Table S1. Electronic database search strategy

Search	Query
#15	Search **#13 AND #14**
#14	Search **English [Language]**
#13	Search **#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12**
#12	Search **"quorn"[Title/Abstract]**
#11	Search **"quorn"[Text Word]**
#10	Search **"mycoprotein"[Title/Abstract]**
#9	Search **"mycoprotein"[Text Word]**
#8	Search **"textured vegetable protein"[Title/Abstract]**
#7	Search **"textured vegetable protein"[Text Word]**
#6	Search **"meat alternative"[Title/Abstract]**
#5	Search **"meat alternative"[Text Word]**
#4	Search **"meat substitute"[Title/Abstract]**
#3	Search **"meat substitute"[Text Word]**
#2	Search **"plant-based meat"[Title/Abstract]**
#1	Search **"plant-based meat"[Text Word]**

Table S2. One-study-removed analysis

Outcome **Study**	**N**	**Removal**	**Mean Difference**	***p*-value**	***p*-value for heterogeneity**	**I^2 (%)**
TC	384		-0.50 [-0.70, -0.29]	<0.00001	0.002	66
Azadbakht (2007)	342	Yes	-0.47 [-0.68, -0.26]	<0.0001	0.002	66
Azadbakht (2008)	**343**	**Yes**	**-0.61 [-0.91, -0.30]**	**<0.0001**	**0.001**	**69**
Bakhtiary (2012)	334	Yes	-0.53 [-0.76, -0.29]	<0.00001	0.0009	70
Bianchi (2021)	**270**	**Yes**	**-0.61 [-0.86, -0.36]**	**<0.00001**	**0.006**	**62**
Kestin (1989)	367	Yes	-0.49 [-0.71, -0.27]	<0.0001	0.001	69
Ruxton (2010)	**369**	**Yes**	**-0.40 [-0.56, -0.23]**	**<0.00001**	**0.05**	**49**
Sirtori (1977)	364	Yes	-0.48 [-0.69, -0.28]	<0.00001	0.02	68
Ta (2022)	337	Yes	-0.52 [-0.74, -0.30]	<0.00001	0.0009	70
Turnbull (1990)	367	Yes	-0.45 [-0.66, -0.24]	<0.0001	0.002	63
Turnbull (1992)	363	Yes	-0.50 [-0.72, -0.29]	<0.00001	0.0009	70
LDL-C	420		-0.39 [-0.57, -0.21]	<0.0001	0.0007	67

	Azadbakht (2007)	378	Yes	-0.44 [-0.66, -0.23]	<0.0001	0.001	67
	Azadbakht (2008)	379	Yes	-0.34 [-0.51, -0.16]	<0.0001	0.009	59
	Bakhtiary (2012)	370	Yes	-0.39 [-0.59, -0.20]	<0.0001	0.0005	70
	Bianchi (2021)	**306**	**Yes**	**-0.45 [-0.63, -0.27]**	**<0.00001**	**0.01**	**57**
	Crimarco (2020)	384	Yes	-0.43 [-0.65, -0.21]	0.0001	0.0004	70
	Kestin (1989)	403	Yes	-0.38 [-0.56, -0.19]	<0.0001	0.0007	69
	Ruxton (2010)	405	Yes	-0.38 [-0.57, -0.20]	<0.0001	0.0005	69
	Sirtori (1977)	400	Yes	-0.39 [-0.57, -0.20]	<0.0001	0.0005	70
	Ta (2022)	373	Yes	-0.41 [-0.61, -0.22]	<0.0001	0.0004	70
	Turnbull (1990)	**403**	**Yes**	**-0.33 [-0.49, -0.16]**	**0.0001**	**0.01**	**58**
	Turnbull (1992)	399	Yes	-0.39 [-0.58, -0.20]	<0.0001	0.0004	70
HDL-C		400		0.01 [-0.02, 0.05]	0.44	0.28	18
	Azadbakht (2007)	358	Yes	0.02 [-0.03, 0.08]	0.34	0.24	23
	Azadbakht (2008)	359	Yes	0.02 [-0.02, 0.06]	0.45	0.21	26
	Bakhtiary (2012)	350	Yes	0.01 [-0.03, 0.05]	0.66	0.28	19
	Bianchi (2021)	286	Yes	0.02 [-0.02, 0.06]	0.39	0.21	27
	Crimarco (2020)	364	Yes	0.02 [-0.03, 0.06]	0.48	0.21	26
	Kestin (1989)	383	Yes	0.02 [-0.01, 0.05]	0.21	0.58	0
	Ruxton (2010)	385	Yes	0.02 [-0.02, 0.06]	0.45	0.21	26
	Ta (2022)	353	Yes	0.01 [-0.03, 0.31]	0.54	0.26	21
	Turnbull (1990)	383	Yes	0.00 [-0.03, 0.03]	0.84	0.63	0
	Turnbull (1992)	379	Yes	0.02 [-0.02, 0.06]	0.42	0.21	27
TG		420		-0.15 [-0.29, -0.01]	0.04	<0.00001	79
	Azadbakht (2007)	378	Yes	-0.19 [-0.40, 0.02]	0.08	<0.00001	81
	Azadbakht (2008)	379	Yes	-0.15 [-0.30, 0.00]	0.05	<0.00001	81
	Bakhtiary (2012)	370	Yes	-0.16 [-0.32, -0.01]	0.04	<0.00001	81
	Bianchi (2021)	306	Yes	-0.18 [-0.34, -0.01]	0.03	<0.00001	81
	Crimarco (2020)	384	Yes	-0.19 [-0.37, -0.00]	0.05	<0.00001	81
	Kestin (1989)	**403**	**Yes**	**-0.20 [-0.34, -0.05]**	**0.009**	**<0.00001**	**79**
	Ruxton (2010)	405	Yes	-0.12 [-0.26, 0.02]	0.10	<0.00001	79
	Sirtori (1977)	**400**	**Yes**	**-0.05 [-0.14, 0.04]**	**0.31**	**0.06**	**45**
	Ta (2022)	373	Yes	-0.14 [-0.28, 0.00]	0.05	<0.00001	81
	Turnbull (1990)	403	Yes	-0.15 [-0.30, 0.00]	0.06	<0.00001	81
	Turnbull (1992)	399	Yes	-0.16 [-0.31, -0.01]	0.03	<0.00001	81
FBG		231		-0.08 [-0.23, 0.08]	0.33	0.07	52
	Azadbakht (2007)	**189**	**Yes**	**-0.16 [-0.43, 0.11]**	**0.24**	**0.05**	**58**
	Azadbakht (2008)	**190**	**Yes**	**-0.06 [-0.19, 0.07]**	**0.38**	**0.13**	**44**
	Bakhtiary (2012)	181	Yes	-0.01 [-0.16, 0.14]	0.87	0.21	32
	Crimarco (2020)	**195**	**Yes**	**-0.16 [-0.40, 0.08]**	**0.20**	**0.06**	**55**
	Ruxton (2010)	216	Yes	-0.07 [-0.22, 0.08]	0.37	0.06	55
	Ta (2022)	184	Yes	-0.07 [-0.23, 0.09]	0.38	0.05	59
SBP		339		-0.32 [-1.79, 1.14]	0.67	0.29	18

Azadbakht (2007)	**297**	**Yes**	**-0.80 [-2.52, 0.93]**	**0.37**	**0.30**	**17**
Azadbakht (2008)	298	Yes	-0.41 [-2.01, 1.19]	0.62	0.20	32
Bakhtiary (2012)	**289**	**Yes**	**0.22 [-1.17, 1.62]**	**0.75**	**0.40**	**2**
Bianchi (2021)	225	Yes	-0.62 [-2.61, 1.36]	0.54	0.20	32
Crimarco (2020)	303	Yes	-0.75 [-2.42, 0.93]	0.38	0.30	18
Kestin (1989)	322	Yes	-0.19 [-1.73, 1.35]	0.81	0.26	23
Margetts (1985)	300	Yes	0.01 [-1.25, 1.28]	0.98	0.47	0
DBP	339		0.49 [-0.30, 1.28]	0.23	0.63	0
Azadbakht (2007)	297	**Yes**	**-0.30 [-1.56, 0.97]**	**0.65**	**0.87**	**0**
Azadbakht (2008)	298	Yes	0.50 [-0.30, 1.29]	0.22	0.55	0
Bakhtiary (2012)	289	Yes	0.56 [-0.26, 1.38]	0.18	0.57	0
Bianchi (2021)	225	Yes	0.54 [-0.36, 1.44]	0.24	0.51	0
Crimarco (2020)	**303**	**Yes**	**0.57 [-0.25, 1.39]**	**0.17**	**0.60**	**0**
Kestin (1989)	**322**	Yes	0.52 [-0.28, 1.32]	0.20	0.54	0
Margetts (1985)	**300**	**Yes**	**0.57 [-0.23, 1.38]**	**0.16**	**0.77**	**0**
Weight	294		-0.12 [-1.52, 1.27]	0.86	0.93	0
Azadbakht (2007)	**252**	**Yes**	**-0.58 [-2.28, -1.13]**	**0.51**	**1.00**	**0**
Azadbakht (2008)	253	Yes	-0.07 [-1.51, 1.37]	0.93	0.85	0
Bakhtiary (2012)	**244**	**Yes**	**0.31 [-1.68, 2.30]**	**0.76**	**0.91**	**0**
Bianchi (2021)	180	Yes	-0.09 [-1.51, 1.34]	0.90	0.85	0
Ta (2022)	247	Yes	-0.12 [-1.56, 1.33]	0.87	0.83	0

Table S3. Mean differences in outcomes adjusted for zero percent heterogeneity

Outcome	**N**	**Mean Difference**	***p*-value**	***p*-value for heterogeneity**	**I^2 (%)**
TC	238	-0.32 [-0.38, -0.26]	<0.00001	0.66	0
LDL-C	228	-0.60 [-0.76, -0.43]	<0.00001	0.48	0
HDL-C	383	0.02 [-0.01, 0.05]	0.21	0.58	0
TG	368	-0.05 [-0.08, -0.01]	0.008	0.74	0
FBG	140	0.01 [-0.08, 0.10]	0.87	0.48	0
SBP	300	0.01 [-1.25, 1.28]	0.98	0.47	0
DBP	339	0.49 [-0.30, 1.28]	0.23	0.63	0
Weight	294	-0.12 [-1.52, 1.27]	0.86	0.93	0

Table S4. Results of meta-regression including age, study duration, sample size, baseline BMI, and sex

Modifier	Dependent variable	Coefficients
Age	Total cholesterol	0.0084 [-0.0232, 0.0310], p=0.602
	LDL-cholesterol	-0.0142 [-0.0288, 0.0003], p=0.055
	Triglycerides	-0.0026 [-0.0224, 0.01715], p=0.794
Duration	Total cholesterol	0.0014 [-0.0021, 0.0050], p=0.433
	LDL-cholesterol	-0.0018 [-0.0047, 0.0010], p=0.210
	Triglycerides	0.0001 [-0.0036, 0.0038], p=0.962
Sample size	**Total cholesterol**	**0.0072 [0.0017, 0.0127], p=0.010**
	LDL-cholesterol	**0.0066 [0.0014, 0.0117], p=0.012**
	Triglycerides	0.0029 [-0.0045, 0.0102], p=0.445
Baseline BMI	Total cholesterol	-0.0433 [-0.2428, 0.1563], p=0.671
	LDL-cholesterol	-0.0483 [-0.1808, 0.0842], p=0.475
	Triglycerides	-0.0307 [-0.1228, 0.0614], p=0.514
Sex	Total cholesterol	-0.0000 [-0.0079, 0.0078], p=0.997
	LDL-cholesterol	-0.0037 [-0.0111, 0.0037], p=0.324
	Triglycerides	0.0015 [-0.0059, 0.0090], p=0.687

Table S5. P values of Egger's test and Begg's test

Outcome	Egger's test	Begg's test
Total cholesterol	0.066	0.089
LDL cholesterol	0.044	0.274
HDL cholesterol	0.354	0.468
Triglycerides	0.270	0.059

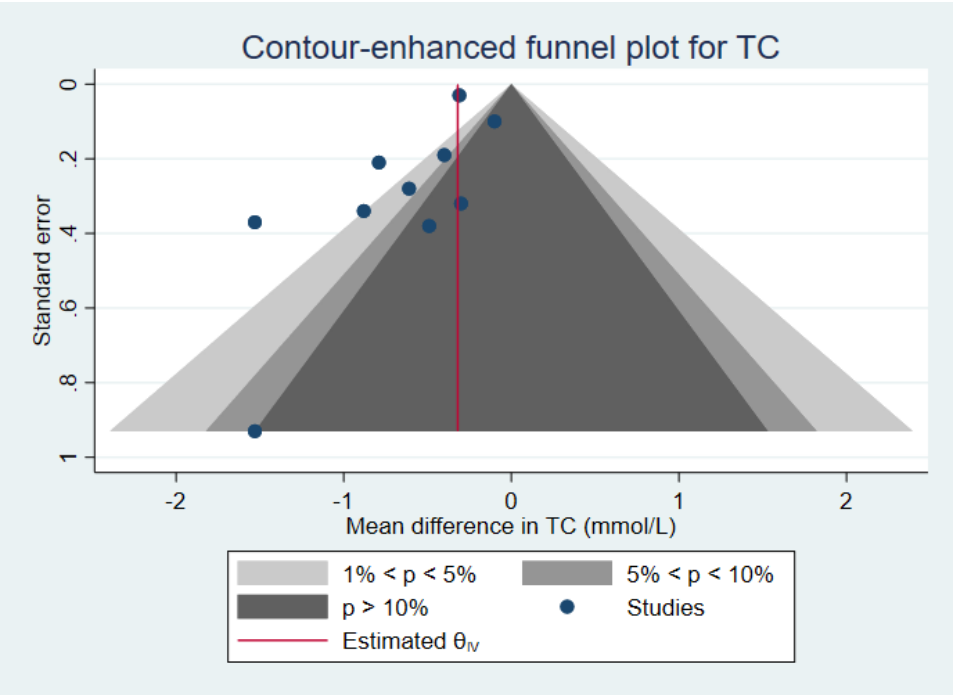

Figure S1. Publication bias funnel plot for total cholesterol concentration

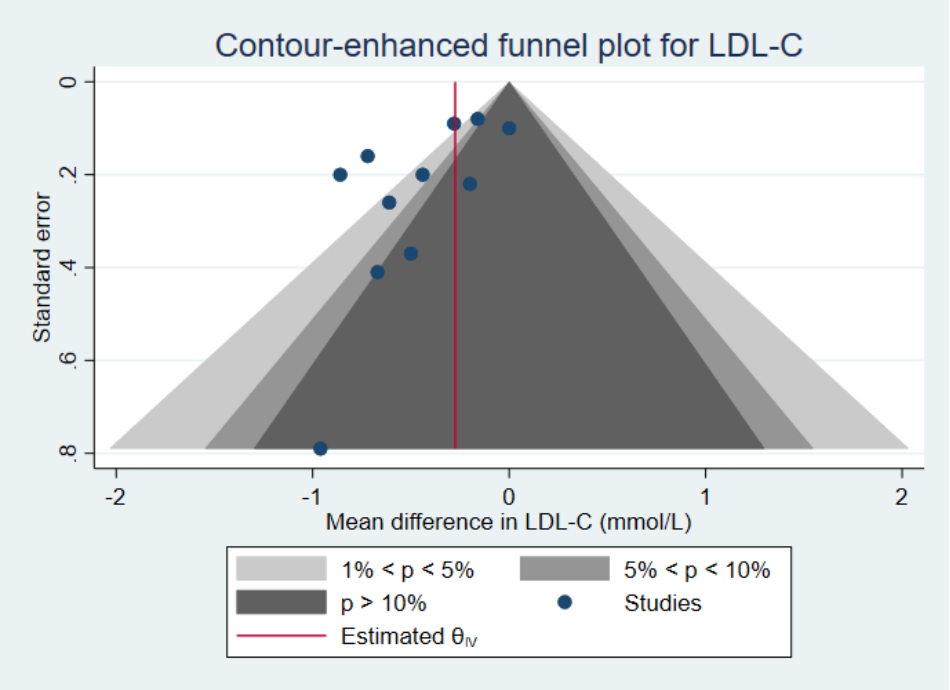

Figure S2. Publication bias funnel plot for LDL-cholesterol concentration

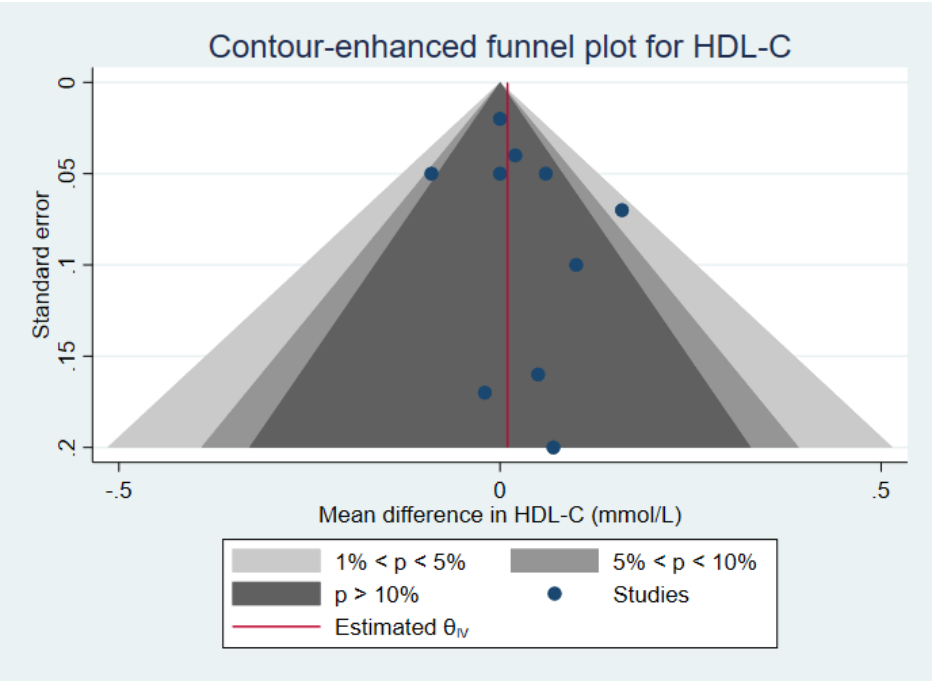

Figure S3. Publication bias funnel plot for HDL-cholesterol concentration

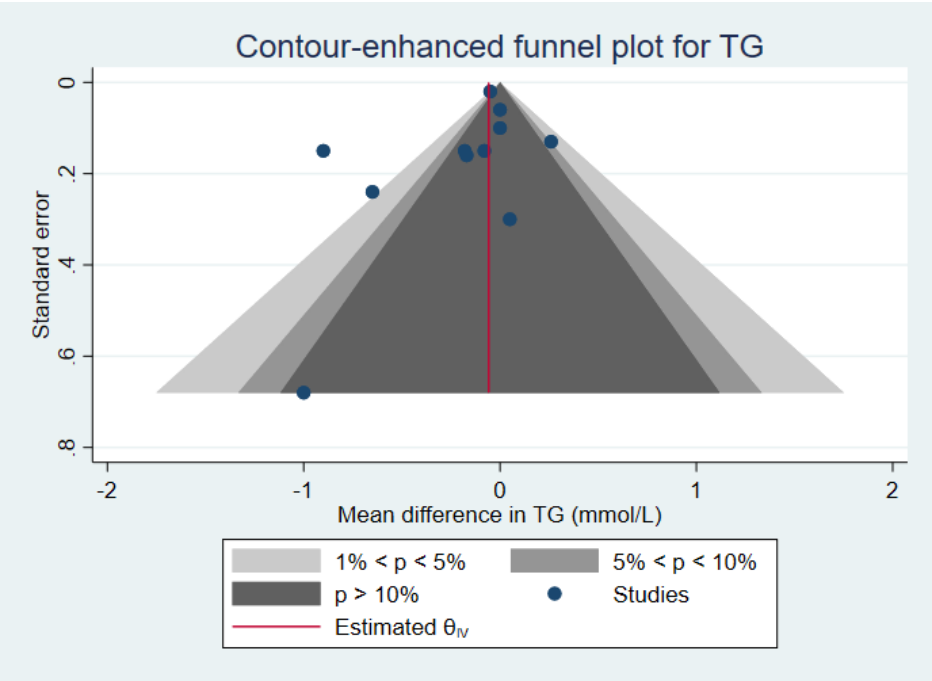

Figure S4. Publication bias funnel plot for triglyceride concentration

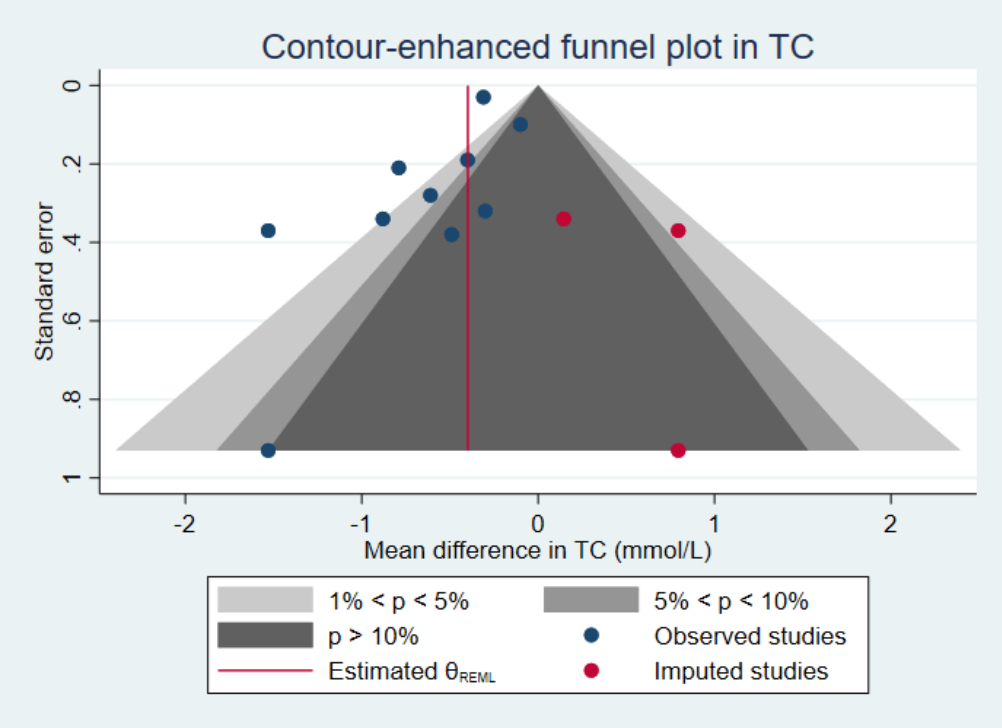

Figure S5. Trim and fill funnel plot for total cholesterol concentration

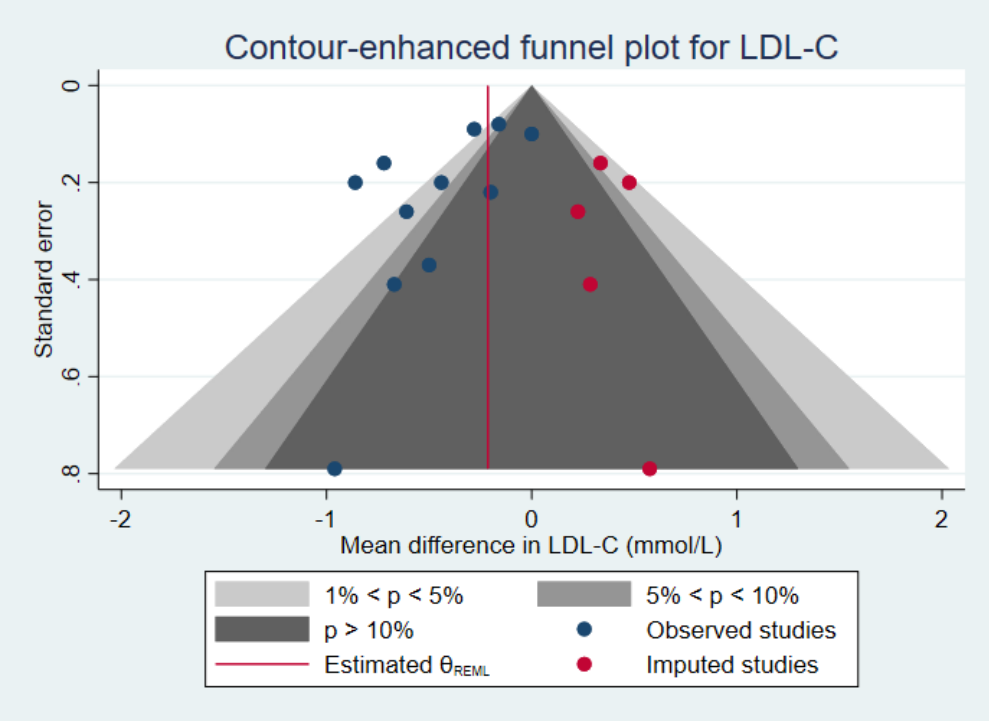

Figure S6. Trim and fill funnel plot for LDL-cholesterol concentration

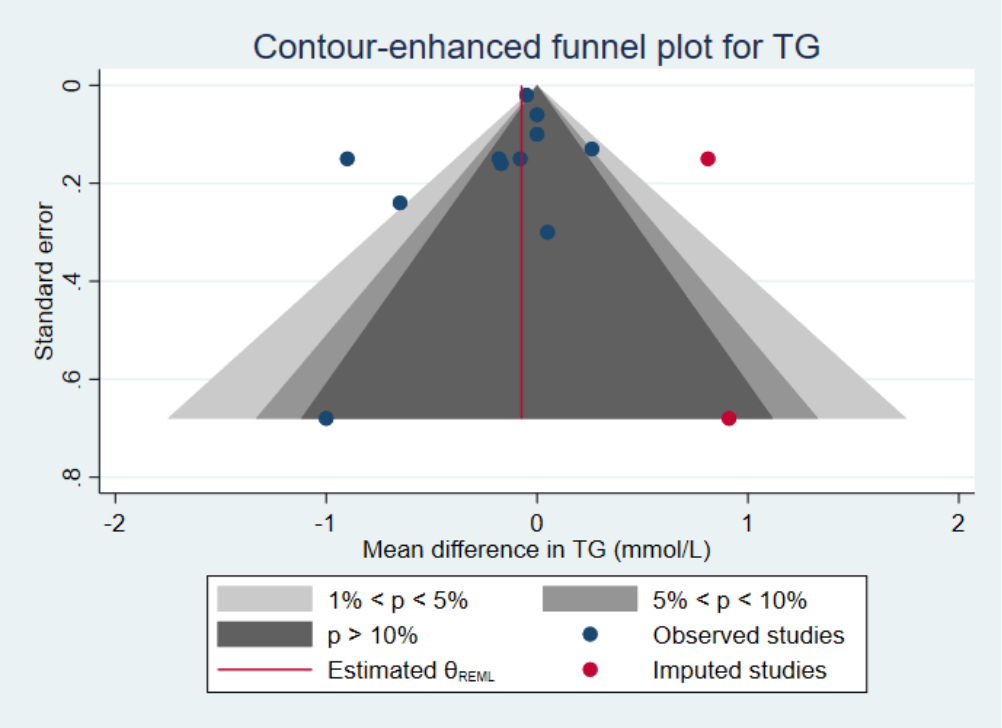

Figure S7. Trim and fill funnel plot for triglyceride concentration