Study or Subgroup	Experimental Mean	Experimental SD	Experimental Total	Control Mean	Control SD	Control Total	Weight	Mean Difference IV, Fixed, 95% CI	Year
4.2.1 healthy population									
Duthie 2006	0	0.32	11	−0.02	0.22	9	1.9%	0.02 [−0.22, 0.26]	2006
Novotny 2015	0.04	0.23	29	0.03	0.32	27	5.1%	0.01 [−0.14, 0.16]	2015
Flanagan 2022	0	0.36	29	0	0.4	31	3.0%	0.00 [−0.19, 0.19]	2022
Heiss 2022	−0.13	0.18	22	0.07	0.53	22	2.0%	−0.20 [−0.43, 0.03]	2022
Rahn 2023	−0.12	0.28	18	−0.11	0.33	18	2.7%	−0.01 [−0.21, 0.19]	2023
Subtotal (95% CI)			**109**			**107**	**14.7%**	**−0.02 [−0.11, 0.06]**	
Heterogeneity: $Chi^2 = 2.59$, df = 4 (P = 0.63); $I^2 = 0\%$									
Test for overall effect: Z = 0.52 (P = 0.60)									
4.2.2 population with metabolic diseases									
Lee 2008	0	0.39	15	0.1	0.04	15	2.8%	−0.10 [−0.30, 0.10]	2008
Basu 2011	−0.04	0.21	15	−0.01	0.25	16	4.2%	−0.03 [−0.19, 0.13]	2011
Paquette 2017	0.01	0.25	20	0.04	0.26	21	4.5%	−0.03 [−0.19, 0.13]	2017
Javid 2017	0.03	0.18	9	0.17	0.26	12	3.1%	−0.14 [−0.33, 0.05]	2017
Hormoznejad 2020	−0.01	0.17	20	0.09	0.17	21	10.1%	−0.10 [−0.20, 0.00]	2020
Richter 2021	0	0.28	40	0	0.28	40	7.3%	0.00 [−0.12, 0.12]	2021
Shirazi 2021	0.12	0.12	46	0.09	0.13	48	42.9%	0.03 [−0.02, 0.08]	2021
Subtotal (95% CI)			**165**			**173**	**74.8%**	**−0.01 [−0.05, 0.03]**	
Heterogeneity: $Chi^2 = 8.04$, df = 6 (P = 0.23); $I^2 = 25\%$									
Test for overall effect: Z = 0.48 (P = 0.63)									
4.2.3 population with coronary artery disease or CVD risk									
Dohadwala 2011	−0.03	0.25	22	0.03	0.23	22	5.4%	−0.06 [−0.20, 0.08]	2011
Flammer 2013	0	0.21	32	0.12	0.4	37	5.0%	−0.12 [−0.27, 0.03]	2013
Subtotal (95% CI)			**54**			**59**	**10.4%**	**−0.09 [−0.19, 0.01]**	
Heterogeneity: $Chi^2 = 0.33$, df = 1 (P = 0.57); $I^2 = 0\%$									
Test for overall effect: Z = 1.70 (P = 0.09)									
Total (95% CI)			**328**			**339**	**100.0%**	**−0.02 [−0.05, 0.01]**	
Heterogeneity: $Chi^2 = 13.00$, df = 13 (P = 0.45); $I^2 = 0\%$									
Test for overall effect: Z = 1.16 (P = 0.25)									
Test for subgroup differences: $Chi^2 = 2.03$, df = 2 (P = 0.36), $I^2 = 1.7\%$									