Study or Subgroup	Experimental Mean	Experimental SD	Experimental Total	Control Mean	Control SD	Control Total	Weight	Mean Difference IV, Random, 95% CI	Year
4.1.1 healthy population									
Duthie 2006	−0.01	0.65	11	−0.03	0.75	9	4.2%	0.02 [−0.60, 0.64]	2006
Novotny 2015	0.08	0.61	29	0	0.73	27	9.1%	0.08 [−0.27, 0.43]	2015
Flanagan 2022	−0.2	1.15	29	−0.1	1.05	31	4.9%	−0.10 [−0.66, 0.46]	2022
Heiss 2022	−0.13	0.51	22	0.01	1.69	22	3.1%	−0.14 [−0.88, 0.60]	2022
Rahn 2023	−0.01	0.24	18	−0.04	0.39	18	14.2%	0.03 [−0.18, 0.24]	2023
Subtotal (95% CI)			**109**			**107**	**35.5%**	**0.02 [−0.14, 0.18]**	
Heterogeneity: Tau^2 = 0.00; Chi^2 = 0.48, df = 4 (P = 0.98); I^2 = 0%									
Test for overall effect: Z = 0.25 (P = 0.80)									
4.1.2 population with metabolic diseases									
Lee 2008	−0.4	0.39	15	0.3	0.39	15	11.5%	−0.70 [−0.98, −0.42]	2008
Basu 2011	−0.14	0.85	15	0.13	0.81	16	4.6%	−0.27 [−0.86, 0.32]	2011
Javid 2017	−0.01	1.07	9	−0.2	0.83	12	2.5%	0.19 [−0.65, 1.03]	2017
Paquette 2017	−0.1	0.81	20	0.08	0.97	21	5.1%	−0.18 [−0.73, 0.37]	2017
Hormoznejad 2020	−0.04	1.17	20	−0.22	0.74	21	4.4%	0.18 [−0.42, 0.78]	2020
Richter 2021	−0.03	0.85	40	−0.03	0.85	40	8.5%	0.00 [−0.37, 0.37]	2021
Shirazi 2021	−0.54	1.65	46	−0.13	1.32	48	4.3%	−0.41 [−1.02, 0.20]	2021
Subtotal (95% CI)			**165**			**173**	**41.0%**	**−0.22 [−0.52, 0.07]**	
Heterogeneity: Tau^2 = 0.09; Chi^2 = 14.37, df = 6 (P = 0.03); I^2 = 58%									
Test for overall effect: Z = 1.48 (P = 0.14)									
4.1.3 population with coronary artery disease or CVD risk									
Dohadwala 2011	−0.05	1.02	22	0	1.07	22	4.2%	−0.05 [−0.67, 0.57]	2011
Flammer 2013	0.1	0.16	32	0.14	0.18	37	19.4%	−0.04 [−0.12, 0.04]	2013
Subtotal (95% CI)			**54**			**59**	**23.6%**	**−0.04 [−0.12, 0.04]**	
Heterogeneity: Tau^2 = 0.00; Chi^2 = 0.00, df = 1 (P = 0.97); I^2 = 0%									
Test for overall effect: Z = 0.99 (P = 0.32)									
Total (95% CI)			**328**			**339**	**100.0%**	**−0.11 [−0.26, 0.03]**	
Heterogeneity: Tau^2 = 0.03; Chi^2 = 24.76, df = 13 (P = 0.02); I^2 = 48%									
Test for overall effect: Z = 1.57 (P = 0.12)									
Test for subgroup differences: Chi^2 = 2.00, df = 2 (P = 0.37), I^2 = 0.2%									