

Online resource 2. *Effect of the DHA-enriched diet on muscle fatty acid composition*

	CTL diet		DHA diet		ANOVA
	Fed	Starved	Fed	Starved	
C14:0	1.055 ± 0.090 <sup>a</sup>	0.730 ± 0.060 <sup>b</sup>	1.358 ± 0.027 <sup>c</sup>	1.045 ± 0.103 <sup>a</sup>	D, S
C15:0	< LD	0.250 ± 0.049	< LD	0.530 ± 0.230	-
C16:0	25.982 ± 4.811 <sup>a</sup>	20.710 ± 1.848 <sup>a</sup>	20.778 ± 0.796 <sup>a</sup>	30.164 ± 5.50 <sup>a</sup>	-
C16:1 n-9	0.838 ± 0.073 <sup>a</sup>	1.080 ± 0.118 <sup>b</sup>	0.838 ± 0.025 <sup>a</sup>	0.970 ± 0.075 <sup>ab</sup>	S
C16:1 n-7	3.814 ± 0.353 <sup>ab</sup>	1.822 ± 0.156 <sup>c</sup>	4.776 ± 0.450 <sup>a</sup>	2.765 ± 0.656 <sup>bc</sup>	S, D
C18:0	6.470 ± 1.631 <sup>ab</sup>	11.352 ± 1.875 <sup>a</sup>	4.000 ± 0.447 <sup>b</sup>	11.620 ± 3.551 <sup>a</sup>	S
C18:1 9cis	44.618 ± 4.558 <sup>a</sup>	26.108 ± 5.994 <sup>b</sup>	44.668 ± 1.000 <sup>a</sup>	32.164 ± 0.825 <sup>ab</sup>	S
C18:1 n-7	2.290 ± 0.178 <sup>a</sup>	3.172 ± 0.205 <sup>b</sup>	1.312 ± 0.052 <sup>c</sup>	1.390 ± 0.147 <sup>c</sup>	S, D, S x D
C18:2 n-6cis	10.010 ± 0.790 <sup>a</sup>	11.268 ± 0.463 <sup>a</sup>	11.592 ± 0.519 <sup>a</sup>	9.530 ± 1.681 <sup>a</sup>	-
C20:0	0.183 ± 0.059 <sup>ab</sup>	0.173 ± 0.012 <sup>ab</sup>	0.090 ± 0.004 <sup>b</sup>	0.256 ± 0.064 <sup>a</sup>	-
C20:1 n-9	0.584 ± 0.074 <sup>a</sup>	0.614 ± 0.156 <sup>a</sup>	0.510 ± 0.019 <sup>a</sup>	0.556 ± 0.080 <sup>a</sup>	-
C18:3 n-3	< LD	< LD	0.133 ± 0.014	< LD	-
C20:3 n-6	0.324 ± 0.024 <sup>a</sup>	0.946 ± 0.147 <sup>b</sup>	0.066 ± 0.002 <sup>c</sup>	0.107 ± 0.012 <sup>ac</sup>	S, D, S x D
C20:4 n-6	2.698 ± 0.293 <sup>a</sup>	10.242 ± 1.631 <sup>b</sup>	0.476 ± 0.035 <sup>a</sup>	0.642 ± 0.094 <sup>a</sup>	S, D, S x D
C20:5 n-3	< LD	< LD	0.168 ± 0.007 <sup>b</sup>	0.113 ± 0.017 <sup>c</sup>	-
C22:5 n-6	0.824 ± 0.061 <sup>a</sup>	4.062 ± 0.789 <sup>b</sup>	0.396 ± 0.024 <sup>a</sup>	0.454 ± 0.053 <sup>b</sup>	S, D, S x D
C22:5 n-3	0.070 ± 0.010 <sup>a</sup>	0.322 ± 0.080 <sup>b</sup>	0.322 ± 0.019 <sup>b</sup>	0.340 ± 0.029 <sup>b</sup>	-
C22:6 n-3	1.190 ± 0.072 <sup>a</sup>	7.020 ± 1.510 <sup>b</sup>	8.398 ± 0.752 <sup>b</sup>	9.230 ± 1.144 <sup>b</sup>	S, D, S x D

Data (in % of total fatty acids) are means ± SEM for n = 6 mice. Statistical differences were assessed by ANOVA. D, diet effect; S, starvation effect. S x D, interaction between diet and starvation effect. Values within a row with different superscript letters are significantly different. < LD, stands for below limit of detection

**DHA-supplementation prior to fasting prevents muscle atrophy of starved mice**

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