

Supplementary Materials

Table S1. Search strategy for each electronic database.

Database	Strategy
PubMed (title/abstract)	#1 (selenium) OR (selenite) OR (selenate) OR (Selenium supplementation) OR (trace element) #2 (cardiometabolic diseases) OR (diabetes mellitus) OR (type 2 diabetes mellitus) OR (T2DM) OR (coronary heart disease) OR (ischemic heart disease) OR (heart failure) OR (Cardiac Failure) OR (hypertension) OR (hyperlipidemia) OR (metabolic syndrome) OR (nonalcoholic fatty liver disease) OR (NAFLD) OR (stroke) OR (obesity) OR (obese) #3 (Randomized Controlled Trial) OR (RCT) OR (random*) #4 #1 AND #2 AND #3
Cochrane Library (title/abstract/keyword)	#1 (selenium) OR (selenite) OR (selenate) OR (Selenium supplementation) OR (trace element) #2 (cardiometabolic diseases) OR (diabetes mellitus) OR (type 2 diabetes mellitus) OR (T2DM) OR (coronary heart disease) OR (ischemic heart disease) OR (heart failure) OR (Cardiac Failure) OR (hypertension) OR (hyperlipidemia) OR (metabolic syndrome) OR (nonalcoholic fatty liver disease) OR (NAFLD) OR (stroke) OR (obesity) OR (obese) #3 (Randomized Controlled Trial) OR (RCT) OR (random*) #4 #1 AND #2 AND #3
Embase (title/abstract/keyword)	#1 "selenium" OR "selenite" OR "selenate" OR "Selenium supplementation" OR "trace element" #2 "cardiometabolic diseases" OR "diabetes mellitus" OR "type 2 diabetes mellitus" OR "T2DM" OR "coronary heart disease" OR "ischemic heart disease" OR "heart failure" OR "Cardiac Failure" OR "hypertension" OR "hyperlipidemia" OR "metabolic syndrome" OR "nonalcoholic fatty liver disease" OR "NAFLD" OR "stroke" OR "obesity" OR "obese" #3 "Randomized Controlled Trial" OR "RCT" OR "random*" #4 #1 AND #2 AND #3
Scopus (title/abstract/keyword)	#1 "selenium" OR "selenite" OR "selenate" OR "selenium supplementation" OR "trace element" #2 "cardiometabolic diseases" OR "diabetes mellitus" OR "type 2 diabetes mellitus" OR "t2dm" OR "coronary heart disease" OR "ischemic heart disease" OR "heart failure" OR "cardiac failure" OR "hypertension" OR "hyperlipidemia" OR "metabolic syndrome" OR "nonalcoholic fatty liver disease" OR "NAFLD" OR "stroke" OR "obesity" OR "obese" #3 "randomized controlled trial" OR "RCT" OR "random*"

	#4 #1 AND #2 AND #3
Web of Science (title/abstract/keyword)	#1 selenium OR selenite OR selenate OR Selenium supplementation OR trace element
	#2 cardiometabolic diseases OR diabetes mellitus OR type 2 diabetes mellitus OR T2DM OR coronary heart disease OR ischemic heart disease OR heart failure OR Cardiac Failure OR hypertension OR hyperlipidemia OR metabolic syndrome OR nonalcoholic fatty liver disease OR NAFLD OR stroke OR obesity OR obese
	#3 Randomized Controlled Trial OR RCT OR random*
	#4 #1 AND #2 AND #3

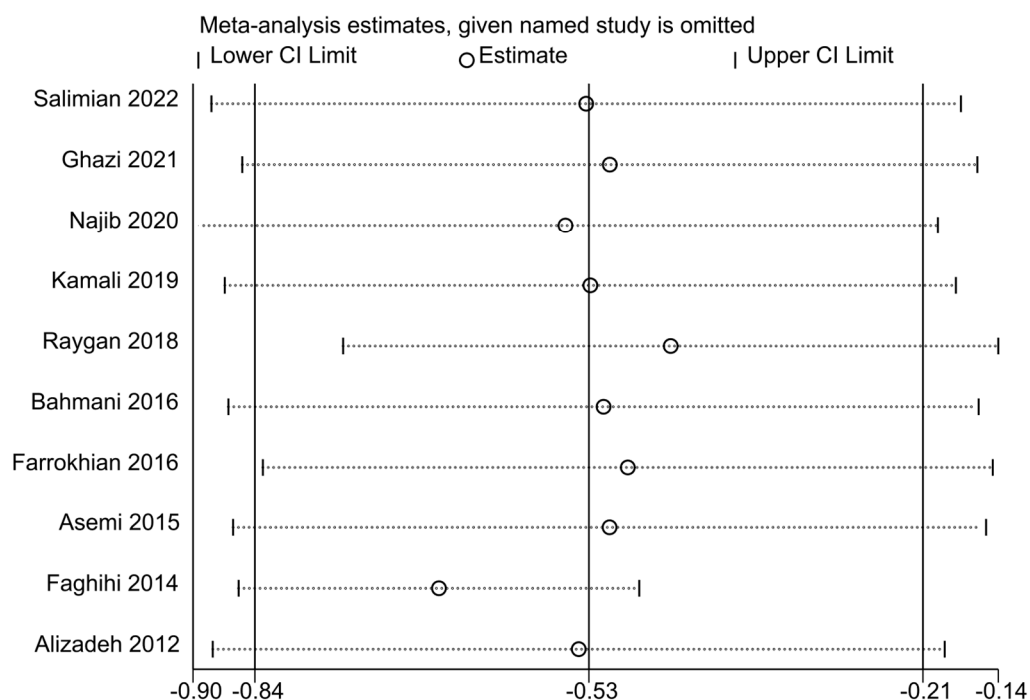


Figure S1. Sensitivity analysis of insulin levels.

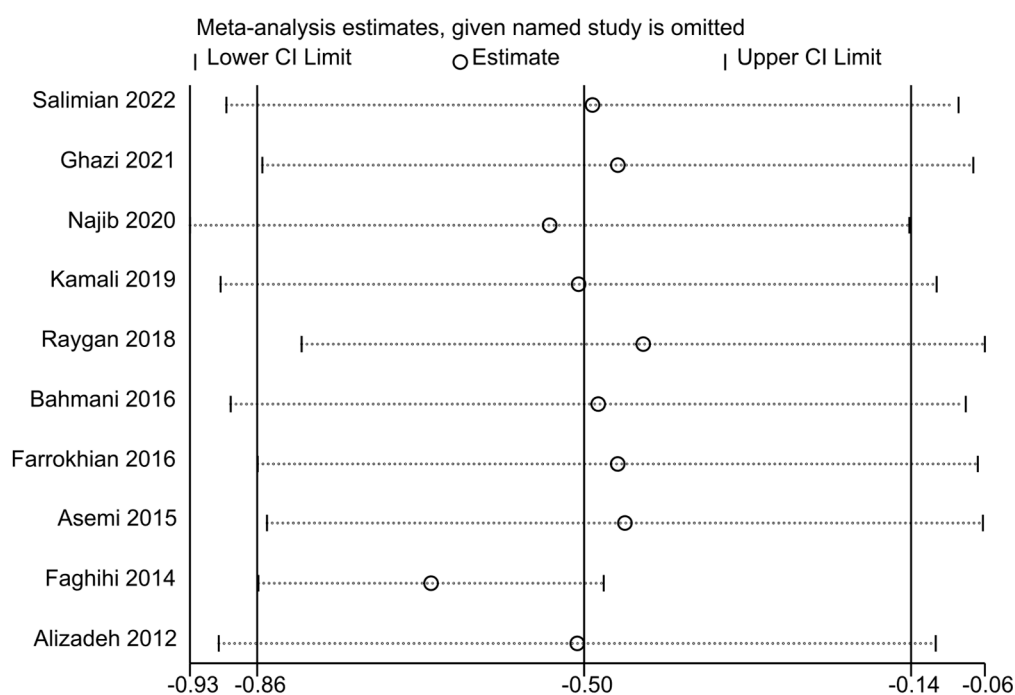


Figure S2. Sensitivity analysis of HOMA-IR.

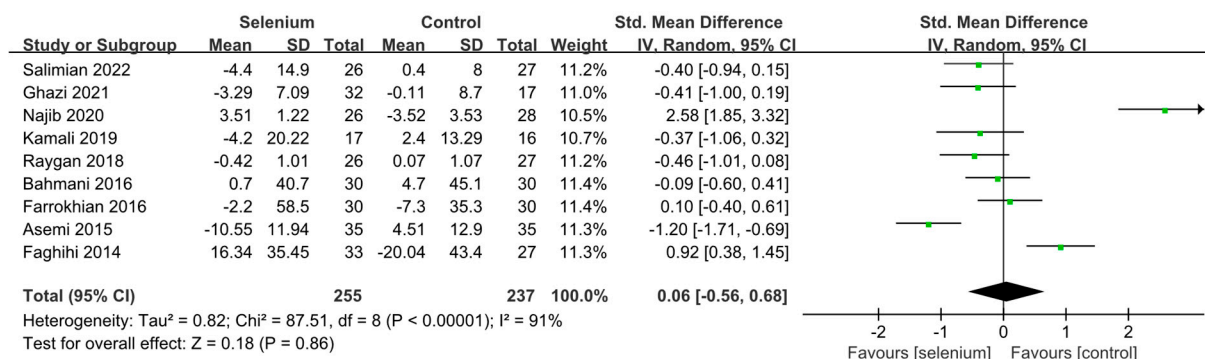


Figure S3. Forest plot of FPG.

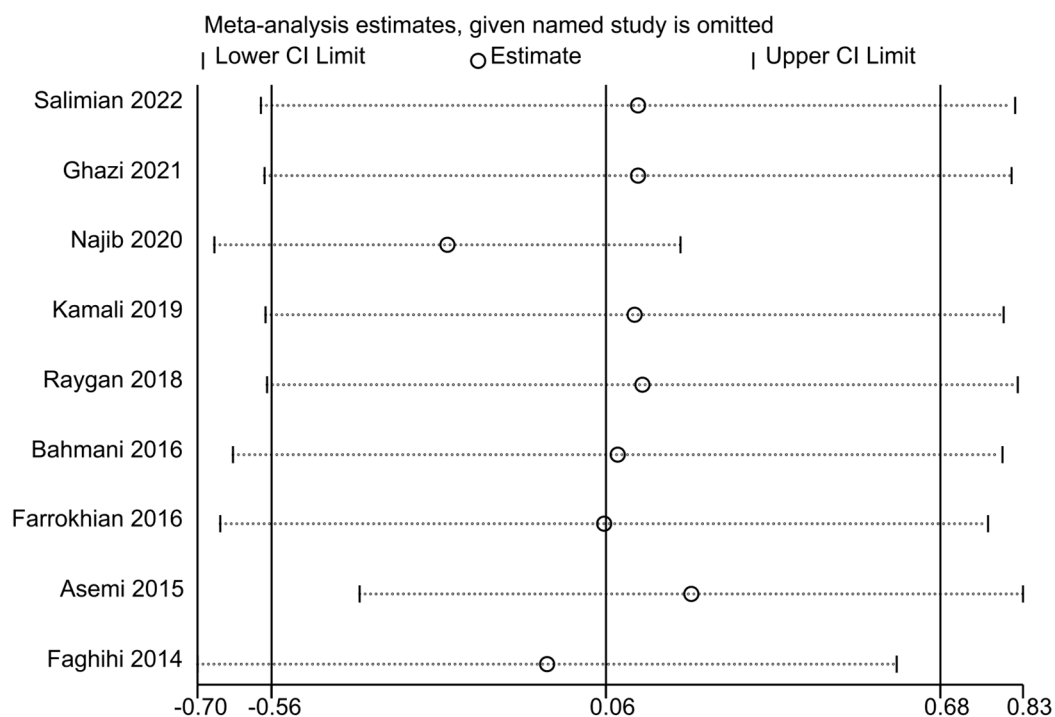


Figure S4. Sensitivity analysis of FPG.

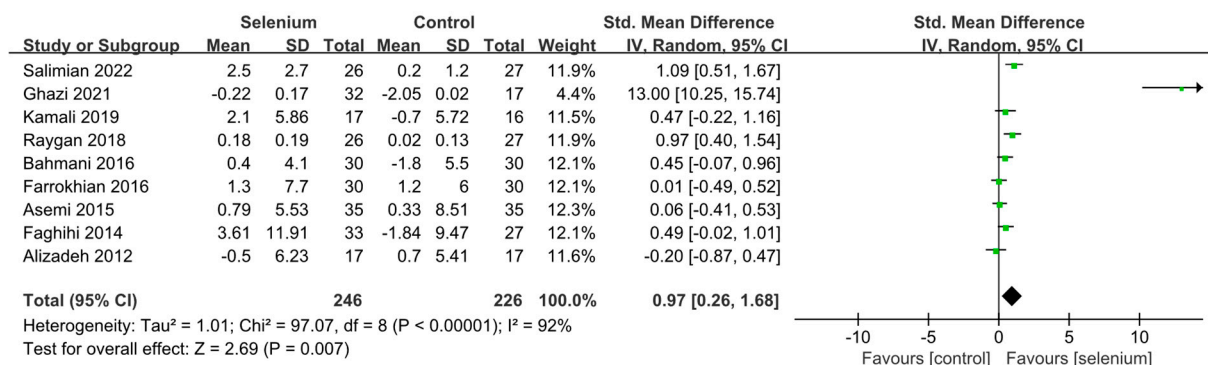


Figure S5. Forest plot of HDL-C.

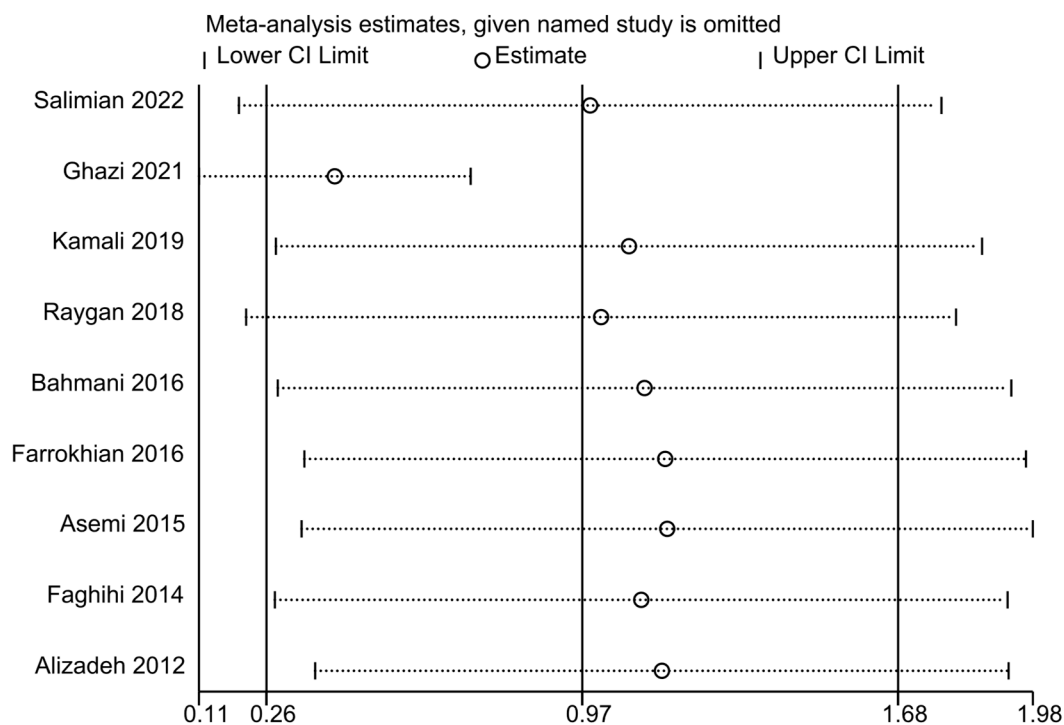


Figure S6. Sensitivity analysis of HDL-C.

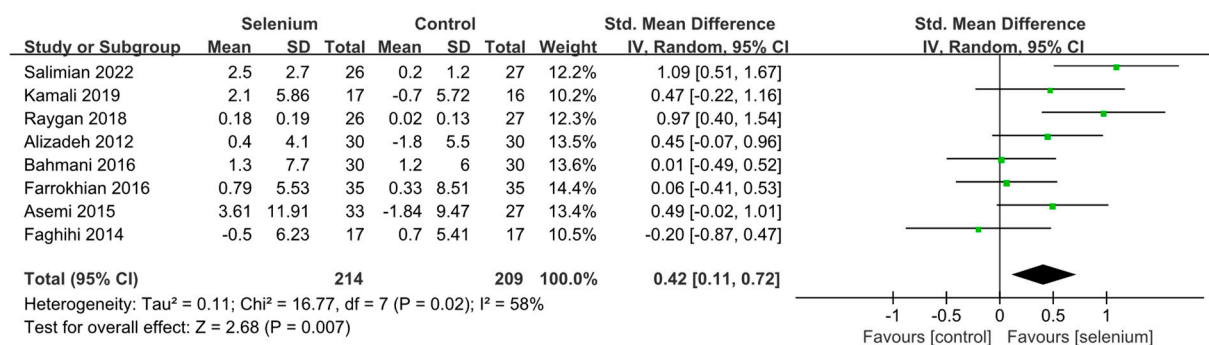


Figure S7. Forest plot of HDL-C after excluding Ghazi 2021.