

Supplementary data

Table S1. Biochemical methods.

Parameter	Instrument	Reference range
Plasma, serum		
Total cholesterol (mmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	<5.2
LDL cholesterol (mmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	<3.35
HDL cholesterol (mmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	>1.03
Triglycerides (mmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	<1.7
Apolipoprotein A (g/l) °	COBAS INTEGRA 400 plus System (Roche Diagnostics Ltd., Rotkreuz, Switzerland)	women: 1.08 – 2.25 men: 1.04 – 2.02
Apolipoprotein B (g/l) °	COBAS INTEGRA 400 plus System (Roche Diagnostics Ltd., Rotkreuz, Switzerland)	women: 0.60 – 1.17 men: 0.66 – 1.33
High-sensitivity CRP (mg/d) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	≤0.3
Homocysteine (μmol/l) *	HPLC (Shimadzu, Kyoto, Japan)	5 – 15
Vitamin E (μmol/l) *	HPLC (Shimadzu, Kyoto, Japan)	11.6 – 46.4
Glucose (mmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	18 – 60 y: 4.1 – 5.9 60 – 90 y: 4.6 – 6.4
Insulin (mU/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	3 – 25
HbA1c (%) *	Tosoh HLC-723G11 (Sysmex, Norderstedt, Germany)	4.5 – 6.1
Lipoprotein(a) (nmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	<72
MDA-LDL cholesterol (U/l) °	Manual MDA-LDL ELISA, ImmBioMed, 2019	No information available
Calcium (mmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	2.15 – 2.50
Potassium (mmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	3.4 – 4.5
Ferritin (μg/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	women: 13 – 150 men: 30 – 400
Transferrin (g/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	2.0 – 3.6
Folic acid (ng/ml) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	3.9 – 26.8 [78]
Biotin (ng/l) °	ELISA	> 250

Table S1. Continued.

Parameter	Instrument	Reference range
	Plasma, serum	
Holo-transcobalamin (pmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	> 37.52
Vitamin A (μ mol/l) *	HPLC (Shimadzu, Kyoto, Japan)	1.46 – 2.84 [78]
Vitamin B ₂ (μ g/l) *	HPLC (Shimadzu, Kyoto, Japan)	180 – 295
Vitamin B ₆ (nmol/l) *	HPLC (Shimadzu, Kyoto, Japan)	14.6 – 72.8
Vitamin B ₁₂ (pmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	197 – 7712
Vitamin C (mg/l) *	HPLC (Shimadzu, Kyoto, Japan)	4 – 15
Vitamin D (nmol/l) *	Abbott Architect CI 16200 analyzer (Abbott, Wiesbaden, Germany)	> 75
Vitamin E (μ mol/l) *	HPLC (Shimadzu, Kyoto, Japan)	11.6 – 46.4
Erythrocytes		
Fatty acids (% FAME) \$	GC-17V3 (Shimadzu, Duisburg, Germany)	No information available

* Measured by Institute of Clinical Chemistry and Laboratory Diagnostics, University Hospital Jena, Jena, Germany; \diamond measured by Dianovis GmbH, Greiz, Germany; \$ measured by Institute of Nutritional Sciences, Friedrich Schiller University, Jena, Germany. Abbreviations: CRP, c-reactive protein; FAME, fatty acid methyl ester; HDL, high-density lipoprotein; HbA1c, glycated hemoglobin A1c; LDL, low-density lipoprotein; MDA-LDL, malondialdehyd-modified-low-density lipoprotein

Table S2. Energy and nutrient intake of the study participants in the week before the start of the intervention period (self-reports, 7 days).

	High linoleic acid (n = 25)	Low linoleic acid (n = 25)	High milk (n = 21)	Control (n = 26)				
Energy and nutrients	Characteristics *	Characteristics *	Characteristics *	Characteristics *				
Energy (kcal/day)	2065 (1846, 2600)	a	2219 (1724, 2535)	a	2098 (1846, 2624)	a	2204 (1888, 2532)	a
Carbohydrate (g/day)	224 (192, 294)	a	213 (182, 247)	a	220 (189, 273)	a	238 (175, 273)	a
Fiber (g/day)	23.9 (19.5, 27.1)	a	28.4 (20.7, 34.1)	a	24.7 (19.9, 40.1)	a	27.0 (20.0, 32.9)	a
Total sugar (g/day)	108 (87, 155)	a	93 (77, 133)	a	108 (83, 137)	a	109 (83, 146)	a
Sucrose (g/day)	50.7 (39.0, 73.6)	a	43.5 (31.5, 57.2)	a	52.6 (37.2, 62.0)	a	52.8 (43.9, 62.8)	a
Glucose (g/day)	19.4 (14.3, 25.6)	a	18.8 (14.2, 23.6)	a	22.3 (14.4, 24.9)	a	18.1 (15.1, 26.8)	a
Fructose (g/day)	24.0 (18.4, 32.3)	a	23.4 (19.6, 29.2)	a	26.1 (18.7, 35.0)	a	24.0 (20.1, 32.2)	a
Alcohol (g/day)	7.4 (2.4, 14.0)	a	7.4 (3.8, 15.2)	a	6.0 (0.2, 15.1)	a	4.1 (2.2, 9.9)	a
Protein (g/day)	82 (67, 109)	a	87 (69, 106)	a	87 (78, 102)	a	91 (81, 104)	a
Fat (g/day)	83 (63, 100)	a	87 (73, 118)	a	88 (70, 101)	a	92 (74, 106)	a
SFA (g/day)	32.2 (28.9, 42.3)	a	37.6 (30.7, 44.6)	a	33.9 (28.6, 41.8)	a	36.1 (29.6, 41.3)	a
MUFA (g/day)	28.5 (22.2, 36.8)	a	31.5 (25.7, 45.6)	a	32.3 (25.2, 40.2)	a	32.5 (27.3, 38.3)	a
PUFA (g/day)	11.4 (9.3, 16.6)	a	12.8 (9.2, 16.4)	a	12.4 (9.9, 22.2)	a	12.5 (10.2, 16.8)	a
C-18:2 _{n6} (g/day)	8.8 (7.6, 13)	a	10.4 (7.4, 14.5)	a	10.0 (7.7, 15.4)	a	10.2 (7.6, 12.8)	a
C-18:3 _{n3} (g/day)	1.2 (1.0, 1.6)	a	1.4 (1.1, 1.5)	a	1.3 (0.9, 1.6)	a	1.3 (1.1, 1.8)	a
C-20:5 _{n3} (g/day)	0.2 (0.0, 0.5)	a	0.2 (0.1, 0.3)	a	0.2 (0.1, 0.4)	a	0.3 (0.1, 0.5)	a
C-22:6 _{n3} (g/day)	0.2 (0.1, 0.3)	a	0.2 (0.1, 0.4)	a	0.3 (0.1, 0.5)	a	0.4 (0.2, 0.5)	a
C-20:4 _{n6} (g/day)	0.2 (0.1, 0.3)	a	0.2 (0.1, 0.3)	a	0.2 (0.1, 0.3)	a	0.2 (0.1, 0.3)	a
Vitamin A (mg/day)	0.5 (0.4, 1.0)	a	0.6 (0.4, 1.2)	a	0.4 (0.3, 0.5)	a	0.5 (0.4, 0.7)	a
Vitamin B ₁ (mg/day)	1.5 (1.2, 2.0)	a	1.6 (1.3, 2.2)	a	1.9 (1.2, 2.1)	a	1.5 (1.3, 1.9)	a
Vitamin B ₂ (mg/day)	1.6 (1.3, 1.8)	a	1.6 (1.2, 1.9)	a	1.5 (1.4, 1.8)	a	1.7 (1.4, 2.0)	a
Vitamin B ₆ (mg/day)	1.9 (1.5, 2.5)	a	2.0 (1.7, 2.2)	a	2.1 (1.8, 2.4)	a	2.0 (1.7, 2.5)	a
Vitamin B ₁₂ (μ g/day)	5.6 (4.8, 7.9)	a	5.4 (4.4, 6.6)	a	5.2 (4.1, 6.5)	a	5.7 (4.4, 7.4)	a
Vitamin C (mg/day)	124 (94, 145)	a	122 (88, 176)	a	139 (108, 161)	a	130 (92, 149)	a
Vitamin D (μ g/day)	3.7 (2.2, 6.9)	a	2.0 (1.2, 4.4)	a	3.2 (2.3, 4.4)	a	3.9 (2.0, 6.7)	a
Vitamin E (mg/day)	9.1 (7.8, 13.7)	a	10.7 (9.0, 15.8)	a	10.5 (9.2, 17.2)	a	11.9 (9.4, 14.4)	a
Vitamin K (mg/day)	0.1 (0.1, 0.2)	a	0.2 (0.1, 0.2)	a	0.1 (0.1, 0.2)	a	0.2 (0.1, 0.2)	a
Calcium (mg/day)	832 (654, 932)	a	788 (645, 980)	a	811 (647, 1002)	a	844 (671, 1145)	a
Magnesium (mg/day)	346 (290, 437)	a	391 (320, 457)	a	353 (292, 478)	a	382 (332, 458)	a
Potassium (mg/day)	3389 (2800, 4096)	a	3601 (2858, 4036)	a	3512 (3011, 4243)	a	3605 (3325, 4431)	a
Iron (mg/day)	12.7 (10.0, 15.8)	a	12.4 (10.7, 14.5)	a	12.0 (9.5, 15.3)	a	12.8 (11.1, 14.7)	a
Zinc (mg/day)	10.4 (8.4, 13.9)	a	11.4 (8.9, 13.8)	a	11.2 (9.5, 15.1)	a	11.7 (11.3, 14.9)	a
Sodium (mg/day)	2310 (1820, 3195)	a	2180 (1810, 2700)	a	2131 (1741, 2704)	a	2061 (1694, 2801)	a
Chloride (mg/day)	4073 (2930, 4675)	a	3620 (2815, 4069)	a	3578 (2943, 4335)	a	3444 (2826, 4860)	a
Phosphor (mg/day)	1410 (1080, 1623)	a	1424 (1075, 1652)	a	1354 (1120, 1750)	a	1528 (1252, 1794)	a
Iodine (μ g/day)	91 (76, 137)	a	106 (72, 130)	a	99 (73, 116)	a	106 (71, 134)	a
Copper (mg/day)	1.8 (1.6, 2.3)	a	2.0 (1.6, 2.3)	a	1.7 (1.5, 2.6)	a	2.0 (1.7, 2.5)	a
Manganese (mg/day)	4.5 (3.6, 5.8)	a	4.7 (3.8, 6.0)	a	4.1 (3.3, 7.6)	a	4.9 (3.9, 7.2)	a

* Variables expressed as mean (\pm SD) and/or as median (25th, 75th percentile) depending on the statistical test that was performed; ♦ groups without a common letter are significantly different, $p < 0.05$. Abbreviations: MUFA, monounsaturated fatty acids; PUFA, polyunsaturated fatty acids; SFA, saturated fatty acids

Table S3. Comparison of erythrocyte fatty acids at baseline (week 0), after weeks 4 and 8 and at the end of the intervention period (week 12).

Erythrocyte fatty acids (% FAME)	Week	High linoleic acid (n = 27)			Low linoleic acid (n = 27)			High milk (n = 22)			Control (n = 27)		
		Characteristics *	Δ	◊	Characteristics *	Δ	◊	Characteristics *	Δ	◊	Characteristics *	Δ	◊
C-14:0	0	0.16 (±0.07)	a	a	0.17 (±0.06)	a	a,b	0.20 (±0.06)	a	b	0.25 (±0.07) 0.25 (0.19, 0.30)	a	c
	4	0.19 (±0.05)	a	a	0.19 (±0.06)	a,b	a	0.21 (±0.06)	a	a	0.25 (±0.07) 0.25 (0.21, 0.31)	a	b
	8	0.20 (±0.04) 0.21 (0.18, 0.22)	a	a	0.20 (±0.05) 0.19 (0.17, 0.24)	b	a	0.24 (±0.09) 0.23 (0.19, 0.26)	a	a	0.27 (0.23, 0.33)	b	b
	12	0.20 (±0.03)	a	a	0.19 (±0.03)	a,b	a	0.22 (±0.08)	a	a	0.29 (±0.07) 0.28 (0.25, 0.34)	b	b
	Cfb (%)	33.03 (0.40, 81.76)	a	14.33 (-12.35, 61.48)	a	-7.24 (-20.07, 66.48)	a	21.95 (8.61, 28.45)	a		a		
C-15:0	0	0.12 (±0.03) 0.11 (0.09, 0.14)	a	a	0.11 (0.10, 0.13)	a	a	0.13 (0.12, 0.19)	a	b	0.16 (±0.03) 0.16 (0.14, 0.18)	a	b
	4	0.14 (±0.02)	b,c	a	0.13 (±0.03) 0.13 (0.12, 0.15)	b,c	a	0.15 (±0.03) 0.14 (0.12, 0.18)	a	a	0.17 (±0.03)	a	b
	8	0.14 (±0.02) 0.14 (0.12, 0.15)	b	a,b	0.14 (0.13, 0.15)	b	a	0.16 (0.13, 0.19)	a	b,c	0.18 (±0.04) 0.18 (0.16, 0.20)	b	c
	12	0.13 (±0.02)	a	a	0.12 (±0.02) 0.12 (0.11, 0.13)	a,c	a	0.15 (±0.05) 0.15 (0.11, 0.17)	a	b	0.19 (±0.04)	b	c
	Cfb (%)	10.71 (-8.08, 35.74)	a	10.73 (-7.42, 27.21)	a	-13.50 (-19.21, 31.98)	a	15.82 (8.17, 29.73)	a		a		
C-16:0	0	16.58 (±2.71)	a	a	16.78 (±2.70)	a	a	21.98 (±2.84) 21.23 (20.07, 23.75)	a	b	21.13 (±1.74) 20.81 (19.92, 21.98)	a	b
	4	18.65 (±2.24) 18.7 (17.55, 20.23)	b	a	18.96 (±2.28) 19.09 (18.05, 20.54)	b	a	21.09 (19.13, 23.56)	a	b	22.57 (20.60, 22.88)	b	b
	8	20.17 (±0.88)	c	a	20.35 (±1.08)	c	a	23.10 (±3.96) 23.68 (20.86, 24.91)	a	b	23.04 (±1.37) 23.14 (22.13, 23.80)	b,c	b
	12	20.25 (±1.11) 20.02 (19.49, 21.12)	c	a	20.11 (±0.77) 20.12 (19.63, 20.49)	c	a	23.37 (19.37, 25.60)	a	b	23.66 (22.57, 24.68)	c	c
	Cfb (%)	23.33 (7.84, 42.58)	a	22.29 (4.36, 38.32)	a	-1.45 (-8.83, 22.04)	a	11.93 (8.63, 19.38)	b		a,b		

Table S3. Continued

Table S3. Continued.

Erythrocyte fatty acids (% FAME)	Week	High linoleic acid (n = 27)			Low linoleic acid (n = 27)			High milk (n = 22)			Control (n = 27)		
		Characteristics *	Δ	◊	Characteristics *	Δ	◊	Characteristics *	Δ	◊	Characteristics *	Δ	◊
aC-18:3c9c12c15 (ALA) (n [†] (Control) = 26)	0	0.14 (0.12, 0.17)	a	a	0.17 (0.14, 0.23)	a	a	0.14 (0.12, 0.17)	a	a	0.17 (0.13, 0.23)	a	a
	4	0.55 (±0.19)	b	a	0.60 (±0.27)	b	a	0.61 (±0.24)	b	a	0.58 (±0.18)	b	a
	8	0.56 (0.40, 0.70)	c	a	0.54 (0.43, 0.82)	c	a	0.61 (0.41, 0.77)	b	a	0.57 (0.47, 0.71)	b	a
	12	0.67 (±0.27)	c	a	0.80 (±0.39)	c	a	0.65 (±0.32)	b	a	0.64 (±0.22)	b	a
	Cfb (%)	0.69 (0.52, 0.74)	d	a	0.77 (0.52, 1.06)	c	a	0.64 (0.39, 0.81)	b	a	0.60 (0.48, 0.79)	b	a
		0.79 (±0.31)			0.81 (±0.39)			0.69 (±0.28)			0.70 (±0.23)		
C-20:2c11c14	0	0.78 (0.59, 1.02)	a	a	0.82 (0.55, 1.12)	c	a	0.75 (0.50, 0.92)	b	a	0.72 (0.57, 0.79)	b	a
		465.08 (±286.92)			354.34 (±223.79)			378.33 (±250.97)			296.30 (±158.53)		
	0	0.20 (0.19, 0.25)	a	a	0.23 (0.20, 0.25)	a	a	0.24 (±0.03)	a	a	0.22 (0.18, 0.24)	a	a
	4	0.21 (0.18, 0.21)	a	a,c	0.19 (0.18, 0.21)	b	a	0.23 (±0.03)	a	b	0.21 (0.20, 0.23)	a	b,c
	8	0.19 (0.18, 0.21)	a	a	0.19 (0.18, 0.21)	b	a	0.22 (0.21, 0.24)	a	b	0.21 (0.19, 0.23)	a	a,b
	12	0.19 (0.17, 0.21)	a	a	0.19 (0.18, 0.21)	b	a	0.23 (±0.04)	a	b	0.22 (0.19, 0.24)	a	b
C-20:3c8c11c14	Cfb (%)	-7.58 (-18.78, -1.51)	a		-8.94 (-21.81, 1.39)	a,c		-1.72 (-12.00, 16.26)	b,c		-1.65 (-7.88, 7.10)		b
	0	1.44 (1.38, 1.60)	a	a	1.54 (1.25, 1.65)	a	a	1.41 (1.26, 1.59)	a	a	1.39 (1.20, 1.59)	a	a
	4	1.19 (1.07, 1.37)	a	a	1.15 (0.99, 1.41)	b	a	1.20 (1.11, 1.35)	b	a	1.17 (1.02, 1.36)	b	a
	8	1.07 (1.01, 1.26)	b	a	1.14 (0.97, 1.30)	b	a	1.21 (1.07, 1.38)	b	a	1.15 (1.01, 1.32)	b	a
	12	1.10 (1.00, 1.24)	b	a	1.10 (0.98, 1.25)	b	a	1.32 (1.19, 1.47)	a,b	b	1.07 (0.99, 1.32)	b	a
	Cfb (%)	-21.86 (-34.38, -15.79)	a		-15.70 (-33.06, -7.93)	a		-7.14 (-20.83, 4.24)	b		-16.65 (-23.01, -13.99)	a,b	
C-20:4c5c8c11c14 (ARA)	0	15.73 (±1.73)	a	a	15.36 (13.96, 16.22)	a	a	14.78 (13.82, 15.62)	a	a	14.30 (13.82, 15.47)	a	a
		15.50 (14.52, 16.72)											
	4	14.25 (±1.53)	b	a	14.10 (13.27, 14.77)	b	a	15.00 (13.56, 16.21)	a	a	13.19 (12.70, 13.69)	b	b
		13.86 (13.25, 15.10)											
	8	13.46 (±1.24)	c	a,b	13.11 (12.44, 13.67)	c	a,b	14.20 (13.06, 15.92)	a	a	12.92 (12.26, 13.58)	b	b
		13.64 (12.66, 14.13)											
C-20:4n3 (ETA) (n [†] (Control) = 22)	12	13.39 (±1.17)	c	a	13.35 (12.65, 14.09)	b,c	a	13.96 (12.64, 15.92)	a	a	12.40 (11.48, 13.29)	c	b
		13.62 (12.41, 14.05)											
	Cfb (%)	-15.55 (-20.20, -9.14)	a		-10.42 (-17.93, -6.52)	a,b		-4.80 (-12.93, 4.97)	b		-13.52 (-18.61, -7.94)	a	
	0	0.09 (0.07, 0.12)	a	a	0.09 (0.07, 0.14)	a	a	0.07 (0.05, 0.08)	a	b	0.08 (0.06, 0.11)	a	a,b
	4	0.12 (0.10, 0.15)	a,b	a	0.14 (0.09, 0.17)	a,b	a	0.12 (0.10, 0.18)	b	a	0.13 (0.09, 0.16)	b	a
	8	0.12 (0.10, 0.15)	b	a	0.14 (0.11, 0.17)	b	a	0.13 (0.09, 0.16)	b	a	0.13 (0.11, 0.16)	b	a
	12	0.16 (0.11, 0.18)	b	a	0.15 (0.13, 0.19)	b	a	0.16 (0.10, 0.20)	b	a	0.14 (0.12, 0.18)	b	a
	Cfb (%)	72.75 (14.74, 157.73)	a,b		53.87 (18.57, 146.26)	a		140.21 (93.21, 210.24)	b		83.58 (53.3, 119.51)	a,b	

Table S3. Continued.

Table S3. Continued.

Erythrocyte fatty acids (% FAME)	Week	High linoleic acid (n = 27)			Low linoleic acid (n = 27)			High milk (n = 22)			Control (n = 27)		
		Characteristics *	Δ	◊	Characteristics *	Δ	◊	Characteristics *	Δ	◊	Characteristics *	Δ	◊
C-22:6n3 (DHA)	0	5.75 (± 1.41) 5.73 (4.66, 6.54)	a	a	5.20 (4.40, 5.98)	a	a,c	4.18 (3.06, 4.95)	a	b	4.85 (± 0.86) 4.76 (4.27, 5.47)	a	b,c
	4	4.53 (± 1.01)	b	a	4.44 (± 1.13) 4.32 (3.67, 4.96)	b	a	4.39 (± 1.18) 4.18 (3.65, 5.33)	a	a	4.05 (± 0.94)	b	a
	8	3.93 (± 0.69) 4.06 (3.46, 4.23)	c	a	3.72 (3.08, 4.40)	c	a	3.53 (3.19, 4.35)	a	a	4.04 (± 0.92) 4.04 (3.35, 4.61)	b	a
	12	3.87 (± 0.66)	c	a	3.67 (± 0.70) 3.67 (3.15, 4.21)	c	a	3.79 (± 1.18) 3.91 (3.17, 4.67)	a	a	3.91 (± 0.79)	b	a
	Cfb (%)	-33.96 (-41.68, -20.05)	a	-35.47 (-39.61, -17.42)	a	-5.97 (-19.99, 14.69)	b	-18.66 (-29.33, -11.47)	b			b	
SFA	0	33.63 (31.96, 34.58)	a	a	33.89 (31.87, 36.02)	a	a	36.28 (34.31, 38.94)	a	b	37.20 (36.45, 37.65)	a,b	b
	4	32.76 (31.78, 33.94)	a	a	34.00 (32.25, 34.89)	a	a	36.15 (33.74, 37.77)	a	b	36.37 (35.21, 37.24)	a	b
	8	33.88 (33.29, 34.43)	a	a	34.15 (33.44, 34.59)	a	a	39.30 (36.30, 40.91)	a	b	38.09 (37.24, 39.28)	b	b
	12	33.87 (33.07, 35.32)	a	a	33.77 (32.70, 34.67)	a	a	37.36 (33.48, 39.26)	a	b	37.78 (37.16, 38.63)	b	b
	Cfb (%)	2.81 (-5.27, 9.70)	a	-0.38 (-7.79, 6.97)	a	0.00 (-11.49, 8.98)	a	1.77 (-0.82, 5.66)	a			a	
MUFA	0	15.77 (± 1.00)	a	a	15.90 (± 1.21)	a	a	18.13 (± 1.35) 18.11 (17.18, 19.34)	a	b	17.02 (± 1.32)	a	c
	4	16.26 (± 0.92)	b	a	16.61 (± 1.15)	b	a	17.02 (± 1.32) 17.07 (16.34, 17.83)	b	a	16.96 (± 1.36)	a	a
	8	16.89 (± 0.79)	c	a	17.42 (± 1.25)	c	a	17.14 (± 1.23) 17.14 (16.31, 18.15)	b	a	17.09 (± 1.47)	a	a
	12	16.87 (± 0.80) 16.60 (16.28, 17.49)	c	a	17.55 (± 1.14) 17.77 (16.61, 18.33)	c	a,b	18.26 (17.41, 19.17)	a	b	17.40 (± 1.06) 17.37 (16.65, 18.23)	a	a,b
	Cfb (%)	7.30 (± 7.55)	a	10.55 (± 5.25)	a	-0.02 (± 7.75)	b	2.57 (± 7.14)	b			b	
C-18:1c9/C-18:0	0	0.96 (0.92, 1.03)	a	a	1.01 (0.88, 1.07)	a	a	1.34 (1.25, 1.43)	a	b	1.11 (0.99, 1.24)	a	c
	4	1.22 (± 0.17)	b	a	1.21 (± 0.18)	b	a	1.38 (± 0.18)	a	b	1.29 (± 0.14)	b	a,b
	8	1.22 (1.15, 1.35)	b	a	1.20 (1.07, 1.35)	c	a	1.40 (1.28, 1.50)	b	b	1.27 (1.19, 1.39)	a,b	b
	12	1.35 (1.31, 1.39)	b	a	1.36 (1.27, 1.46)	b,c	a	1.14 (1.07, 1.24)	a	a	1.24 (1.13, 1.33)	a,b	b
	Cfb (%)	1.26 (1.18, 1.41)	a,c	41.36 (± 20.92)	a	1.34 (1.25, 1.49)	a	1.66 (± 21.63)	b		1.37 (1.20, 1.48)	b	c
		35.69 (± 25.96)									25.07 (± 27.69)		

Table S3. Continued.

Table S3. Continued.

Erythrocyte fatty acids (% FAME)	Week	High linoleic acid (n = 27)				Low linoleic acid (n = 27)				High milk (n = 22)				Control (n = 27)			
		Characteristics *		Δ	◊	Characteristics *		Δ	◊	Characteristics *		Δ	◊	Characteristics *		Δ	◊
TFA	0	0.36 (0.31, 0.42)	a	a	0.33 (0.27, 0.42)	a	a	0.50 (0.44, 0.66)	a,c	b	0.48 (0.43, 0.65)	a	b				
	4	0.29 (0.25, 0.33)	b	a	0.26 (0.22, 0.36)	a	a	0.53 (0.43, 0.58)	a	b	0.42 (0.39, 0.50)	a	b				
	8	0.27 (0.24, 0.29)	b	a	0.27 (0.24, 0.32)	a	a	0.61 (0.49, 0.68)	b,c	b	0.49 (0.41, 0.69)	a	b				
	12	0.28 (0.26, 0.53)	b	a	0.30 (0.23, 0.83)	a	a	0.68 (0.62, 0.78)	b	b	0.44 (0.38, 0.70)	a	a,b				
	Cfb (%)	-14.65 (-27.85, 2.93)	a	-3.37 (-17.04, 133.81)	a,b	29.58 (12.71, 51.89)			b	-0.23 (-26.45, 34.81)			a				
EPA/ALA (n [†] (Control) = 26)	0	6.04 (4.59, 8.45)	a	a	5.36 (4.58, 7.03)	a	a	4.60 (4.23, 6.28)	a	a	5.59 (4.20, 6.90)	a	a				
	4	2.32 (1.65, 3.17)	b	a	2.17 (1.58, 2.98)	b	a	1.98 (1.65, 2.59)	b	a	2.01 (1.77, 2.53)	b	a				
	8	2.15 (1.54, 2.65)	b	a	1.84 (1.45, 2.30)	b	a	1.84 (1.35, 2.38)	b	a	1.97 (1.58, 2.98)	b	a				
	12	2.05 (1.51, 2.49)	b	a	1.93 (1.48, 2.81)	b	a	2.05 (1.47, 2.90)	b	a	1.99 (1.67, 2.65)	b	a				
	Cfb (%)	-68.97 (-77.97, -53.31)	a	-66.94 (-71.34, -42.33)	a	-61.15 (-71.47, -50.76)			a	-62.69 (-71.87, -54.95)			a				
DPA/ALA (n [†] (Control) = 26)	0	18.92 (16.00, 23.70)	a	a	16.50 (12.28, 21.07)	a	a,b	16.07 (13.98, 19.27)	a	a,b	14.79 (10.55, 17.35)	a	b				
	4	4.63 (3.62, 6.35)	b	a	4.65 (3.51, 6.64)	b	a	4.54 (3.70, 6.75)	b	a	4.12 (3.35, 5.46)	b	a				
	8	3.85 (3.35, 5.17)	b,c	a	3.33 (2.53, 5.10)	c	a	4.11 (3.47, 5.68)	b	a	3.65 (3.15, 5.32)	b	a				
	12	3.50 (2.64, 4.84)	c	a	3.77 (2.69, 5.04)	b,c	a	4.45 (3.17, 6.77)	b	a	3.86 (3.22, 4.59)	b	a				
	Cfb (%)	-79.35 (-87.18, -73.49)	a	-77.89 (-85.11, -52.67)	a,b	-73.33 (-79.64, -47.07)			b	-69.49 (-77.51, -61.96)			b				
DHA/ALA (n [†] (Control) = 26)	0	37.77 (29.63, 52.46)	a	a	27.46 (20.07, 41.56)	a	a,b	23.91 (22.08, 33.54)	a	b	28.95 (19.78, 36.77)	a	b				
	4	7.32 (5.78, 12.47)	b	a	7.64 (5.64, 10.35)	b	a	7.66 (5.21, 9.96)	b	a	7.26 (5.06, 8.48)	b	a				
	8	6.03 (4.82, 7.55)	c	a	5.01 (3.74, 7.77)	c	a	6.19 (3.77, 9.75)	b	a	6.06 (4.78, 8.40)	b	a				
	12	4.94 (3.88, 7.38)	c	a	5.37 (3.36, 7.12)	c	a	5.37 (4.08, 7.17)	b	a	5.33 (4.64, 7.14)	b	a				
	Cfb (%)	-86.19 (-90.95, -81.25)	a	-85.59 (-90.36, -64.30)	a,b	-81.50 (-84.64, -61.92)			b	-77.90 (-84.20, -71.06)			b				
ARA/LA	0	1.54 (1.37, 1.86)	a	a	1.50 (\pm 0.25)	a	a	1.29 (\pm 0.19)	a	b	1.35 (1.23, 1.41)	a	b				
	4	1.14 (1.05, 1.40)	b	a,b	1.28 (\pm 0.22)	b	a	1.27 (\pm 0.22)	a	a	1.09 (1.04, 1.21)	b	b				
	8	1.04 (0.91, 1.19)	c	a	1.10 (\pm 0.15)	c	a,b	1.24 (\pm 0.22)	a,b	b	1.09 (1.01, 1.20)	b	a,b				
	12	1.07 (\pm 0.20) 1.06 (0.89, 1.16)	c	a	1.10 (\pm 0.15)	c	a	1.16 (\pm 0.20)	b	a	1.04 (\pm 0.17) 1.07 (0.93, 1.14)	c	a				
	Cfb (%)	-31.11 (-39.67, -25.41)	a	-26.74 (-35.02, -18.09)	a,c	-11.87 (-16.17, -2.90)			b	-20.07 (-25.74, -15.07)			c				

Table S3. Continued.

Erythrocyte fatty acids (% FAME)	Week	High linoleic acid (n = 27)				Low linoleic acid (n = 27)				High milk (n = 22)				Control (n = 27)			
		Characteristics *		Δ	◊	Characteristics *		Δ	◊	Characteristics *		Δ	◊	Characteristics *		Δ	◊
<i>n</i> -3 index	0	6.71 (±1.63) 6.63 (5.51, 7.53)	a	a		6.16 (5.14, 7.02)	a	a		4.84 (3.56, 5.96)	a	b	5.92 (±1.15) 5.85 (4.98, 6.89)	a	a,b		
	4	5.74 (±1.13)	b	a		5.63 (±1.31) 5.42 (4.73, 6.40)	b	a		5.56 (±1.38) 5.25 (4.68, 6.65)	a	a	5.30 (±1.27)	b	a		
	8	5.25 (±0.74) 5.17 (4.76, 5.65)	c	a		5.08 (4.41, 5.89)	b	a		4.63 (3.91, 5.43)	a	a	5.38 (±1.32) 5.11 (4.64, 6.32)	b	a		
	12	5.39 (±0.81)	b,c	a		5.18 (±0.94) 5.25 (4.47, 5.93)	b	a		5.15 (±1.48) 4.98 (4.32, 6.17)	a	a	5.37 (±1.16)	b	a		
	Cfb (%)	-18.78 (-28.56, -11.48)	a		-21.39 (-28.81, -6.68)	a			0.69 (-9.13, 28.30)	b		-9.61 (-19.36, -2.25)	a,b				

* Variables expressed as mean (±SD) and/or as median (25th, 75th percentile) depending on the statistical tests that were performed; ◊ groups without a common letter are significantly different, *p* < 0.05; Δ points in time without a common letter are significantly different, *p* < 0.05; † number of data sets used to calculate shown data if differing from n. Abbreviations: ALA, α-linolenic acid; ARA, arachidonic acid; Cfb (%), percentage change from baseline; DHA, docosahexaenoic acid; DPA, docosapentaenoic acid; EPA, eicosapentaenoic acid; ETA, eicosatetraenoic acid; FAME, fatty acid methyl ester; LA, linoleic acid; MUFA, monounsaturated fatty acids; PUFA, polyunsaturated fatty acids; SFA, saturated fatty acids; TFA, trans-fatty acids

Table S4. Comparison of percentage change from baseline without diet group subdivision but with split by sex differences, EPA baseline status and LA change throughout the study.

Subgroups	Whole study collective	
	Change from baseline (%) *	Δ
C-20:5n3 (EPA) (n †= 68, 35, 54, 49, 52, 51)		
Women	39.39 (12.85, 79.04)	
Men	69.00 (34.96, 94.35)	0.043
EPA (<0.9) ^{Baseline}	79.28 (45.72, 111.29)	
EPA (≥0.9) ^{Baseline}	28.96 (8.61, 58.01)	<0.001
LA (<1.5) ^{Change}	58.02 (26.25, 98.35)	
LA (≥1.5) ^{Change}	39.40 (16.93, 81.19)	n.s.
<i>n-3</i> index (n †= 68, 35, 54, 49, 52, 51)		
Women	-13.33 (-27.62, 0.32)	
Men	-10.41 (-18.16, -2.25)	n.s.
EPA (<0.9) ^{Baseline}	-4.90 (-19.79, 8.21)	
EPA (≥0.9) ^{Baseline}	-17.59 (-26.72, -10.40)	<0.001
LA (<1.5) ^{Change}	-6.53 (-14.16, 7.86)	
LA (≥1.5) ^{Change}	-21.50 (-29.36, -10.41)	0.001

* Variables expressed as mean (±SD) and/or as median (25th, 75th percentile) depending on the statistical test that was performed; † Number of data sets used to calculate shown data per subgroup; Δ Comparison of subgroups; ^{Baseline} Subgroup built by using baseline EPA status (<0.9 % FAME vs. ≥0.9 % FAME); ^{Change} Subgroup built by using total LA change (% FAME) that was observed throughout the study (<1.5 % FAME vs. ≥1.5 % FAME). Abbreviations: EPA, eicosapentaenoic acid; LA, linoleic acid