Study or Subgroup	Experimental Mean	Experimental SD	Experimental Total	Control Mean	Control SD	Control Total	Weight	Mean Difference IV, Random, 95% CI	Year
5.2.1 dosage of polyphenols ≥ 800 mg									
Duthie 2006	0	0.32	11	−0.02	0.22	9	1.9%	0.02 [−0.22, 0.26]	2006
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
Rahn 2023	−0.12	0.28	18	−0.11	0.33	18	2.7%	−0.01 [−0.21, 0.19]	2023
Subtotal (95% CI)			**83**			**86**	**15.1%**	**−0.06 [−0.15, 0.02]**	
Heterogeneity: Tau^2 = 0.00; Chi^2 = 1.31, df = 3 (P = 0.73); I^2 = 0%									
Test for overall effect: Z = 1.39 (P = 0.16)									
5.2.2 dosage of polyphenols < 800 mg									
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
Novotny 2015	0.04	0.23	29	0.03	0.32	27	5.1%	0.01 [−0.14, 0.16]	2015
Javid 2017	0.03	0.18	9	0.17	0.26	12	3.1%	−0.14 [−0.33, 0.05]	2017
Paquette 2017	0.01	0.25	20	0.04	0.26	21	4.5%	−0.03 [−0.19, 0.13]	2017
Richter 2021	0	0.28	40	0	0.28	40	7.3%	0.00 [−0.12, 0.12]	2021
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
Subtotal (95% CI)			**179**			**184**	**31.9%**	**−0.04 [−0.10, 0.02]**	
Heterogeneity: Tau^2 = 0.00; Chi^2 = 4.28, df = 7 (P = 0.75); I^2 = 0%									
Test for overall effect: Z = 1.39 (P = 0.17)									
5.2.3 unavailable									
Hormoznejad 2020	−0.01	0.17	20	0.09	0.17	21	10.1%	−0.10 [−0.20, 0.00]	2020
Shirazi 2021	0.12	0.12	46	0.09	0.13	48	42.9%	0.03 [−0.02, 0.08]	2021
Subtotal (95% CI)			**66**			**69**	**53.0%**	**−0.03 [−0.15, 0.10]**	
Heterogeneity: Tau^2 = 0.01; Chi^2 = 4.85, df = 1 (P = 0.03); I^2 = 79%									
Test for overall effect: Z = 0.41 (P = 0.68)									
Total (95% CI)			**328**			**339**	**100.0%**	**−0.02 [−0.05, 0.01]**	
Heterogeneity: Tau^2 = 0.00; 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 = 0.22, df = 2 (P = 0.89), I^2 = 0%									