

Supplement Table S1. Intervention results for biochemistry parameters adjusted to baseline values of BMI and body weight.

Covariant	BMI		Body weight	
	p	$\eta^2p\eta p^2$	p	$\eta^2p\eta p^2$
hsCRP [mg/L]	0.01	0.18	0.01	0.23
LDL [mg/dL]	0.81	0.01	0.80	0.01
HDLC[mg/dL]	0.10	0.07	0.04	0.10
CHOL[mg/dL]	0.10	0.07	0.07	0.08
TG [mg/dL]	0.10	0.07	0.06	0.09
GLU [mg/dL]	0.00	0.26	0.00	0.27
ALB [g/L]	0.01	0.17	0.00	0.25
PRO [g/L]	0.09	0.08	0.02	0.13

Note: hsCRP, C-reactive protein highly sensitive; LDLC, low-density lipoprotein cholesterol; HDLC, high-density lipoprotein cholesterol; CHOL, cholesterol; TG, triglycerides; GLU, glucose; ALB, albumin; PRO, protein; ANCOVA, analysis of covariance.

Supplement Table S2. Correlation between baseline vitamin D and metabolic parameters.

Baseline	Weight (B)	Weight (C)	BMI (B)	BMI (C)
25(OH)D3 [ng/mL]	-0.07	-0.12	-0.05	0.11
25(OH)D2 [ng/mL]	-0.10	-0.17	-0.12	-0.23
24,25(OH)2D3 [ng/mL]	-0.04	-0.10	-0.08	0.18
epi-25(OH)D3 [ng/mL]	-0.18	-0.13	-0.10	0.06