Fatty acid composition of the liver phospholipid fraction[a].

Fatty acid	Lean[b] Mean SD	Obese[b] Mean SD	Ctrl Mean SD	Ctrl+S Mean SD	FO Mean SD	FO+S Mean SD	P[c] FO	P[c] S
C14:0	0.08 0.01	0.07 0.01	0.10 0.01	0.10 0.05	0.12 0.02	0.14 0.03	0.03	
C16:0	22.4 0.3	20.6 0.6	22.5 0.5	21.9 0.9	24.6 1.1	24.4 0.9	0.001	
C16:1 n-7	0.9 0.1	0.6 0.1	1.3 0.2	1.8 0.4	1.8 0.4	2.2 0.4	0.002	0.005
C18:0	14.4 0.6	17.7 0.7	14.1 1.2	14.3 0.9	13.0 1.3	12.7 1.2	0.003	
C18:1 n-9	6.1 0.2	6.7 0.5	10.1 0.6	10.4 0.5	9.8 0.6	9.6 0.5		0.01
C18:1 n-7	1.6 0.1	1.3 0.2	2.0 0.1	2.2 0.2	1.7 0.2	1.8 0.3	0.001	0.05
C18:2 n-6	19.2 0.6	14.0 2.2	14.4 0.4	13.6 1.2	13.9 2.0	12.5 2.7		
C18:3 n-6	0.3 0.0	0.2 0.1	0.3 0.0	0.3 0.0	0.2 0.0	0.1 0.0	0.001	
C18:3 n-3	0.2 0.0	0.1 0.0	0.0 0.0	0.0 0.0	0.1 0.0	0.1 0.0	0.001	
C20:0	0.1 0.0	0.1 0.0	0.0 0.0	0.0 0.0	0.1 0.0	0.1 0.0	0.001	
C20:4 n-6	20.2 0.6	22.1 1.8	19.8 0.6	19.9 0.5	9.5 1.7	9.5 1.4	0.001	
C20:5 n-3	0.1 0.0	0.2 0.0	0.2 0.0	0.1 0.0	3.2 0.9	3.9 1.2	0.001	
C22:0	0.7 0.1	1.0 0.4	0.9 0.1	0.9 0.1	0.7 0.2	0.8 0.2	0.008	
C22:5 n-6	0.4 0.1	0.3 0.1	0.5 0.1	0.8 0.2	0.1 0.0	0.1 0.1	0.001	0.008
C22:5 n-3	0.4 0.0	0.4 0.0	0.3 0.0	0.3 0.0	0.8 0.1	0.8 0.1	0.001	
C22:6 n-3	11.1 0.4	13.3 0.7	11.6 0.8	11.4 0.3	18.5 1.8	19.4 3.0	0.001	

Ctrl, Control diet. FO, Fish oil diet. +S indicates that 25 % of the normal fat was exchanged for Salatrim.

a) Data are presented as g/100g of fatty acids. Mean with SD, n=8.

b) The 2-way ANOVA does not include data from the lean and obese reference groups.

c) P-values for significant differences between treatment groups assessed by 2-way ANOVA.

Fatty acid composition of total adipose tissue lipid content[a].

	Lean[b]		Obese[b]		Ctrl		Ctrl+S		FO		FO+S		P[c]	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	FO	S
C14:0	0.8	0.1	0.8	0.1	0.9	0.1	0.9	0.1	1.1	0.4	1.2	0.3	0.02	
C16:0	19.1	1.0	17.8	0.6	16.6	0.8	15.9	0.8	16.9	2.0	16.9	1.8		
C16:1 n-7	4.8	0.3	3.9	0.7	4.7	0.8	5.1	1.2	4.8	1.0	5.9	1.9		
C18:0	1.9	0.2	3.3	0.2	3.0	0.4	2.9	0.4	2.7	0.3	2.9	0.4		
C18:1 n-9	31.9	0.6	46.6	1.5	49.1	1.1	48.7	1.1	47.3	2.7	47.1	2.3	0.04	
C18:1 n-7	2.4	0.2	2.7	0.2	3.1	0.1	3.0	0.2	2.9	0.1	2.9	0.2	0.02	
C18:2 n-6	33.9	0.9	19.8	0.5	17.2	1.3	17.8	0.9	16.6	2.3	16.1	2.3		
C18:3 n-6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0		
C18:3 n-3	1.1	0.0	0.6	0.2	0.4	0.1	0.5	0.1	0.7	0.2	0.6	0.1	0.001	
C20:0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0		
C20:1 n-9	0.8	0.1	0.5	0.2	0.9	0.3	0.8	0.1	1.5	0.6	1.3	0.2	0.001	
C20:2 n-6	0.2	0.0	0.4	0.0	0.4	0.0	0.4	0.0	0.4	0.1	0.3	0.0		
C20:3 n-6	0.3	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.1	1.0	0.2	0.0	0.008	
C20:3 n-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.001	
C20:4 n-6	0.5	0.0	0.3	0.1	0.2	0.1	0.3	0.0	0.2	0.0	0.3	0.0		
C20:5 n-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.001	
C22:5 n-6	0.4	0.1	0.3	0.1	0.5	0.1	0.8	0.2	0.1	0.0	0.1	0.1		
C22:5 n-3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.001	
C22:6 n-3	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.8	0.7	0.8	0.3	0.001	

Ctrl, Control diet. FO, Fish oil diet. +S indicates that 25 % of the normal fat was exchanged for Salatrim.

a) Data are presented as g/100g fatty acids. Mean with SD, n=8.

b) The 2-way ANOVA does not include data from the lean and obese reference groups.

c) P-values for significant differences between treatment groups assessed by 2-way ANOVA.

RTqPCR assessed mRNA concentration of adipose genes related to inflammation and lipolysis and of hepatic genes involved in lipogenesis and lipid oxidation after 4wk of weight loss on diets with varying lipid composition[a]

Relative mRNA	Lean[b]		Obese[b]		Ctrl		Ctrl+S		FO		FO+S		P[c]	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	FO	S
Adipose PPAR-α	1	0.3	0.6	0.3	1.1	0.6	1.6	0.2	1.0	0.7	1.7	0.7		0.02
Adipose P65	1	0.4	0.4	0.2	0.8	0.4	0.5	0.1	0.7	0.2	0.4	0.2		0.005
Adipose CD68	1	0.3	7.2	3.5	3.7	1.5	2.8	1.4	3.1	1.7	2.3	1.6		
Adipose TNF-α	1	1.0	3.5	1.7	2.1	1.1	0.8	0.5	1.2	1.7	0.9	0.5		0.053
Adipose HSL	1	0.7	0.4	0.2	0.7	0.4	0.7	0.6	0.5	0.2	0.3	0.2		
Hepatic ACC	1	0.3	1.2	0.2	1.0	0.3	1.3	0.5	1.1	0.4	1.2	0.6		
Hepatic FAS	1	0.6	0.5	0.3	0.5	0.2	0.4	0.2	0.4	0.3	0.3	0.2		
Hepatic SCD-1	1	0.8	0.4	0.3	0.7	0.6	0.7	0.5	1.1	1.2	0.9	1.1		
Hepatic ACS	1	0.5	1.5	0.4	1.2	0.4	1.2	0.2	1.3	0.6	1.6	0.9		
Hepatic AOX	1	0.8	1.2	1.7	1.8	1.0	1.6	0.6	1.7	1.3	1.4	0.8		
Hepatic CYP4A10	1	0.5	1.0	0.5	1.7	0.9	2.5	1.1	2.4	1.4	3.8	2.6		

Ctrl, Control diet. FO, Fish oil diet. +S indicates that 25 % of the normal fat was exchanged for Salatrim.

a) All RTqPCR data are calculated as relative mRNA levels compared to the lean reference group. Data are presented as mean with SD, n=8.

b) The 2-way ANOVA does not include data from the lean and obese reference groups.

c) P-values for significant differences between treatment groups as well as p-values of borderline significance.

Differences were assessed with 2-way ANOVA.

RTqPCR assessed mRNA concentration of adipose and hepatic genes related to inflammation and energy metabolism after 4wk of weight loss on diets with varying lipid composition[a]

Relative mRNA amount	Lean[b]		Obese[b]		Ctrl		Ctrl+S		FO		FO+S		P[c]	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	FO	S
Adipose TGF-β	1	0.4	1.9	0.6	1.5	0.6	0.9	0.5	1.2	0.5	0.7	0.4		0.004
Adipose IL-10	1	0.9	0.8	0.3	0.6	0.3	0.5	0.2	0.7	0.5	0.4	0.3		
Adipose PAI-1	1	0.5	1.8	1.2	1.9	0.5	0.8	0.6	1.8	1.7	0.8	0.7		0.02
Adipose Leptin	1	0.5	7.6	5.0	2.3	1.0	1.3	0.7	1.8	1.4	0.8	0.2		0.008
Adipose Adiponectin	1	0.4	0.4	0.3	0.8	0.2	0.7	0.4	0.8	0.3	0.6	0.3		
Adipose Resistin	1	0.7	0.0	0.0	0.7	0.5	0.2	0.2	0.3	0.2	0.2	0.1	0.05	0.005
Adipose IκBα	1	0.4	0.3	0.1	0.6	0.4	0.6	0.3	0.6	0.1	0.4	0.2		
Adipose MCP-1	1	0.5	3.7	1.9	2.1	2.2	1.9	1.1	2.1	1.8	1.0	0.4		
Adipose MIP-1α	1	0.6	4.1	3.4	1.0	0.8	3.2	1.6	2.5	1.6	1.3	0.9		
Adipose PPAR-γ	1	0.6	0.2	0.1	0.5	0.3	0.4	0.2	0.5	0.3	0.3	0.2		
Adipose Insulin Receptor	1	0.2	0.1	0.1	0.8	0.4	0.4	0.3	0.6	0.4	0.2	0.1		0.003
Hepatic Leptin Receptor	1	0.5	0.8	0.9	9.3	4.6	12.9	8.3	12.2	6.2	11.8	7.8		
Hepatic Insulin Receptor	1	0.5	0.4	0.2	0.8	0.5	0.8	0.4	0.7	0.4	0.9	0.6		
Hepatic UCP-2	1	0.7	0.4	0.2	0.7	0.6	0.8	0.7	0.7	0.2	0.5	0.5		
Hepatic CRP	1	0.5	0.8	0.4	1.2	0.5	1.5	0.7	1.7	0.5	1.1	0.5		
Hepatic CD36	1	0.5	1.3	1.0	0.9	0.3	0.8	0.5	1.2	1.2	1.1	0.6		
Hepatic IκBα	1	0.2	0.7	0.3	0.7	0.3	0.8	0.3	0.9	0.2	0.6	0.1		

Ctrl, Control diet. FO, Fish oil diet. +S indicates that 25 % of the normal fat was exchanged for Salatrim.

a) All RTqPCR data are calculated as relative mRNA levels compared to the lean reference group. Data are presented as mean with SD, n=8.

b) The 2-way ANOVA does not include data from the lean and obese reference groups.

c) P-values for significant differences between treatment groups assessed by two way ANOVA.