Supplementary data

Table 1S. Components of the diets

Ingredients	LFD g/kg	HFD g/kg
Lard	36	315
Soybean oil	4	35
Casein	140	200
Cornstarch	465.7	115.5
Dextrinised cornstarch	155	132
Sucrose	100	100
Cellulose	50	50
AIN-93M Mineral mix	35	-
AIN-93G Mineral mix	-	35
AIN-93 Vitamin mix	10	10
Choline bitartrate	2.5	2.5
L-Cystine	1.8	3

LFD, low-fat diet; HFD, high-fat diet. The diets were prepared in the laboratory.

Table 2S. Genomic sequence analysed by MALDI-TOF mass spectrometry

Gene	***Genomic Sequence***
Pparg	(NC_000072.6) Gene ID: 19016, updated on 1-Feb-2013 CCTGTGTGGGTAACAAAATCTAAAATAAGAATGTGTATATGTTTGAGTACAAGAAT ATTCTTCAGATGTGTGATTAGGAGTTTCAACCAAAGATAAATACTTAAGAAAAACT **-438** TTGGCCAAATACGTTTATCTGGTGTTTCATAACTTAGAGATTAAGGTTTTCTATTTT AAAAGCCACTGGTGTGTATTTTACTGCAATTTTAAAAAGCAATCAATATTGAACAA **-298** TCTCTGCTCTGGTAATTCCAACTACTGTACAGTTCACGCCCCTCACAGAACAGTGA **-263** **-247** ATGTGTGGGTCACTGGCGAGACAATGTAGCAACGTTTTCCTTGTAATGTACCAAGT CTTGCCAAAGCAGCAGACAGCATTATGACACACCATTTTGTCACAACTGGCTCTCA GTCAGGACAGTGCCAGCCAATTCAGGCCTGATTCTTTCTGTGTTT

Supplementary data

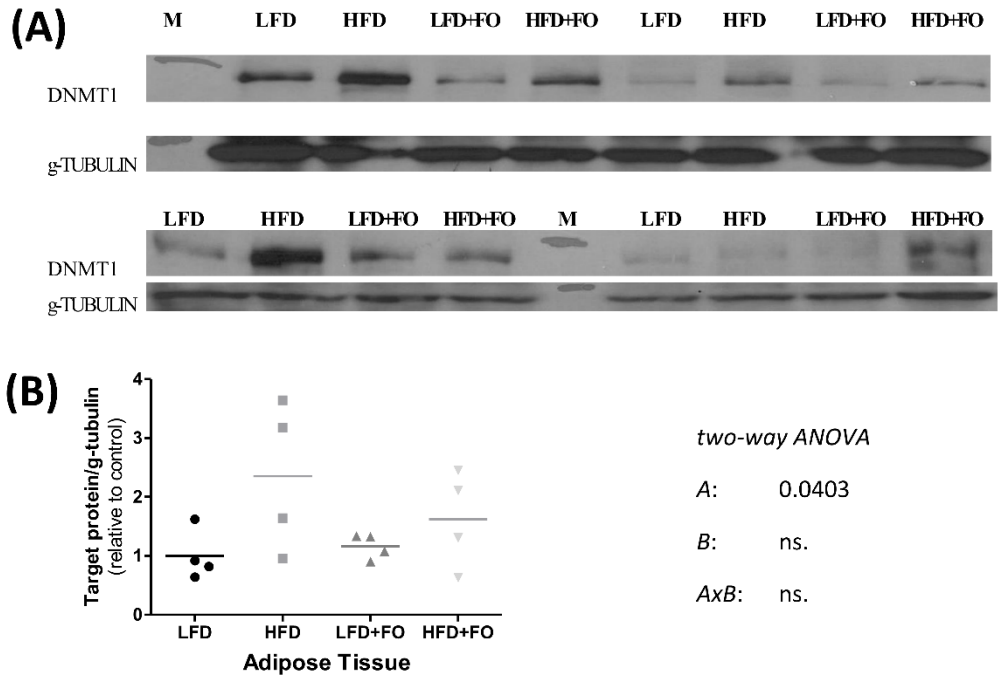
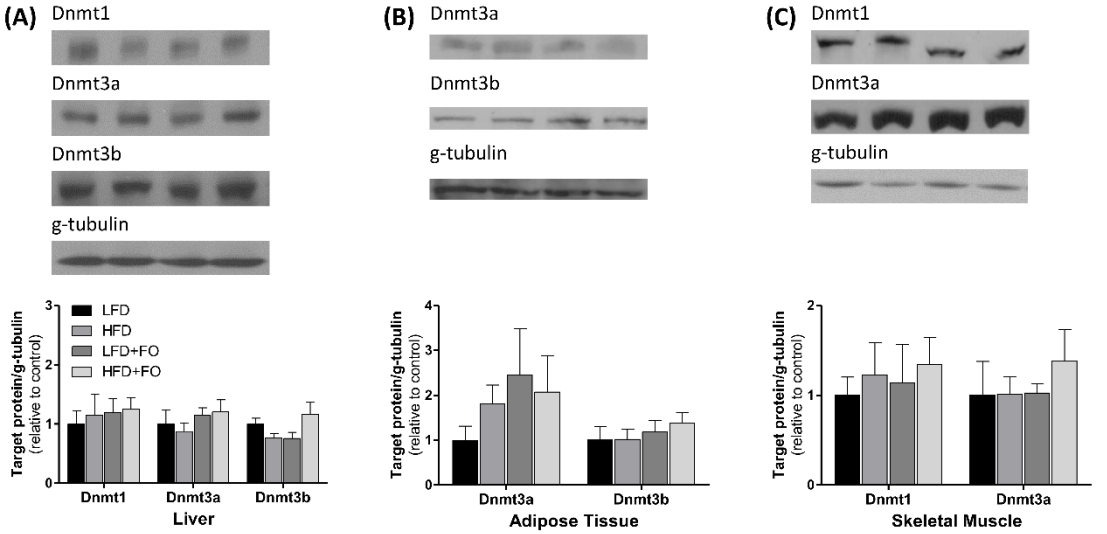


Figure 1S. DNA methyltransferase1 (DNMT1) content in the epididymal adipose tissue. Mice were treated with a low-fat diet (LFD) or a high-fat diet (HFD) and supplemented with fish oil (FO) or water. The upper panel (A) shows the western blot results, and the lower panel (B) shows the quantification. The horizontal line represents the mean (n = 4/group). LFD, low-fat diet; HFD, high-fat diet; LFD+FO, low-fat diet plus fish oil; HFD+FO, high-fat diet plus fish oil. M, Marker; ns., not significant

Supplementary data



two-way ANOVA

	DNMT1	DNMT3a	DNMT3b
A:	ns.	ns.	ns.
B:	ns.	ns.	ns.
AxB:	ns.	ns.	0.0394

two-way ANOVA

	DNMT3a	DNMT3b
A:	ns.	ns.
B:	ns.	ns.
AxB:	ns.	ns.

two-way ANOVA

	DNMT1	DNMT3a
A:	ns.	ns.
B:	ns.	ns.
AxB:	ns.	ns.

Figure 2S. DNA methyltransferase (DNMT) content in the liver (A), epididymal adipose tissue (B) and gastrocnemius skeletal muscle (C). Mice were fed a low-fat diet (LFD) or a high-fat diet (HFD) and supplemented with fish oil (FO) or water. The values are presented as the mean ± SE. Liver (n = 4-6/group); adipose tissue (n = 4/group); skeletal muscle (n = 6-8/group). The upper panel shows the western blot results, and the lower panel shows the quantification. Skeletal muscle DNMT3b was not analysed because it was detected in few of the samples (n = 1-3/group). LFD, low-fat diet; HFD, high-fat diet; LFD+FO, low-fat diet plus fish oil; HFD+FO, high-fat diet plus fish oil. ns., not significant.

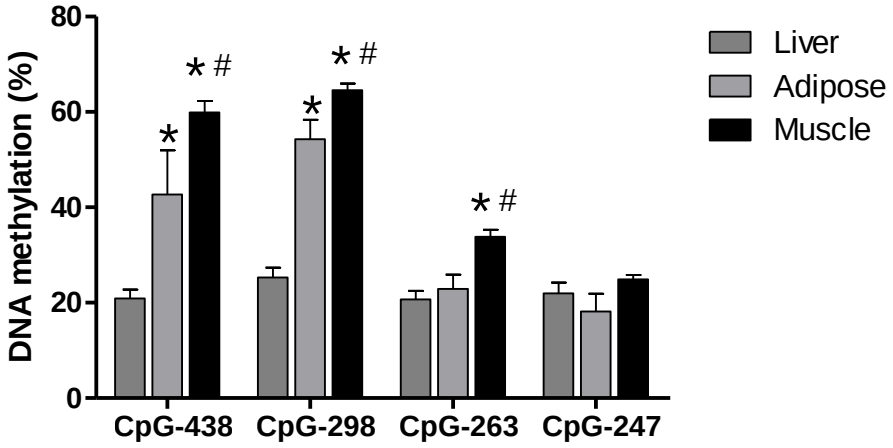


Figure 3S. *Pparg2* promoter DNA methylation in the liver, adipose tissue and skeletal muscle. Tissues methylation pattern from untreated low-fat diet mice (LFD group from Table 2) were compared by one-way ANOVA. Each bar represent mean ± SEM, N = 8-11 animals/tissue. * $P < 0.05$ *vs*. Liver; # $P < 0.05$ *vs*. Adipose.