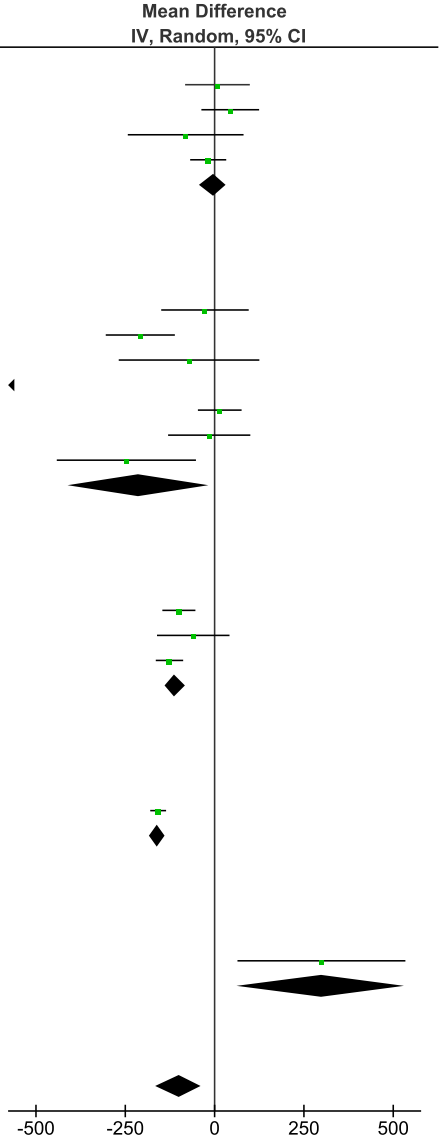Study or Subgroup	vitamin D Deficiency Mean	SD	Total	Vitamin D Non-Deficiency Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
5.18.1 25(OH)D cut-off : 50 nmol/L								
Josefson 2016	3,593	409	130	3,585	422	210	6.8%	8.00 [-82.56, 98.56]
Ong 2016	3,143	414.8	120	3,099.22	458.07	790	7.0%	43.78 [-37.02, 124.58]
Weinert 2016	3,179	586	98	3,260	535	86	5.1%	-81.00 [-243.01, 81.01]
Zhou 2014	3,138	434	364	3,155.95	476.27	1559	7.6%	-17.95 [-68.42, 32.52]
Subtotal (95% CI)			**712**			**2645**	**26.5%**	**-3.47 [-41.11, 34.16]**
Heterogeneity: Tau² = 0.00; Chi² = 2.57, df = 3 (P = 0.46); I² = 0%								
Test for overall effect: Z = 0.18 (P = 0.86)								
5.18.2 25(OH)D cut-off : 25 nmol/L								
Ates 2016	3,245	496	105	3,272	440	124	6.1%	-27.00 [-149.47, 95.47]
Bowyer 2009	3,245	545	144	3,453	555	827	6.7%	-208.00 [-304.72, -111.28]
Burris 2012	3,460	680	47	3,531.57	514.74	1086	4.4%	-71.57 [-268.37, 125.23]
Chen 2015	2,430.1	623.56	46	3,413.85	452.51	3612	4.7%	-983.75 [-1164.55, -802.95]
Dalgard 2016	3,736.46	493.03	550	3,722.07	509.23	488	7.4%	14.39 [-46.76, 75.54]
Reichetzeder 2014	3,240.2	669	398	3,255.3	588.3	149	6.2%	-15.10 [-130.18, 99.98]
Song 2012	3,386.1	406.85	38	3,633.1	420.3	32	4.4%	-247.00 [-441.78, -52.22]
Subtotal (95% CI)			**1328**			**6318**	**39.9%**	**-212.43 [-408.90, -15.96]**
Heterogeneity: Tau² = 64907.58; Chi² = 115.74, df = 6 (P < 0.00001); I² = 95%								
Test for overall effect: Z = 2.12 (P = 0.03)								
5.18.3 25(OH)D cut-off : 30 nmol/L								
Eckhardt 2015	3,000	500	589	3,100	500	1884	7.6%	-100.00 [-146.26, -53.74]
Gale 2008	3,380	460	116	3,439.77	547.09	350	6.6%	-59.77 [-161.22, 41.68]
Leffelaar 2010	3,418.4	510.3	861	3,544.74	478.88	2869	7.7%	-126.34 [-164.67, -88.01]
Subtotal (95% CI)			**1566**			**5103**	**21.9%**	**-111.26 [-139.60, -82.92]**
Heterogeneity: Tau² = 0.00; Chi² = 1.81, df = 2 (P = 0.40); I² = 0%								
Test for overall effect: Z = 7.70 (P < 0.00001)								
5.18.4 25(OH)D cut-off: 28 nmol/L								
Morley 2006	3,397	57	27	3,555	52	347	7.9%	-158.00 [-180.19, -135.81]
Subtotal (95% CI)			**27**			**347**	**7.9%**	**-158.00 [-180.19, -135.81]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 13.96 (P < 0.00001)								
5.18.6 25(OH)D cut-off : 27.5 nmol/L								
Weiler 2005	3,698	380	18	3,399	451	32	3.7%	299.00 [63.98, 534.02]
Subtotal (95% CI)			**18**			**32**	**3.7%**	**299.00 [63.98, 534.02]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 2.49 (P = 0.01)								
Total (95% CI)			**3651**			**14445**	**100.0%**	**-100.69 [-162.25, -39.13]**
Heterogeneity: Tau² = 12358.50; Chi² = 180.67, df = 15 (P < 0.00001); I² = 92%								
Test for overall effect: Z = 3.21 (P = 0.001)								
Test for subgroup differences: Chi² = 61.09, df = 4 (P < 0.00001), I² = 93.5%