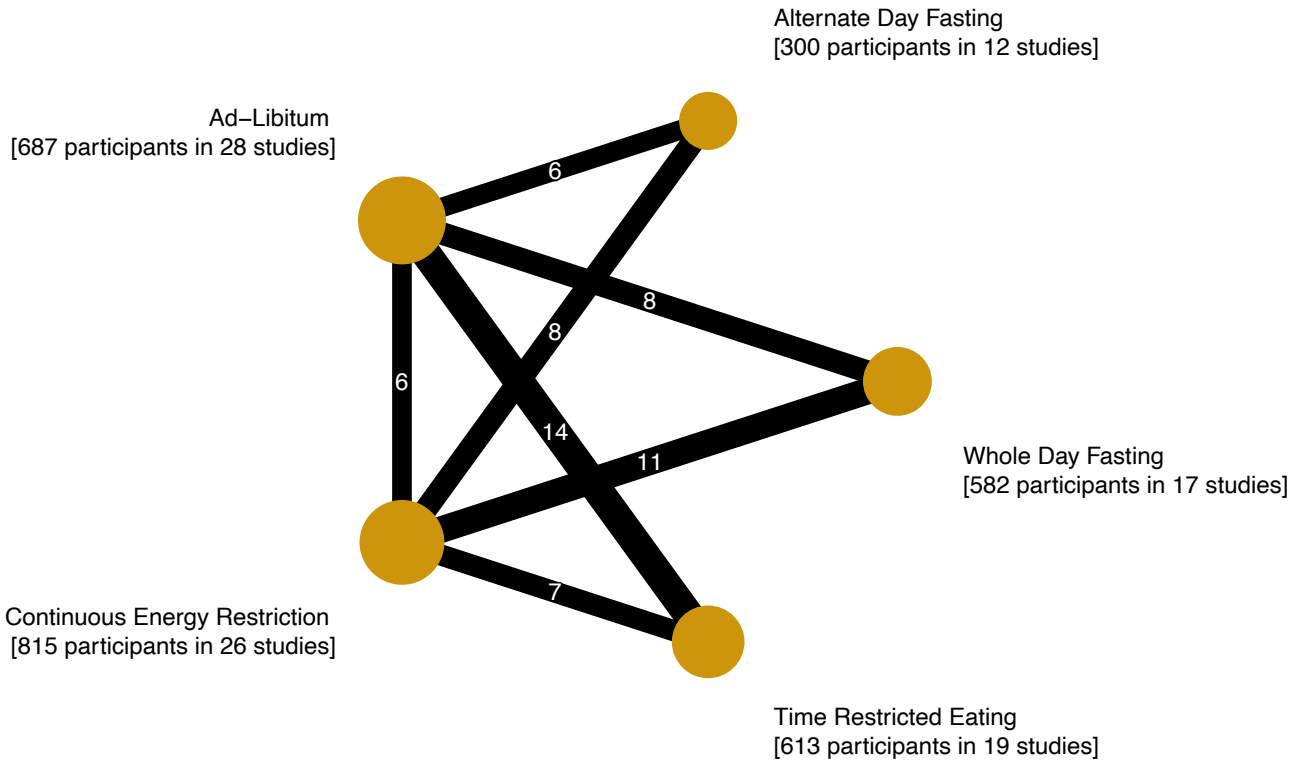
Supplementary Figure 22. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with CRP. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



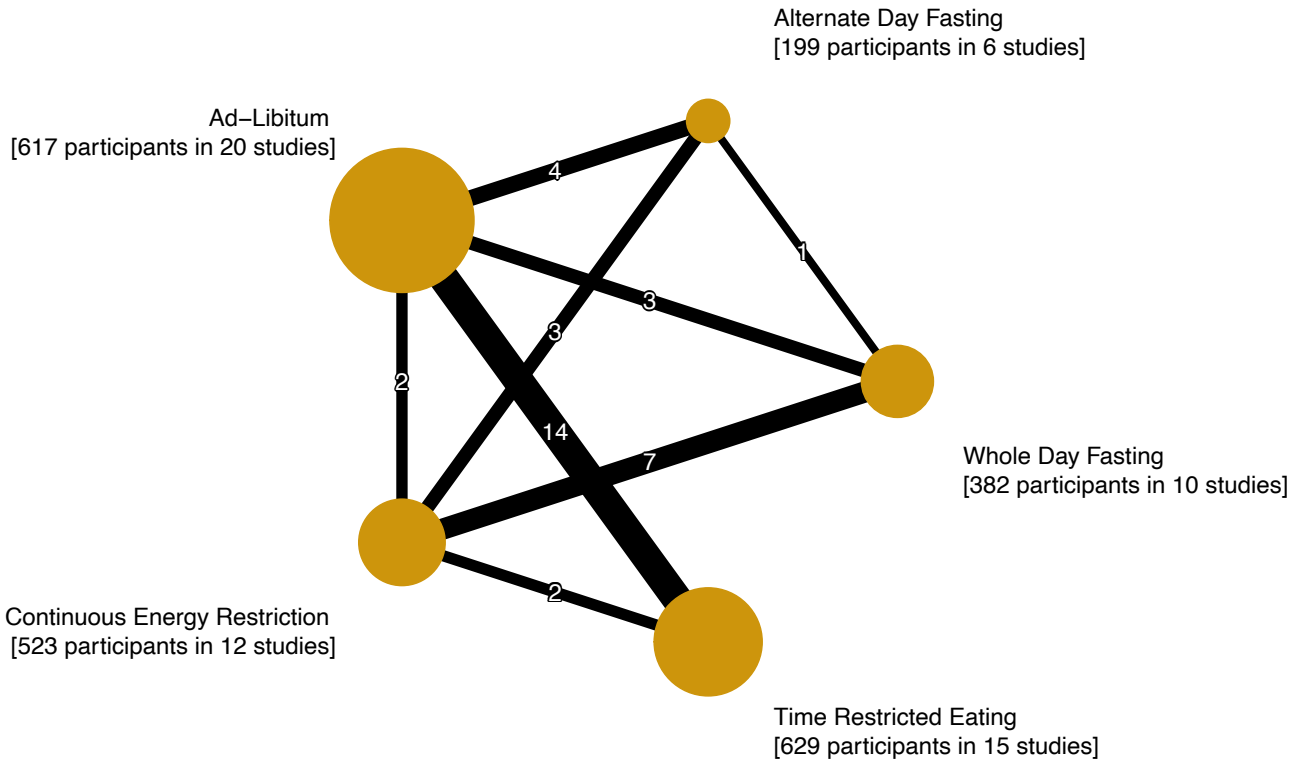
Supplementary Figure 23. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with DBP. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



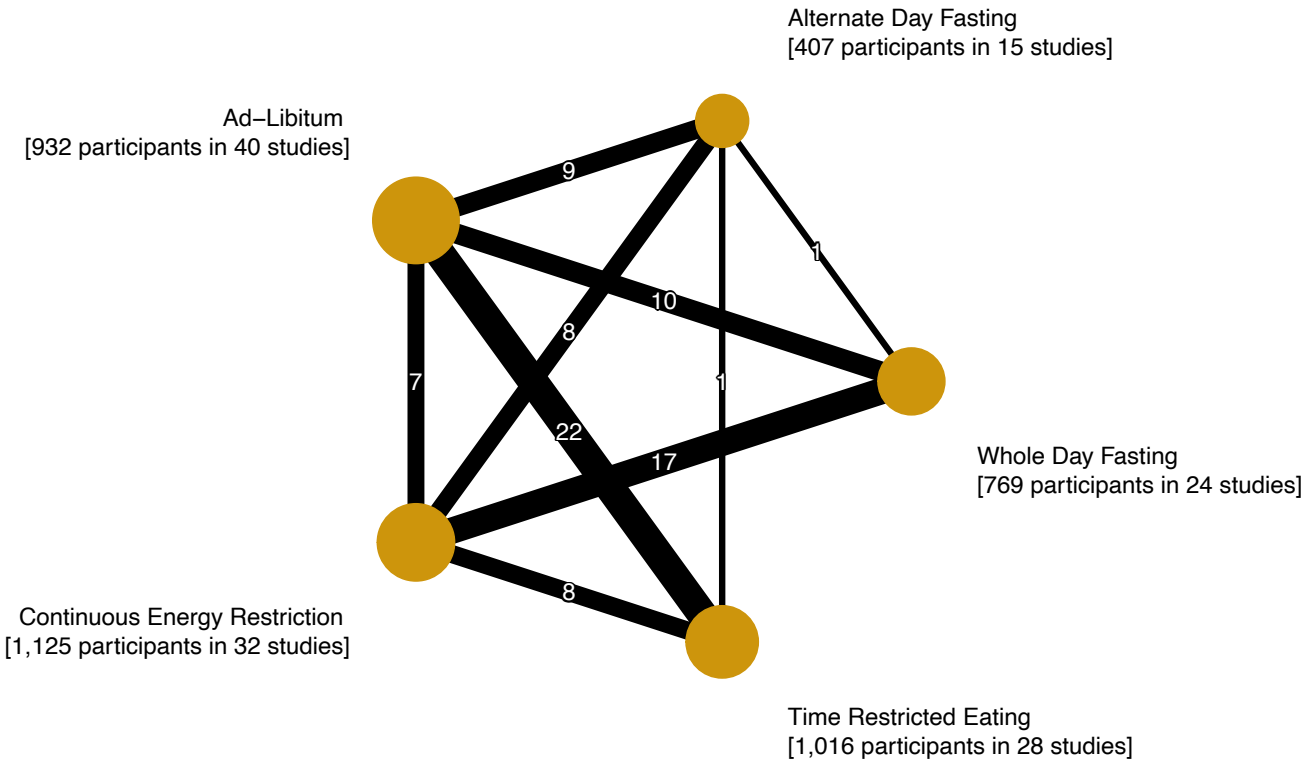
Supplementary Figure 24. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with fasting glucose. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



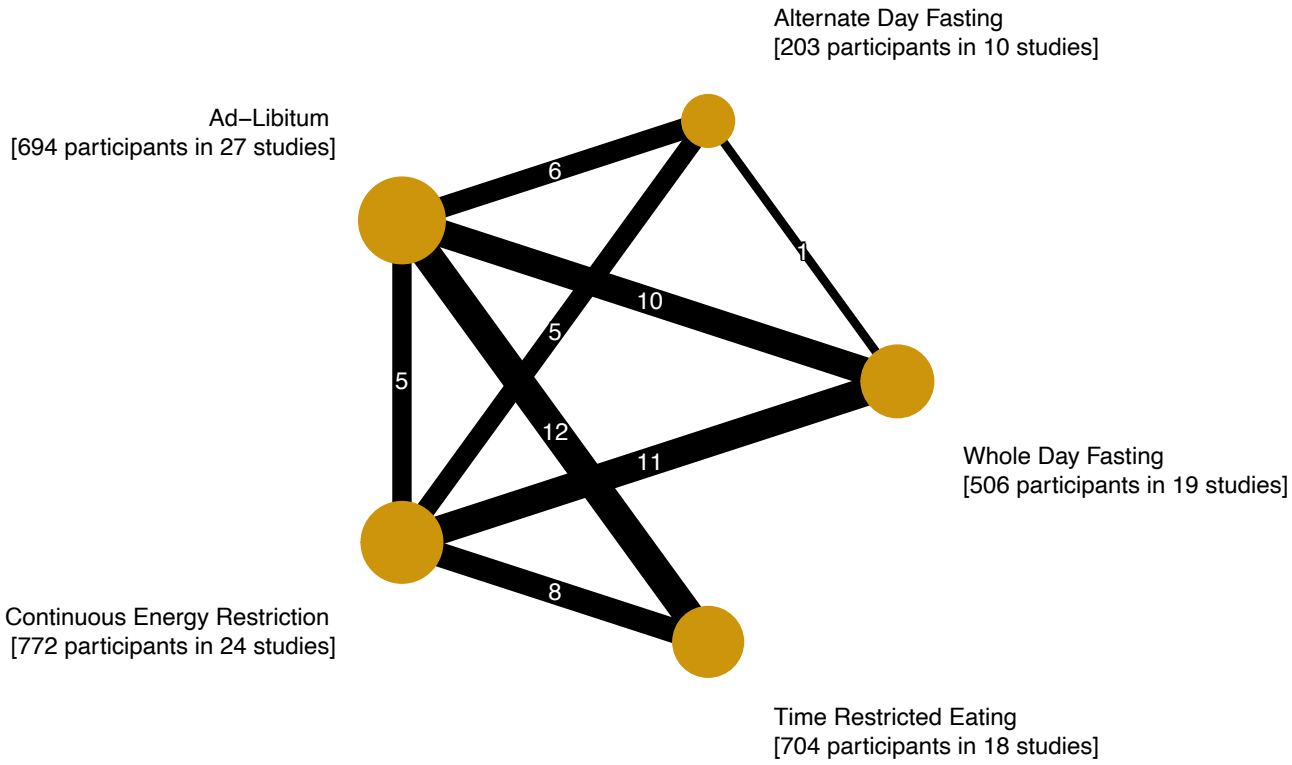
Supplementary Figure 25. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with fasting insulin. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



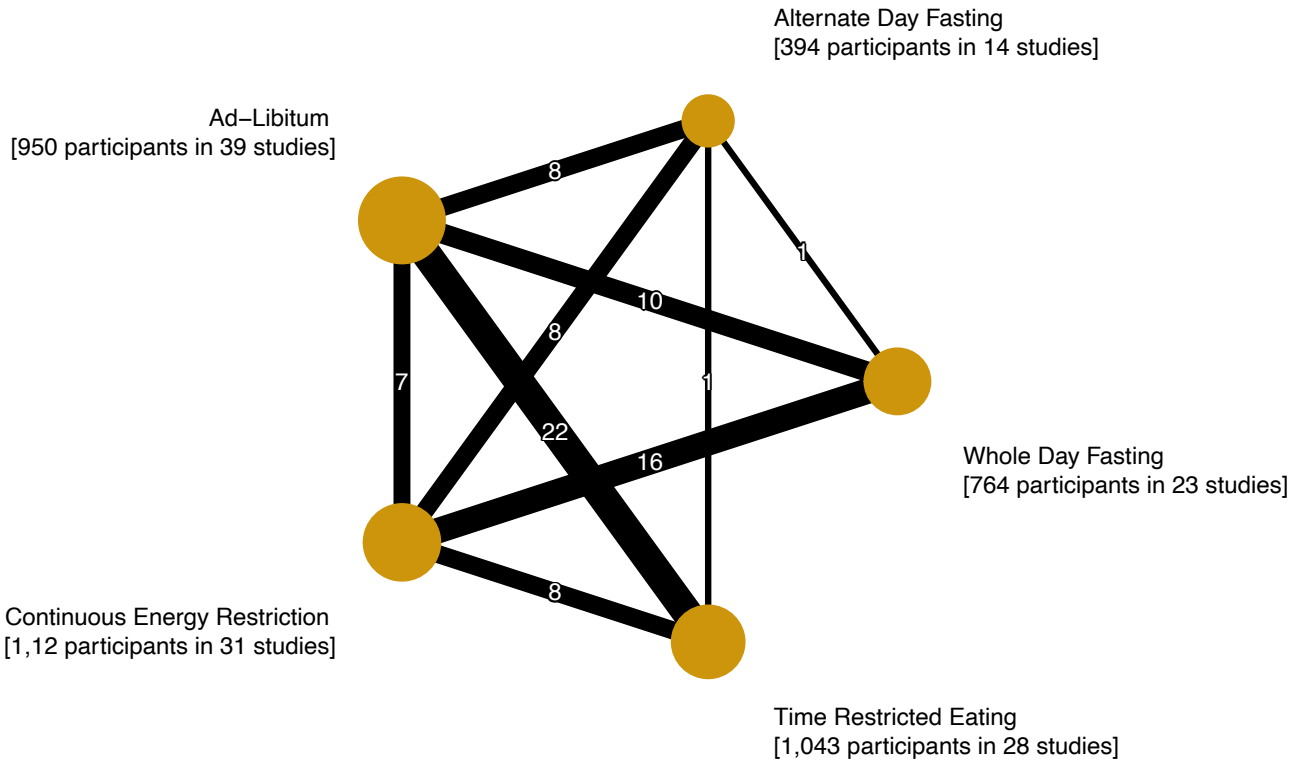
Supplementary Figure 26. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with HbA1c. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



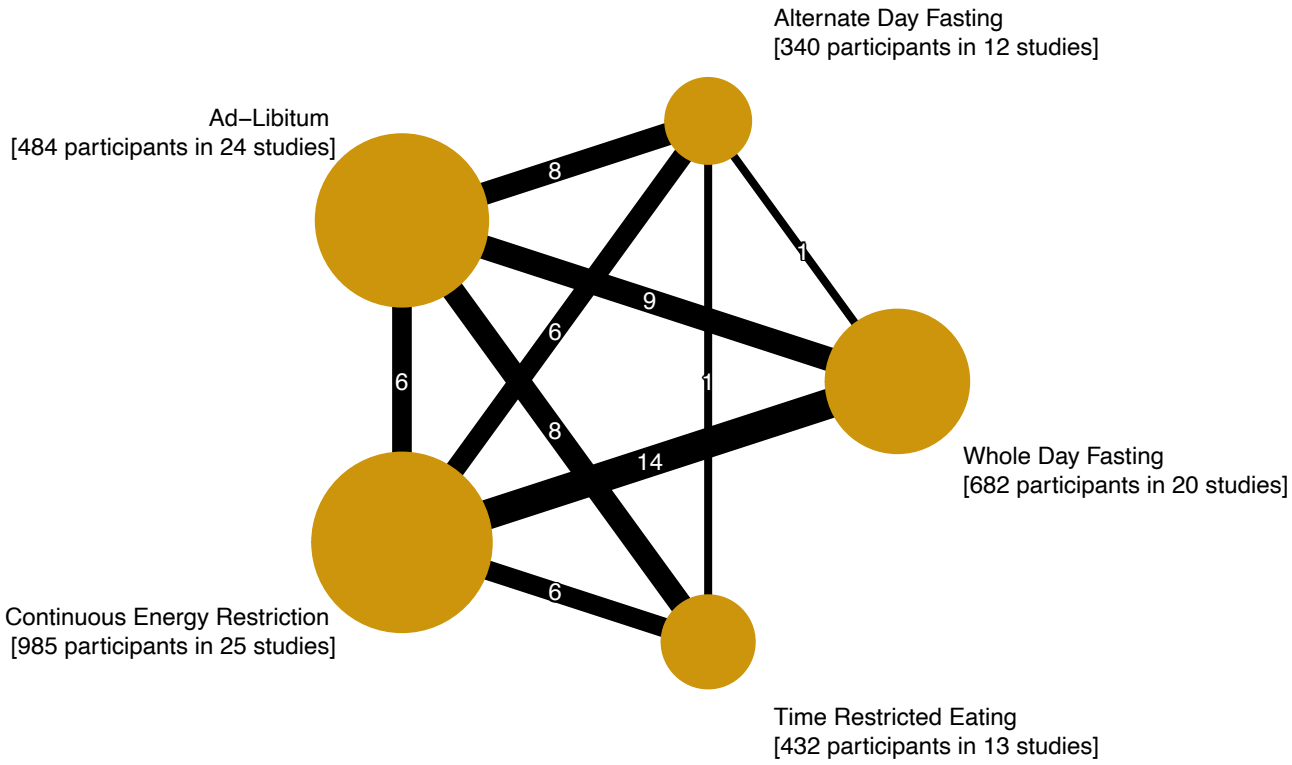
Supplementary Figure 27. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with HDL. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



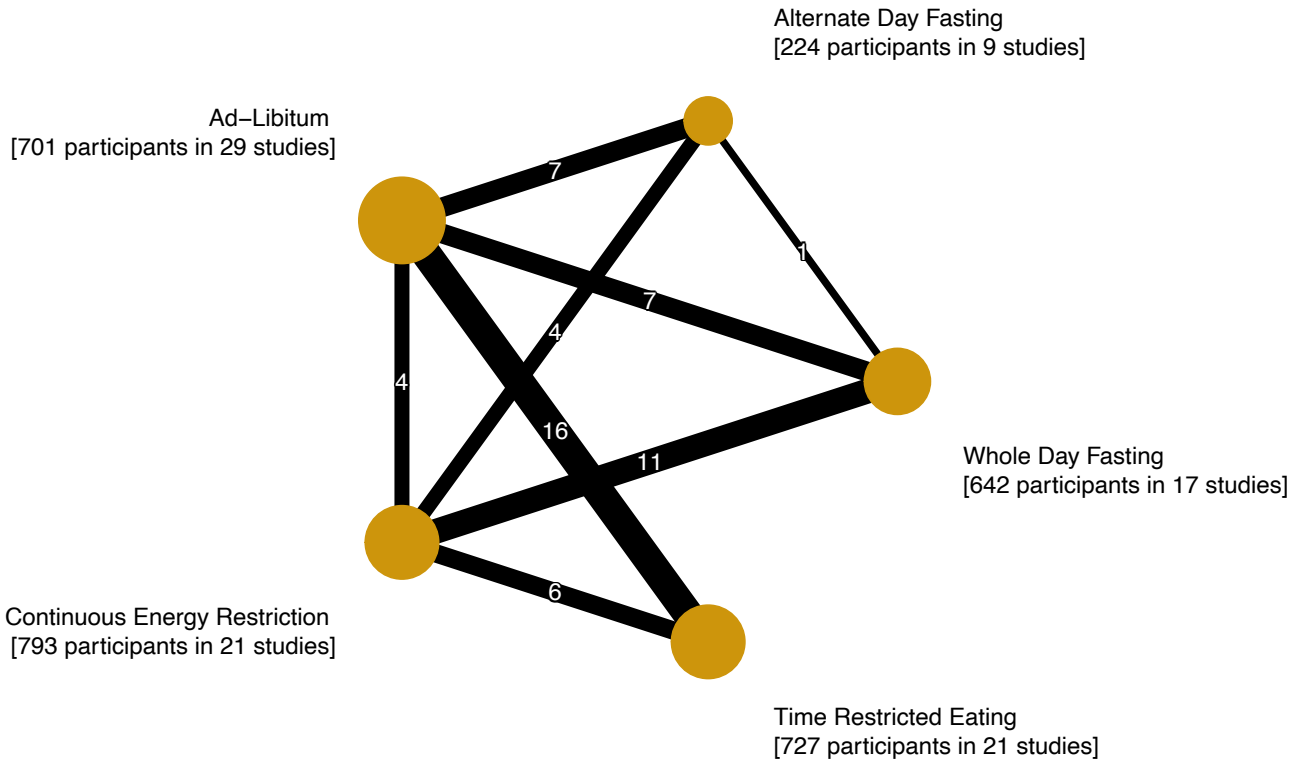
Supplementary Figure 28. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with HOMA-IR. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



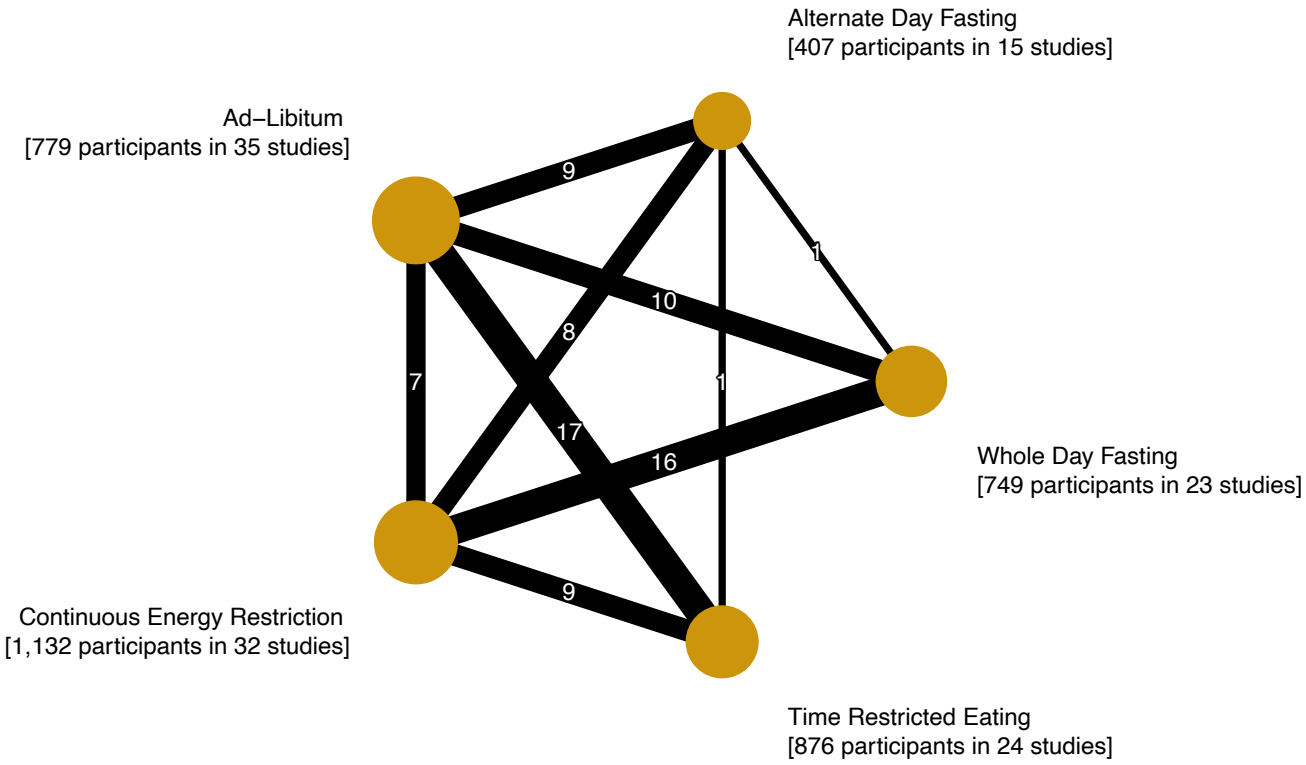
Supplementary Figure 29. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with LDL. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



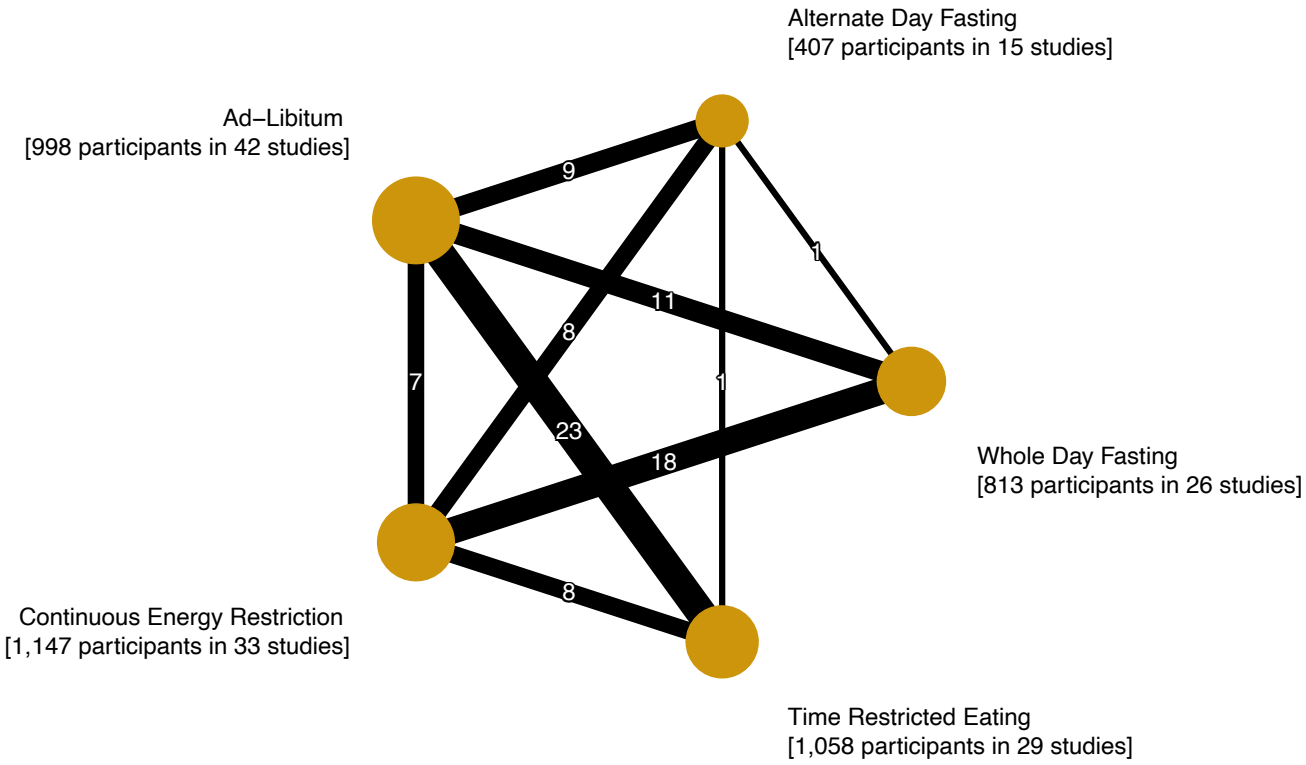
Supplementary Figure 30. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with non-HDL. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



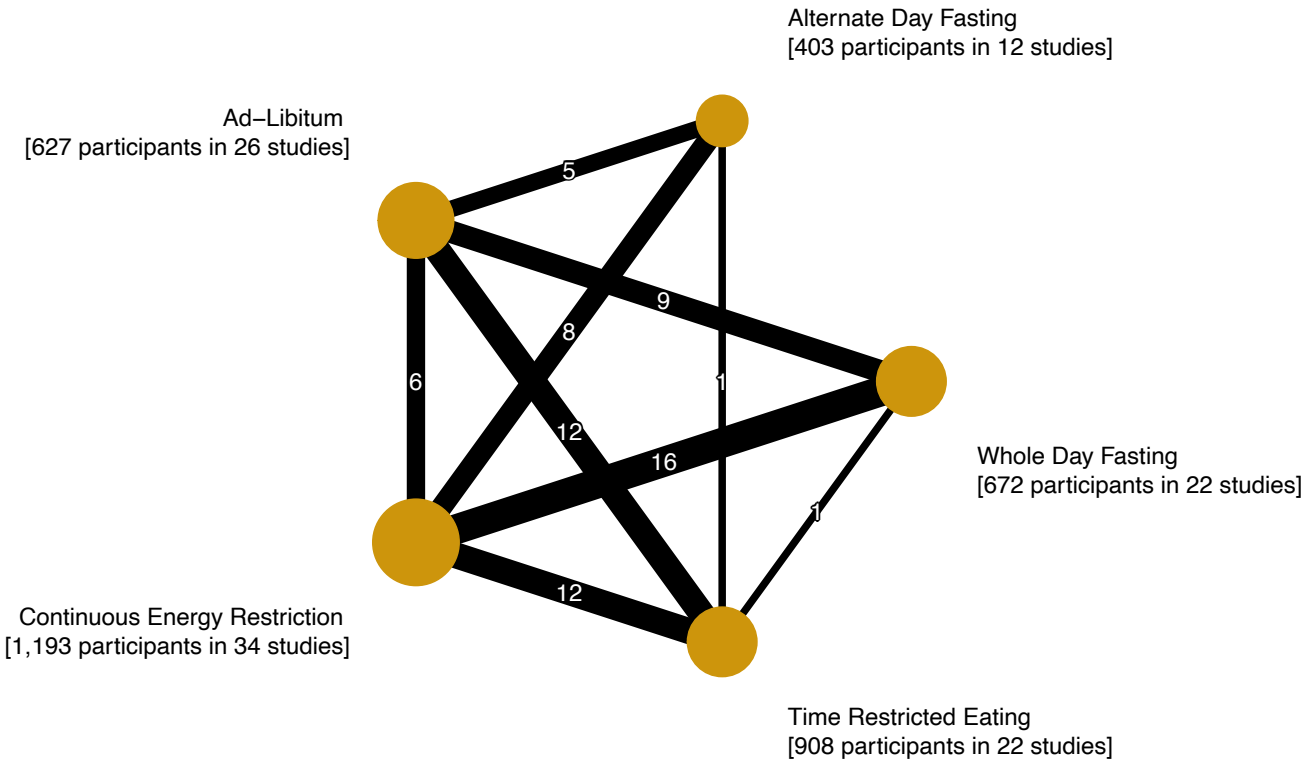
Supplementary Figure 31. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with SBP. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



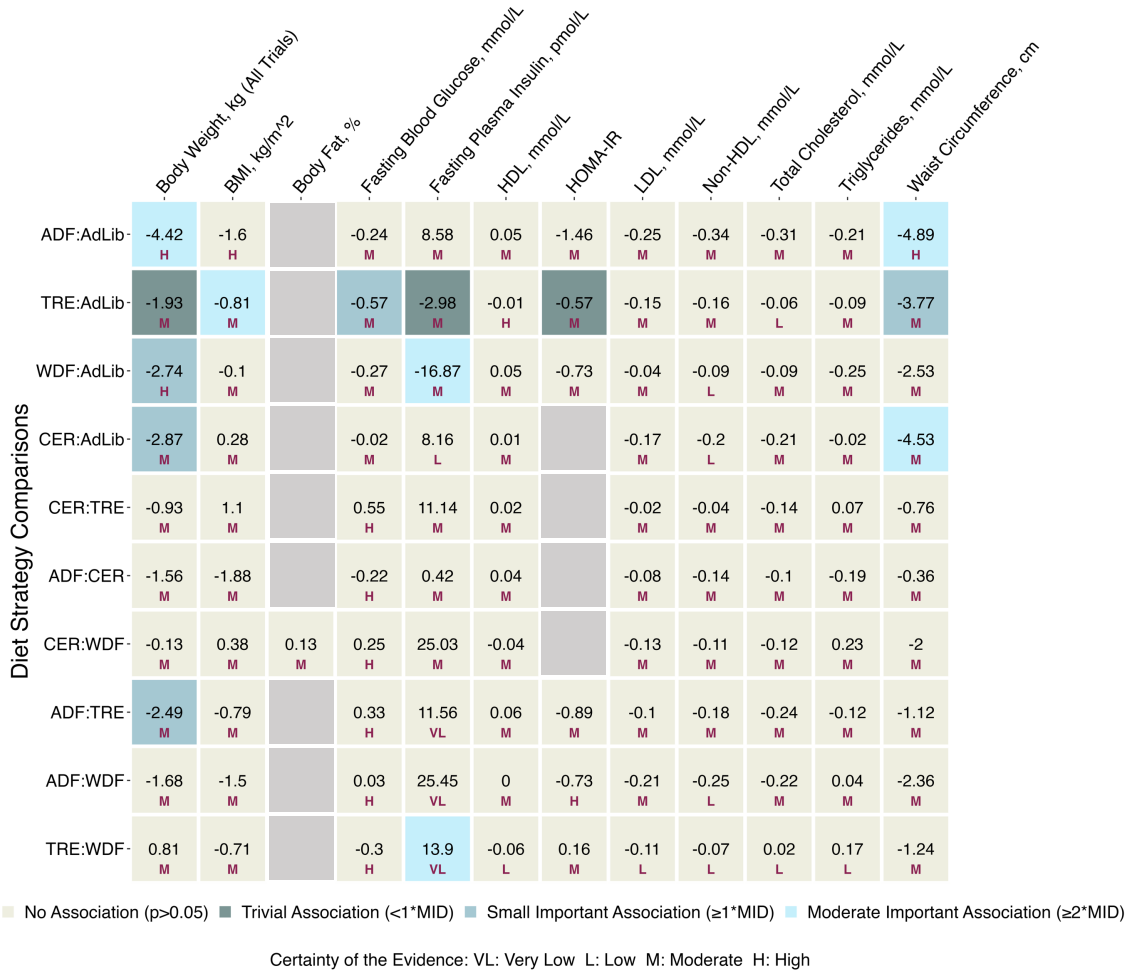
Supplementary Figure 32. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with Total Cholesterol. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



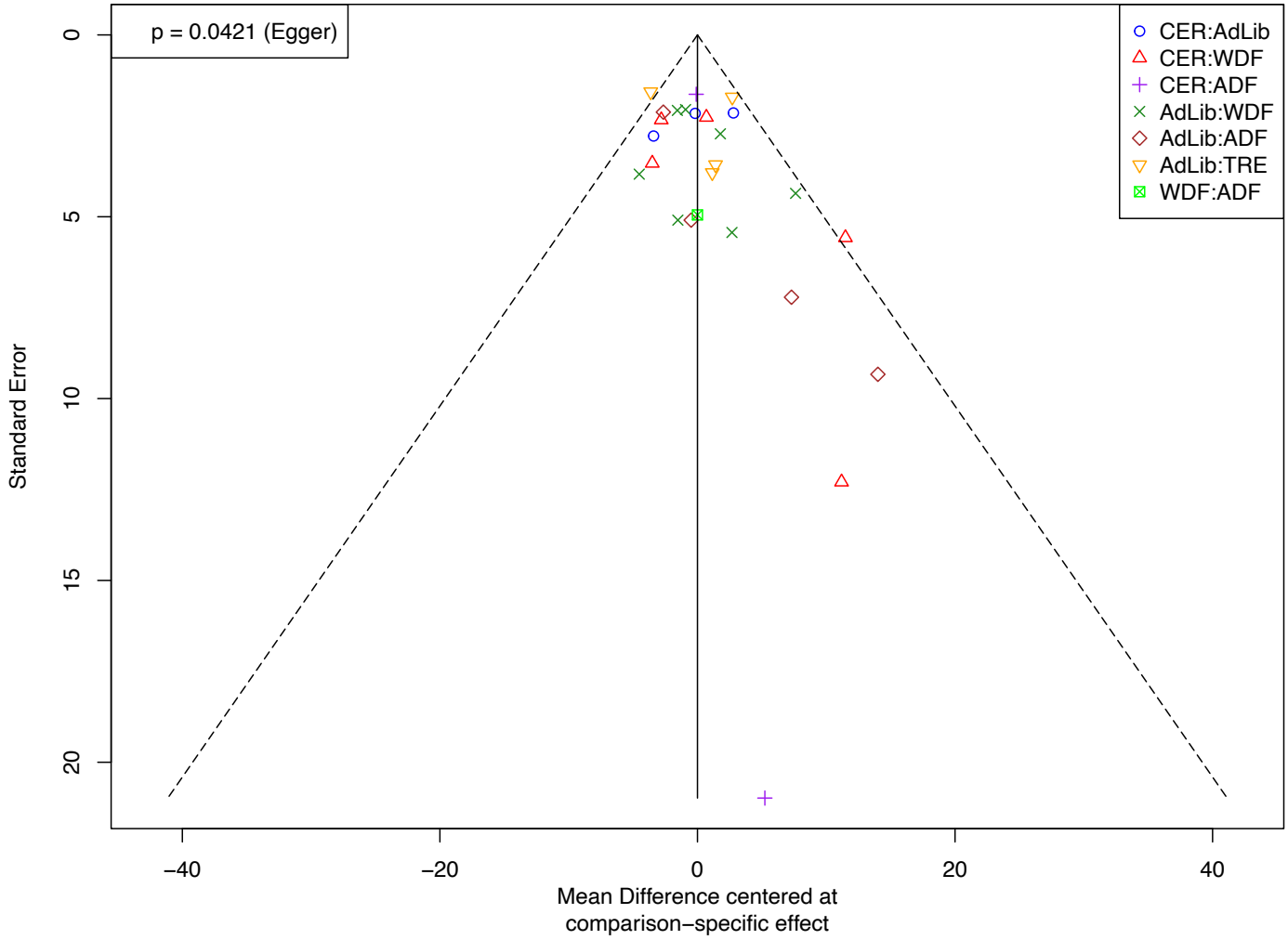
Supplementary Figure 33. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with triglycerides. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



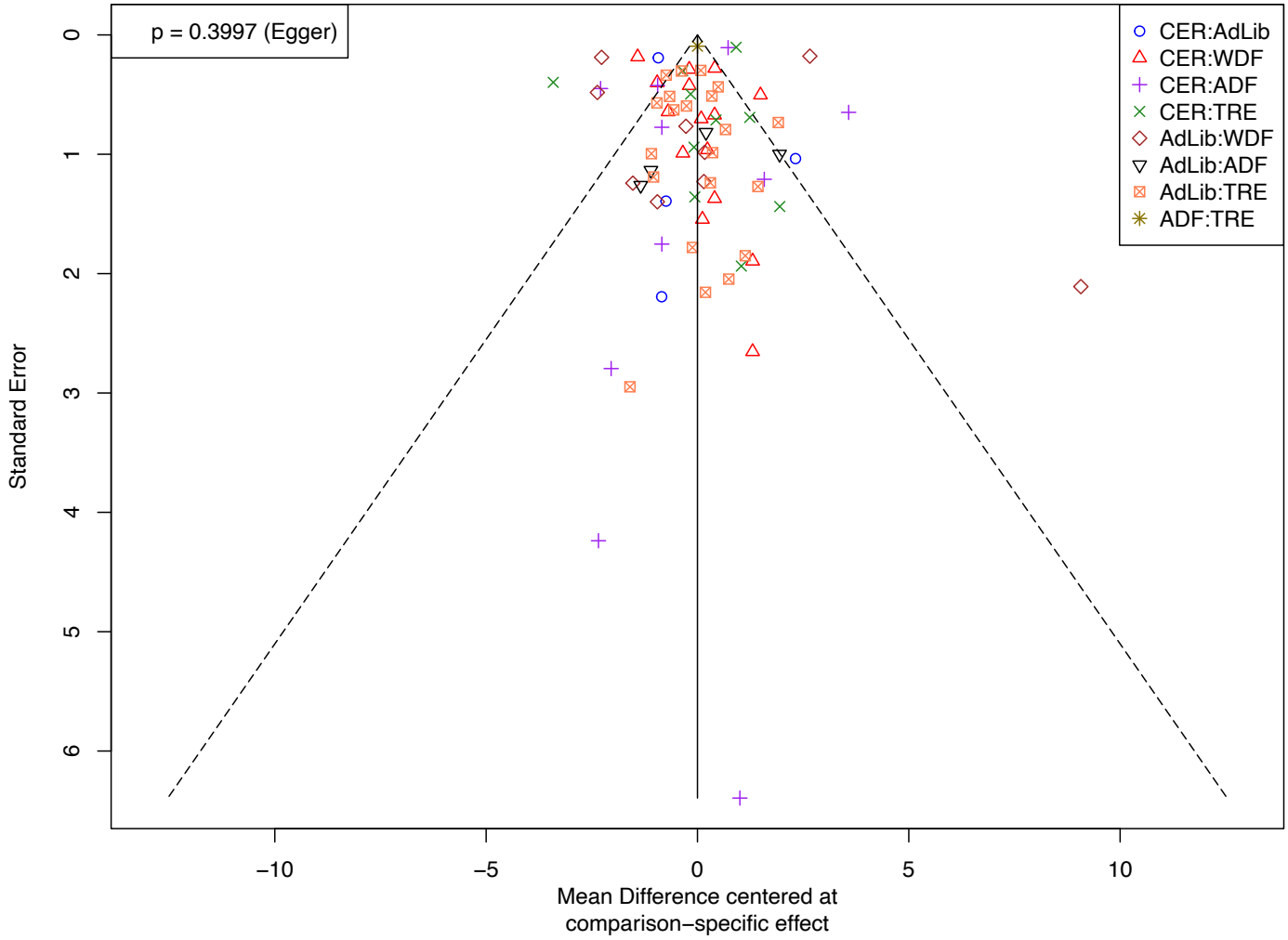
Supplementary Figure 34. Network diagram for randomized clinical trials investigating the association of intermittent fasting strategies and ad libitum diets with waist circumferences. Yellow nodes represent the study size for each diet strategy. The thickness of the turquoise lines represents the number of studies directly comparing one diet strategy to another.



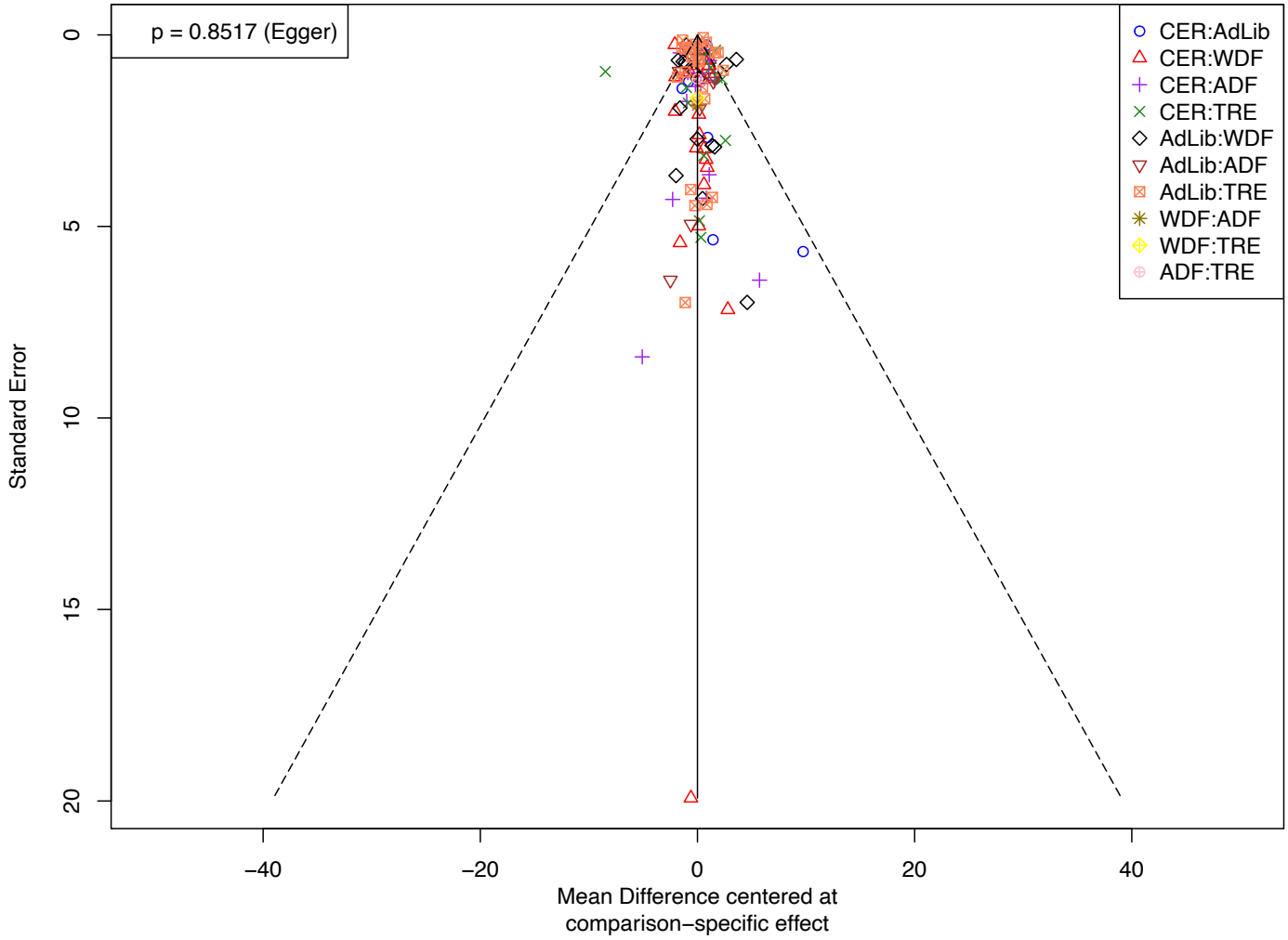
Supplementary Figure 35. Summary heatmap of the network effect size estimates (MD) and CINeMA certainty of the evidence, which applied the GRADE system, for all studies with subjects with diabetes (n=11). Results are given as diet strategy 1 compared to diet strategy 2. For example, ADF:AdLib comparison shows the MD of ADF compared to ad-libitum. A negative MD suggests diet 1 had greater reduction compared to diet 2; whereas a positive MD suggests diet 2 had a greater reduction compared to diet 1. The various shades of teal represent the level of effect based on MID for each outcome (see Supplementary Table 22 for the MIDs). Large important association (≥5*MID) and very large important association (≥108MID) are not shown as no effect size reached this. The beige boxes represent non-significant network effect estimates (p<0.05) and no important effect. The grey box represents no available data. The letters below MD represent the overall certainty of the evidence determined through GRADE for all studies in the review (n=99) - VL: Very low; L: Low; M: Moderate; H: High. MD, mean difference; MID, minimally important difference.



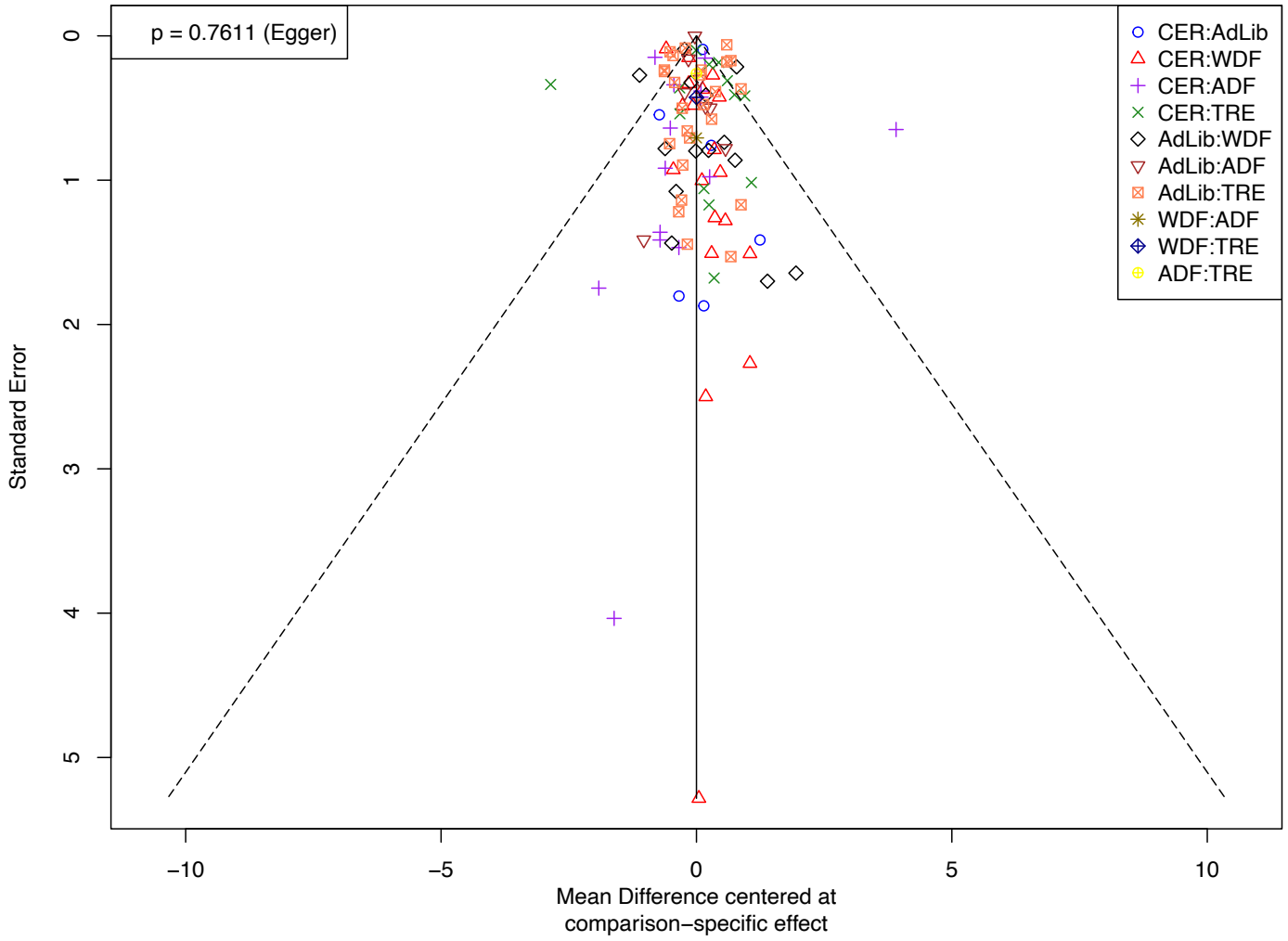
Supplementary Figure 37. Comparison adjusted funnel plot for ALT. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



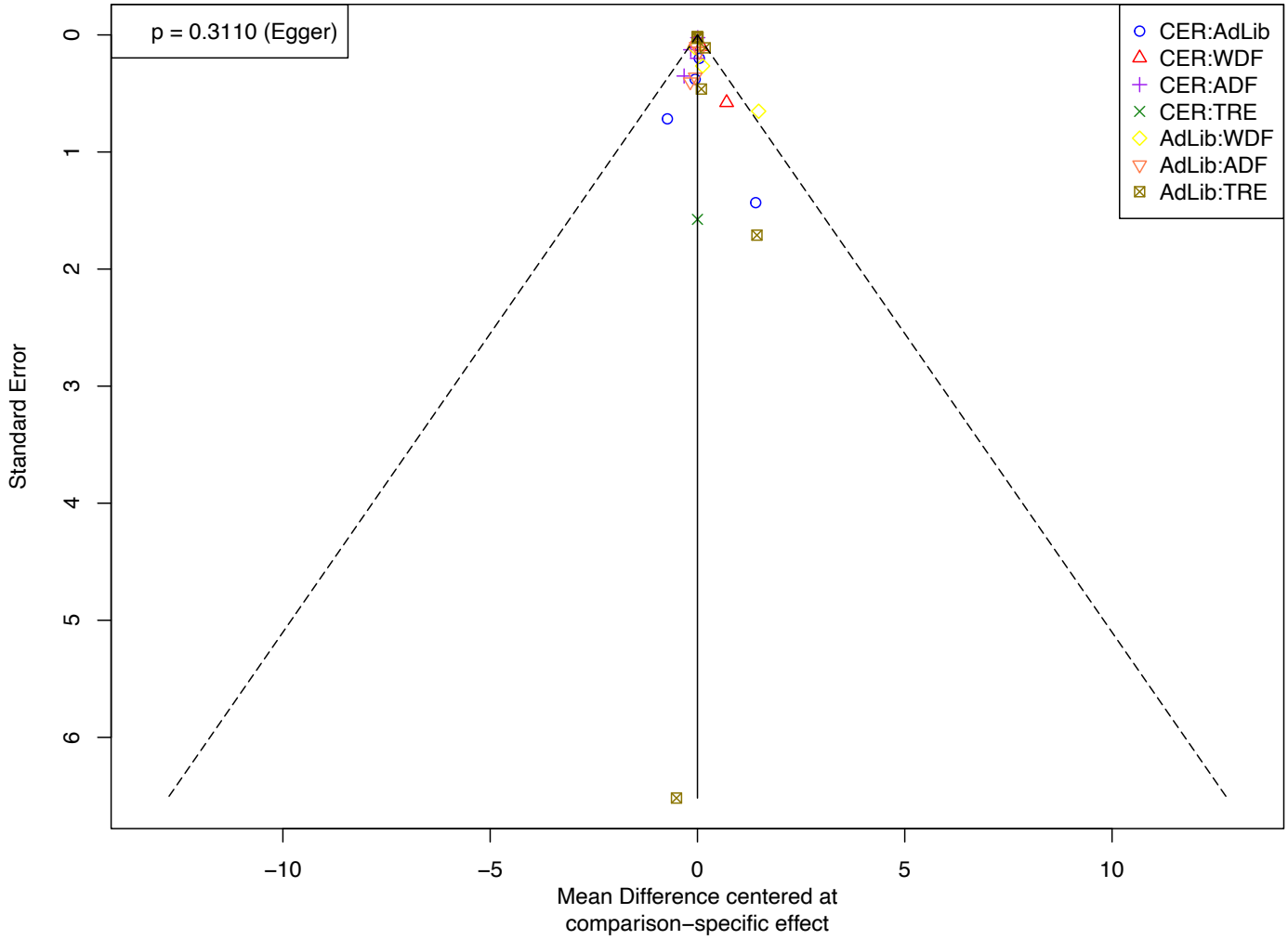
Supplementary Figure 37. Comparison adjusted funnel plot for body fat. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



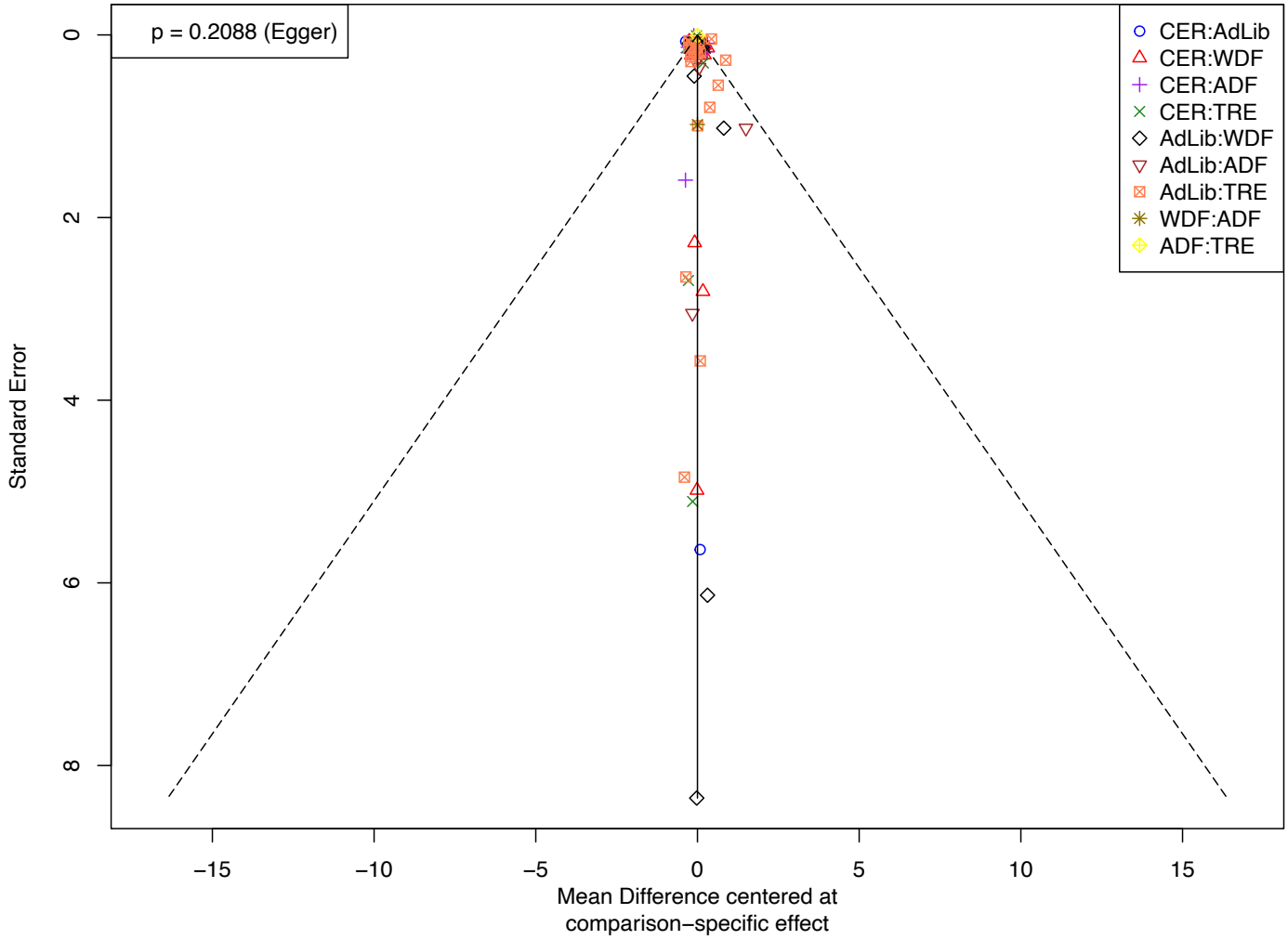
Supplementary Figure 38. Comparison adjusted funnel plot for body weight. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



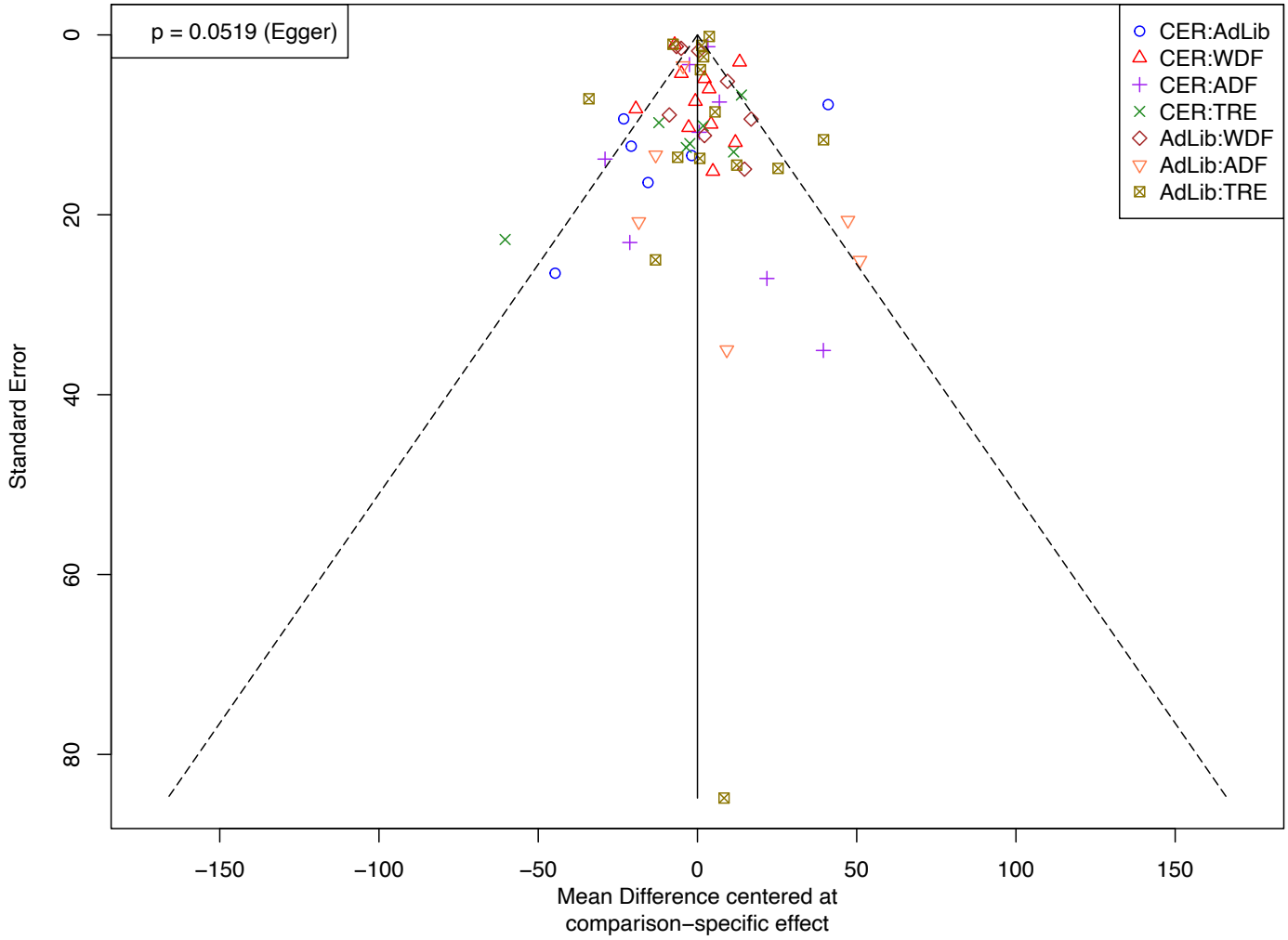
Supplementary Figure 39. Comparison adjusted funnel plot for BMI. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



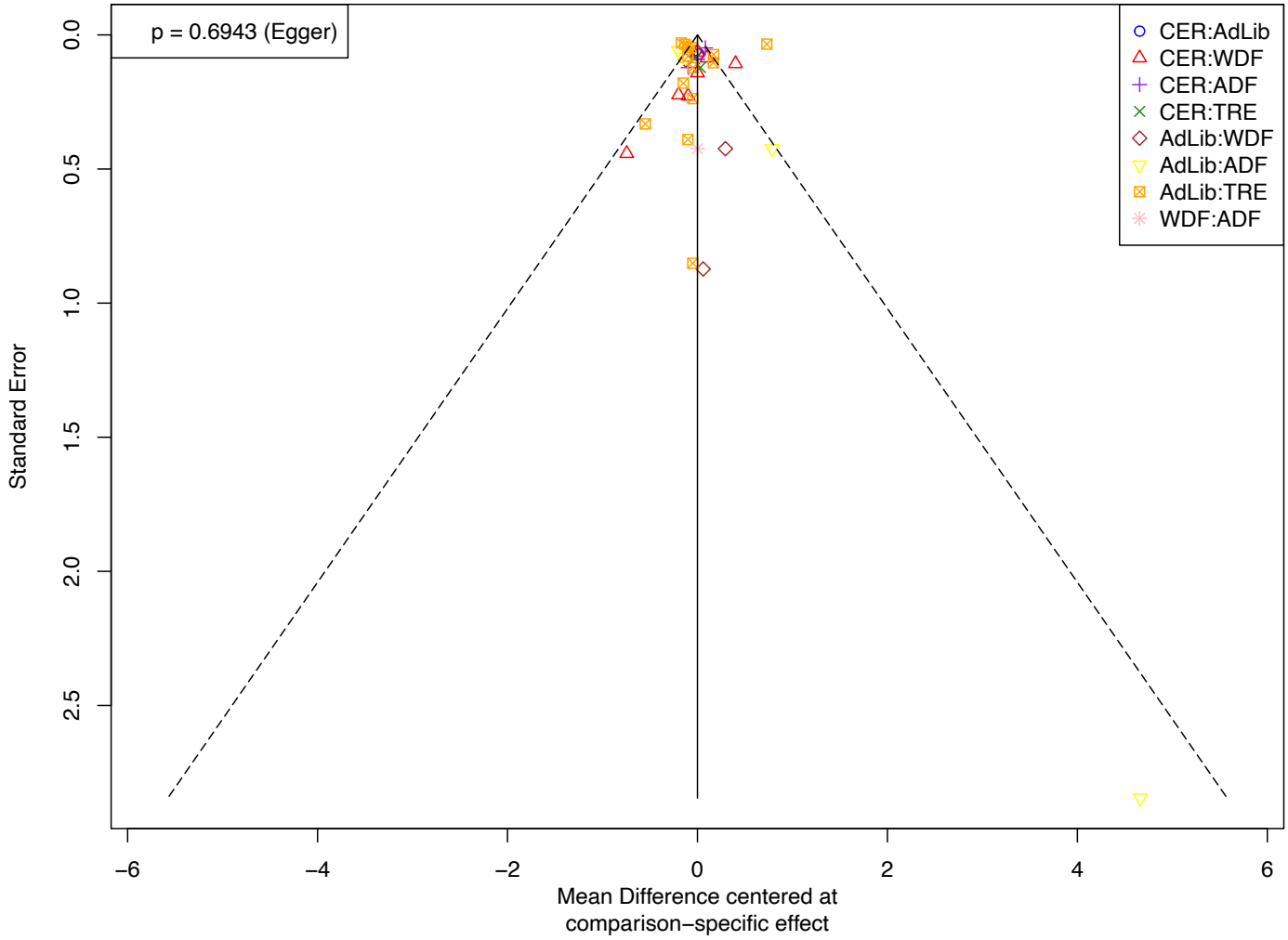
Supplementary Figure 40. Comparison adjusted funnel plot for CRP. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



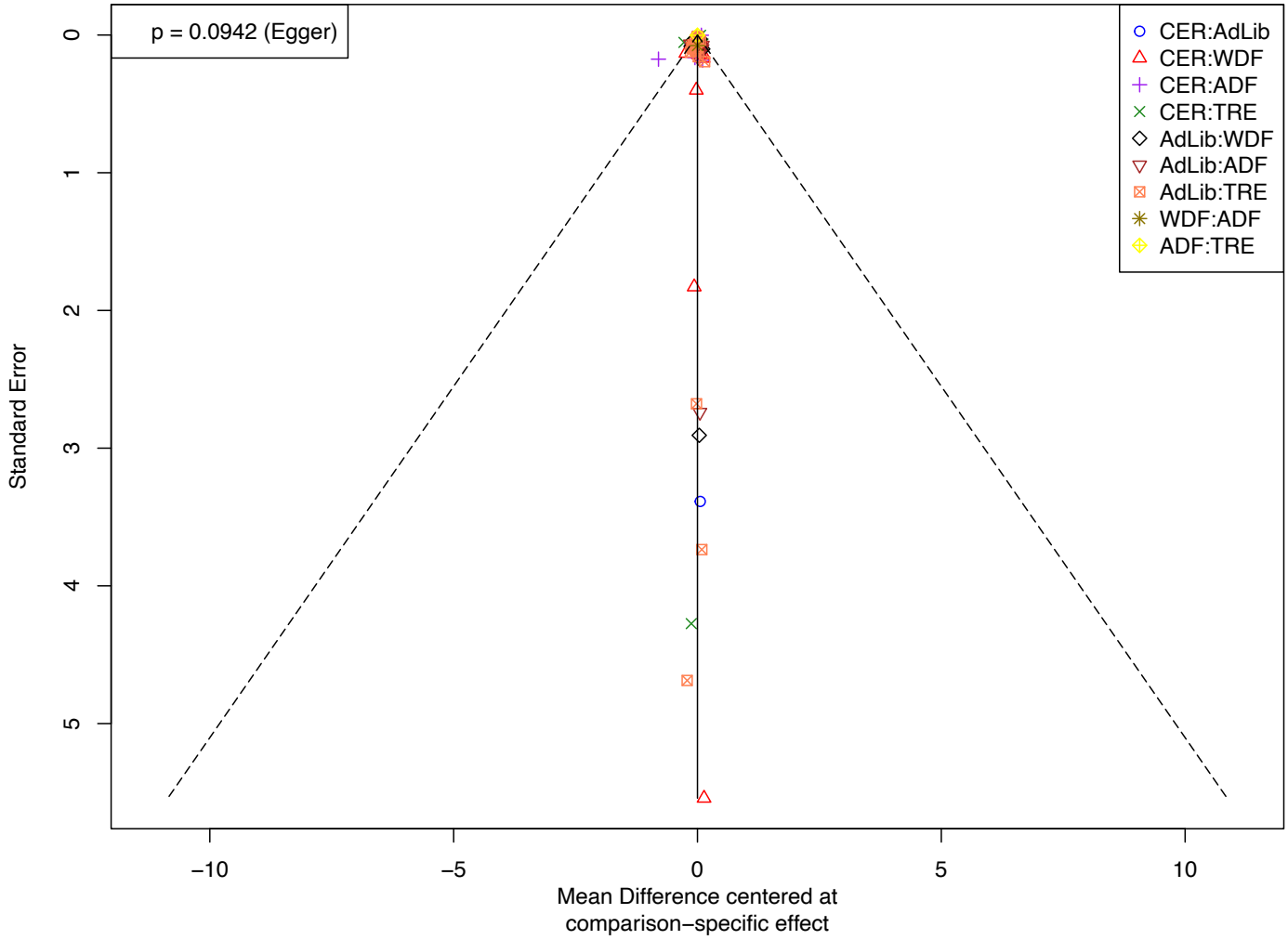
Supplementary Figure 41. Comparison adjusted funnel plot for fasting glucose. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



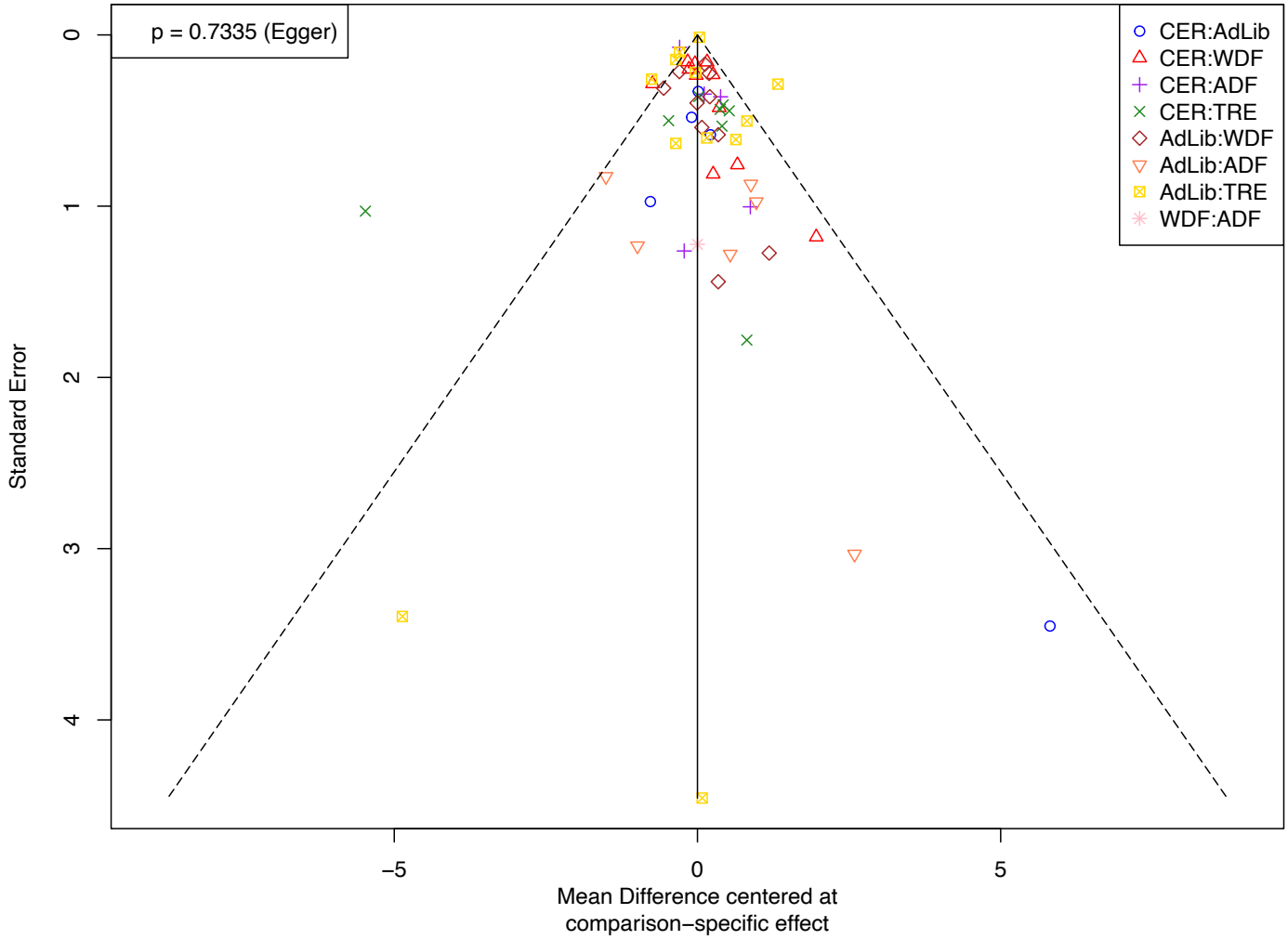
Supplementary Figure 42. Comparison adjusted funnel plot for fasting insulin. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



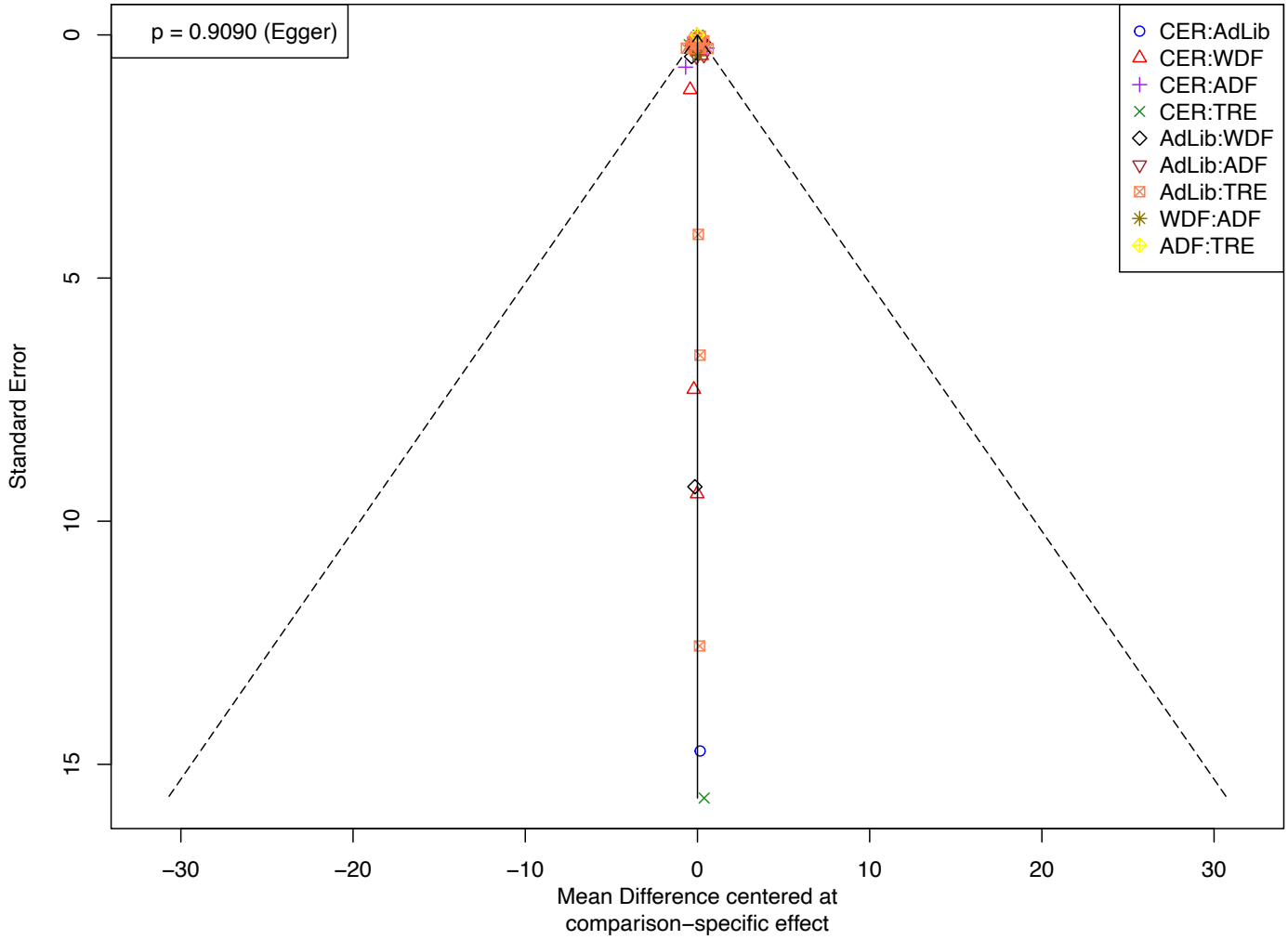
Supplementary Figure 43. Comparison adjusted funnel plot for HbA1c. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



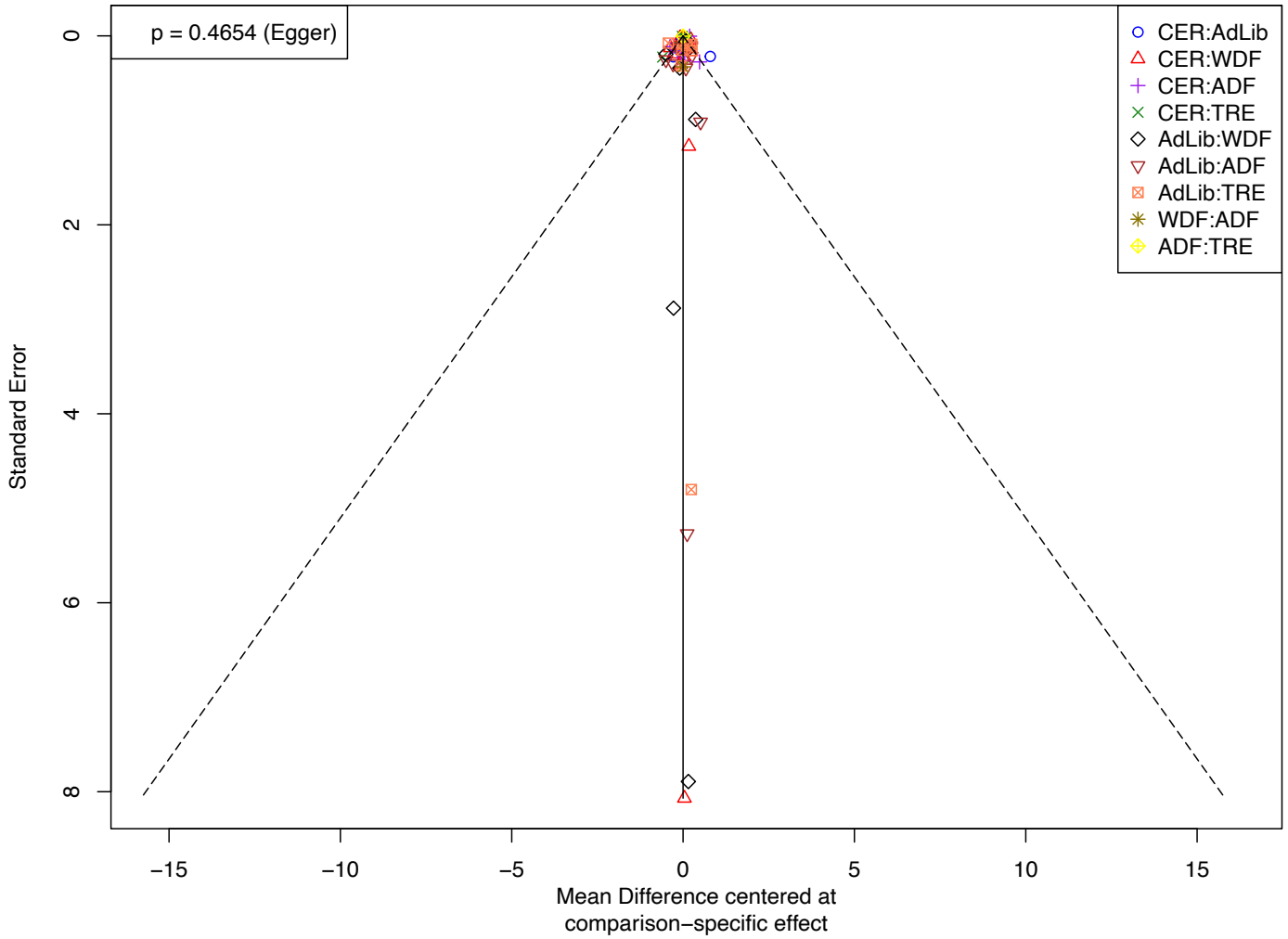
Supplementary Figure 44. Comparison adjusted funnel plot for HDL. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



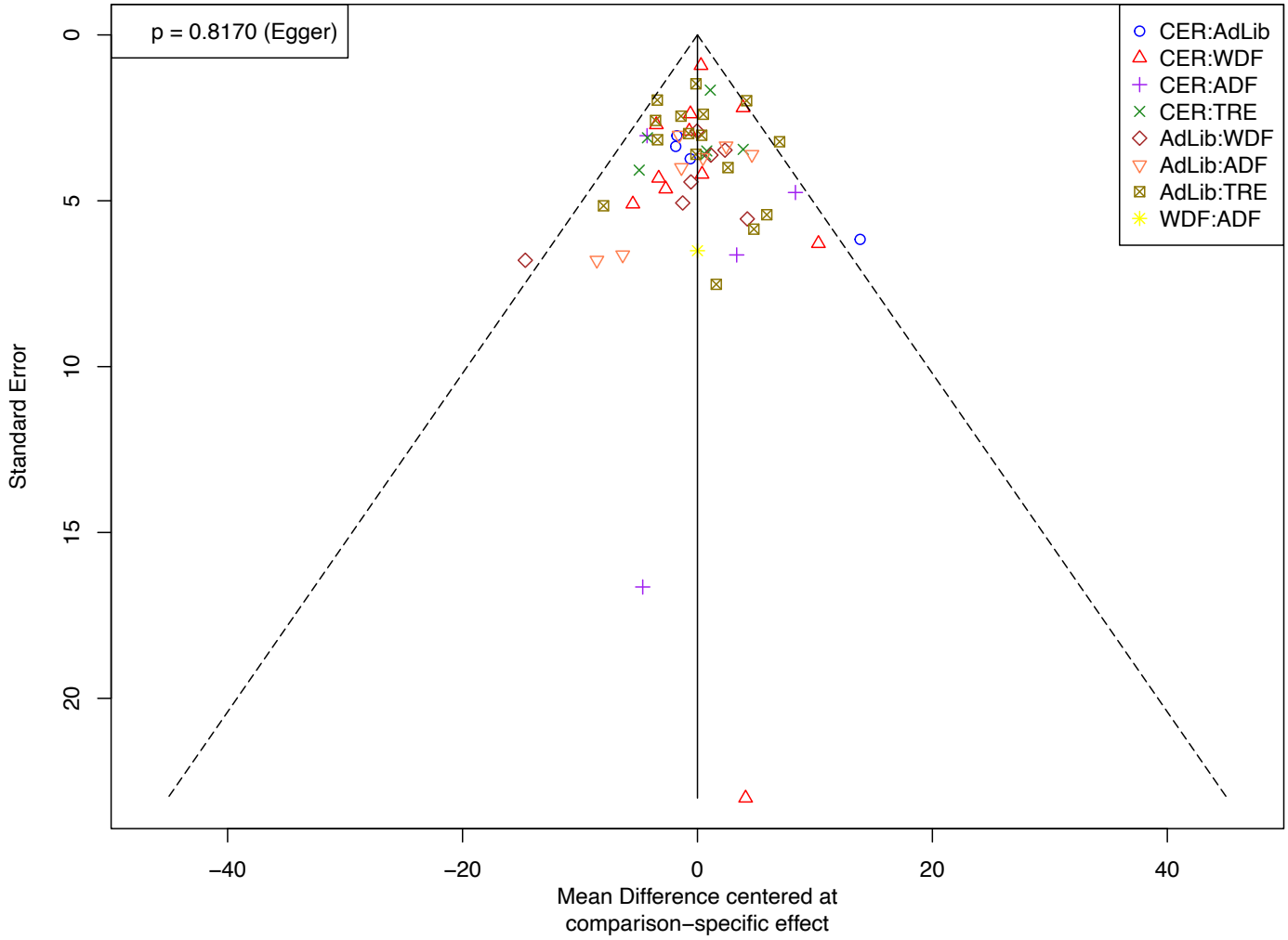
Supplementary Figure 45. Comparison adjusted funnel plot for HOMA-IR. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



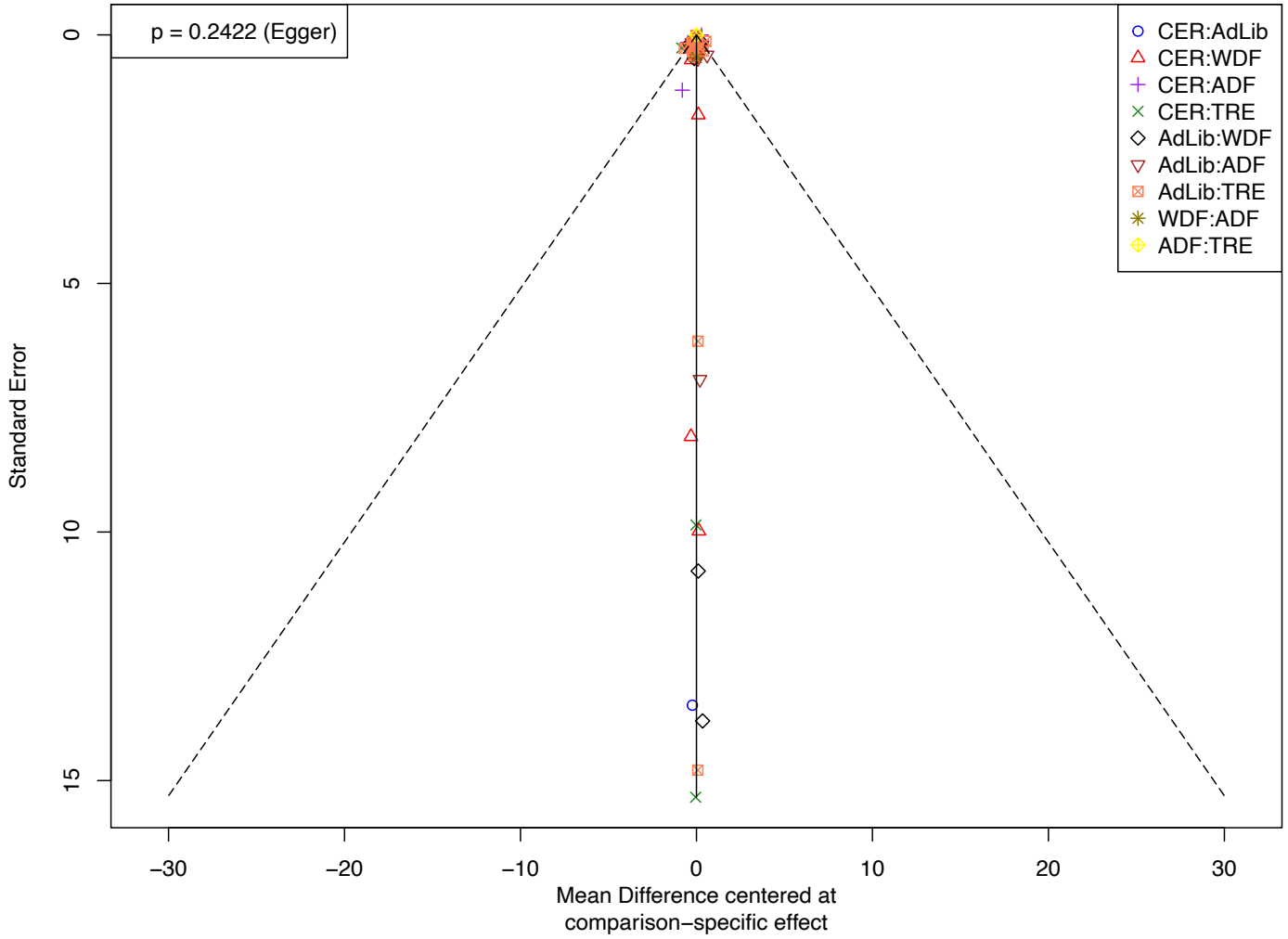
Supplementary Figure 46. Comparison adjusted funnel plot for LDL. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



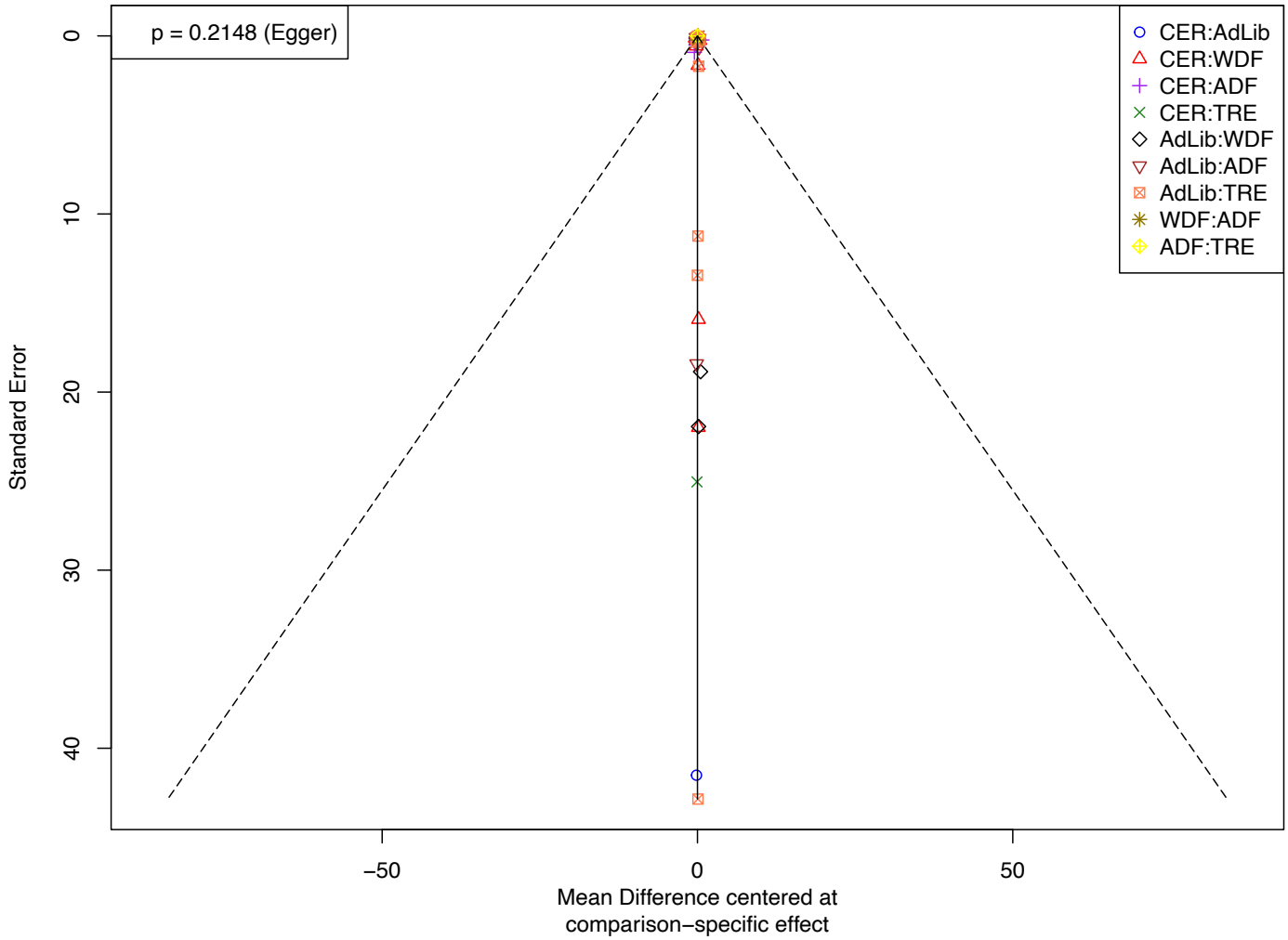
Supplementary Figure 47. Comparison adjusted funnel plot for non-HDL. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



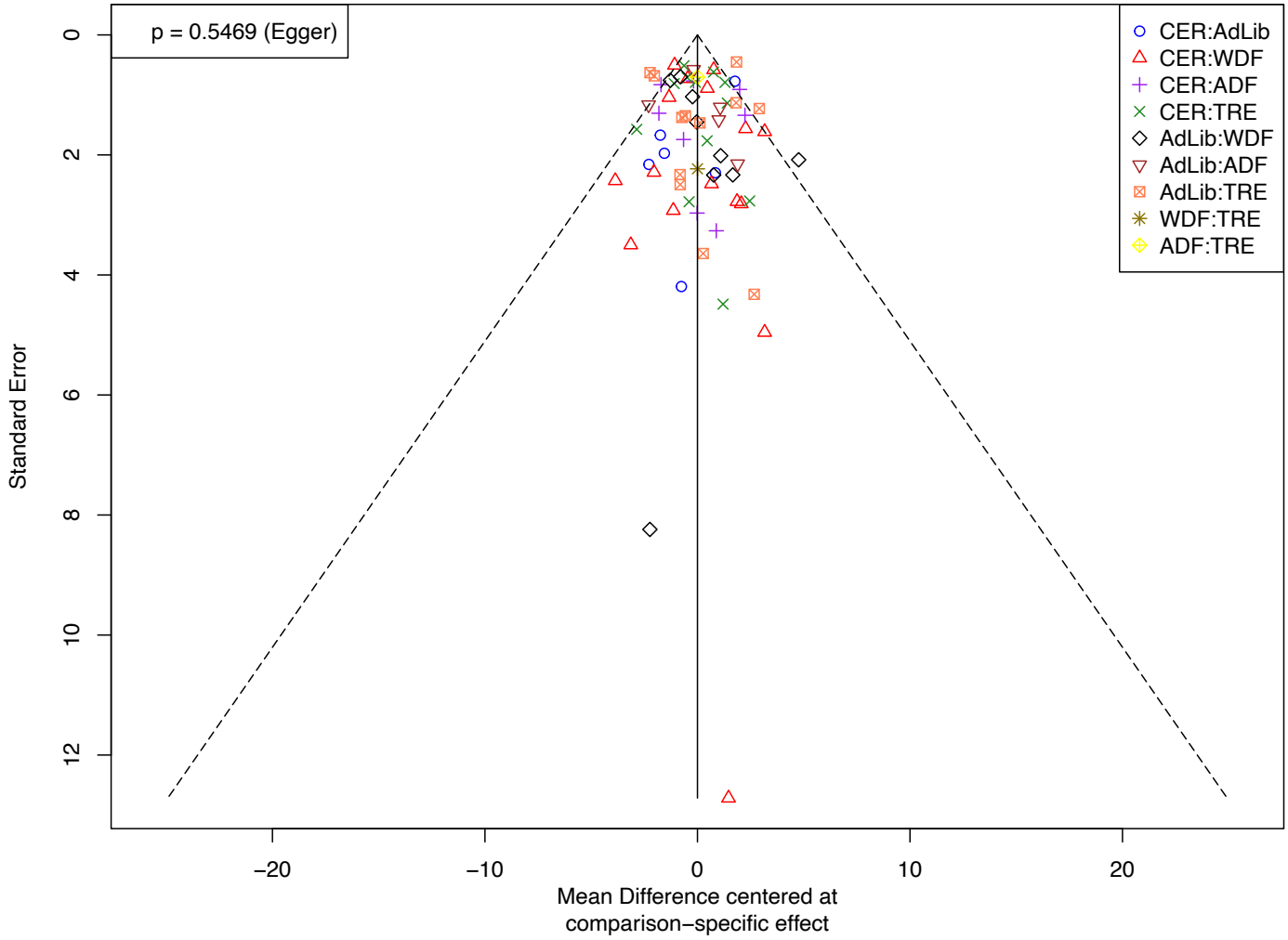
Supplementary Figure 48. Comparison adjusted funnel plot for SBP. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



Supplementary Figure 49. Comparison adjusted funnel plot for Total Cholesterol. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



Supplementary Figure 50. Comparison adjusted funnel plot for triglycerides. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.



Supplementary Figure 51. Comparison adjusted funnel plot for waist circumference. The horizontal axis represents an adjusted effect size, presenting the difference between each observed effect size and the mean effect size for the specific comparison being made. The dashed lines represent pseudo 95% confidence intervals.

Appendix

Appendix A. Articles Excluded in Full Text Review.

Title	Authors	Published Year	Journal	Volume	Issue	DOI
Effects of Different Types of Intermittent Fasting Interventions on Metabolic Health in Healthy Individuals (EDIF): A Randomised Trial with a Controlled-Run in Phase.	Herz, Daniel; ; Karl, Sebastian; Weis, Johannes; Zimmermann, Paul; Haupt, Sandra; Zimmer, Rebecca Tanja; Schierbauer, Janis; Wachsmuth, Nadine Bianca; Erlmann, Maximilian Paul; Niedrist, Tobias; Khoramipour, Kayvan; Voit, Thomas; Rilstone, Sian; Sourij, Harald; Moser, Othmar	2024	Nutrients	16	8	https://dx.doi.org/10.3390/nu16081114
Time-Restricted Eating Versus Daily Calorie Restriction: Effect on Sleep in Adults with Obesity over 12 Months.	Lin, Shuhao; ; Cienfuegos, Sofia; Ezpeleta, Mark; Gabel, Kelsey; Pavlou, Vasiliki; Alexandria, Shaina J; Varady, Krista A	2024	Nutrients	16	20	https://dx.doi.org/10.3390/nu16203528
Effect of time restricted eating versus daily calorie restriction on sex hormones in males and females with obesity.	Lin, Shuhao; ; Cienfuegos, Sofia; Ezpeleta, Mark; Pavlou, Vasiliki; Runchey, Mary-Claire; Varady, Krista A	2024	European journal of clinical nutrition	78	9	https://dx.doi.org/10.1038/s41430-024-01461-5
The acute effect of time-restricted feeding (12 & 16 h) and varying exercise intensities on fat-oxidation rate in inactive young adults - a randomized control trial.	Loren, Yavelberg; ; Norman, Gledhill; Veronica, Jamnik	2024	BMC sports science, medicine & rehabilitation	16	1	https://dx.doi.org/10.1186/s13102-024-00959-6
Gut microbiome remodeling and metabolomic profile improves in response to protein pacing with intermittent fasting versus continuous caloric restriction.	Mohr, Alex E; ; Sweazea, Karen L; Bowes, Devin A; Jasbi, Paniz; Whisner, Corrie M; Sears, Dorothy D; Krajmalnik-Brown, Rosa; Jin, Yan; Gu, Haiwei; Klein-Seetharaman, Judith; Arciero, Karen M; Gumpricht, Eric; Arciero, Paul J	2024	Nature communications	15	1	https://dx.doi.org/10.1038/s41467-024-48355-5
Effects of dietary interventions and intermittent fasting on HDL function in obese individuals with T2DM: a randomized controlled trial.	Pammer, Anja; ; Obermayer, Anna; Stadler, Julia T; Pferschy, Peter N; Tripolt, Norbert J; Habisch, Hansjorg; Madl, Tobias; Sourij, Harald; Marsche, Gunther	2024	Cardiovascular diabetology	23	1	https://dx.doi.org/10.1186/s12933-024-02426-5
Associations between dietary fatty acid and plasma fatty acid composition in non-alcoholic fatty liver disease: secondary analysis from a randomised trial with a hypoenergetic low-carbohydrate high-fat and intermittent fasting diet.	Tillander, Veronika; ; Holmer, Magnus; Hagstrom, Hannes; Petersson, Sven; Brismar, Torkel B; Stal, Per; Lindqvist, Catarina	2024	The British journal of nutrition		az4, 0372547	https://dx.doi.org/10.1017/S0007114524001673
Fasting, ketogenic and anti-inflammatory diets stabilized active relapsing-remitting multiple sclerosis over 18 months, a randomized, controlled study	Bahr L.S.; ; Bellmann-Strobl J.; Koppold D.A.; Rust R.; Schmitz-Hubsch T.; Olszewska M.; Stadlbauer J.; Bock M.; Scheel M.; Chien C.; Multmeier J.; Krannich A.; Michalsen A.; Paul F.; Mahler A.	2024	medRxiv		(Bahr, Bellmann-Strobl, Rust, Schmitz-Hubsch, Chien, Paul, Mahler) Charite - Universitatsmedizin Berlin, Freie Universitat Berlin, Humboldt- Universitat zu Berlin, Experimental and Clinical Research Center (ECRC), Lindenberger Weg 80, Berlin 13125, German	https://dx.doi.org/10.1101/2024.08.13.24311863
Fasting as an intervention to alter the impact of simulated night-shift work on glucose metabolism in healthy adults: a cluster randomised controlled trial	Centofanti S.; ; Heilbronn L.K.; Wittert G.; Dorrian J.; Coates A.M.; Kennaway D.; Gupta C.; Stepien J.M.; Catcheside P.; Yates C.; Grosser L.; Matthews R.W.; Banks S.	2024	Diabetologia		(Centofanti, Dorrian, Coates, Stepien, Yates, Grosser, Banks) Behaviour-Brain-Body Research Centre, UniSA Justice and Society, University of South Australia, Adelaide, SA, Australia(Heilbronn, Wittert) Lifelong Health Theme, South Australian Health and Me	https://dx.doi.org/10.1007/s00125-024-06279-1
Effectiveness of time-restricted eating with caloric restriction vs. caloric restriction on anthropometric parameters in overweight and obese adults	Cresnovar T.; ; Habe B.; Praznikar Z.J.; Petelin A.	2024	Clinical Nutrition ESPEN	63	(Cresnovar, Habe, Praznikar, Petelin) University of Primorska, Faculty of Health Science, Izola, Slovenia	https://dx.doi.org/10.1016/j.clnesp.2024.07.480
AEROBIC TRAINING AND INTERMITTENT FASTING REGIMEN FOR WOMEN WITH DIABESITY	Elsayed E.; ; El-Nahas N.G.; Hakim S.A.; Abdelhady A.A.; Beltagi A.A.	2024	Cardiopulmonary Physical Therapy Journal	35	1	https://dx.doi.org/10.1097/CPT.0000000000000243
Intermittent fasting, caloric restriction, and ketogenic diet increase bioenergetic health index in monocytes and improve metabolic outcome in subjects with obesity via changes in gut microbiota	Velazquez-Villegas L.A.; ; Hernandez-Gomez K.G.; Pichardo-Ontiveros E.; Lopez-Barradas A.M.; Condado-Huerta M.C.C.; Sanchez-Tapia M.; Gonzalez-Salazar L.E.; Leon-Hernandez V.; Serralde-Zuniga A.E.; Medina-Vera I.; Noriega L.G.; Granados-Portillo O.; Olin-Sandoval V.; Torres N.; Tovar A.R.; Guevara-Cruz M.	2023	Clinical Nutrition ESPEN	58	(Velazquez-Villegas, Hernandez-Gomez, Pichardo-Ontiveros, Lopez-Barradas, Condado-Huerta, Sanchez-Tapia, Leon-Hernandez, Noriega, Granados-Portillo, Torres, Tovar, Guevara-Cruz) Departamento de Fisiologia de la Nutricion(Gonzalez-Salazar, Serralde-Zuniga)	https://dx.doi.org/10.1016/j.clnesp.2023.09.363
Effects of time-restricted eating and low-carbohydrate diet on psychosocial health and appetite in individuals with metabolic syndrome: a secondary analysis of a randomized controlled trial	Zheng Y; ; Wang X; Wang J; Yang J; Wang T; Li Q; Zhu W; Wang Y; Sui J; Qiang W; Guo H; Shi B; He M	2024		43	10	https://doi.org/10.1016/j.clnu.2024.08.029
Obesity Genetic Risk Scores and Weight Loss in Participants From the Daily Caloric Restriction Versus Intermittent Fasting Trial (DRIFT)	Yeo EN; ; Scadden AW; Cole JB; Pan Z; Borengasser S; James KL; Bessesen DH; Catenacci VA; Litowski EM; MacLean PS; Melanson EL; Ostendorf DM; Lozupone C; Stamislawski MA	2024		8		https://doi.org/10.1016/j.cdnut.2024.103521
Study on the Dynamic Effects of Different Dietary Interventions on Weight and Other Biochemical Indicators Based on Randomized Controlled Trials		2024				
Randomized controlled trial of once-per-week intermittent fasting for health improvement: the WONDERFUL trial.	Bartholomew, Ciera L; Muhlestein, Joseph B; May, Heidi T; Le, Viet T; Galenko, Oxana; Garrett, Kelly Davis; Brunker, Cherie; Hopkins, Ramona O; Carlquist, John F; Knowlton, Kirk U; Anderson, Jeffrey L; Bailey, Bruce W; Horne, Benjamin D	2021	European heart journal open	1	2	https://dx.doi.org/10.1093/ehjopen/oeab026
Intermittent calorie restriction alters T cell subsets and metabolic markers in people with multiple sclerosis.	Fitzgerald, Kathryn C; Bhargava, Pavan; Smith, Matthew D; Vizthum, Diane; Henry-Barron, Bobbie; Kornberg, Michael D; Cassard, Sandra D; Kapogiannis, Dimitrios; Sullivan, Patrick; Baer, David J; Calabresi, Peter A; Mowry, Ellen M	2022	EBioMedicine	82	101647039	https://dx.doi.org/10.1016/j.ebiom.2022.104124

Title	Authors	Published Year	Journal	Volume	Issue	DOI
Effect of Time-Restricted Eating versus Daily Calorie Restriction on Mood and Quality of Life in Adults with Obesity.	Lin, Shuhao; Cienfuegos, Sofia; Ezpeleta, Mark; Pavlou, Vasiliki; Chakos, Kaitlin; McStay, Mara; Runchey, Mary-Claire; Alexandria, Shaina J; Varady, Krista A	2023	Nutrients	15	20	https://dx.doi.org/10.3390/nu15204313
Cardiometabolic effects of early v. delayed time-restricted eating plus energetic restriction in adults with overweight and obesity: an exploratory randomised clinical trial.	Queiroz, Jessica do Nascimento; Macedo, Rodrigo Cauduro Oliveira; Dos Santos, Gabriela Cristina; Munhoz, Samuel Vargas; Machado, Carlos Leonardo Figueiredo; de Menezes, Rodrigo Leal; Menzem, Elisa Nascimento; Moritz, Cesar Eduardo Jacintho; Pinto, Ronei Silveira; Tinsley, Grant M; de Oliveira, Alvaro Reischak	2022	The British journal of nutrition		az4, 0372547	https://dx.doi.org/10.1017/S0007114522001581
Calorie restriction by time restricted intermittent fasting is better than standard calorie restriction in improving the metabolic profile and hepatic fibrosis in patients with non-alcoholic fatty liver disease	Aggarwal D.; Duseja A.K.; De A.; Bhadada S.; Kalra N.; Sahni N.	2023	Journal of Hepatology	78	Supplement 1	https://dx.doi.org/10.1016/S0168-8278%2823%2900518-4
Effectiveness of Time-restricted Intermittent Fasting in Patients with Non-alcoholic Fatty Liver Disease - A Randomized Controlled Trial	Aggarwal D.; Duseja A.; De A.; Sahni N.; Bhadada S.; Kalra N.	2023	Journal of Clinical and Experimental Hepatology	13	Supplement 1	https://dx.doi.org/10.1016/j.jceh.2023.07.198
Comparison of hypocaloric mediterranean diet plus intermittent fasting against classic hypocaloric mediterranean diet on body composition and metabolic parameters in obese individuals	Barkas F.; Maggiorou E.; Kokkinos A.; Tentolouris N.K.; Liberopoulos E.	2022	Atherosclerosis	355	(Barkas, Maggiorou) Department Of Internal Medicine, Faculty of Medicine, School of Health Sciences, University of Ioannina, Ioannnina, Greece(Kokkinos, Tentolouris, Liberopoulos) First Department Of Propaedeutic Internal Medicine, Medical School, Nationa	https://dx.doi.org/10.1016/j.atherosclerosis.2022.06.753
ShiftingWeight in Night ShiftWorkers: Results From a 24 Week, Parallel, Multi-Site, Randomised Controlled Trial (SWIFt)	Bonham M.; Banks S.; Clarke A.; Coates A.; Davis C.; Davis R.; Dorrian J.; Huggins C.; Kellow N.; Leung G.; Phoi Y.Y.; Rogers M.; Sletten T.	2023	Current Developments in Nutrition	7	Supplement 1	https://dx.doi.org/10.1016/j.cdnut.2023.100722
Dietary Protein Supplementation During Time Restricted Feeding Does Not Affect Body Composition or Sleep, but Improves Mood, in Adults With Overweight or Obesity	Boudrey S.; Hawley A.; Bowie R.; Romana C.; Thomas A.-M.; Komp M.; Baum J.	2023	Current Developments in Nutrition	7	Supplement 1	https://dx.doi.org/10.1016/j.cdnut.2023.100621
Intermittent fasting versus calorie restriction on blood pressure and the renin-angiotensin-aldosterone system: A secondary analysis of a randomised controlled trial in adults at elevated risk of developing type 2 diabetes	Charrouf R.; Liu K.; Teong X.T.; Hutchison A.; Leonie H.	2022	Obesity Reviews	23	Supplement 2	https://dx.doi.org/10.1111/obr.13503
Changes in Body Weight and Glucoregulatory Markers by Eight-Hour Time-Restricted Eating vs. Daily Calorie Restriction: A 6-Month Randomized Controlled Trial	Cienfuegos S.; Lin S.; Gabel K.; McStay M.; Mulas A.; Varady K.	2022	Diabetes	71	Supplement 1	https://dx.doi.org/10.2337/db22-547-P
Alternate-Day Fasting Combined with Endurance Exercise for the Treatment of Fatty Liver Disease	Ezpeleta M.; Gabel K.; Varady K.; Lin S.; Cienfuegos S.	2022	Diabetes	71	Supplement 1	https://dx.doi.org/10.2337/db22-121-OR
Alternate Day Fasting Combined With Endurance Exercise for the Treatment of Fatty Liver Disease	Ezpeleta M.; Gabel K.; Cienfuegos S.; Lin S.; Kalam F.; Varady K.; Pavlou V.	2022	Obesity	30	Supplement 1	https://dx.doi.org/10.1002/oby.23626
Randomized clinical trial of intermittent calorie restriction in people with Multiple Sclerosis: effects on immunometabolic and cognitive measures	Ghezzi L.; Tosti V.; Cantoni C.; Salter A.; Lancia S.; Shi L.; Don A.; Zhou Y.; Obert K.; Mikesell R.; Sen M.; Cross A.; Naismith R.; Piccio L.	2023	Multiple Sclerosis Journal	29	3 Supplement	https://dx.doi.org/10.1177/13524585238523
Fasting Leads to Disease Activity Suppression and Sustained Weight Loss in Rheumatoid Arthritis	Hansen B.; Aho V.T.E.; Frachet-Bour A.; Habier J.; Hanslian E.; Hartmann A.; Koppold D.; Laczny C.C.; Michalsen A.; Mollenhauer B.; Ostaszewski M.; Roomp K.; Schade S.; Schneider J.; Steckhan N.; Wilmes P.	2023	Current Developments in Nutrition	7	Supplement 1	https://dx.doi.org/10.1016/j.cdnut.2023.101470
Effects of Intermittent Compared With Continuous Energy Restriction on Blood Pressure Control in Overweight and Obese Patients With Hypertension	He C.-J.; Fei Y.-P.; Zhu C.-Y.; Yao M.; Qian G.; Hu H.-L.; Zhai C.-L.	2021	Frontiers in Cardiovascular Medicine	8	(He, Fei, Qian, Hu, Zhai) Department of Cardiology, The First Hospital of Jiaxing, The Affiliated Hospital of Jiaxing University, Jiaxing, China(Zhu, Yao) Department of Anesthesiology, The First Hospital of Jiaxing, The Affiliated Hospital of Jiaxing Univ	https://dx.doi.org/10.3389/fcvm.2021.750714
The Fasting and Shifted Timing (FAST) of Eating Study: a pilot feasibility randomized crossover intervention assessing the acceptability of three different fasting diet approaches	Turner-McGrievy GM; Wirth MD; Bernhart JA; Aydin H	2022		176		https://doi.org/10.1016/j.appet.2022.106135
5 days of time-restricted feeding increases fat oxidation rate but not affect postprandial lipemia: a crossover trial	Chiu CH; Chen CH; Wu MH; Lan PT; Hsieh YC; Lin ZY; Chen BW	2022		12	1	https://doi.org/10.1038/s41598-022-13387-8
Effects of intermittent fasting compared to daily calorie restriction on intermediary metabolism in humans	Liu K.; Teong X.T.; Vincent A.D.; Wittert G.A.; Liu B.; Larance M.; Hutchison A.T.; Heilbronn L.K.	2022	Obesity Reviews	23	Supplement 2	https://dx.doi.org/10.1111/obr.13502
Changes in Eating Frequency but Not in Food Quality During Time Restricted Eating: Analysis from the See Food Study	Malaeb S.; Harindhanavudhi T.; Katrina D.; Esch N.; Emily M.; Panda S.; Mashek D.; Qi W.; Chow L.S.	2020	Journal of the Endocrine Society	4	Supplement 1	https://dx.doi.org/10.1210/jendso/bvaa046.906
Effects of 6-weeks of Time-Restricted Feeding in Normal Weight Middle-Aged and Older Adults	Nagy E.E.; Rossman M.J.; Mazzo M.R.; Denman B.A.; Jankowski L.R.; Richey J.J.; Johnson S.A.; Wang Y.; Peterson C.M.; Chonchol M.B.; Seals D.R.; Martens C.R.	2019	FASEB Journal	33	SUPPL 1	https://dx.doi.org/10.1096/fasebj.2019.33.1_supplement.590.2
Randomized clinical trial of intermittent energy restriction in people with multiple sclerosis	Tosti V; Ghezzi L; Rahmani F; Cantoni C; Salter A; Lancia S; Cross A; Naismith R; Zhou Y; Obert K; Mikesell R; Raji C; Piccio L	2022		28	3	https://doi.org/10.1177/13524585221123687
Effect of 8-Hour Time Restricted Eating Versus Daily Calorie Restriction on Body Weight and Glycemic Control in Adults With Type 2 Diabetes	Pavlou V.; Cienfuegos S.; Ezpeleta M.; Mulas A.; Varady K.; Lin S.	2023	Current Developments in Nutrition	7	Supplement 1	https://dx.doi.org/10.1016/j.cdnut.2023.101560

Title	Authors	Published Year	Journal	Volume	Issue	DOI
A Six-Month Periodic Fasting Reduces Microalbuminuria and Improves Metabolic Control in Patients with Type 2 Diabetes and Diabetic Nephropathy: A Randomized Controlled Study	Sulaj A.; Kopf S.; Rauchhaupt E.V.; Kliemank E.; Brune M.; Kender Z.; Bartl H.; Garcia-Cortizo F.; Klepac K.; Han Z.; Kumar V.; Longo V.; Teleman A.; Okun J.G.; Morgenstern J.; Fleming T.H.; Szendroedi J.M.; Herzig S.	2022	Diabetes	71	Supplement 1	https://dx.doi.org/10.2337/db22-389-P
Intermittent fasting has short-term effects on albuminuria, AGE formation and acylcarnitines in patients with type 2 diabetes	Sulaj A.; Kopf S.; Fleming T.; Teleman A.; Okun J.; Szendroedi J.; Herzig S.; Nawroth P.	2021	Diabetologia	64	Supplement 1	https://dx.doi.org/10.1007/s00125-021-05519-y
A randomized controlled trial to compare early intermittent fasting versus calorie restriction on glycemic control in adults at increased risk of developing type 2 diabetes	Teong X.T.; Liu K.; Vincent A.; Liu B.; Zhao L.; Feinle-Bisset C.; Wittert G.; Hutchison A.; Heilbronn L.	2022	Obesity Reviews	23	Supplement 2	https://dx.doi.org/10.1111/obr.13502
EFFECT OF INTERMITTENT FASTING IN OVERWEIGHT FEMALES ON WEIGHT LOSS AND METABOLIC BIOMARKERS	Tivya S.; Mustafa N.; Manaf Z.A.; Amiliyaton M.R.	2021	Journal of the ASEAN Federation of Endocrine Societies	36	(Tivya, Mustafa, Amiliyaton) Endocrine Unit, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia(Manaf) Dietetic Unit, Faculty of Health Sciences, National University of Malaysia, Kuala Lumpur, Malaysia	https://dx.doi.org/10.15605/jafes.036.S17
Randomized Clinical Trial of Intermittent Calorie Restriction in People with Multiple Sclerosis: Eects on Immunometabolic and Cognitive Measures	Tolentino M.; Ghezzi L.; Tosti V.; Cantoni C.; Salter A.; Lancia S.; Zhou Y.; Obert K.; Mikesell R.; Sen M.K.; Cross A.; Naismith R.; Piccio L.	2023	Journal of Immunology	210	1 Supplement	https://dx.doi.org/10.4049/jimmunol.210.Supp.165.05
Randomized clinical trial of intermittent energy restriction in people with multiple sclerosis	Tosti V.; Ghezzi L.; Rahmani F.; Cantoni C.; Salter A.; Lancia S.; Cross A.; Naismith R.; Zhou Y.; Obert K.; Mikesell R.; Raji C.; Piccio L.	2022	Multiple Sclerosis Journal	28	3 Supplement	https://dx.doi.org/10.1177/13524585221123687
Efficacy and Safety of Intermittent Fasting in People With Insulin-Treated Type 2 Diabetes (INTERFAST-2)—A Randomized Controlled Trial	Obermayer A; Tripolt NJ; Pferschy PN; Kojzar H; Aziz F; Muller A; Schauer M; Oulhaj A; Aberer F; Sourij C; Habisch H; Madl T; Pieber T; Obermayer-Pietsch B; Stadlbauer V; Sourij H	2023		46	2	https://doi.org/10.2337/dc22-1622
Cardiometabolic effects of early v. delayed time-restricted eating plus energetic restriction in adults with overweight and obesity: an exploratory randomised clinical trial	Queiroz JDN; MacEdo RCO; Dos Santos GC; Munhoz SV; MacHado CLF; De Menezes RL; Menzem EN; Moritz CEJ; Pinto RS; Tinsley GM; De Oliveira AR	2023		129	4	https://doi.org/10.1017/S0007114522001581
8-Hour Time Restricted Eating Plus Exercise on Body Composition in Older Adults With Obesity	Gabel K; Ezpeleta M; Cienfuegos S; Lin S; Cruz C; Varady K	2022		30		https://doi.org/10.1002/oby.23625
Effect of time-restricted feeding on body composition and cardio-metabolic risk in middle-aged women in Taiwan	Lin YJ; Wang YT; Chan LC; Chu NF	2022		93		https://doi.org/10.1016/j.nut.2021.111504
Randomized controlled trial for time-restricted eating in healthy volunteers without obesity	Xie Z; Sun Y; Ye Y; Hu D; Zhang H; He Z; Zhao H; Yang H; Mao Y	2022		13	1	https://doi.org/10.1038/s41467-022-28662-5
Effects of intermittent (5: 2) or continuous energy restriction on basal and postprandial metabolism: a randomised study in normal-weight, young participants	Gao Y; Tsintzas K; Macdonald IA; Cordon SM; Taylor MA	2022		76	1	https://doi.org/10.1038/s41430-021-00909-2
Impact of Intermittent Fasting on Lipid Profile-A Quasi-Randomized Clinical Trial.	Ahmed, Naseer; Farooq, Javeria; Siddiqi, Hasan Salman; Meo, Sultan Ayoub; Kulsoom, Bibi; Laghari, Abid H; Jamshed, Humaira; Pasha, Farooq	2020	Frontiers in nutrition	7	101642264	https://dx.doi.org/10.3389/fnut.2020.596787
The Effects of Time Restricted Feeding on Overweight, Older Adults: A Pilot Study.	Anton, Stephen D; Lee, Stephanie A; Donahoo, William T; McLaren, Christian; Manini, Todd; Leeuwenburgh, Christiaan; Pahor, Marco	2019	Nutrients	11	7	https://dx.doi.org/10.3390/nu11071500
The effect of alternate-day caloric restriction on the metabolic consequences of 8 days of bed rest in healthy lean men: a randomized trial.	Harder-Lauridsen, Nina Majlund; Nielsen, Signe Tellerup; Mann, Sebastian Porsdam; Lyngbaek, Mark Preben; Benatti, Fabiana Braga; Langkilde, Annika Reynberg; Law, Ian; Wedell-Neergaard, Anne-Sophie; Thomsen, Carsten; Moller, Kirsten; Karstoft, Kristian; Pedersen, Bente Klarlund; Krogh-Madsen, Rikke	2017	Journal of applied physiology (Bethesda, Md. : 1985)	122	2	https://dx.doi.org/10.1152/japplphysiol.00846.2016
Alternate-day fasting in nonobese subjects: effects on body weight, body composition, and energy metabolism.	Heilbronn, Leonie K; Smith, Steven R; Martin, Corby K; Anton, Stephen D; Ravussin, Eric	2005	The American journal of clinical nutrition	81	1	
Randomized cross-over trial of short-term water-only fasting: metabolic and cardiovascular consequences.	Horne, B D; Muhlestein, J B; Lappe, D L; May, H T; Carlquist, J F; Galenko, O; Brunisholz, K D; Anderson, J L	2013	Nutrition, metabolism, and cardiovascular diseases : NMCD	23	11	https://dx.doi.org/10.1016/j.numecd.2012.09.007
An Intermittent Fasting Mimicking Nutrition Bar Extends Physiologic Ketosis in Time Restricted Eating: A Randomized, Controlled, Parallel-Arm Study.	Huang, Angie W; Wei, Min; Caputo, Sara; Wilson, Melissa L; Antoun, Joseph; Hsu, William C	2021	Nutrients	13	5	https://dx.doi.org/10.3390/nu13051523
Ramadan Fasting Improves Body Composition without Exacerbating Depression in Males with Diagnosed Major Depressive Disorders.	Jahrami, Haitham; BaHammam, Ahmed S; Haji, Eman Ahmed; Bragazzi, Nicola L; Rakha, Ihab; Alsabbagh, Amani; Nugraha, Boya; Pasiakos, Stefan M	2021	Nutrients	13	8	https://dx.doi.org/10.3390/nu13082718
Early Time-Restricted Feeding Improves 24-Hour Glucose Levels and Affects Markers of the Circadian Clock, Aging, and Autophagy in Humans.	Jamshed, Humaira; Beyl, Robbie A; Della Manna, Deborah L; Yang, Eddy S; Ravussin, Eric; Peterson, Courtney M	2019	Nutrients	11	6	https://dx.doi.org/10.3390/nu11061234
Changes in subjective measures of appetite during 6 months of alternate day fasting with a low carbohydrate diet.	Kalam, Faiza; Gabel, Kelsey; Cienfuegos, Sofia; Wiseman, Eric; Ezpeleta, Mark; Pavlou, Vasiliki; Varady, Krista A	2021	Clinical nutrition ESPEN	41	101654592	https://dx.doi.org/10.1016/j.clnesp.2020.10.007
A nonrandomized controlled clinical pilot trial on 8 wk of intermittent fasting (24 h/wk).	Kessler, Christian S; Stange, Rainer; Schlenkermann, Maike; Jeitler, Michael; Michalsen, Andreas; Selle, Antonia; Raucci, Franca; Steckhan, Nico	2018	Nutrition (Burbank, Los Angeles County, Calif.)	46	beu, 8802712	https://dx.doi.org/10.1016/j.nut.2017.08.004

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Optimizing Chronic Pain Treatment with Enhanced Neuroplastic Responsiveness: A Pilot Randomized Controlled Trial.	Pratscher, Steven; Mickle, Angela M; Marks, John G; Rocha, Harold; Bartsch, Felix; Schmidt, Jeffrey; Tejera, Lazaro; Garcia, Steven; Custodero, Carlo; Jean, Federlin; Garvan, Cynthia; Johnson, Alisa J; Pop, Ralisa; Greene, Anthony; Woods, Adam J; Staud, Roland; Fillingim, Roger B; Keil, Andreas; Sibille, Kimberly T	2021	Nutrients	13	5	https://dx.doi.org/10.3390/nu13051556
Time-restricted eating for 12 weeks does not adversely alter bone turnover in overweight adults	Lobene, Andrea J.; Panda, Satchidananda; Manoogian, Emily N. C.; Mashek, Douglas G.; Chow, Lisa S.; Hill Gallant, Kathleen M.	2021	Nutrients	13	4	http://dx.doi.org/10.3390/nu13041155
Effect of intermittent compared with continuous energy restriction on glycaemic control in patients with type 2 diabetes	Carter, Sharayah; Clifton, Peter; Keogh, Jennifer	2019	Obesity Research and Clinical Practice	13	3	http://dx.doi.org/10.1016/j.orcp.2018.11.027
Intermittent compared to continuous energy restriction on weight loss and weight maintenance: effects after 12 months	Headland, Michelle; Clifton, Peter; Keogh, Jennifer	2019	Obesity Research and Clinical Practice	13	3	http://dx.doi.org/10.1016/j.orcp.2018.11.095
Calorie restriction diets and changes in the metabolome in people with multiple sclerosis	Fitzgerald, K.; Cassard, S.; Mowry, E.; Vizthum, D.; Henry Barron, B.; Baer, D.; Sullivan, P.	2017	Multiple Sclerosis Journal	23	3 Supplement 1	http://dx.doi.org/10.1177/1352458517731406
Intermittent Fasting vs. Continuous energy restriction: A pilot study in people with type 2 diabetes and overweight and obesity	Overland, Jane; Griffiths, Charmaine; Gauld, Amanda; Gibson, Alice; Franklin, Janet; Toth, Krisztina; Sainsbury, Amanda; Wong, Jencia	2017	Diabetes	66	Supplement 1	
A randomised controlled trial assessing the impact of intermittent energy restriction (IER) on weight loss and insulin sensitivity in healthy men and women with central obesity. "the Met-IER study"	Pinto, A.; Bordoli, C.; Buckner, L.; Kaplan, P.; Arenal, I.; Jefcock, E.; Kim, C.; Hall, W.; Johnston, K.	2017	Obesity Facts	10	Supplement 1	http://dx.doi.org/10.1159/000468958
A randomised controlled trial assessing the impact of intermittent vs continuous energy restriction on blood pressure and anthropometry in healthy subjects with central obesity. "the Met-IER study"	Pinto, A.; Bordoli, C.; Buckner, L.; Kaplan, P.; Arenal, I.; Jefcock, E.; Kim, C.; Hall, W.; Johnston, K.	2017	Obesity Facts	10	Supplement 1	http://dx.doi.org/10.1159/000468958
Alternate-day fasting	Varady, Krista	2016	Menopause	23	12	http://dx.doi.org/10.1097/GME.0000000000000783
Effect of intermittent versus continuous energy restriction on compensatory mechanisms activated during weight reduction	Coutinho, S.R.; Glsbakk, S.; Halset, E.H.; Kulseng, B.; Martins, C.; Truby, H.	2015	Obesity Facts	8	SUPPL. 1	http://dx.doi.org/10.1159/000382140
Alternateday fasting and daily calorie restriction similarly affect visceral adiposity and circulating inflammatory cytokine concentrations	Trepanowski, John; Kroeger, Cynthia; Barnosky, Adrienne; Hoddy, Kristin; Varady, Krista	2015	FASEB Journal	29	1 Meeting Abstracts	
Effect of 1 year of alternate day fasting versus daily calorie restriction on type 2 diabetes risk	Kroeger, Cynthia; Trapanowski, John; Barnosky, Adrienne; Klempel, Monica; Varady, Krista	2015	FASEB Journal	29	1 Meeting Abstracts	
Effects of intermittent compared to continuous energy restriction on weight loss and diet quality after one year	Pedersen, E.; Jennifer B Keogh, J.; Kristina Petersen, K.; Peter, M.; Clifton, P.	2014	Obesity Reviews	15	SUPPL. 2	http://dx.doi.org/10.1111/obr.12151
Intermittent energy restriction improves weight loss efficiency in obese men	Byrne, N.; King, N.; Sainsbury, A.; Wood, R.; Hills, A.	2014	Obesity Reviews	15	SUPPL. 2	http://dx.doi.org/10.1111/obr.12148
Alternateday fasting versus daily calorie restriction for weight loss and cardio-protection	Trepanowski, John; Kroeger, Cynthia; Klempel, Monica; Calvo, Yolian; Varady, Krista	2014	FASEB Journal	28	1 SUPPL. 1	
Alternate day fasting with or without exercise: Effects on endothelial function and adipokines in obese humans	Bhutani, Surabhi; Klempel, Monica C.; Kroeger, Cynthia M.; Trepanowski, J.F.; Varady, Krista A.; Phillips, Shane A.; Norkeviciute, Edita	2013	e-SPEN Journal	8	5	http://dx.doi.org/10.1016/j.clnme.2013.07.005
Alternate day fasting when combined with endurance exercise reduces leptin but not adiponectin and resistin	Bhutani, S.; Klempel, M.C.; Kroeger, C.M.; Varady, K.A.	2013	Journal of Investigative Medicine	61	4	
Short- and long-term effects of continuous versus intermittent restrictive diet approaches on body composition and the metabolic profile in overweight and obese postmenopausal women: A pilot study		2012	Menopause	19	8	http://dx.doi.org/10.1097/gme.0b013e318250a287
Intermittent dietary carbohydrate restriction enables weight loss and reduces breast cancer risk biomarkers	Harvie, M.; Wright, C.; Pegington, M.; Mitchell, E.; Evans, D.G.; Jebb, S.; Clarke, R.; Goodacre, R.; Dunn, W.; Mattson, M.; Howell, A.	2011	Cancer Research	71	24 SUPPL. 3	http://dx.doi.org/10.1158/0008-5472.SABCS11-P3-09-02
Effect of intermittent versus continuous energy restriction on weight loss and breast cancer risk biomarkers	Harvie, M.; Pegington, M.; Howell, A.; Cuzick, J.; Frystyk, J.; Flyvbjerg, A.; Jebb, S.; Mattson, M.	2010	Breast Cancer Research	12	SUPPL. 1	http://dx.doi.org/10.1186/bcr2525
The effect of intermittent versus continuous energy restriction on biomarkers of breast cancer risk	Harvie, M.; Chapman, M.; Howell, A.; Cuzick, J.; Flyvbjerg, A.; Jebb, S.; Mattson, M.	2009	Cancer Research	69	2 Suppl. S	http://dx.doi.org/10.1158/0008-5472.SABCS-506
Intermittent and continuous energy restriction result in similar weight loss, weight loss maintenance, and body composition changes in a 6 month randomized pilot study	Steger FL, Donnelly JE, Hull HR, Li X, Hu J, Sullivan DK	2020				
MATCHED WEIGHT LOSS THROUGH INTERMITTENT OR CONTINUOUS ENERGY RESTRICTION DOES NOT RESULT IN COMPENSATORY ADAPTATIONS IN APPETITE: a PROOF OF CONCEPT RCT		2019	MATCHED WEIGHT LOSS THROUGH INTERMITTENT OR CONTINUOUS ENERGY RESTRICTION DOES NOT RESULT IN COMPENSATORY ADAPTATIONS IN APPETITE: a PROOF OF CONCEPT RCT	38		
Dietary adherence and macronutrient intake during 12 months of alternate day fasting	Varady KA, Gabel K	2017		31	1	
Effects of intermittent versus continuous energy restriction for weight loss on diet quality and eating behavior. A randomized trial	Sundfor TM, Tonstad S, Svendsen M	2018				
Effect of intermittent compared to continuous energy restriction on weight loss and weight maintenance after 12 months in healthy overweight or obese adults	Headland ML, Clifton PM, Keogh JB	2018		(no pagination)		
Effect of intermittent versus continuous energy restriction on weight loss, maintenance and cardiometabolic risk: a randomized 1-year trial	Sundfor TM, Svendsen M, Tonstad S	2018		(no pagination)		
243 Interim Results of the MANGO Trial: Modified Intermittent Fasting in Psoriasis	Grine, L. Hilhorst, N. T. Michels, N. Abbeddou, S. De Henauw, S. Lambert, J.	2021	Journal of Investigative Dermatology	141	10 Supplement	https://dx.doi.org/10.1016/j.jid.2021.08.248

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Intermittent fasting and increased galectin-3 reveal a potential protective mechanism against risk of heart failure and type 2 diabetes	Horne, B. D. Anderson, J. L. May, H. T. Le, V. T. Galenko, O. Drakos, S. G. Bair, T. L. Knowlton, K. U. Muhlestein, J. B.	2021	Circulation	144	SUPPL 1	https://dx.doi.org/10.1161/circ.144.suppl_1.10312
Intermittent fasting interacts with red cell distribution width to differentially improve cardiometabolic health	Horne, B. D. Muhlestein, J. B. May, H. T. Le, V. T. Bair, T. L. Knowlton, K. U. Anderson, J. L.	2021	Circulation	144	SUPPL 1	https://dx.doi.org/10.1161/circ.144.suppl_1.10330
Effects of christian orthodox fasting versus time‐restricted eating on plasma irisin concentrations among overweight metabolically healthy individuals	Karras, S. N. Koufakis, T. Adamidou, L. Dimakopoulos, G. Karalazou, P. Thisiadou, K. Makedou, K. Kotsa, K.	2021	Nutrients	13	4	https://doi.org/10.3390/nu13041071
Differential Effects of One Meal per Day in the Evening on Metabolic Health and Physical Performance in Lean Individuals	Meessen, E. C. E. Andresen, H. van Barneveld, T. van Riel, A. Johansen, E. I. Kolnes, A. J. Kemper, E. M. Olde Damink, S. W. M. Schaap, F. G. Romijn, J. A. Jensen, J. Soeters, M. R.	2021	Frontiers in physiology	12		https://dx.doi.org/10.3389/fphys.2021.771944
Effects of intermittent (5:2) or continuous energy restriction on basal and postprandial metabolism: a randomised study in normal-weight, young participants	Gao, Yangfan Tsintzas, Kostas Macdonald, Ian A. Cordon, Sally M. Taylor, Moira A.	2022	European journal of clinical nutrition	76	1	https://dx.doi.org/10.1038/s41430-021-00909-2
The rationale and design of a Mediterranean diet accompanied by time restricted feeding to optimise the management of type 2 diabetes: The MedDietFast randomised controlled trial	Papamichou, Dimitra Panagiotakos, Demosthenes B. Holmes, Elaine Koutsakis, Polychronis Katsoulotos, Hariklia Loo, Ruey L. Itsiopoulos, Catherine	2022	Nutrition, metabolism, and cardiovascular diseases : NMCD	32	1	https://dx.doi.org/10.1016/j.numecd.2021.09.031
Effects of 8 wk of 16:8 Time-restricted Eating in Male Middle- and Long-Distance Runners	Brady, A. J.; Langton, H. M.; Mulligan, M.; Egan, B.	2021	Med Sci Sports Exerc	53	3	10.1249/MSS.0000000000002488
Adaptation of energy metabolism of overweight women to alternating and continuous low energy intake	de Groot, L. C.; van Es, A. J.; van Raaij, J. M.; Vogt, J. E.; Hautvast, J. G.	1989	Am J Clin Nutr	50	6	10.1093/ajcn/50.6.1314
Time-restricted feeding influences immune responses without compromising muscle performance in older men	Gasmi, M.; Sellami, M.; Denham, J.; Padulo, J.; Kuvacic, G.; Selmi, W.; Khalifa, R.	2018	Nutrition	51-52		10.1016/j.nut.2017.12.014
Eating two larger meals a day (breakfast and lunch) is more effective than six smaller meals in a reduced-energy regimen for patients with type 2 diabetes: a randomised crossover study	Kahleova, H.; Belinova, L.; Malinska, H.; Oliyarnyk, O.; Trnovska, J.; Skop, V.; Kazdova, L.; Dezortova, M.; Hajek, M.; Tura, A.; Hill, M.; Pelikanova, T.	2014	Diabetologia	57	8	10.1007/s00125-014-3253-5
Efficacy of fasting calorie restriction on quality of life among aging men	Teng, N. I.; Shahar, S.; Manaf, Z. A.; Das, S. K.; Taha, C. S.; Ngah, W. Z.	2011	Physiol Behav	104	5	10.1016/j.physbeh.2011.07.007
Effects of a very low calorie diet on weight, thyroid hormones and mood	Wadden, T. A.; Mason, G.; Foster, G. D.; Stunkard, A. J.; Prange, A. J.	1990	Int J Obes	14	3	
The effect of short periods of caloric restriction on weight loss and glycemic control in type 2 diabetes	Williams, K. V.; Mullen, M. L.; Kelley, D. E.; Wing, R. R.	1998	Diabetes Care	21	1	10.2337/diacare.21.1.2
Year-long weight loss treatment for obese patients with type II diabetes: does including an intermittent very-low-calorie diet improve outcome?	Wing, R. R.; Blair, E.; Marcus, M.; Epstein, L. H.; Harvey, J.	1994	Am J Med	97	4	10.1016/0002-9343(94)90302-6
Impact of Ramadan Diurnal Intermittent Fasting on Hypoglycemic Events in Patients With Type 2 Diabetes: A Systematic Review of Randomized Controlled Trials and Observational Studies	Abdelrahim, Dana Faris, MoezAlIslam E. Shakir, Ayman Z. Yusuf, Ayesha M. Hassanein, Mohamed Almeneessier, Aljohara S. BaHammam, Ahmed S.	2021	Frontiers in Endocrinology	12		http://dx.doi.org/10.3389/fendo.2021.624423
Intermittent fasting for the prevention of cardiovascular disease	Allaf, Mohammed Elghazaly, Hussein Mohamed, Omer G. Fareen, Mohamed Firas Khan Zaman, Sadia Salmasi, Abdul-Majeed Tsilidis, Kostas Dehghan, Abbas	2021	The Cochrane database of systematic reviews	1		https://dx.doi.org/10.1002/14651858.CD013496.pub2
The effect of intermittent fasting and exercise on some physiological parameters	Berk, Y. Unver, S. Avlayan, H.	2021	Pakistan Journal of Medical and Health Sciences	15	9	http://dx.doi.org/10.53350/pjmhs211592793
Watching, keeping and squeezing time to lose weight: Implications of time-restricted eating in daily life	Bjerre, N. Holm, L. Quist, J. S. Faerch, K. Hempler, N. F.	2021	Appetite	161		http://dx.doi.org/10.1016/j.appet.2021.105138
Exerciser identity and device-measured physical activity in a behavioral weight loss trial	Caldwell, A. Grau, L. Ostendorf, D. Catenacci, V.	2021	Obesity	29	SUPPL 2	https://dx.doi.org/10.1002/oby.23328
Prevalence, etiology and management of gastroesophageal reflux disease among adult females in Hail Region, Saudi Arabia	Fatima, S. B. Mutlaq, S. Alhejji, R. J. S. Alkamali, R. N. S. Almalaq, O. A.	2021	Endocrine Practice	27	12 SUPPL	https://dx.doi.org/10.1016/j.eprac.2021.11.025
Exerciser identity and device-measured physical activity in a behavioral weight loss trial	Caldwell, A. Grau, L. Ostendorf, D. Catenacci, V.	2021	Obesity	29	SUPPL 2	https://dx.doi.org/10.1002/oby.23328
Prevalence, etiology and management of gastroesophageal reflux disease among adult females in Hail Region, Saudi Arabia	Fatima, S. B. Mutlaq, S. Alhejji, R. J. S. Alkamali, R. N. S. Almalaq, O. A.	2021	Endocrine Practice	27	12 SUPPL	https://dx.doi.org/10.1016/j.eprac.2021.11.025
Improvements in physical activity and some dietary behaviors in a community health worker-led diabetes self-management intervention for adults with low incomes: Results from a randomized controlled trial	Gray, K. E. Hoerster, K. D. Taylor, L. Krieger, J. Nelson, K. M.	2021	Translational behavioral medicine	11	12	https://dx.doi.org/10.1093/tbm/ibab113
243 Interim Results of the MANGO Trial: Modified Intermittent Fasting in Psoriasis	Grine, L. Hilhorst, N. T. Michels, N. Abbeddou, S. De Henauw, S. Lambert, J.	2021	Journal of Investigative Dermatology	141	10 Supplement	https://dx.doi.org/10.1016/j.jid.2021.08.248
Periodic fasting prevents fat penalties in females	Heilbronn, L. K.	2021	Nature Metabolism	3	10	http://dx.doi.org/10.1038/s42255-021-00472-x
Novel dietary interventions for adolescents with obesity: A narrative review	Hoare, J. K. Jebeile, H. Garnett, S. P. Lister, N. B.	2021	Pediatric Obesity	16	9	http://dx.doi.org/10.1111/ijpo.12798
SGLT2 Inhibitors as Calorie Restriction Mimetics: Insights on Longevity Pathways and Age-Related Diseases	Hoong, C. W. S. Chua, M. W. J.	2021	Endocrinology (United States)	162	8	http://dx.doi.org/10.1210/endocr/bqab079
The effects of a macronutrient-based diet and time-restricted feeding (16:8) on body composition in physically active individuals-a 14-week randomised controlled trial	Isenmann, E. Dissemond, J. Geisler, S.	2021	Nutrients	13	9	http://dx.doi.org/10.3390/nu13093122
Time-restricted eating and concurrent exercise training reduces fat mass and increases lean mass in overweight and obese adults	Kotarsky, C. J. Johnson, N. R. Mahoney, S. J. Mitchell, S. L. Schimek, R. L. Stastny, S. N. Hackney, K. J.	2021	Physiological reports	9	10	http://dx.doi.org/10.14814/phy2.14868
Intermittent fasting and sleep: A review of human trials	McStay, M. Gabel, K. Cienfuegos, S. Ezpeleta, M. Lin, S. Varady, K. A.	2021	Nutrients	13	10	http://dx.doi.org/10.3390/nu13103489
Differential Effects of One Meal per Day in the Evening on Metabolic Health and Physical Performance in Lean Individuals	Meessen, E. C. E. Andresen, H. van Barneveld, T. van Riel, A. Johansen, E. I. Kolnes, A. J. Kemper, E. M. Olde Damink, S. W. M. Schaap, F. G. Romijn, J. A. Jensen, J. Soeters, M. R.	2021	Frontiers in physiology	12		https://dx.doi.org/10.3389/fphys.2021.771944

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Food as medicine	Michalsen, A.	2021	Complementary Medicine Research	28	SUPPL 1	https://dx.doi.org/10.1159/000514476
Isolated and combined effects of high-intensity interval training and time-restricted eating on glycaemic control in reproductive-aged women with overweight or obesity: Study protocol for a four-armed randomised controlled trial	Moholdt, T. Silva, C. P. Lydersen, S. Hawley, J. A.	2021	BMJ Open	11	2	https://dx.doi.org/10.1136/bmjopen-2020-040020
Intermittent fasting and the possible benefits in obesity, diabetes, and multiple sclerosis: A systematic review of randomized clinical trials	Morales-Suarez-varela, M. Sanchez, E. C. Peraita-Costa, I. Llopis-Morales, A. Soriano, J. M.	2021	Nutrients	13	9	http://dx.doi.org/10.3390/nu13093179
Machine Learning-based Meal Detection Using Continuous Glucose Monitoring on Healthy Participants: An Objective Measure of Participant Compliance to Protocol	Palacios, Victor Woodbridge, Diane Myung-Kyung Fry, Jean L.	2021	Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual International Conference	2021		https://dx.doi.org/10.1109/EMBC46164.2021.9630408
Intermittent Fasting and Obesity-Related Health Outcomes: An Umbrella Review of Meta-analyses of Randomized Clinical Trials	Patikorn, C. Roubal, K. Veettil, S. K. Chandran, V. Pham, T. Lee, Y. Y. Giovannucci, E. L. Varady, K. A. Chaiyakunapruk, N.	2021	JAMA network open	4	12	https://dx.doi.org/10.1001/jamanetworkopen.2021.39558
Effects of Periodic Religious Fasting for Decades on Nutrient Intakes and the Blood Biochemical Profile	Petridou, Anatoli Rodopaios, Nikolaos E. Mougios, Vassilis Koulouri, Alexandra-Aikaterini Vasara, Eleni Papadopoulou, Sousana K. Skepastianos, Petros Hassapidou, Maria Kafatos, Anthony	2021	Nutrients	13	11	https://dx.doi.org/10.3390/nu13113963
Optimizing chronic pain treatment with enhanced neuroplastic responsiveness: A pilot randomized controlled trial	Pratscher, S. Mickle, A. M. Marks, J. G. Rocha, H. Bartsch, F. Schmidt, J. Tejera, L. Garcia, S. Custodero, C. Jean, F. Garvan, C. Johnson, A. J. Pop, R. Greene, A. Woods, A. J. Staud, R. Fillingim, R. B. Keil, A. Sibille, K. T.	2021	Nutrients	13	5	http://dx.doi.org/10.3390/nu13051556
Effect of early time-restricted feeding on the metabolic profile of adults with excess weight: A systematic review with meta-analysis	Pureza, I. R. D. O. M. Macena, M. D. L. da Silva Junior, A. E. Praxedes, D. R. S. Vasconcelos, L. G. L. Bueno, N. B.	2021	Clinical Nutrition	40	4	http://dx.doi.org/10.1016/j.clnu.2020.10.031
Intermittent Fasting: A User-Friendly Method for Type 2 Diabetes Mellitus	Saeed, Mahreen Ali, Moeez Zehra, Tehreem Haider Zaidi, Saiyed Ali Tariq, Rihab	2021	Cureus	13	11	https://dx.doi.org/10.7759/cureus.19348
The Gut Microbiota during a Behavioral Weight Loss Intervention	Stanislawski, Maggie A. Frank, Daniel N. Borengasser, Sarah J. Ostendorf, Danielle M. Ir, Diana Jambal, Purevsuren Bing, Kristen Wayland, Liza Siebert, Janet C. Bessesen, Daniel H. MacLean, Paul S. Melanson, Edward L. Catenacci, Victoria A.	2021	Nutrients	13	9	https://dx.doi.org/10.3390/nu13093248
A six-month periodic fasting reduces microalbuminuria and improves metabolic control in patients with type 2 diabetes and diabetic nephropathy: A randomized controlled study	Sulaj, A. Kopf, S. von Rauchhaupt, E. Kliemank, E. Brune, M. Kender, Z. Bartl, H. Cortizo, F. G. Klepac, K. Han, Z. Kumar, V. Longo, V. Teleman, A. Okun, J. G. Morgenstern, J. Fleming, T. Szendroedi, J. Herzig, S. Nawroth, P. P.	2021	medRxiv			https://dx.doi.org/10.1101/2021.12.01.21266958
Time-limited eating and continuous glucose monitoring in adolescents with obesity: A pilot study	Vidmar, A. P. Naguib, M. Raymond, J. K. Salvy, S. J. Hegedus, E. Wee, C. P. Goran, M. I.	2021	Nutrients	13	11	https://dx.doi.org/10.3390/nu13113697
Nutrition Concepts for the Treatment of Obesity in Adults	Wiechert, Meike Holzapfel, Christina	2021	Nutrients	14	1	https://dx.doi.org/10.3390/nu14010169
The comparison of the effects between continuous and intermittent energy restriction in short-term bodyweight loss for sedentary population: A randomized, double-blind, controlled trial	Xu, M. Li, J. Zou, Y. Xu, Y.	2021	International Journal of Environmental Research and Public Health	18	21	https://dx.doi.org/10.3390/ijerph182111645
Management of Paediatric Fatty Liver Disease by Intermittent Fasting - a Pilot study	Acharyya, B. C. Mukhopadhyay, M. Acharyya, S.	2022	Journal of Clinical and Experimental Hepatology	12	Supplement 1	https://dx.doi.org/10.1016/j.jceh.2021.10.069
Practical, Evidence-Based Approaches to Nutritional Modifications to Reduce Atherosclerotic Cardiovascular Disease: An American Society For Preventive Cardiology Clinical Practice Statement	Belardo, Danielle Michos, Erin D. Blankstein, Ron Blumenthal, Roger S. Ferdinand, Keith C. Hall, Kevin Klatt, Kevin Natajaran, Pradeep Ostfeld, Robert J. Reddy, Koushik Rodriguez, Renee Sriram, Urshila Tobias, Deirdre K. Gulati, Martha	2022	American journal of preventive cardiology	10		https://dx.doi.org/10.1016/j.ajpc.2022.100323
Intermittent Fasting in Weight Loss and Cardiometabolic Risk Reduction: A Randomized Controlled Trial	Chair, Sek Ying Cai, Hua Cao, Xi Qin, Yuelan Cheng, Ho Yu Ng, Michael Timothy	2022	The journal of nursing research : JNR	30	1	https://dx.doi.org/10.1097/jnr.0000000000000469
The effect of 4-h versus 6-h time restricted feeding on sleep quality, duration, insomnia severity and obstructive sleep apnea in adults with obesity	Cienfuegos, Sofia Gabel, Kelsey Kalam, Faiza Ezpeleta, Mark Pavlou, Vicky Lin, Shuhao Wiseman, Eric Varady, Krista A.	2022	Nutrition and health	28	1	https://dx.doi.org/10.1177/02601060211002347
Intermittent fasting & performance: The iFast clinical trial protocol	El-Outa, A. Ghandour, L. Hamade, H. Borgi, C. Fares, E. J. Gherbal, T. Mufarrij, A.	2022	Contemporary Clinical Trials Communications	25		https://dx.doi.org/10.1016/j.conctc.2021.100766
Association of prolonged nightly fasting with cardiovascular, renal, inflammation, and nutritional status biomarkers in community-dwelling older adults	Estrada-deLeon, Daniela B. Struijk, Ellen A. Caballero, Francisco Felix Ortola, Rosario Guallar-Castillon, Pilar Banegas, Jose R. Rodriguez-Artalejo, Fernando Lopez-Garcia, Esther	2022	The American journal of clinical nutrition			https://dx.doi.org/10.1093/ajcn/nqac021
Intermittent calorie restriction alters T cell subsets and metabolic markers in people with multiple sclerosis	Fitzgerald, K. C. Bhargava, P. Smith, M. D. Vizthum, D. Henry-Barron, B. Kornberg, M. D. Cassard, S. D. Kapogiannis, D. Sullivan, P. Baer, D. J. Calabresi, P. A. Mowry, E. M.	2022	medRxiv			https://dx.doi.org/10.1101/2022.01.11.22269094
Effects of intermittent (5:2) or continuous energy restriction on basal and postprandial metabolism: a randomised study in normal-weight, young participants	Gao, Yangfan Tsintzas, Kostas Macdonald, Ian A. Cordon, Sally M. Taylor, Moira A.	2022	European journal of clinical nutrition	76	1	https://dx.doi.org/10.1038/s41430-021-00909-2
Chrononutrition in Cardiometabolic Health	Katsi, Vasiliki Papakonstantinou, Ilias P. Soulaidopoulos, Stergios Katsiki, Niki Tsioufis, Konstantinos	2022	Journal of clinical medicine	11	2	https://dx.doi.org/10.3390/jcm11020296
Effect of time-restricted feeding on body composition and cardio-metabolic risk in middle-aged women in Taiwan	Lin, Yan-Ju Wang, Yun-Ting Chan, Lin-Chien Chu, Nain-Feng	2022	Nutrition (Burbank, Los Angeles County, Calif.)	93		https://dx.doi.org/10.1016/j.nut.2021.111504

Title	Authors	Published Year	Journal	Volume	Issue	DOI
Antioxidant Potential, DNA Damage, Inflammation, Glycemic Control and Lipid Metabolism Alteration: A Mediation Analysis of Islamic Sunnah Intermittent Fasting on Cognitive Function among Older Adults with Mild Cognitive Impairment	Ooi, T. C. Meramat, A. Rajab, N. F. Shahar, S. Sharif, R.	2022	The journal of nutrition, health & aging	26	3	https://dx.doi.org/10.1007/s12603-022-1757-0
The rationale and design of a Mediterranean diet accompanied by time restricted feeding to optimise the management of type 2 diabetes: The MedDietFast randomised controlled trial	Papamichou, Dimitra Panagiotakos, Demosthenes B. Holmes, Elaine Koutsakis, Polychronis Katsoulotos, Hariklia Loo, Ruey L. Itsiopoulos, Catherine	2022	Nutrition, metabolism, and cardiovascular diseases : NMCD	32	1	https://dx.doi.org/10.1016/j.numecd.2021.09.031
Early Time-Restricted Feeding Amends Circadian Clock Function and Improves Metabolic Health in Male and Female Nile Grass Rats	Ramanathan, Chidambaram Johnson, Hayden Sharma, Suman Son, Wangkuk Puppa, Melissa Rohani, Saba Neyson Tipirneni-Sajja, Aaryani Bloomer, Richard J. van der Merwe, Marie	2022	Medicines (Basel, Switzerland)	9	2	https://dx.doi.org/10.3390/medicines9020015
Effect of different types of intermittent fasting on biochemical and anthropometric parameters among patients with metabolic-associated fatty liver disease (MAFLD)-A systematic review	Rozanski, G. Pheby, D. Newton, J. L. Murovska, M. Zalewski, P. Slomko, J.	2022	Nutrients	14	1	https://dx.doi.org/10.3390/nu14010091
A scoping review of intermittent fasting, chronobiology, and metabolism	Santos, H. O. Genario, R. Tinsley, G. M. Ribeiro, P. Carteri, R. B. Coelho-Ravagnani, C. F. Mota, J. F.	2022	The American journal of clinical nutrition	115	4	https://dx.doi.org/10.1093/ajcn/nqab433
Association of breakfast skipping with cardiovascular outcomes and cardiometabolic risk factors: an updated review of clinical evidence	Santos, Heitor O. Genario, Rafael Macedo, Rodrigo C. O. Pareek, Manan Tinsley, Grant M.	2022	Critical reviews in food science and nutrition	62	2	https://dx.doi.org/10.1080/10408398.2020.1819768
ShiftingWeight in Night ShiftWorkers: results From a 24 Week, Parallel, Multi-Site, Randomised Controlled Trial (SWIFt)	Bonham M; Banks S; Clarke A; Coates A; Davis C; Davis R; Dorrian J; Huggins C; Kellow N; Leung G; Phoi YY; Rogers M; Sletten T	2023		7		https://doi.org/10.1016/j.cdnut.2023.100722
Dietary Protein Supplementation During Time Restricted Feeding Does Not Affect Body Composition or Sleep, but Improves Mood, in Adults With Overweight or Obesity	Boudrey S; Hawley A; Bowie R; Romana C; Thomas A-M; Komp M; Baum J	2023		7		https://doi.org/10.1016/j.cdnut.2023.100621
Intermittent dietary carbohydrate restriction versus calorie restriction and cardiometabolic profiles: a randomized trial	Dou Y; Jiang Y; Chen X; Zhang Y; Wang Y; Chen H; He W; Yan W	2023		31	9	https://doi.org/10.1002/oby.23855
Nutritional Intervention-induced Weight Loss During the Oncological Treatment of Obesity-related Breast Cancer		2023	Evaluation of Changes in the Methylome and Prognosis of Obesity-related Breast Cancer After Nutritional Intervention-induced Weight Loss During the Oncological Treatment			
Prolonged fasting outperforms short-term fasting in terms of glucose tolerance and insulin release: a randomised controlled trial	Solianik R; Židoniene K; Eimantas N; Brazaitis M	2023		130	9	https://doi.org/10.1017/S0007114523000557
The acute effect of time-restricted feeding (12 & 16 hrs) and varying exercise intensities on fat-oxidation rate		2023				
Fasting-mimicking Diet and Periodontitis (FMD)		2023	The Effect of a Fast-mimicking Diet on Periodontal Clinical and Systemic Response to Non-surgical Treatment of Stage III-IV Periodontitis: a Multi-centre Randomised Controlled Trial With Internal Pilot			
A study on the effect of intermittent fasting in reducing the blood sugar level and number of medicines in type 2 diabetic patients		2023	Open label randomized controlled trial evaluating the effect of three months intermittent fasting on polypharmacy in patients with type II diabetes mellitus. - NIL			
Safety and efficacy of intermittent fasting and exercise in overweight people with type 2 diabetes – a randomized controlled trial		2023	Safety and efficacy of intermittent fasting and exercise in overweight people with type 2 diabetes – a randomized controlled trial - InterFast 3			
Intermittent fasting and sleep: A review of human trials	McStay, M. Gabel, K. Cienfuegos, S. Ezpeleta, M. Lin, S. Varady, K. A.	2021	Nutrients	13	10	http://dx.doi.org/10.3390/nu13103489
Differential Effects of One Meal per Day in the Evening on Metabolic Health and Physical Performance in Lean Individuals	Meessen, E. C. E. Andresen, H. van Barneveld, T. van Riel, A. Johansen, E. I. Kolnes, A. J. Kemper, E. M. Olde Damink, S. W. M. Schaap, F. G. Romijn, J. A. Jensen, J. Soeters, M. R.	2021	Frontiers in physiology	12		https://dx.doi.org/10.3389/fphys.2021.771944
Machine Learning-based Meal Detection Using Continuous Glucose Monitoring on Healthy Participants: An Objective Measure of Participant Compliance to Protocol	Palacios, Victor Woodbridge, Diane Myung-Kyung Fry, Jean L.	2021	Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual International Conference	2021		https://dx.doi.org/10.1109/EMBC46164.2021.9630408
EFFECTS OF THE KETOGENIC DIET AND INTERMITTENT FASTING ON SYSTEMIC BLOOD PRESSURE AND VASCULAR REACTIVITY IN A COHORT OF WOMEN WITH OBESITY AND ARTERIAL HYPERTENSION (DIET-TO-HTN)	Pala B; Tifi P; Di Marzio S; Tocci G; Volpe M	2022		29	5	https://doi.org/10.1007/s40292-022-00541-6
5 days of time-restricted feeding increases fat oxidation rate but not affect postprandial lipemia: a crossover trial	Chiu CH; Chen CH; Wu MH; Lan PT; Hsieh YC; Lin ZY; Chen BW	2022		12	1	https://doi.org/10.1038/s41598-022-13387-8