

Table S1. Content of fatty acids (FA) in the visceral white adipose tissue (VAT) of mice fed for 15 weeks a control diet (Ctrl.) or high fat diet with lard as dominant component (HFD-L). The table summarizes the first phase of dietary intervention. Results are presented as means $\pm$ standard deviation. Bold font is used to show the most abundant fatty acids detected in VAT. Symbol: * in a superscript represents a statistically significant difference from Ctrl.: **p < 0.01, *** p < 0.001, **** p < 0.0001.

FA content in VAT (mg/100 mg tissue)			
FA Omega Nomenclature	Common name	Ctrl.	HFD-L
C12:0	Lauric acid	0.044 $\pm$ 0.005	0.028 $\pm$ 0.003
C14:0	Myristic acid	0.747 $\pm$ 0.052	0.610 $\pm$ 0.028
C14:1	Myristoleic acid	0.058 $\pm$ 0.018	0.019 $\pm$ 0.003
C15:0	Pentadecic acid	0.088 $\pm$ 0.008	0.050 $\pm$ 0.005
C16:0	Palmitic acid	6.457 $\pm$ 0.343	7.258 $\pm$ 0.338**
C16:1n9	Elaidic acid	0.774 $\pm$ 0.031	0.657 $\pm$ 0.050
C16:1n7	Palmitoleic acid	5.853 $\pm$ 0.272	4.090 $\pm$ 0.272****
C17:0	Margaric acid	0.100 $\pm$ 0.005	0.123 $\pm$ 0.010
C17:1	Margaroleic acid	0.194 $\pm$ 0.013	0.185 $\pm$ 0.008
C18:0	Stearic acid	1.539 $\pm$ 0.096	2.605 $\pm$ 0.233****
C18:1n9	Oleic acid	28.603 $\pm$ 1.202	32.560 $\pm$ 2.113**
C18:1n3	15E-octadecenoic acid	5.925 $\pm$ 0.425	4.362 $\pm$ 0.536***
C18:2n6	Linoleic acid	16.045 $\pm$ 0.954	12.564 $\pm$ 0.537****
C18:3n3 (ALA)	α -Linolenic acid	0.687 [#] $\pm$ 0.083	0.338* $\pm$ 0.082
C18:3n6 (GLA)	γ -Linolenic acid	0.722 $\pm$ 0.080	0.547 $\pm$ 0.045
C20:0	Arachidic acid	0.052 $\pm$ 0.006	0.027 $\pm$ 0.002
C20:1n7	Paullinic acid	0.781 $\pm$ 0.023	0.530 $\pm$ 0.070
C20:2n6	<i>Cis</i> -11,14-Eicosadienoic Acid	0.083 $\pm$ 0.007	0.150 $\pm$ 0.009
C20:3n9	Mead acid	0.189 $\pm$ 0.021	0.145 $\pm$ 0.031
C20:4n6	Arachidonic Acid	0.134 $\pm$ 0.024	0.105 $\pm$ 0.042
C22:6n3	Docosahexaenoic acid	0.041 $\pm$ 0.012	0.025 $\pm$ 0.014