Study or Subgroup	Experimental Mean	Experimental SD	Experimental Total	Control Mean	Control SD	Control Total	Weight	Mean Difference IV, Random, 95% CI	Year
4.5.1 healthy population									
Novotny 2015	−0.1	0.38	29	0.06	0.36	27	12.8%	−0.16 [−0.35, 0.03]	2015
Flanagan 2022	−0.1	0.4	29	−0.1	0.5	31	11.6%	0.00 [−0.23, 0.23]	2022
Heiss 2022	0.01	0.49	22	0.08	0.6	22	8.6%	−0.07 [−0.39, 0.25]	2022
Subtotal (95% CI)			**80**			**80**	**33.0%**	**−0.09 [−0.22, 0.05]**	
Heterogeneity: Tau^2 = 0.00; Chi^2 = 1.11, df = 2 (P = 0.57); I^2 = 0%									
Test for overall effect: Z = 1.30 (P = 0.19)									
4.5.2 population with metabolic diseases									
Lee 2008	−0.6	2.32	15	−0.4	1.55	15	0.8%	−0.20 [−1.61, 1.21]	2008
Shidfar 2011	−1.09	0.73	29	0.09	1.22	29	4.8%	−1.18 [−1.70, −0.66]	2011
Basu 2011	0.32	0.45	15	0.06	0.47	16	8.6%	0.26 [−0.06, 0.58]	2011
Javid 2017	−0.17	3.85	9	−1.74	3.59	12	0.2%	1.57 [−1.66, 4.80]	2017
Paquette 2017	0.1	0.45	20	0.1	0.46	21	9.9%	0.00 [−0.28, 0.28]	2017
Hormoznejad 2020	−0.3	0.78	20	0.04	1.07	21	4.1%	−0.34 [−0.91, 0.23]	2020
Hsia 2020	0.04	0.38	18	−0.02	0.37	17	10.9%	0.06 [−0.19, 0.31]	2020
Shirazi 2021	−0.36	0.49	46	−0.3	0.47	48	12.8%	−0.06 [−0.25, 0.13]	2021
Richter 2021	0	0.35	40	0.11	0.35	40	14.3%	−0.11 [−0.26, 0.04]	2021
Subtotal (95% CI)			**212**			**219**	**66.4%**	**−0.11 [−0.32, 0.09]**	
Heterogeneity: Tau^2 = 0.05; Chi^2 = 25.11, df = 8 (P = 0.001); I^2 = 68%									
Test for overall effect: Z = 1.11 (P = 0.27)									
4.5.3 population with coronary artery disease or CVD risk									
Dohadwala 2011	−0.17	2.69	22	0.22	2.69	22	0.7%	−0.39 [−1.98, 1.20]	2011
Subtotal (95% CI)			**22**			**22**	**0.7%**	**−0.39 [−1.98, 1.20]**	
Heterogeneity: Not applicable									
Test for overall effect: Z = 0.48 (P = 0.63)									
Total (95% CI)			**314**			**321**	**100.0%**	**−0.09 [−0.23, 0.04]**	
Heterogeneity: Tau^2 = 0.03; Chi^2 = 26.41, df = 12 (P = 0.009); I^2 = 55%									
Test for overall effect: Z = 1.38 (P = 0.17)									
Test for subgroup differences: Chi^2 = 0.17, df = 2 (P = 0.92), I^2 = 0%									