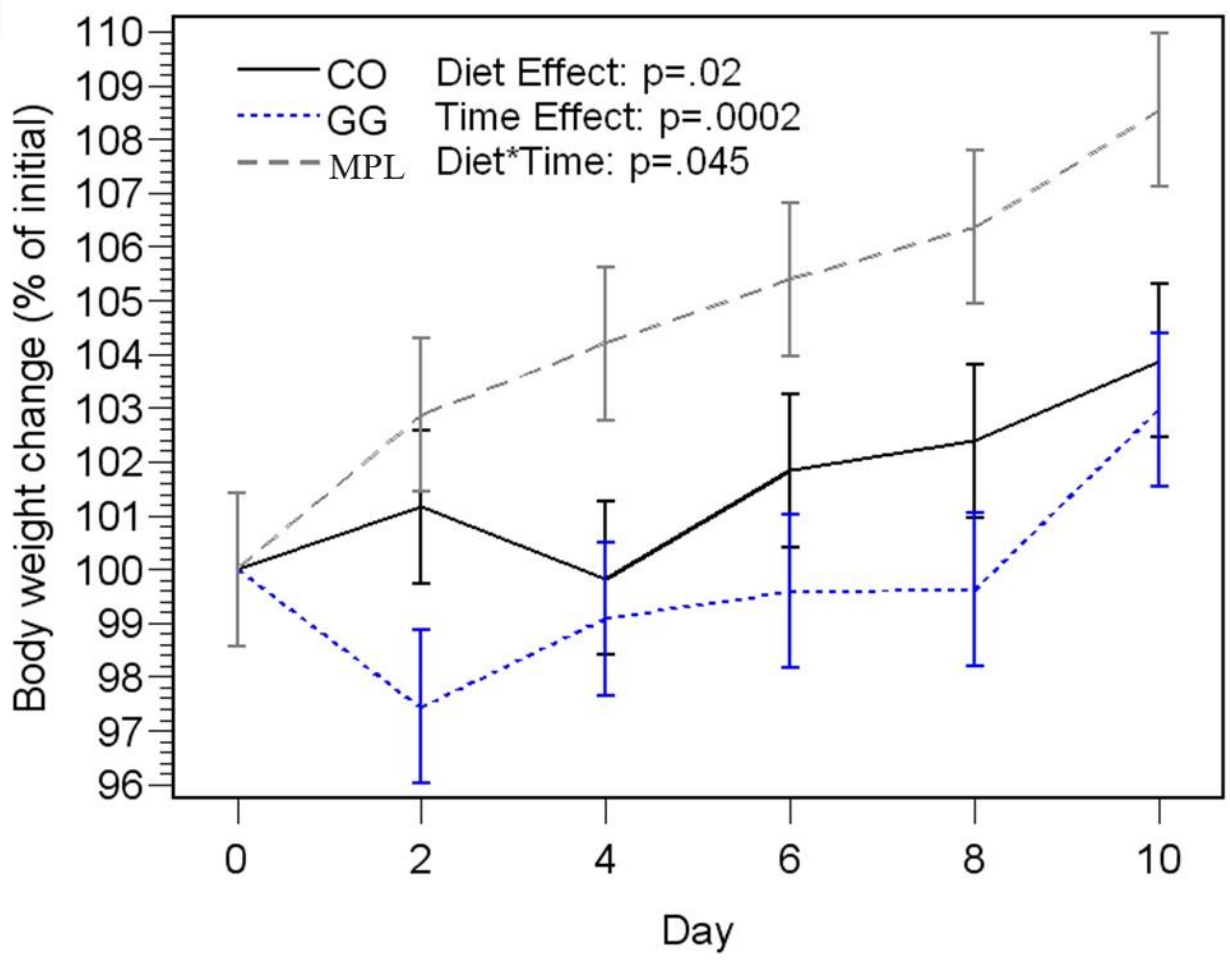
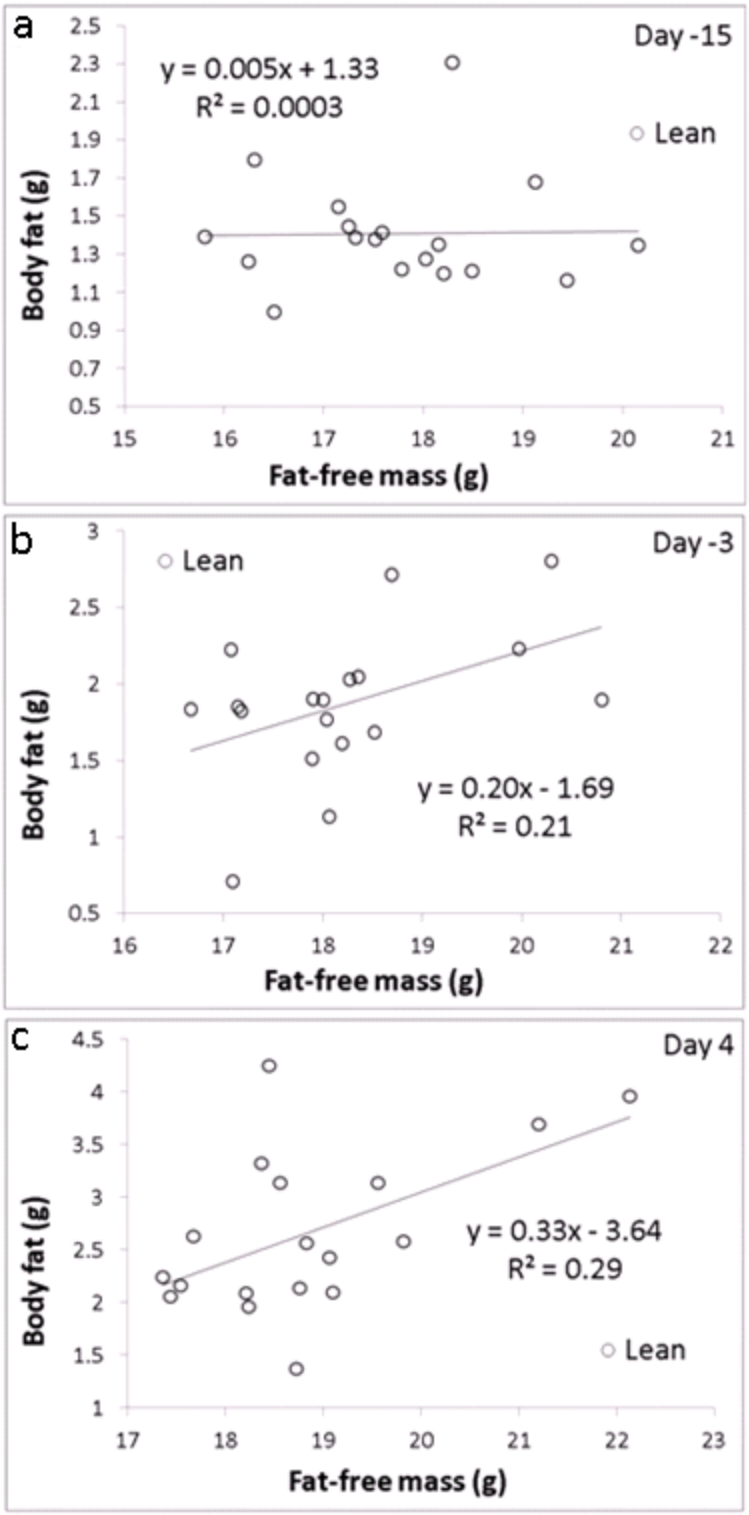
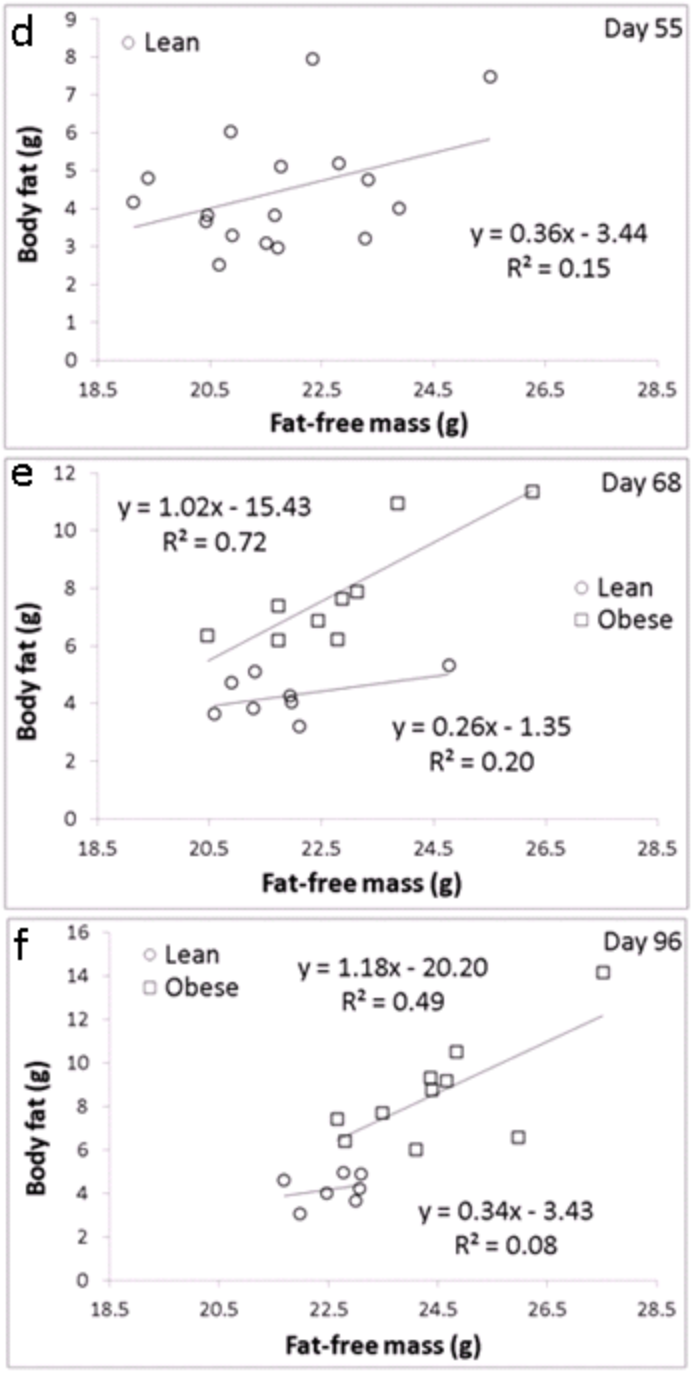
Supplemental Figures



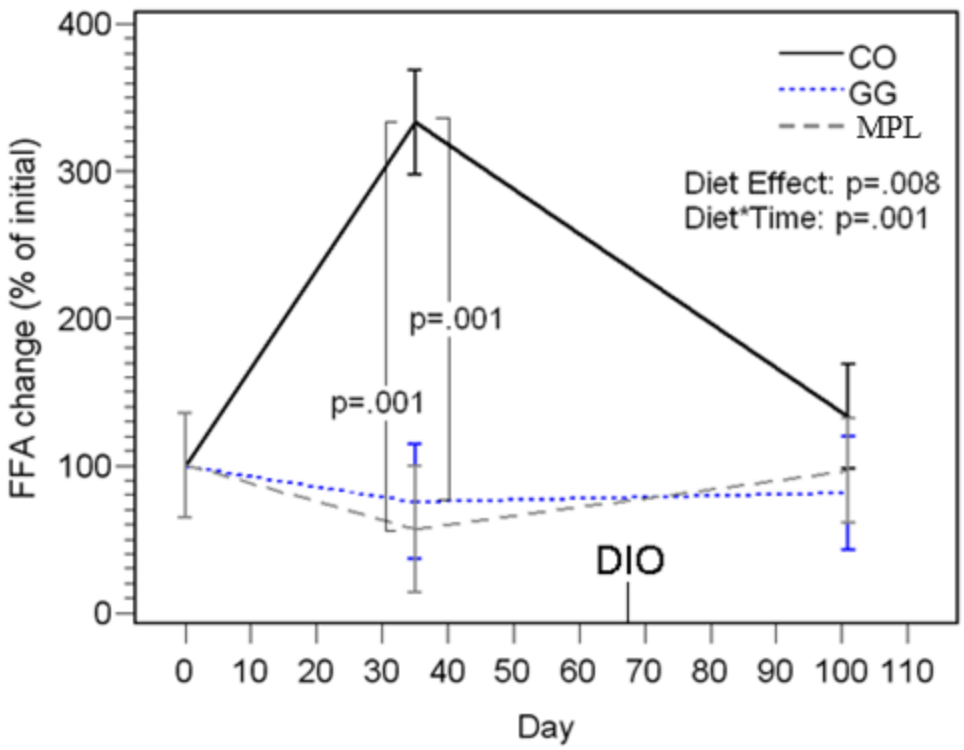
Supplementary Figure 1 MPL group gained more body weight during the first 10 days. The data represent mean ± SEM (n = 6). Initial body weight for CO, GG and PL groups: 20.9 ± 0.5, 21.2 ± 0.3, 21.7 ± 0.7 g. Initial body fat for CO, GG and PL groups: 2.17 ± 0.09, 2.06 ± 0.08, 2.18 ± 0.14 g.



Supplementary Figure 1a-c Body fat plotted against fat-free mass for individual animals at (a) day -15, (b) day -3 and (c) day 4.



Supplementary Figure 2d-f Body fat plotted against fat-free mass for individual animals at (d) day 55, (e) day 68 and (f) day 96.



Supplementary Figure 3 Plasma FFA increased in CO group and the level returned to baseline level by the end of the study. The data represent mean ± SEM (n = 6, 5, 6 for CO, GG, PL).

Supplementary Table 1 Food intake (Mean ± SEM; unit: g).

	CO	GG	MPL
1	3.18±0.27	2.85±0.65	4.15±0.17
2	3.03±0.23	2.83±0.25	3.40±0.25
3	2.30±0.14	2.80±0.30	2.97±0.17
4	2.25±0.11	2.35±0.21	2.68±0.30
5	2.85±0.27	2.38±0.24	2.60±0.27
6	2.45±0.12	2.22±0.26	2.72±0.16
7	2.32±0.18	2.73±0.20	2.47±0.16
8	2.28±0.12^{ab}	1.92±0.26^{b}	2.80±0.14^{a}
9	2.85±0.18	2.33±0.17	2.38±0.19
10	2.25±0.11^{b}	2.47±0.18^{b}	3.05±0.22^{a}
days 1-3 sum	8.52±0.18^{b}	8.48±0.69^{b}	10.52±0.52^{a}
days 1-3 mean	2.84±0.06^{b}	2.83±0.23^{b}	3.51±0.17^{a}
days 1-10 sum	25.77±0.52^{b}	24.88±1.08^{b}	29.22±1.16^{a}
days 1-10 mean	2.58±0.05^{ab}	2.49±0.11^{b}	2.92±0.12^{a}
General sum	257.72±8.34	251.00±8.57	278.26±11.53
General mean	2.58±0.08	2.51±0.09	2.78±0.12

^{a,b} Means in a row with different superscripts are significantly different ($p < 0.05$).

Supplementary Table 2 Effects of milk polar lipids on liver and adipose tissue mass (Mean ± SEM).

Tissue mass/body weight (%)	CO	GG	MPL
Liver%	3.32±0.25	3.50±0.13	3.26±0.05
Brown adipose tissue depot%	0.42±0.04	0.52±0.08	0.52±0.06
Inguinal fat depot%	2.82±0.49	3.34±0.52	3.69±0.38
Gonadal fat depot%	3.34±0.58	4.37±0.63	4.81±0.36
Mesenteric fat depot%	1.39±0.26#	1.75±0.22	2.19±0.25#
Retroperitoneal fat depot%	1.19±0.28	1.47±0.26	1.72±0.18
Visceral fat depots%	5.92±1.10*	7.59±1.09	8.72±0.71*
Subcutaneous fat depot%	5.30±1.08	5.90±0.98	6.56±0.52
Total fat depots%	11.64±2.20	14.01±2.11	15.80±1.27

#: CO vs MPL, $p = 0.033$; *: CO vs MPL, $p = 0.055$.

Supplementary Table 3 Effects of milk polar lipids on plasma levels of MCP-1 and TNF-α in C57BL/6J mice during the development of diet-induced obesity (Mean ± SEM; unit: Log10(pg/ml)).

Lipids	CO	GG	MPL
Baseline			
MCP-1	1.42±0.07	1.51±0.10	1.14±0.15
TNF-α	1.38±0.06	1.36±0.06	1.16±0.14
Day 35			
MCP-1	1.50±0.04[a]	1.46±0.03[a]	1.32±0.06[b]
TNF-α	1.37±0.05	1.25±0.11	1.33±0.15
Day 101			
MCP-1	1.48±0.04	1.54±0.05	1.38±0.07
TNF-α	1.35±0.08	1.39±0.08	1.28±0.11

[a,b] Means in a row with different superscripts are significantly different ($p < 0.05$).