

Figure S1. Meta-analysis of adipose tissue between liraglutide and control groups.

The pooled results indicated no significant difference regarding the adipose tissues between liraglutide and placebo or insulin, respectively. The summary effect estimates (mean difference, MD) for individual randomized controlled trial (RCT) are indicated by green rectangles (the size of the rectangle is proportional to the study weight), and the black horizontal lines represent 95% confidence intervals (CIs). The overall summary effect estimates (MD) and 95% confidence intervals are indicated by black diamond below. SAT, subcutaneous adipose tissue; VAT, visceral adipose tissue.

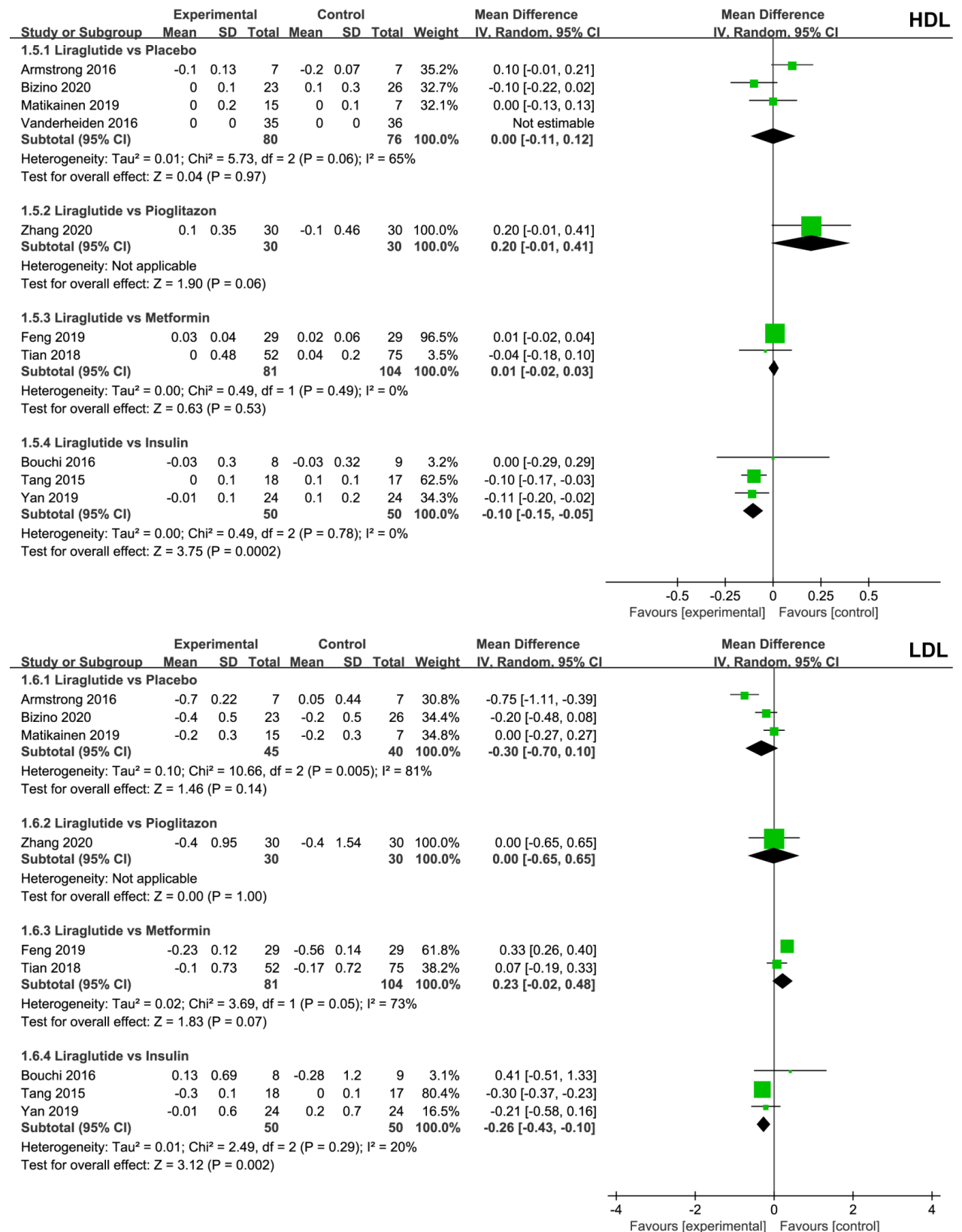


Figure S2. Meta-analysis of lipoprotein between liraglutide and control groups.

The pooled results indicated a significant difference with regard to adipose tissues between liraglutide and insulin. The summary effect estimates (mean difference, MD)

for individual randomized controlled trial (RCT) are indicated by green rectangles (the size of the rectangle is proportional to the study weight), and the black horizontal lines represent 95% confidence intervals (CIs). The overall summary effect estimates (MD) and 95% confidence intervals are indicated by black diamond below. HDL, high density lipoprotein; LDL, low density lipoprotein.

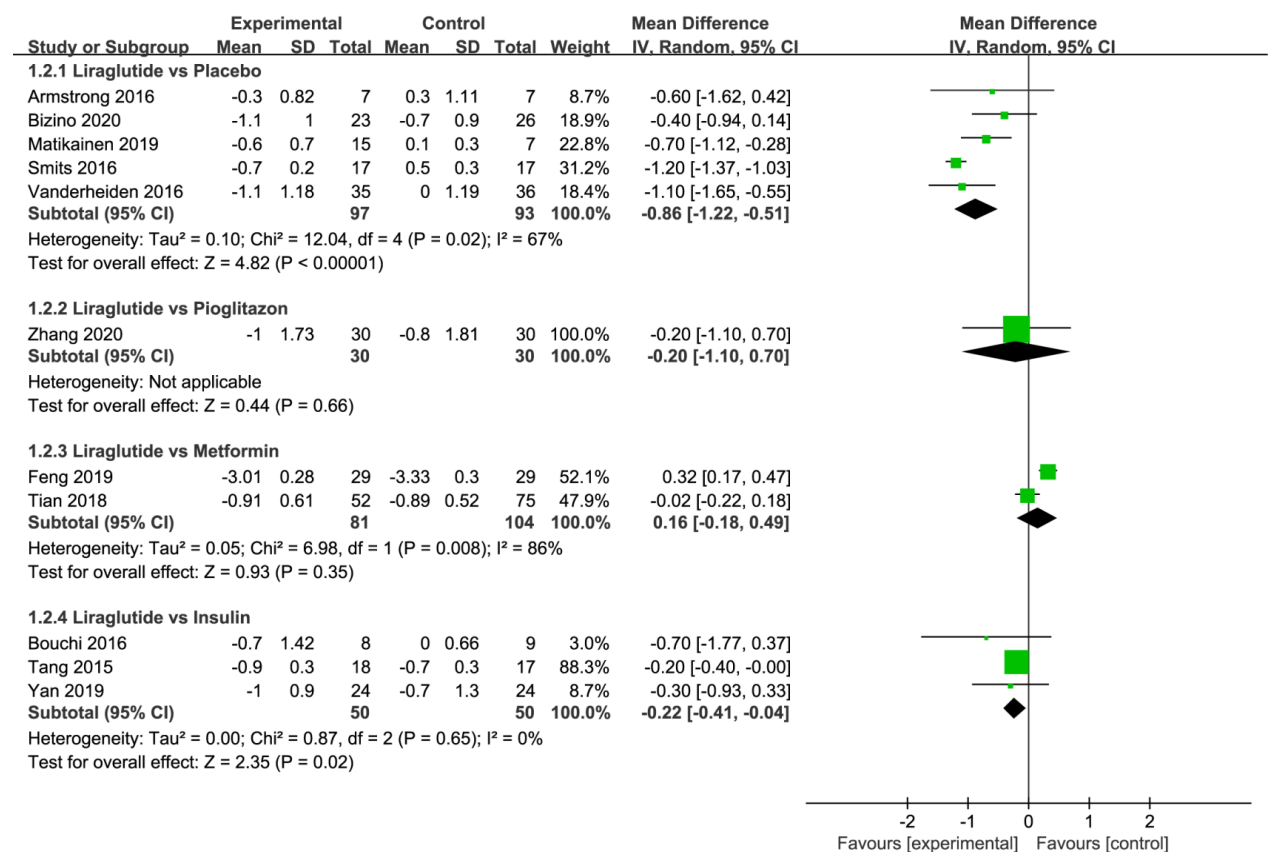


Figure S3. Meta-analysis of HbA1c between liraglutide and control groups. The pooled results indicated a significant difference in HbA1c levels after treatment with liraglutide when compared to placebo or insulin. The summary effect estimates (mean difference, MD) for individual randomized controlled trial (RCT) are indicated by green rectangles (the size of the rectangle is proportional to the study weight), and the black horizontal lines represent 95% confidence intervals (CIs). The overall summary effect estimates (MD) and 95% confidence intervals are indicated by black diamond below.

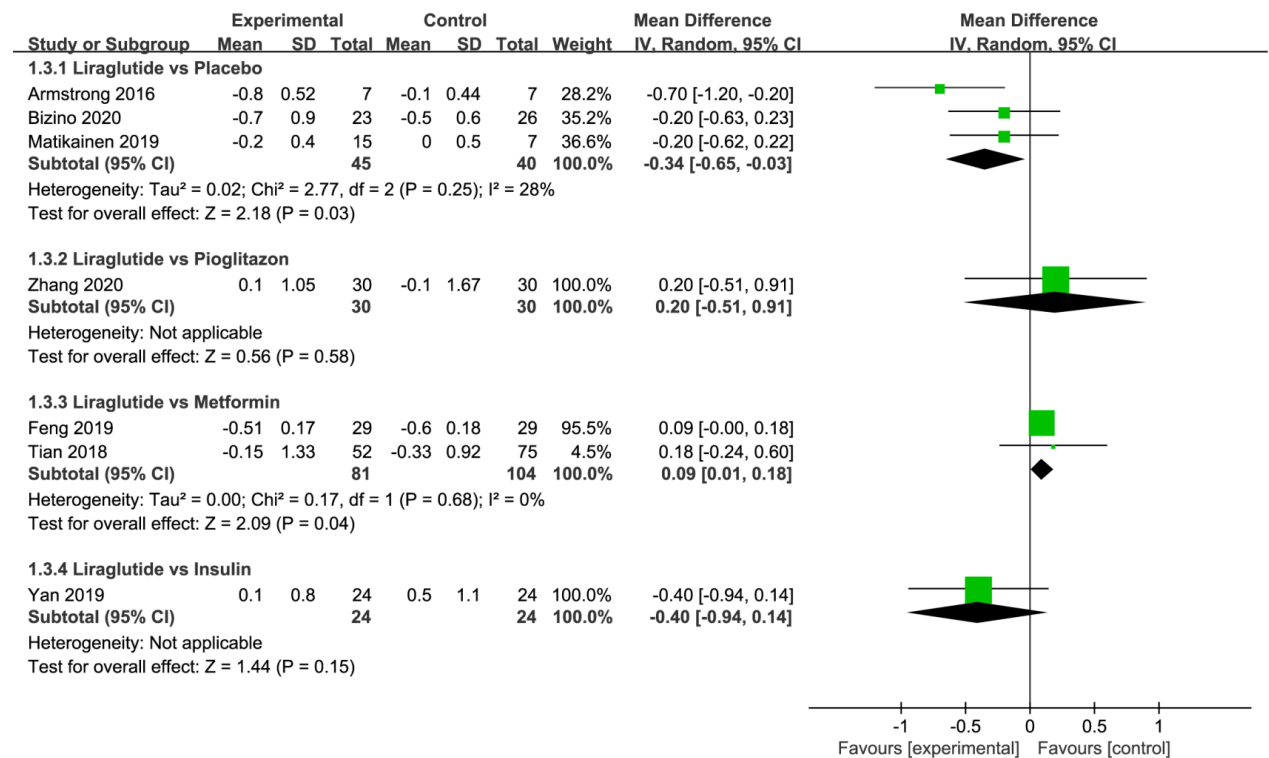


Figure S4. Meta-analysis of TC between liraglutide and placebo or other active control agents. SD, standard difference; IV, inverse variance; CI, confidence interval; TC, total cholesterol.

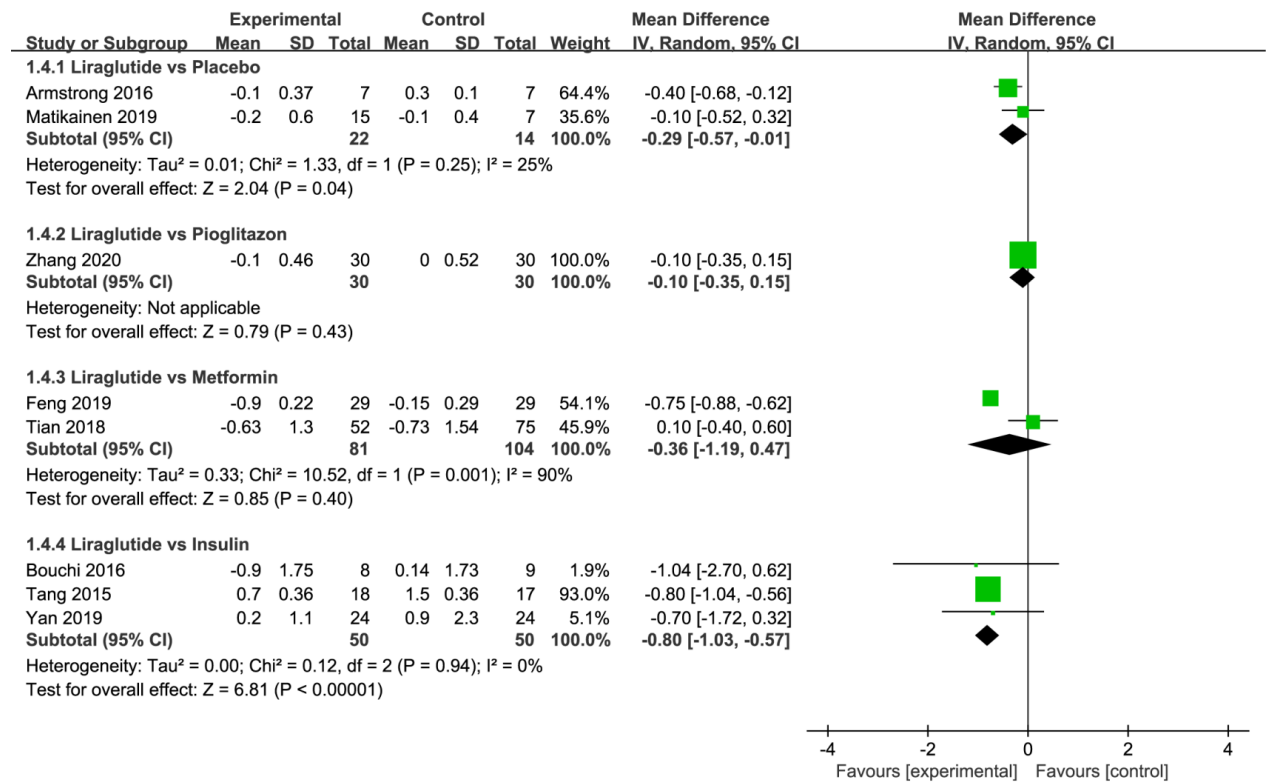


Figure S5. Meta-analysis of TG between liraglutide and placebo or other active control agents. SD, standard difference; IV, inverse variance; CI, confidence interval; TG, triglyceride.

Supplementary Table S1 Search strategies for English-language databases.

Search strategy of PubMed

No.	Query
#11	#3 AND #6 AND #9 AND #10
#10	random*
#9	#7 OR #8
#8	'nonalcoholic fatty liver'/exp 'non alcoholic fatty liver disease':ab,ti OR 'non-alcoholic fatty liver disease':ab,ti OR
#7	nafld:ab,ti OR 'nonalcoholic fatty liver disease':ab,ti OR 'nonalcoholic fatty liver':ab,ti OR 'nonalcoholic fatty livers':ab,ti OR 'nonalcoholic steatohepatitis':ab,ti OR 'nonalcoholic steatohepatitides':ab,ti
#6	#4 OR #5
#5	'non insulin dependent diabetes mellitus'/exp 'ketosis-resistant diabetes mellitus':ab,ti OR 'non-insulin-dependent diabetes mellitus':ab,ti OR 'stable diabetes mellitus':ab,ti OR niddm:ab,ti OR 'maturity-onset diabetes mellitus':ab,ti OR 'maturity onset diabetes mellitus':ab,ti OR mody:ab,ti OR
#4	'slow-onset diabetes mellitus':ab,ti OR 'type 2 diabetes mellitus':ab,ti OR 'noninsulin-dependent diabetes mellitus':ab,ti OR 'noninsulin dependent diabetes mellitus':ab,ti OR 'maturity-onset diabetes':ab,ti OR 'maturity onset diabetes':ab,ti OR 'type 2 diabetes':ab,ti OR 'adult-onset diabetes mellitus':ab,ti OR 'adult onset diabetes mellitus':ab,ti
#3	#1 OR #2
#2	'liraglutide'/exp
#1	liraglutide:ab,ti OR victoza:ab,ti OR saxenda:ab,ti OR 'nn 2211':ab,ti

Search strategy of CENTRAL

Search Name:

Date Run: 25/04/2020 06:31:25

Comment:

ID Search

- #1 (liraglutide):ti,ab,kw OR (Victoza):ti,ab,kw OR (Saxenda):ti,ab,kw OR (NN 2211):ti,ab,kw OR (NN-2211):ti,ab,kw (Word variations have been searched)
- #2 MeSH descriptor: [Liraglutide] explode all trees
- #3 #1 OR #2
- #4 (ketosis resistant diabetes mellitus):ti,ab,kw OR (non insulin dependent diabetes mellitus):ti,ab,kw OR (stable diabetes mellitus):ti,ab,kw OR (NIDDM):ti,ab,kw OR (maturity onset diabetes mellitus):ti,ab,kw (Word variations have been searched)
- #5 (maturity onset diabetes mellitus):ti,ab,kw OR (MODY):ti,ab,kw OR (Slow-Onset Diabetes Mellitus):ti,ab,kw OR (Type 2 Diabetes Mellitus):ti,ab,kw OR (Noninsulin-Dependent Diabetes Mellitus):ti,ab,kw (Word variations have been searched)
- #6 (Noninsulin Dependent Diabetes Mellitus):ti,ab,kw OR (Maturity-Onset Diabetes):ti,ab,kw OR (Maturity Onset Diabetes):ti,ab,kw OR (Type 2 Diabetes):ti,ab,kw OR (Adult-Onset Diabetes Mellitus):ti,ab,kw (Word variations have been searched)
- #7 MeSH descriptor: [Non-alcoholic Fatty Liver Disease] explode all trees
- #8 #4 OR #5 OR #6 OR #7
- #9 (Non alcoholic Fatty Liver Disease):ti,ab,kw OR (Non-alcoholic Fatty Liver Disease):ti,ab,kw OR (NAFLD):ti,ab,kw OR (Nonalcoholic Fatty Liver Disease):ti,ab,kw OR (Nonalcoholic Fatty Liver):ti,ab,kw (Word variations have been searched)
- #10 (Nonalcoholic Fatty Livers):ti,ab,kw OR (Nonalcoholic Steatohepatitis):ti,ab,kw OR (Nonalcoholic Steatohepatitides):ti,ab,kw (Word variations have been searched)
- #11 MeSH descriptor: [Non-alcoholic Fatty Liver Disease] explode all trees
- #12 #9 OR #10 OR #11
- #13 (random*) (Word variations have been searched)
- #14 #3 AND #8 AND #12 AND #13

Search strategy of Embase

No.	Query
#11	#3 AND #6 AND #9 AND #10
#10	random*
#9	#7 OR #8
#8	'nonalcoholic fatty liver'/exp 'non alcoholic fatty liver disease':ab,ti OR 'non-alcoholic fatty liver disease':ab,ti OR nafld:ab,ti OR 'nonalcoholic fatty liver disease':ab,ti OR 'nonalcoholic fatty liver':ab,ti
#7	OR 'nonalcoholic fatty livers':ab,ti OR 'nonalcoholic steatohepatitis':ab,ti OR 'nonalcoholic steatohepatitides':ab,ti
#6	#4 OR #5
#5	'non insulin dependent diabetes mellitus'/exp 'ketosis-resistant diabetes mellitus':ab,ti OR 'non-insulin-dependent diabetes mellitus':ab,ti OR 'stable diabetes mellitus':ab,ti OR niddm:ab,ti OR 'maturity-onset diabetes mellitus':ab,ti OR 'maturity onset diabetes mellitus':ab,ti OR mody:ab,ti OR
#4	'slow-onset diabetes mellitus':ab,ti OR 'type 2 diabetes mellitus':ab,ti OR 'noninsulin-dependent diabetes mellitus':ab,ti OR 'noninsulin dependent diabetes mellitus':ab,ti OR 'maturity-onset diabetes':ab,ti OR 'maturity onset diabetes':ab,ti OR 'type 2 diabetes':ab,ti OR 'adult-onset diabetes mellitus':ab,ti OR 'adult onset diabetes mellitus':ab,ti
#3	#1 OR #2
#2	'liraglutide'/exp
#1	liraglutide:ab,ti OR victoza:ab,ti OR saxenda:ab,ti OR 'nn 2211':ab,ti