

## Supplementary data

**Table S2:** Plasma markers following 16 weeks on diets (pre-intervention).

Plasma	LFH	HFH	HFL
VitC <sup>1</sup> μmol/L	38.93(34.44-46.00)	34.28 (26.26-41.91)	1.98 (1.89-2.03) <sup>****,###</sup>
FFA mmol/L	0.55±0.07	0.61±0.09	0.62±0.26
TG <sup>1</sup> mmol/L	0.64(0.57-0.82)	0.70(0.50-0.85)	0.68(0.49-1.02)
TC <sup>1</sup> mmol/L	0.52(0.49-0.85)	7.12(4.98-11.23) <sup>****</sup>	5.55(4.28-6.94) <sup>****</sup>
ALT <sup>1</sup> U/L	29.70 (20.20-35.80)	44.00(33.78-62.90)	59.20(38.70-77.60) <sup>*</sup>
AST <sup>1</sup> U/L	125.6(30.70-328.60)	398.30(168.95-1002.65)	368.30(320.60-532.80)
ALP U/L	56.40±12.73	49.88±7.45	61.71±10.05

<sup>1</sup>Analysis was performed on log transformed data. Data are presented as medians with Q25-Q75 (in brackets) or means ± SD and analyzed by one-way ANOVA with a Tukey's test for multiple comparisons (n=7-8/group). Difference from LFH: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001; Difference from HFH: ####p<0.0001. ALP: Alkaline Phosphatase, ALT: Alanine Aminotransferase, AST: Aspartate Aminotransferase, FFA: Free Fatty Acids, HFH: High Fat High vitC, HFL: High Fat Low vitC, LFH: Low Fat High vitC, TC: Total Cholesterol, TG: Triglycerides, vitC: Vitamin C.