

**Table S1.** Difference in **biomarker** concentration (%TPFA) per 1 percentage increase in relative fatty acid intake and correlations between biomarker concentration and intake from Spearman statistics unless indicated otherwise (n=255).

	Regression coefficients (95% CI) from linear regressions		Correlation coefficients
	Non-adjusted	Adjusted for age, parity, BMI, smoking and total energy intake	
<b>EPA</b>	<b>0.44 (0.20; 0.69)</b> % per 1% relative increase/day **	<b>0.43 (0.17; 0.68)</b> % per 1% relative increase/day*	<b>0.24 ***</b>
<b>DHA</b>	<b>0.52 (0.25; 0.80)</b> % per 1% relative increase/day **	<b>0.44 (0.15; 0.73)</b> % per 1 % relative increase/day *	<b>0.21 **</b>
<b>EPA+DHA</b>	<b>0.51 (0.26; 0.77)</b> % per 1% relative increase/day **	<b>0.45 (0.19; 0.72)</b> % per 1 % relative increase/day *	<b>0.23 **</b>
<b>ALA</b>	0.02 (-0.02; 0.06) % per 1% relative increase/day	0.03 (-0.01; 0.06) % per 1 % relative increase/day	0.06 <sup>a</sup>
<b>LA</b>	0.10 (-0.06; 0.27) % per 1% relative increase/day	0.06 (-0.11; 0.23) % per 1 % relative increase/day	0.08
<b>AA</b>	0.85 (-1.97; 2.66) % per 1% relative increase/day	1.26 (-1.84; 3.35) % per 1 % relative increase/day	0.06 <sup>a</sup>

BOLD =  $P < 0.05$ , \* =  $P < 0.01$ , \*\* =  $P < 0.001$ , \*\*\* =  $P < 0.0001$

<sup>a</sup>: Pearson correlation

AA: arachidonic acid; ALA:  $\alpha$ -linolenic acid; BMI: body mass index; DHA: docohexaenoic acid; EPA: eicosapentaenoic acid; LA: linoleic acid; %TPFA: percentage of total plasma fatty acids

**Table S2a.** Difference in **biomarker** concentration (%TPFA) per increase in daily intake and correlations between biomarker concentration and intake from Spearman statistics unless indicated otherwise. Stratified to samples stored at -196 °C since 2013 (n=203)

	Regression coefficients from linear regressions (95% CI)		Correlation coefficients
	Non-adjusted	Adjusted for age, parity, BMI, smoking and total energy intake	
<b>EPA</b>	<b>0.05 (0.01; 0.08)</b> % per 100 mg/day *	<b>0.05 (0.01; 0.08)</b> % per 100 mg/day *	<b>0.22 *</b>
<b>DHA</b>	<b>0.04 (0.00; 0.07)</b> % per 100 mg/day	<b>0.04 (0.00; 0.07)</b> % per 100 mg/day	<b>0.15</b>
<b>EPA+DHA</b>	<b>0.04 (0.01; 0.08)</b> % per 100 mg/day *	<b>0.04 (0.01; 0.07)</b> % per 100 mg/day *	<b>0.18 *</b>
<b>ALA</b>	<b>0.03 (0.00; 0.05)</b> % per 1 g/day	<b>0.07 (0.03; 0.11)</b> % per 1 g/day **	<b>0.15<sup>a</sup></b>
<b>LA</b>	0.06 (-0.06; 0.19) % per 1 g/day	0.04 (-0.20; 0.27) % per 1 g/day	0.06
<b>AA</b>	<0.001 (-0.03; 0.03) % per 10 mg/day	0.01 (-0.02; 0.04) % per 10 mg/day	<0.01 <sup>a</sup>

Model 2: Adjusted for age, parity, BMI, smoking and total energy intake

BOLD =  $P < 0.05$ , \* =  $P < 0.01$ , \*\* =  $P < 0.001$ , \*\*\* =  $P < 0.0001$

<sup>a</sup>: Pearson correlation

AA: arachidonic acid; ALA:  $\alpha$ -linolenic acid; BMI: body mass index; DHA: docohexaenoic acid; EPA: eicosapentaenoic acid; LA: linoleic acid; %TPFA: percentage of total plasma fatty acids

**Table S2b.** Plasma sample storage temperatures (n=252)

Storage temperature	n	%
<b>-196 °C</b>	203	80.6
<b>-80 °C</b>	40	15.9
<b>-20 °C</b>	9	3.6

**Figure S1.** Quartile mean intake of EPA+ DHA (g/day) and the corresponding plasma concentration of EPA+DHA (% TFA) (n=255).

