

Supplementary Material

Supplementary TABLE 1 – Detailed Results: Determinants of fat and fatty acid content of mother’s milk – unadjusted β estimates (SDS) and 95% CI ¹

		Infant Characteristics (95% CI)				
		Gestational Age at Birth (weeks)	Infant Sex (vs F)	Birth Weight (/100g)	Lactation Stage (week)	Multiple birth (multiple vs single)
	Total Fat	-0.02 (-0.06, 0.03)	0.06 (-0.15, 0.27)	-0.03 (-0.08, 0.02)	0.06 (0.02, 0.10)	-0.25 (-0.50, 0.00)
Saturated fats (mol%)	10:0	0.02 (-0.03, 0.08)	0.22 (-0.02, 0.47)	0.00 (-0.06, 0.06)	-0.05 (-0.10, -0.01)	-0.25 (-0.54, 0.04)
	12:0	-0.07 (-0.11, -0.02)	-0.03 (-0.25, 0.19)	-0.06 (-0.11, -0.01)	-0.06 (-0.10, -0.02)	-0.50 (-0.76, -0.24)
	14:0	-0.07 (-0.12, -0.03)	0.00 (-0.23, 0.23)	-0.05 (-0.10, 0.01)	-0.07 (-0.11, -0.03)	-0.51 (-0.78, -0.24)
	16:0	0.02 (-0.03, 0.06)	0.14 (-0.08, 0.36)	0.01 (-0.04, 0.07)	-0.03 (-0.07, 0.00)	-0.38 (-0.63, -0.13)
	18:0	-0.01 (-0.06, 0.04)	0.14 (-0.09, 0.36)	0.03 (-0.03, 0.08)	0.04 (0.00, 0.08)	0.00 (-0.27, 0.27)
	20:0	-0.01 (-0.05, 0.04)	0.08 (-0.15, 0.30)	0.01 (-0.04, 0.07)	-0.02 (-0.05, 0.02)	0.00 (-0.27, 0.27)
	21:0	0.07 (0.01, 0.12)	0.03 (-0.22, 0.28)	0.07 (0.01, 0.13)	0.01 (-0.03, 0.05)	0.30 (0.00, 0.59)
	22:0	0.00 (-0.04, 0.04)	-0.04 (-0.23, 0.14)	0.01 (-0.04, 0.05)	0.00 (-0.03, 0.04)	-0.13 (-0.35, 0.10)
	23:0	0.01 (-0.03, 0.06)	0.11 (-0.11, 0.32)	0.03 (-0.02, 0.09)	-0.06 (-0.09, -0.02)	0.08 (-0.19, 0.35)
	24:0	-0.01 (-0.06, 0.04)	0.09 (-0.13, 0.32)	-0.04 (-0.09, 0.02)	-0.18 (-0.21, -0.15)	-0.26 (-0.54, 0.02)

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	Total SFA	-0.05 (-0.09, -0.01)	0.08 (-0.12, 0.29)	-0.03 (-0.08, 0.02)	-0.07 (-0.1, -0.03)	-0.59 (-0.83, -0.36)
Monounsaturated Fats (mol%)	14:1n-5	-0.02 (-0.07, 0.04)	-0.21 (-0.47, 0.05)	0.07 (0.01, 0.13)	0.03 (0.00, 0.07)	-0.04 (-0.35, 0.27)
	16:1n-7	0.01 (-0.03, 0.06)	-0.30 (-0.52, -0.08)	0.01 (-0.05, 0.06)	0.03 (0.00, 0.07)	-0.10 (-0.36, 0.17)
	17:1n-7	-0.02 (-0.07, 0.03)	-0.03 (-0.27, 0.21)	0.00 (-0.06, 0.06)	0.02 (-0.02, 0.06)	0.02 (-0.26, 0.30)
	18:1n-7	0.08 (0.03, 0.13)	-0.16 (-0.38, 0.07)	0.00 (-0.06, 0.05)	-0.05 (-0.09, -0.01)	0.20 (-0.09, 0.48)
	18:1n-9	0.06 (0.02, 0.11)	-0.03 (-0.24, 0.18)	0.06 (0.01, 0.11)	0.06 (0.02, 0.09)	0.69 (0.46, 0.92)
	20:1n-9	0.06 (0.01, 0.10)	0.03 (-0.18, 0.24)	-0.02 (-0.07, 0.03)	-0.12 (-0.16, -0.09)	0.06 (-0.2, 0.32)
	22:1n-9	0.05 (0.00, 0.10)	0.05 (-0.18, 0.28)	-0.02 (-0.08, 0.03)	-0.20 (-0.23, -0.17)	-0.07 (-0.35, 0.2)
	24:1n-9	0.02 (-0.03, 0.07)	0.01 (-0.22, 0.24)	-0.05 (-0.11, 0.00)	-0.22 (-0.25, -0.19)	-0.21 (-0.49, 0.06)
	Total MUFA	0.06 (0.02, 0.11)	-0.04 (-0.25, 0.17)	0.06 (0.01, 0.11)	0.04 (0.00, 0.08)	0.61 (0.37, 0.85)
n-3 PUFA (mol%)	18:3n-3 (ALA)	-0.01 (-0.05, 0.03)	0.05 (-0.15, 0.26)	0.00 (-0.05, 0.05)	0.07 (0.03, 0.10)	0.21 (-0.04, 0.46)
	20:3n-3	0.01 (-0.04, 0.06)	0.08 (-0.14, 0.30)	-0.06 (-0.11, -0.01)	-0.17 (-0.2, -0.14)	-0.20 (-0.46, 0.07)
	20:5n-3 (EPA)	0.01 (-0.04, 0.06)	0.04 (-0.19, 0.28)	0.09 (0.03, 0.14)	0.01 (-0.02, 0.05)	0.26 (-0.02, 0.54)
	22:5n-3 (DPA)	0.03 (-0.01, 0.07)	0.00 (-0.21, 0.21)	0.01 (-0.04, 0.07)	-0.05 (-0.09, -0.02)	0.08 (-0.17, 0.33)
	22:6n-3 (DHA)	0.07 (0.02, 0.12)	-0.04 (-0.28, 0.19)	0.08 (0.02, 0.14)	-0.10 (-0.13, -0.06)	0.00 (-0.28, 0.28)
	Total n-3 PUFA	0.01 (-0.03, 0.06)	-0.02 (-0.23, 0.18)	0.04 (-0.01, 0.09)	0.03 (-0.01, 0.07)	0.22 (-0.02, 0.46)
n-6 PUF A	18:2n-6 (LA)	-0.01 (-0.06, 0.03)	-0.02 (-0.25, 0.20)	-0.03 (-0.09, 0.02)	0.06 (0.03, 0.10)	0.17 (-0.09, 0.43)

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	18:3n-6 (GLA)	0.02 (-0.03, 0.07)	0.07 (-0.18, 0.33)	0.06 (-0.00, 0.12)	0.03 (0.00, 0.07)	0.31 (0.01, 0.61)
	20:2n-6	0.01 (-0.03, 0.05)	-0.08 (-0.26, 0.1)	0.00 (-0.04, 0.05)	0.00 (-0.04, 0.03)	-0.13 (-0.34, 0.09)
	20:3n-6 (DGLA)	0.05 (0.00, 0.10)	0.03 (-0.21, 0.27)	0.03 (-0.03, 0.09)	-0.14 (-0.17, -0.11)	-0.01 (-0.31, 0.28)
	20:4n-6 (ARA)	0.08 (0.03, 0.13)	-0.04 (-0.28, 0.2)	0.04 (-0.02, 0.09)	-0.13 (-0.17, -0.10)	0.01 (-0.27, 0.30)
	22:4n-6	0.05 (0.00, 0.10)	-0.03 (-0.26, 0.19)	0.02 (-0.04, 0.07)	-0.06 (-0.1, -0.02)	-0.19 (-0.46, 0.08)
	22:5n-6	0.04 (0.00, 0.09)	-0.04 (-0.26, 0.18)	-0.01 (-0.07, 0.04)	-0.17 (-0.21, -0.14)	-0.32 (-0.58, -0.06)
	Total n-6 PUFA	0.00 (-0.05, 0.04)	-0.04 (-0.27, 0.18)	-0.03 (-0.08, 0.03)	0.04 (0.01, 0.08)	0.10 (-0.16, 0.36)
Ratios	n-6:n-3 PUFA	-0.01 (-0.05, 0.02)	0.09 (-0.07, 0.25)	-0.04 (-0.08, 0.00)	0.00 (-0.03, 0.03)	-0.15 (-0.34, 0.05)
	ARA:DHA	-0.02 (-0.08, 0.04)	-0.06 (-0.35, 0.23)	-0.04 (-0.12, 0.03)	0.05 (0.02, 0.07)	0.09 (-0.26, 0.44)

		Maternal Characteristics (95% CI)			
		Maternal Pre-pregnancy BMI (Underweight vs normal)	Overweight vs normal	Obese vs normal	Delivery method (Caesarean vs vaginal)
	Total Fat	-0.37 (-0.81, 0.06)	0.44 (0.19, 0.68)	0.47 (0.16, 0.78)	0.00 (-0.22, 0.23)
Saturated fats (mol%)	10:0	0.56 (-0.01, 1.13)	0.50 (0.22, 0.79)	-0.01 (-0.39, 0.36)	0.06 (-0.20, 0.33)
	12:0	-0.35 (-0.81, 0.11)	0.38 (0.14, 0.66)	0.05 (-0.27, 0.38)	-0.20 (-0.44, 0.04)

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	14:0	-0.14 (-0.63, 0.35)	0.30 (0.02, 0.58)	0.33 (-0.02, 0.68)	-0.20 (-0.44, 0.05)
	16:0	0.09 (-0.35, 0.53)	0.33 (0.08, 0.58)	0.79 (0.47, 1.10)	0.09 (-0.14, 0.32)
	18:0	0.65 (0.16, 1.14)	-0.21 (-0.49, 0.06)	0.21 (-0.14, 0.56)	-0.29 (-0.54, -0.05)
	20:0	0.28 (-0.20, 0.77)	-0.16 (-0.44, 0.12)	-0.02 (-0.37, 0.33)	-0.17 (-0.41, 0.08)
	21:0	-0.03 (-0.57, 0.50)	-0.11 (-0.42, 0.20)	0.68 (0.30, 1.07)	0.11 (-0.17, 0.39)
	22:0	-0.09 (-0.51, 0.34)	-0.15 (-0.38, 0.09)	-0.20 (-0.50, 0.10)	-0.12 (-0.33, 0.08)
	23:0	0.33 (-0.17, 0.82)	0.03 (-0.25, 0.31)	0.54 (0.18, 0.89)	-0.13 (-0.37, 0.12)
	24:0	-0.19 (-0.69, 0.32)	-0.22 (-0.51, 0.07)	0.04 (-0.32, 0.41)	-0.11 (-0.37, 0.14)
	Total SFA	-0.02 (-0.44, 0.40)	0.41 (0.18, 0.65)	0.58 (0.29, 0.88)	-0.19 (-0.40, 0.03)
Monounsaturated Fats (mol%)	14:1n-5	0.08 (-0.44, 0.60)	-0.07 (-0.37, 0.24)	0.87 (0.50, 1.25)	-0.16 (-0.43, 0.11)
	16:1n-7	0.52 (0.05, 0.99)	-0.06 (-0.32, 0.21)	0.45 (0.12, 0.79)	0.07 (-0.17, 0.32)
	17:1n-7	0.34 (-0.17, 0.84)	-0.09 (-0.38, 0.21)	0.54 (0.16, 0.92)	-0.22 (-0.47, 0.04)
	18:1n-7	0.34 (-0.17, 0.84)	-0.20 (-0.48, 0.09)	-0.01 (-0.37, 0.35)	0.32 (0.07, 0.57)
	18:1n-9	0.25 (-0.18, 0.67)	-0.52 (-0.76, -0.28)	-0.25 (-0.56, 0.05)	0.13 (-0.09, 0.36)
	20:1n-9	-0.16 (-0.62, 0.31)	-0.43 (-0.69, -0.16)	-0.17 (-0.50, 0.17)	0.19 (-0.05, 0.42)
	22:1n-9	-0.13 (-0.63, 0.37)	-0.19 (-0.48, 0.09)	-0.08 (-0.43, 0.28)	0.10 (-0.15, 0.35)
	24:1n-9	-0.03 (-0.53, 0.47)	-0.19 (-0.48, 0.09)	0.10 (-0.26, 0.45)	0.14 (-0.11, 0.39)

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	Total MUFA	0.25 (-0.18, 0.67)	-0.58 (-0.82, -0.34)	-0.15 (-0.45, 0.15)	0.12 (-0.11, 0.34)
n-3 PUFA (mol%)	18:3n-3 (ALA)	-0.24 (-0.69, 0.22)	0.04 (-0.22, 0.29)	-0.38 (-0.7, -0.05)	0.05 (-0.18, 0.27)
	20:3n-3	-0.23 (-0.73, 0.26)	-0.05 (-0.33, 0.23)	-0.17 (-0.52, 0.19)	0.12 (-0.13, 0.36)
	20:5n-3 (EPA)	-0.13 (-0.64, 0.38)	-0.03 (-0.32, 0.27)	-0.25 (-0.61, 0.12)	-0.18 (-0.44, 0.07)
	22:5n-3 (DPA)	0.02 (-0.45, 0.48)	0.01 (-0.25, 0.28)	-0.17 (-0.50, 0.16)	0.04 (-0.19, 0.27)
	22:6n-3 (DHA)	-0.25 (-0.75, 0.25)	-0.17 (-0.45, 0.12)	-0.63 (-0.98, -0.27)	0.06 (-0.19, 0.32)
	Total n-3 PUFA	-0.37 (-0.81, 0.07)	0.00 (-0.25, 0.25)	-0.47 (-0.78, -0.15)	0.09 (-0.14, 0.31)
n-6 PUFA (mol%)	18:2n-6 (LA)	-0.33 (-0.79, 0.13)	0.06 (-0.21, 0.32)	-0.66 (-0.99, -0.33)	0.14 (-0.09, 0.38)
	18:3n-6 (GLA)	0.38 (-0.18, 0.94)	0.07 (-0.25, 0.39)	0.22 (-0.18, 0.62)	-0.13 (-0.41, 0.15)
	20:2n-6	-0.14 (-0.55, 0.27)	-0.10 (-0.32, 0.13)	-0.15 (-0.44, 0.14)	-0.10 (-0.30, 0.10)
	20:3n-6 (DGLA)	0.17 (-0.37, 0.70)	0.01 (-0.30, 0.32)	0.52 (0.14, 0.91)	0.00 (-0.26, 0.27)
	20:4n-6 (ARA)	0.12 (-0.40, 0.64)	-0.07 (-0.37, 0.22)	-0.09 (-0.46, 0.28)	0.35 (0.09, 0.61)
	22:4n-6	0.03 (-0.47, 0.53)	-0.12 (-0.41, 0.16)	-0.17 (-0.53, 0.19)	0.11 (-0.14, 0.36)
	22:5n-6	-0.10 (-0.57, 0.38)	-0.06 (-0.33, 0.21)	-0.37 (-0.71, -0.03)	0.13 (-0.10, 0.37)
Total n-6 PUFA	-0.34 (-0.80, 0.11)	0.01 (-0.25, 0.27)	-0.67 (-1.00, -0.34)	0.11 (-0.12, 0.35)	
Ratios	n-6:n-3 PUFA	0.04 (-0.32, 0.41)	-0.06 (-0.26, 0.14)	-0.16 (-0.42, 0.1)	-0.02 (-0.20, 0.16)
	ARA:DHA	0.39 (-0.20, 0.99)	0.05 (-0.29, 0.40)	0.74 (0.31, 1.16)	0.09 (-0.23, 0.40)

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Sociodemographic Characteristics (95% CI)												
	Maternal Age (/5 years)	Parity (>1 vs 1)	Maternal Education (Post- secondary degree vs none)	Maternal Ethnicity (vs European) East or Southeast	South or West Asian	African or Caribbean	Other vs European	Income (below poverty line vs not)	English spoken at home (yes vs mixed)	English vs no English	Marital status (married vs single)	
Total Fat	0.04 (-0.07, 0.15)	0.31 (0.09 , 0.53)	-0.05 (-0.36, 0.26)	-0.06 (-0.35, 0.23)	0.19 (-0.13, 0.52)	0.02 (-0.28, 0.33)	-0.02 (-0.74, 0.69)	0.48 (0.21 , 0.74)	-0.04 (-0.28, 0.20)	-0.11 (-0.46, 0.25)	-0.07 (-0.56, 0.41)	
Saturated fats (mol%)	10:0	0.09 (-0.04, 0.22)	0.09 (-0.18, 0.36)	-0.19 (-0.56, 0.18)	-0.11 (-0.44, 0.22)	-0.18 (-0.55, 0.19)	0.23 (-0.13, 1.53)	0.71 (-0.11, 1.53)	-0.15 (-0.48, 0.19)	-0.22 (-0.53, 0.09)	-0.17 (-0.65, 0.32)	0.09 (-0.49, 0.67)
	12:0	0.01 (-0.10, 0.13)	0.03 (-0.21, 0.27)	-0.11 (-0.44, 0.21)	-0.19 (-0.48, 0.09)	0.45 (0.13 , 0.77)	0.55 (0.25 , 0.85)	1.16 (0.49 , 1.84)	0.36 (0.06 , 0.65)	-0.03 (-0.29, 0.23)	-0.26 (-0.65, 0.13)	-0.82 (-1.32 , -0.31)
	14:0	-0.12 (-0.24 , 0.00)	0.26 (0.02 , 0.51)	-0.13 (-0.47, 0.21)	-0.26 (-0.54, 0.02)	0.84 (0.53 , 1.16)	0.78 (0.48 , 1.07)	1.39 (0.74 , 2.04)	0.62 (0.32 , 0.92)	0.02 (-0.26, 0.29)	-0.34 (-0.74, 0.07)	-0.87 (-1.39 , -0.35)
	16:0	0.00 (-0.11, 0.12)	0.08 (-0.15, 0.31)	-0.46 (-0.77 , -0.16)	0.01 (-0.29, 0.30)	0.52 (0.19 , 0.85)	0.10 (-0.21, 0.41)	0.22 (-0.48, 0.91)	0.11 (-0.18, 0.39)	0.12 (-0.14, 0.37)	-0.34 (-0.72, 0.05)	-0.16 (-0.67, 0.35)
	18:0	-0.08 (-0.20, 0.04)	0.10 (-0.15, 0.35)	-0.41 (-0.74 , -0.08)	0.04 (-0.28, 0.35)	-0.37 (-0.72 , -0.01)	0.02 (-0.31, 0.35)	-0.08 (-0.83, 0.66)	-0.25 (-0.56, 0.05)	0.09 (-0.20, 0.38)	-0.17 (-0.60, 0.27)	0.80 (0.24 , 1.36)
	20:0	-0.01 (-0.13, 0.11)	-0.27 (-0.52 , -0.03)	-0.08 (-0.41, 0.25)	-0.05 (-0.37, 0.27)	-0.07 (-0.43, 0.28)	-0.04 (-0.37, 0.29)	-0.32 (-1.06, 0.43)	-0.35 (-0.64 , -0.05)	-0.12 (-0.40, 0.15)	-0.04 (-0.45, 0.37)	0.35 (-0.19, 0.89)
	21:0	0.1 (-0.04, 0.23)	0.18 (-0.10, 0.46)	0.14 (-0.23, 0.52)	-0.21 (-0.57, 0.15)	-0.24 (-0.64, 0.17)	-0.30 (-0.67, 0.08)	0.43 (-0.37, 1.23)	-0.09 (-0.44, 0.26)	0.15 (-0.17, 0.47)	0.08 (- 0.40, 0.55)	0.32 (-0.30, 0.93)

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Monounsaturated Fats (mol%)	22:0	0.02 (-0.08, 0.12)	-0.20 (-0.40, 0.01)	0.06 (-0.22, 0.34)	0.11 (-0.16, 0.37)	0.05 (-0.25, 0.36)	0.05 (-0.23, 0.34)	0.01 (-0.69, 0.71)	-0.19 (-0.45, 0.07)	-0.14 (-0.38, 0.11)	-0.10 (-0.47, 0.27)	0.06 (-0.43, 0.56)
	23:0	-0.06 (-0.18, 0.06)	0.14 (-0.11, 0.38)	0.15 (-0.18, 0.49)	-0.65 (-0.96, -0.35)	-0.08 (-0.43, 0.26)	-0.31 (-0.63, 0.01)	-0.19 (-0.92, 0.54)	-0.05 (-0.35, 0.26)	0.26 (-0.01, 0.52)	0.32 (-0.07, 0.72)	-0.02 (-0.55, 0.51)
	24:0	-0.11 (-0.23, 0.01)	-0.21 (-0.47, 0.04)	0.05 (-0.29, 0.40)	-0.19 (-0.52, 0.14)	0.21 (-0.15, 0.58)	0.15 (-0.19, 0.49)	0.46 (-0.29, 1.2)	-0.11 (-0.42, 0.21)	-0.09 (-0.38, 0.20)	-0.18 (-0.61, 0.26)	-0.25 (-0.82, 0.32)
	Total SFA	-0.05 (-0.16, 0.05)	0.18 (-0.05, 0.40)	-0.38 (-0.68, -0.08)	-0.22 (-0.47, 0.04)	0.70 (0.41, 0.99)	0.60 (0.32, 0.87)	1.21 (0.60, 1.82)	0.38 (0.11, 0.65)	0.05 (-0.18, 0.29)	-0.45 (-0.81, -0.09)	-0.63 (-1.10, -0.16)
	14:1n-5	0.03 (-0.11, 0.17)	-0.08 (-0.37, 0.20)	0.17 (-0.21, 0.55)	-1.00 (-1.28, -0.72)	-0.20 (-0.52, 0.12)	-1.02 (-1.31, -0.72)	0.23 (-0.42, 0.88)	-0.42 (-0.77, -0.08)	0.18 (-0.12, 0.48)	-0.49 (-0.95, -0.04)	0.09 (-0.52, 0.70)
	16:1n-7	-0.02 (-0.14, 0.10)	0.02 (-0.23, 0.26)	-0.20 (-0.52, 0.12)	0.07 (-0.21, 0.35)	-0.45 (-0.77, -0.14)	-0.70 (-1.00, -0.41)	-0.07 (-0.73, 0.60)	-0.24 (-0.53, 0.06)	0.09 (-0.18, 0.37)	-0.38 (-0.79, 0.02)	0.28 (-0.26, 0.82)
	17:1n-7	0.14 (0.02, 0.27)	0.06 (-0.20, 0.31)	0.12 (-0.23, 0.47)	-0.23 (-0.54, 0.08)	-0.52 (-0.87, -0.17)	-0.73 (-1.06, -0.40)	-0.60 (-1.32, 0.12)	-0.58 (-0.89, -0.26)	0.20 (-0.09, 0.48)	-0.43 (-0.85, 0.00)	0.71 (0.16, 1.26)
	18:1n-7	-0.02 (-0.15, 0.1)	-0.14 (-0.39, 0.12)	-0.04 (-0.39, 0.30)	0.72 (0.44, 0.99)	-0.58 (-0.89, -0.27)	-0.21 (-0.5, 0.08)	0.21 (-0.45, 0.87)	-0.28 (-0.60, 0.03)	-0.11 (-0.38, 0.17)	0.19 (-0.22, 0.59)	0.64 (0.1, 1.18)
	18:1n-9	0.07 (-0.03, 0.18)	-0.36 (-0.58, -0.14)	0.31 (0.01, 0.61)	-0.16 (-0.42, 0.09)	-0.91 (-1.20, -0.62)	-0.83 (-1.10, -0.56)	-1.15 (-1.77, -0.53)	-0.61 (-0.87, -0.34)	0.00 (-0.24, 0.24)	0.34 (-0.02, 0.70)	0.65 (0.17, 1.12)
	20:1n-9	-0.02 (-0.14, 0.09)	-0.36 (-0.59, -0.13)	0.23 (-0.09, 0.55)	0.32 (0.02, 0.63)	-0.23 (-0.58, 0.11)	-0.08 (-0.40, 0.24)	-0.25 (-0.98, 0.47)	-0.46 (-0.75, -0.18)	-0.23 (-0.49, 0.04)	0.10 (-0.29, 0.50)	0.34 (-0.19, 0.86)
22:1n-9	-0.05 (-0.17, 0.07)	-0.24 (-0.49, 0.01)	-0.03 (-0.37, 0.31)	0.17 (-0.15, 0.50)	0.18 (-0.19, 0.54)	0.13 (-0.21, 0.47)	0.45 (-0.29, 1.20)	-0.27 (-0.57, 0.04)	-0.16 (-0.43, 0.11)	-0.08 (- 0.48, 0.33)	-0.13 (-0.66, 0.41)	

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	24:1n-9	-0.07 (-0.19, 0.06)	-0.10 (-0.35, 0.16)	0.06 (-0.28, 0.40)	0.15 (-0.17, 0.48)	0.22 (-0.14, 0.58)	0.15 (-0.19, 0.49)	0.53 (-0.22, 1.27)	-0.12 (-0.44, 0.19)	-0.03 (-0.31, 0.25)	-0.13 (-0.56, 0.29)	-0.29 (-0.85, 0.26)
	Total MUFA	0.07 (-0.04, 0.18)	-0.30 (-0.53, -0.08)	0.20 (-0.10, 0.51)	-0.13 (-0.38, 0.13)	-0.99 (-1.27, -0.70)	-0.86 (-1.13, -0.60)	-1.00 (-1.62, -0.39)	-0.69 (-0.95, -0.42)	-0.03 (-0.27, 0.21)	0.23 (-0.14, 0.59)	0.69 (0.21, 1.16)
n-3 PUFA (mol%)	18:3n-3 (ALA)	0.02 (-0.09, 0.13)	0.14 (-0.09, 0.37)	0.41 (0.11, 0.71)	0.13 (-0.16, 0.42)	0.15 (-0.18, 0.48)	-0.01 (-0.31, 0.30)	-0.41 (-1.12, 0.29)	0.10 (-0.17, 0.38)	-0.02 (-0.28, 0.23)	0.40 (0.02, 0.79)	0.25 (-0.25, 0.76)
	20:3n-3	-0.12 (-0.24, 0.00)	0.11 (-0.14, 0.36)	0.07 (-0.26, 0.40)	0.45 (0.14, 0.76)	0.41 (0.07, 0.76)	0.43 (0.11, 0.75)	0.68 (-0.03, 1.40)	0.18 (-0.13, 0.48)	-0.06 (-0.34, 0.23)	0.07 (-0.35, 0.50)	0.10 (-0.46, 0.67)
	20:5n-3 (EPA)	0.02 (-0.11, 0.14)	-0.14 (-0.40, 0.11)	0.12 (-0.23, 0.46)	-0.29 (-0.62, 0.04)	-0.12 (-0.48, 0.25)	-0.16 (-0.5, 0.18)	-0.12 (-0.87, 0.62)	-0.19 (-0.51, 0.13)	0.21 (-0.09, 0.50)	0.30 (-0.14, 0.75)	-0.09 (-0.68, 0.51)
	22:5n-3 (DPA)	0.03 (-0.08, 0.14)	0.01 (-0.22, 0.24)	0.08 (-0.23, 0.39)	0.19 (-0.11, 0.49)	0.18 (-0.16, 0.51)	0.09 (-0.22, 0.40)	0.79 (0.06, 1.51)	0.01 (-0.27, 0.30)	0.15 (-0.11, 0.42)	0.22 (-0.18, 0.61)	-0.26 (-0.79, 0.28)
	22:6n-3 (DHA)	0.11 (-0.02, 0.23)	-0.19 (-0.44, 0.06)	-0.20 (-0.54, 0.15)	0.45 (0.13, 0.78)	0.04 (-0.32, 0.40)	0.41 (0.07, 0.75)	0.16 (-0.59, 0.91)	-0.10 (-0.41, 0.22)	0.32 (0.03, 0.61)	0.41 (-0.03, 0.84)	-0.39 (-0.98, 0.20)
	Total n-3 PUFA	0.03 (-0.08, 0.14)	0.05 (-0.18, 0.27)	0.28 (-0.02, 0.58)	0.17 (-0.11, 0.46)	0.19 (-0.13, 0.51)	0.11 (-0.19, 0.41)	-0.46 (-1.16, 0.24)	0.07 (-0.21, 0.34)	0.07 (-0.19, 0.32)	0.29 (-0.09, 0.67)	0.20 (-0.31, 0.71)
	n-6 PUFA (mol%)	18:2n-6 (LA)	-0.01 (-0.13, 0.11)	0.16 (-0.08, 0.39)	0.24 (-0.08, 0.56)	0.40 (0.10, 0.70)	0.05 (-0.29, 0.39)	0.13 (-0.18, 0.44)	-0.71 (-1.41, 0.00)	0.22 (-0.07, 0.52)	-0.08 (-0.35, 0.20)	0.36 (-0.06, 0.77)
18:3n-6 (GLA)		0.05 (-0.09, 0.19)	0.03 (-0.25, 0.31)	0.10 (-0.28, 0.47)	-0.84 (-1.17, -0.50)	-0.59 (-0.96, -0.21)	-0.55 (-0.90, -0.20)	-1.25 (-2.00, -0.51)	-0.31 (-0.66, 0.04)	0.08 (-0.23, 0.39)	0.45 (-0.02, 0.92)	0.20 (-0.40, 0.81)
20:2n-6		0.03 (-0.07, 0.12)	-0.05 (-0.25, 0.15)	0.06 (-0.21, 0.33)	0.26 (0.00, 0.51)	0.03 (-0.27, 0.32)	0.05 (-0.22, 0.32)	0.05 (-0.63, 0.74)	-0.05 (-0.30, 0.20)	-0.11 (-0.35, 0.12)	-0.10 (-0.46, 0.26)	0.05 (-0.44, 0.54)

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	20:3n-6 (DGLA)	-0.04 (-0.17, 0.1)	0.15 (-0.12, 0.42)	0.03 (-0.34, 0.39)	-0.60 (-0.94, -0.26)	-0.09 (-0.47, 0.29)	-0.20 (-0.55, 0.15)	-0.28 (-1.05, 0.48)	-0.05 (-0.38, 0.29)	0.11 (-0.19, 0.42)	0.09 (-0.37, 0.55)	-0.18 (-0.78, 0.41)
	20:4n-6 (ARA)	-0.08 (-0.21, 0.04)	0.21 (-0.05, 0.48)	-0.37 (-0.72, -0.02)	-0.02 (-0.35, 0.30)	-0.09 (-0.45, 0.27)	0.64 (0.31, 0.98)	1.06 (0.31, 1.81)	0.07 (-0.25, 0.39)	0.11 (-0.18, 0.40)	0.31 (-0.12, 0.74)	-0.38 (-0.94, 0.19)
	22:4n-6	0.05 (-0.07, 0.17)	0.45 (0.20, 0.69)	-0.32 (-0.65, 0.01)	0.54 (0.23, 0.85)	0.10 (-0.25, 0.45)	0.29 (-0.04, 0.62)	0.36 (-0.37, 1.10)	0.40 (0.09, 0.70)	-0.09 (-0.39, 0.20)	-0.25 (-0.69, 0.20)	0.09 (-0.49, 0.68)
	22:5n-6	-0.06 (-0.18, 0.05)	0.08 (-0.16, 0.32)	-0.34 (-0.66, -0.01)	0.46 (0.16, 0.76)	0.34 (0.00, 0.68)	0.33 (0.02, 0.65)	0.69 (-0.03, 1.41)	0.20 (-0.09, 0.50)	0.00 (-0.26, 0.26)	0.19 (-0.20, 0.59)	-0.45 (-0.97, 0.07)
	Total n-6 PUFA	0.00 (-0.12, 0.12)	0.16 (-0.08, 0.39)	0.23 (-0.09, 0.55)	0.48 (0.18, 0.78)	0.06 (-0.28, 0.40)	0.17 (-0.14, 0.49)	-0.61 (-1.32, 0.09)	0.20 (-0.09, 0.50)	-0.12 (-0.39, 0.15)	0.32 (-0.09, 0.72)	0.13 (-0.41, 0.68)
	Ratios	n-6:n-3 PUFA	-0.01 (-0.1, 0.08)	0.02 (-0.16, 0.21)	0.03 (-0.21, 0.28)	0.16 (-0.07, 0.39)	-0.08 (-0.34, 0.18)	0.11 (-0.13, 0.36)	0.20 (-0.39, 0.79)	0.03 (-0.20, 0.25)	-0.11 (-0.32, 0.11)	0.07 (-0.25, 0.39)
ARA:DHA		-0.23 (-0.38, -0.08)	0.33 (0.03, 0.63)	-0.03 (-0.45, 0.39)	-0.79 (-1.18, -0.39)	-0.31 (-0.75, 0.12)	-0.34 (-0.75, 0.06)	0.18 (-0.65, 1.01)	0.13 (-0.26, 0.52)	-0.16 (-0.50, 0.18)	-0.42 (-0.93, 0.09)	0.13 (-0.56, 0.81)

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		Environmental Characteristics (95% CI)			
		Smoking (yes vs no)	Season of delivery (fall vs spring)	Summer vs spring	Winter vs spring
Total Fat		0.40 (-0.12, 0.91)	-0.31 (-0.62, 0.00)	0.00 (-0.32, 0.31)	-0.13 (-0.42, 0.15)
Saturated fats (mol%)	10:0	1.46 (0.84, 2.08)	-0.50 (-0.87, -0.13)	0.27 (-0.07, 0.61)	-0.01 (-0.33, 0.31)
	12:0	0.65 (0.11, 1.18)	-0.54 (-0.87, -0.22)	-0.09 (-0.41, 0.24)	-0.11 (-0.41, 0.19)
	14:0	0.49 (-0.06, 1.05)	0.11 (-0.24, 0.45)	0.18 (-0.17, 0.53)	0.27 (-0.06, 0.59)
	16:0	0.44 (-0.09, 0.96)	0.13 (-0.20, 0.45)	0.26 (-0.06, 0.59)	0.16 (-0.14, 0.45)
	18:0	0.37 (-0.19, 0.93)	0.63 (0.28, 0.97)	0.20 (-0.15, 0.54)	0.12 (-0.20, 0.43)
	20:0	-0.11 (-0.67, 0.44)	0.55 (0.21, 0.88)	0.06 (-0.28, 0.4)	0.26 (-0.06, 0.57)
	21:0	0.49 (-0.12, 1.09)	-0.14 (-0.53, 0.25)	0.09 (-0.3, 0.49)	-0.08 (-0.44, 0.29)
	22:0	-0.12 (-0.63, 0.38)	0.25 (-0.04, 0.54)	-0.23 (-0.52, 0.06)	-0.04 (-0.30, 0.23)
	23:0	-0.27 (-0.83, 0.29)	-0.26 (-0.6, 0.08)	0.05 (-0.29, 0.39)	-0.16 (-0.47, 0.16)
	24:0	0.18 (-0.39, 0.74)	0.13 (-0.23, 0.48)	-0.13 (-0.49, 0.22)	-0.06 (-0.39, 0.27)
	Total SFA	0.80 (0.31, 1.30)	-0.04 (-0.35, 0.27)	0.20 (-0.11, 0.50)	0.15 (-0.13, 0.44)
Monounsaturated Fats	14:1n-5	0.51 (-0.10, 1.12)	-0.45 (-0.83, -0.07)	0.25 (-0.13, 0.63)	0.02 (-0.34, 0.37)
	16:1n-7	0.15 (-0.40, 0.69)	-0.11 (-0.44, 0.22)	0.26 (-0.07, 0.59)	-0.17 (-0.47, 0.13)

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	17:1n-7	0.20 (-0.37, 0.76)	-0.06 (-0.40, 0.29)	0.29 (-0.06, 0.64)	-0.10 (-0.43, 0.24)
	18:1n-7	-0.07 (-0.65, 0.50)	0.10 (-0.25, 0.44)	0.01 (-0.34, 0.35)	-0.36 (-0.68, -0.04)
	18:1n-9	-0.46 (-0.97, 0.05)	0.01 (-0.30, 0.33)	-0.06 (-0.38, 0.25)	-0.18 (-0.47, 0.11)
	20:1n-9	-0.20 (-0.74, 0.35)	0.25 (-0.08, 0.58)	-0.21 (-0.55, 0.12)	-0.23 (-0.53, 0.08)
	22:1n-9	0.17 (-0.39, 0.73)	0.09 (-0.25, 0.44)	-0.28 (-0.62, 0.07)	-0.26 (-0.59, 0.06)
	24:1n-9	0.15 (-0.41, 0.71)	0.15 (-0.20, 0.49)	-0.16 (-0.51, 0.18)	-0.18 (-0.50, 0.14)
	Total MUFA	-0.32 (-0.83, 0.20)	0.01 (-0.30, 0.33)	-0.10 (-0.41, 0.22)	-0.25 (-0.54, 0.04)
n-3 PUFA (mol%)	18:3n-3 (ALA)	-0.55 (-1.07, -0.03)	-0.20 (-0.52, 0.11)	-0.15 (-0.46, 0.17)	0.08 (-0.21, 0.37)
	20:3n-3	0.07 (-0.48, 0.62)	0.09 (-0.25, 0.43)	-0.28 (-0.62, 0.06)	-0.19 (-0.51, 0.12)
	20:5n-3 (EPA)	-0.31 (-0.87, 0.26)	-0.02 (-0.37, 0.33)	0.17 (-0.18, 0.51)	0.26 (-0.06, 0.58)
	22:5n-3 (DPA)	-0.07 (-0.60, 0.47)	-0.21 (-0.53, 0.10)	0.23 (-0.09, 0.54)	0.06 (-0.23, 0.35)
	22:6n-3 (DHA)	-0.25 (-0.83, 0.32)	0.06 (-0.30, 0.42)	0.11 (-0.25, 0.47)	0.14 (-0.19, 0.47)
	Total n-3 PUFA	-0.52 (-1.03, 0.00)	-0.12 (-0.43, 0.19)	-0.03 (-0.34, 0.28)	0.01 (-0.14, 0.43)
n-6 PUFA (mol%)	18:2n-6 (LA)	-0.77 (-1.31, -0.24)	-0.02 (-0.35, 0.31)	-0.29 (-0.62, 0.04)	0.06 (-0.25, 0.36)
	18:3n-6 (GLA)	-0.53 (-1.14, 0.07)	-0.36 (-0.75, 0.03)	-0.02 (-0.41, 0.36)	-0.07 (-0.43, 0.29)
	20:2n-6	-0.05 (-0.54, 0.44)	0.25 (-0.03, 0.53)	-0.05 (-0.34, 0.23)	-0.03 (-0.28, 0.23)
	20:3n-6 (DGLA)	-0.15 (-0.74, 0.44)	-0.22 (-0.59, 0.16)	-0.18 (-0.55, 0.20)	-0.21 (-0.56, 0.13)

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	20:4n-6 (ARA)	0.59 (0.01, 1.17)	-0.10 (-0.46, 0.26)	0.14 (-0.22, 0.51)	0.07 (-0.26, 0.41)
	22:4n-6	0.23 (-0.33, 0.80)	0.53 (0.19, 0.87)	0.02 (-0.32, 0.35)	-0.12 (-0.43, 0.19)
	22:5n-6	0.26 (-0.29, 0.81)	0.01 (-0.32, 0.35)	-0.01 (-0.34, 0.33)	0.09 (-0.22, 0.40)
	Total n-6 PUFA	-0.74 (-1.27, -0.20)	0.08 (-0.25, 0.40)	-0.31 (-0.63, 0.02)	0.02 (-0.28, 0.32)
Ratios	n-6:n-3 PUFA	-0.07 (-0.50, 0.36)	0.13 (-0.12, 0.38)	-0.14 (-0.39, 0.12)	0.00 (-0.23, 0.23)
	ARA:DHA	0.86 (0.22, 1.51)	0.01 (-0.43, 0.45)	-0.05 (-0.49, 0.39)	-0.02 (-0.43, 0.39)

¹Unadjusted associations (β estimates and 95% CI) of infant, maternal, sociodemographic, or environmental factors with mother's milk fatty acid composition standard deviation scores. A negative sign indicates a negative association for continuous variables (gestational age, lactation stage, and maternal age) or lower than the listed reference value for categorical variables (all others).

Sample size is 100 mothers, 472 human milk samples. Associations were analyzed using PROC MIXED accounting for repeated measures using an autoregressive correlation structure. Estimates in **bold** type represent associations that remain significant after adjusting for multiple testing ($p < 0.007$) while those in red are associated with p -values < 0.05 .

Alpha linolenic acid (ALA), Arachidonic acid (ARA), Docosahexaenoic acid (DHA), Docosapentaenoic acid (DPA), Eicosapentaenoic acid (EPA), Female (F), Dihomo gamma linolenic acid (DGLA), Gamma linolenic acid (GLA), Linoleic acid (LA), Monounsaturated fatty acid (MUFA), Polyunsaturated fatty acid (PUFA), Saturated Fatty Acids (SFA), Standard deviation scores (SDS).

Supplementary Material

Supplementary TABLE 2 - Detailed Results: Determinants of fat and fatty acid content of mother’s milk – adjusted Beta estimates (SDS) and 95% CI¹

		Infant Characteristics (95% CI)			
		Gestational Age at Birth (weeks)	Infant Sex (vs F)	Multiple birth (multiple vs single)	Lactation Stage (week)
Total Fat		0.02 (-0.03, 0.06)	-0.08 (-0.28, 0.12)	-0.30 (-0.56, -0.05)	0.06 (0.02, 0.09)
Mono Saturated fats (mol%)	10:0	0.00 (-0.05, 0.05)	0.16 (-0.09, 0.40)	-0.23 (-0.54, 0.07)	-0.06 (-0.10, -0.02)
	12:0	-0.07 (-0.12, -0.03)	-0.23 (-0.44, -0.02)	-0.43 (-0.69, -0.17)	-0.06 (-0.09, -0.02)
	14:0	-0.07 (-0.11, -0.03)	-0.24 (-0.45, -0.04)	-0.41 (-0.66, -0.16)	-0.08 (-0.11, -0.05)
	16:0	0.01 (-0.04, 0.05)	-0.11 (-0.33, 0.11)	-0.37 (-0.63, -0.12)	-0.03 (-0.06, 0.01)
	18:0	-0.03 (-0.08, 0.02)	0.13 (-0.10, 0.36)	-0.04 (-0.33, 0.24)	0.05 (0.01, 0.09)
	20:0	-0.03 (-0.08, 0.02)	0.09 (-0.14, 0.32)	-0.01 (-0.3, 0.29)	-0.01 (-0.05, 0.03)
	21:0	0.08 (0.02, 0.13)	0.04 (-0.21, 0.29)	0.30 (-0.02, 0.62)	0.01 (-0.02, 0.05)
	22:0	-0.01 (-0.05, 0.04)	-0.02 (-0.23, 0.18)	-0.11 (-0.37, 0.15)	0.01 (-0.03, 0.05)
	23:0	0.01 (-0.03, 0.06)	0.10 (-0.13, 0.32)	-0.09 (-0.38, 0.20)	-0.06 (-0.10, -0.02)
	24:0	-0.06 (-0.10, -0.01)	0.00 (-0.19, 0.20)	-0.19 (-0.43, 0.06)	-0.17 (-0.21, -0.14)
	Total SFA	-0.06 (-0.10, -0.02)	-0.22 (-0.41, -0.03)	-0.54 (-0.76, -0.31)	-0.06 (-0.09, -0.03)
Mono	14:1n-5	-0.01 (-0.06, 0.03)	-0.18 (-0.39, 0.03)	-0.37 (-0.63, -0.12)	0.04 (0.01, 0.07)

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	16:1n-7	0.01 (-0.04, 0.05)	-0.27 (-0.48, -0.07)	-0.36 (-0.62, -0.09)	0.03 (0.00, 0.07)
	17:1n-7	-0.04 (-0.09, 0.01)	0.06 (-0.18, 0.3)	-0.20 (-0.50, 0.10)	0.03 (-0.01, 0.06)
	18:1n-7	0.05 (0.01, 0.10)	-0.10 (-0.3, 0.1)	0.30 (0.04, 0.55)	-0.06 (-0.09, -0.02)
	18:1n-9	0.06 (0.02, 0.10)	0.26 (0.07, 0.44)	0.52 (0.30, 0.74)	0.06 (0.03, 0.09)
	20:1n-9	0.01 (-0.03, 0.05)	0.08 (-0.11, 0.28)	0.21 (-0.03, 0.46)	-0.12 (-0.16, -0.09)
	22:1n-9	0.00 (-0.04, 0.04)	-0.04 (-0.22, 0.14)	0.09 (-0.13, 0.31)	-0.20 (-0.23, -0.17)
	24:1n-9	-0.03 (-0.06, 0.01)	-0.10 (-0.27, 0.07)	-0.06 (-0.27, 0.15)	-0.22 (-0.25, -0.19)
	Total MUFA	0.05 (0.01, 0.09)	0.22 (0.04, 0.40)	0.45 (0.23, 0.67)	0.04 (0.01, 0.07)
n-3 PUFA (mol%)	18:3n-3	0.02 (-0.02, 0.07)	0.19 (-0.02, 0.40)	0.26 (0.00, 0.53)	0.06 (0.02, 0.09)
	20:3n-3	-0.02 (-0.06, 0.02)	-0.01 (-0.2, 0.18)	0.07 (-0.17, 0.31)	-0.18 (-0.21, -0.15)
	20:5n-3 (EPA)	0.02 (-0.03, 0.07)	0.18 (-0.05, 0.42)	0.24 (-0.07, 0.54)	0.01 (-0.03, 0.04)
	22:5n-3 (DPA)	0.03 (-0.02, 0.07)	0.02 (-0.21, 0.25)	0.22 (-0.07, 0.50)	-0.06 (-0.10, -0.02)
	22:6n-3 (DHA)	0.05 (0.00, 0.10)	-0.01 (-0.25, 0.22)	0.25 (-0.04, 0.54)	-0.10 (-0.14, -0.07)
	Total n-3 PUFA	0.04 (-0.01, 0.08)	0.09 (-0.12, 0.31)	0.34 (0.08, 0.61)	0.02 (-0.02, 0.05)
n-6 PUFA (mol%)	18:2n-6 (LA)	0.01 (-0.03, 0.06)	0.12 (-0.11, 0.34)	0.27 (0.00, 0.54)	0.06 (0.02, 0.09)
	18:3n-6 (GLA)	0.03 (-0.03, 0.08)	0.20 (-0.05, 0.45)	0.01 (-0.31, 0.32)	0.03 (0.00, 0.07)
	20:2n-6	0.00 (-0.04, 0.04)	-0.07 (-0.27, 0.13)	-0.06 (-0.31, 0.18)	0.00 (-0.04, 0.03)

Supplementary Material

	20:3n-6 (DGLA)	0.03 (-0.02, 0.08)	-0.04 (-0.28, 0.19)	-0.13 (-0.43, 0.17)	-0.14 (-0.17, -0.11)
	20:4n-6 (ARA)	0.05 (0.00, 0.09)	-0.16 (-0.39, 0.07)	0.22 (-0.07, 0.51)	-0.13 (-0.17, -0.10)
	22:4n-6	0.04 (-0.01, 0.09)	-0.13 (-0.35, 0.09)	-0.07 (-0.35, 0.22)	-0.06 (-0.10, -0.03)
	22:5n-6	0.00 (-0.04, 0.04)	-0.16 (-0.35, 0.03)	-0.13 (-0.36, 0.11)	-0.18 (-0.21, -0.14)
	Total n-6 PUFA	0.02 (-0.03, 0.07)	0.08 (-0.15, 0.31)	0.22 (-0.05, 0.50)	0.04 (0.00, 0.07)
Ratios	n-6:n-3 PUFA	-0.02 (-0.06, 0.02)	0.12 (-0.06, 0.29)	-0.14 (-0.36, 0.08)	0.00 (-0.03, 0.04)
	ARA:DHA	-0.01 (-0.07, 0.05)	-0.12 (-0.41, 0.16)	-0.13 (-0.49, 0.23)	0.05 (0.03, 0.08)

Maternal Characteristics (95% CI)						
	Maternal Pre-pregnancy BMI (Underweight vs normal)	Overweight vs normal	Obese vs normal	Delivery method (Caesarean vs vaginal)	Maternal Age (/5 years)	
Total Fat	-0.35 (-0.78, 0.08)	0.35 (0.10, 0.61)	0.46 (0.16, 0.77)	0.05 (-0.17, 0.26)	0.02 (-0.1, 0.13)	
Saturated fats (mol%)	10:0	0.54 (-0.02, 1.11)	0.57 (0.28, 0.86)	-0.03 (-0.39, 0.34)	-0.01 (-0.27, 0.24)	0.11 (-0.02, 0.24)
	12:0	-0.31 (-0.75, 0.13)	0.27 (0.01, 0.53)	0.09 (-0.23, 0.40)	-0.24 (-0.46, -0.02)	0.10 (-0.02, 0.21)
	14:0	-0.06 (-0.49, 0.36)	0.11 (-0.15, 0.36)	0.43 (0.13, 0.74)	-0.30 (-0.50, -0.09)	0.05 (-0.06, 0.17)
	16:0	-0.04 (-0.48, 0.4)	0.20 (-0.06, 0.46)	0.75 (0.44, 1.06)	0.05 (-0.17, 0.27)	0.10 (-0.01, 0.22)

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	18:0	0.58 (0.11, 1.06)	-0.20 (-0.48, 0.08)	0.18 (-0.16, 0.52)	-0.37 (-0.60, -0.14)	-0.06 (-0.19, 0.06)
	20:0	0.21 (-0.29, 0.70)	-0.16 (-0.45, 0.13)	-0.06 (-0.41, 0.29)	-0.18 (-0.43, 0.07)	0.00 (-0.13, 0.13)
	21:0	-0.01 (-0.55, 0.53)	-0.10 (-0.43, 0.22)	0.67 (0.29, 1.06)	0.05 (-0.23, 0.32)	0.11 (-0.03, 0.26)
	22:0	-0.16 (-0.6, 0.28)	-0.17 (-0.42, 0.09)	-0.19 (-0.50, 0.12)	-0.12 (-0.34, 0.10)	0.01 (-0.10, 0.12)
	23:0	0.43 (-0.06, 0.92)	0.07 (-0.22, 0.36)	0.49 (0.14, 0.83)	-0.17 (-0.42, 0.07)	0.00 (-0.12, 0.13)
	24:0	-0.12 (-0.53, 0.30)	-0.24 (-0.49, 0.00)	0.07 (-0.22, 0.37)	-0.18 (-0.39, 0.03)	-0.07 (-0.18, 0.04)
	Total SFA	-0.04 (-0.43, 0.35)	0.22 (-0.01, 0.45)	0.61 (0.33, 0.89)	-0.29 (-0.48, -0.10)	0.11 (0.00, 0.21)
Monounsaturated Fats (mol%)	14:1n-5	0.01 (-0.41, 0.44)	-0.06 (-0.32, 0.19)	0.70 (0.39, 1.01)	-0.15 (-0.37, 0.06)	0.09 (-0.02, 0.21)
	16:1n-7	0.49 (0.05, 0.94)	0.09 (-0.17, 0.35)	0.38 (0.06, 0.70)	0.05 (-0.18, 0.27)	-0.06 (-0.18, 0.06)
	17:1n-7	0.27 (-0.21, 0.76)	0.03 (-0.26, 0.33)	0.46 (0.09, 0.82)	-0.27 (-0.51, -0.02)	0.09 (-0.04, 0.22)
	18:1n-7	0.36 (-0.07, 0.79)	0.00 (-0.25, 0.25)	0.06 (-0.25, 0.36)	0.24 (0.03, 0.45)	-0.13 (-0.24, -0.01)
	18:1n-9	0.25 (-0.13, 0.64)	-0.32 (-0.55, -0.10)	-0.35 (-0.62, -0.07)	0.20 (0.01, 0.39)	-0.04 (-0.14, 0.06)
	20:1n-9	-0.16 (-0.57, 0.26)	-0.31 (-0.55, -0.07)	-0.11 (-0.40, 0.19)	0.15 (-0.05, 0.35)	-0.08 (-0.19, 0.03)
	22:1n-9	-0.11 (-0.48, 0.26)	-0.16 (-0.38, 0.06)	-0.03 (-0.29, 0.23)	0.03 (-0.15, 0.22)	-0.02 (-0.12, 0.08)
	24:1n-9	0.02 (-0.34, 0.37)	-0.16 (-0.37, 0.05)	0.16 (-0.09, 0.42)	0.04 (-0.13, 0.22)	-0.03 (-0.13, 0.06)
	Total MUFA	0.25 (-0.13, 0.63)	-0.35 (-0.57, -0.13)	-0.24 (-0.51, 0.03)	0.16 (-0.03, 0.35)	-0.03 (-0.13, 0.07)
n-3 PUFA (mol%)	18:3n-3	-0.22 (-0.67, 0.23)	0.03 (-0.24, 0.29)	-0.33 (-0.65, -0.01)	0.13 (-0.10, 0.35)	-0.04 (-0.16, 0.08)
	20:3n-3	-0.16 (-0.55, 0.24)	-0.04 (-0.27, 0.20)	-0.03 (-0.31, 0.26)	0.04 (-0.16, 0.24)	-0.12 (-0.22, -0.01)
	20:5n-3 (EPA)	-0.09 (-0.59, 0.41)	0.05 (-0.25, 0.35)	-0.27 (-0.63, 0.09)	-0.18 (-0.43, 0.08)	0.06 (-0.08, 0.19)

Supplementary Material

	22:5n-3 (DPA)	0.05 (-0.43, 0.53)	0.04 (-0.24, 0.33)	-0.11 (-0.45, 0.23)	0.02 (-0.22, 0.26)	0.06 (-0.07, 0.18)
	22:6n-3 (DHA)	-0.23 (-0.71, 0.25)	-0.08 (-0.37, 0.21)	-0.54 (-0.89, -0.2)	0.01 (-0.24, 0.26)	0.16 (0.03, 0.29)
	Total n-3 PUFA	-0.36 (-0.81, 0.09)	0.01 (-0.25, 0.27)	-0.42 (-0.74, -0.1)	0.14 (-0.08, 0.37)	0.01 (-0.11, 0.12)
n-6 PUFA (mol%)	18:2n-6 (LA)	-0.31 (-0.76, 0.14)	0.08 (-0.19, 0.34)	-0.61 (-0.93, -0.29)	0.25 (0.03, 0.47)	-0.12 (-0.24, 0.00)
	18:3n-6 (GLA)	0.45 (-0.07, 0.97)	0.20 (-0.11, 0.52)	0.07 (-0.31, 0.44)	-0.10 (-0.37, 0.17)	0.08 (-0.06, 0.22)
	20:2n-6	-0.16 (-0.59, 0.26)	-0.09 (-0.33, 0.16)	-0.11 (-0.41, 0.20)	-0.11 (-0.32, 0.10)	0.01 (-0.10, 0.12)
	20:3n-6 (DGLA)	0.29 (-0.21, 0.79)	0.07 (-0.23, 0.37)	0.47 (0.12, 0.83)	-0.06 (-0.32, 0.19)	0.04 (-0.09, 0.17)
	20:4n-6 (ARA)	0.23 (-0.25, 0.71)	-0.07 (-0.35, 0.22)	-0.02 (-0.36, 0.32)	0.22 (-0.02, 0.47)	0.01 (-0.12, 0.13)
	22:4n-6	0.09 (-0.40, 0.57)	-0.11 (-0.4, 0.17)	-0.09 (-0.43, 0.26)	0.07 (-0.17, 0.32)	0.06 (-0.07, 0.19)
	22:5n-6	-0.05 (-0.45, 0.36)	-0.02 (-0.26, 0.21)	-0.30 (-0.59, -0.02)	0.09 (-0.11, 0.29)	-0.03 (-0.13, 0.08)
	Total n-6 PUFA	-0.32 (-0.78, 0.14)	0.04 (-0.24, 0.31)	-0.61 (-0.94, -0.28)	0.20 (-0.02, 0.43)	-0.11 (-0.23, 0.01)
Ratios	n-6:n-3 PUFA	0.06 (-0.31, 0.43)	-0.07 (-0.28, 0.15)	-0.13 (-0.39, 0.14)	-0.02 (-0.21, 0.16)	-0.05 (-0.15, 0.05)
	ARA:DHA	0.44 (-0.15, 1.03)	0.03 (-0.32, 0.39)	0.62 (0.20, 1.05)	0.10 (-0.21, 0.40)	-0.24 (-0.39, -0.08)

Supplementary Material

		Sociodemographic Characteristics (95% CI)							
		Parity (>1 vs 1)	Maternal Education (post-secondary degree vs none)	Maternal Ethnicity (East and Southeast Asian vs European)	South and West Asian vs European	African, Caribbean and Other vs European	Income (below poverty line Vs not)	English spoken at home (y vs mixed)	English vs no English
	Total Fat	0.25 (0.04, 0.47)	0.05 (-0.25, 0.36)	-0.09 (-0.36, 0.19)	0.02 (-0.31, 0.36)	-0.03 (-0.33, 0.27)	0.42 (0.14, 0.71)	-0.04 (-0.29, 0.21)	-0.10 (-0.46, 0.26)
Saturated fats (mol%)	10:0	0.13 (-0.13, 0.39)	-0.15 (-0.52, 0.22)	-0.11 (-0.43, 0.21)	-0.35 (-0.74, 0.03)	0.08 (-0.28, 0.43)	-0.18 (-0.52, 0.16)	-0.15 (-0.44, 0.15)	-0.30 (-0.75, 0.15)
	12:0	-0.05 (-0.28, 0.17)	0.06 (-0.26, 0.37)	-0.22 (-0.5, 0.07)	0.29 (-0.06, 0.64)	0.49 (0.18, 0.79)	0.22 (-0.08, 0.51)	0.01 (-0.23, 0.25)	-0.25 (-0.6, 0.11)
	14:0	0.15 (-0.07, 0.37)	0.11 (-0.20, 0.41)	-0.25 (-0.53, 0.03)	0.72 (0.39, 1.06)	0.68 (0.38, 0.97)	0.45 (0.16, 0.73)	0.16 (-0.07, 0.39)	-0.10 (-0.45, 0.24)
	16:0	0.01 (-0.21, 0.23)	-0.49 (-0.81, -0.18)	0.15 (-0.14, 0.43)	0.64 (0.30, 0.99)	0.15 (-0.15, 0.45)	-0.12 (-0.41, 0.17)	0.19 (-0.06, 0.45)	-0.22 (-0.60, 0.16)
	18:0	0.14 (-0.10, 0.39)	-0.40 (-0.74, -0.06)	0.11 (-0.20, 0.42)	-0.17 (-0.54, 0.20)	0.13 (-0.19, 0.46)	-0.25 (-0.57, 0.06)	0.23 (-0.04, 0.51)	-0.18 (-0.60, 0.23)
	20:0	-0.27 (-0.52, -0.02)	-0.15 (-0.50, 0.20)	0.01 (-0.31, 0.33)	0.10 (-0.29, 0.48)	0.04 (-0.3, 0.38)	-0.37 (-0.69, -0.04)	-0.14 (-0.42, 0.15)	-0.12 (-0.54, 0.31)
	21:0	0.23 (-0.05, 0.51)	0.20 (-0.18, 0.59)	-0.11 (-0.46, 0.25)	-0.12 (-0.55, 0.31)	-0.02 (-0.4, 0.35)	0.02 (-0.34, 0.39)	0.20 (-0.11, 0.50)	0.28 (-0.18, 0.74)
	22:0	-0.18 (-0.40, 0.04)	-0.02 (-0.33, 0.29)	0.14 (-0.14, 0.41)	0.17 (-0.17, 0.51)	0.13 (-0.17, 0.43)	-0.23 (-0.52, 0.06)	-0.19 (-0.46, 0.07)	-0.20 (-0.59, 0.19)
	23:0	0.13 (-0.12, 0.38)	0.24 (-0.11, 0.59)	-0.62 (-0.93, -0.30)	-0.13 (-0.51, 0.25)	-0.28 (-0.62, 0.05)	0.12 (-0.20, 0.45)	0.24 (-0.03, 0.50)	0.56 (0.16, 0.95)
	24:0	-0.24 (-0.45, -0.03)	0.14 (-0.15, 0.44)	-0.09 (-0.36, 0.18)	0.33 (0.00, 0.65)	0.26 (-0.03, 0.54)	-0.12 (-0.40, 0.15)	-0.07 (-0.32, 0.17)	-0.10 (-0.46, 0.26)
		Total SFA	0.07 (-0.13, 0.27)	-0.22 (-0.50, 0.06)	-0.14 (-0.4, 0.11)	0.68 (0.38, 0.99)	0.58 (0.32, 0.85)	0.15 (-0.11, 0.41)	0.20 (-0.02, 0.42)

Supplementary Material

Monounsaturated Fats (mol%)	14:1n-5	-0.03 (-0.25, 0.19)	0.02 (-0.28, 0.33)	-0.85 (-1.14, -0.57)	0.02 (-0.32, 0.35)	-0.64 (-0.93, -0.34)	-0.29 (-0.57, 0.00)	0.07 (-0.18, 0.33)	-0.26 (-0.64, 0.11)
	16:1n-7	0.09 (-0.14, 0.31)	-0.32 (-0.63, 0.00)	0.13 (-0.16, 0.42)	-0.37 (-0.72, -0.03)	-0.58 (-0.88, -0.27)	-0.14 (-0.43, 0.16)	0.14 (-0.12, 0.4)	-0.31 (-0.7, 0.08)
	17:1n-7	0.16 (-0.09, 0.41)	-0.10 (-0.46, 0.26)	-0.13 (-0.45, 0.20)	-0.33 (-0.72, 0.06)	-0.56 (-0.90, -0.21)	-0.47 (-0.81, -0.14)	0.19 (-0.09, 0.48)	-0.37 (-0.8, 0.05)
	18:1n-7	-0.04 (-0.26, 0.18)	-0.06 (-0.36, 0.25)	0.75 (0.47, 1.03)	-0.54 (-0.87, -0.20)	-0.13 (-0.42, 0.17)	-0.15 (-0.44, 0.13)	0.02 (-0.23, 0.26)	0.14 (-0.22, 0.50)
	18:1n-9	-0.25 (-0.44, -0.06)	0.16 (-0.11, 0.44)	-0.17 (-0.41, 0.08)	-0.76 (-1.06, -0.46)	-0.66 (-0.93, -0.40)	-0.31 (-0.57, -0.06)	-0.12 (-0.33, 0.10)	0.28 (-0.03, 0.60)
	20:1n-9	-0.30 (-0.50, -0.09)	0.18 (-0.12, 0.47)	0.41 (0.15, 0.68)	-0.03 (-0.35, 0.29)	0.04 (-0.24, 0.32)	-0.39 (-0.66, -0.11)	-0.23 (-0.47, 0.01)	0.08 (-0.28, 0.43)
	22:1n-9	-0.23 (-0.41, -0.04)	-0.02 (-0.28, 0.24)	0.26 (0.02, 0.50)	0.29 (0.01, 0.58)	0.19 (-0.07, 0.44)	-0.32 (-0.56, -0.07)	-0.11 (-0.32, 0.10)	-0.03 (-0.34, 0.28)
	24:1n-9	-0.11 (-0.30, 0.07)	0.13 (-0.12, 0.38)	0.25 (0.02, 0.48)	0.29 (0.01, 0.57)	0.23 (-0.01, 0.48)	-0.12 (-0.36, 0.11)	0.05 (-0.16, 0.25)	-0.03 (-0.33, 0.27)
	Total MUFA	-0.17 (-0.36, 0.03)	0.05 (-0.22, 0.32)	-0.09 (-0.33, 0.16)	-0.78 (-1.07, -0.48)	-0.65 (-0.91, -0.39)	-0.40 (-0.65, -0.14)	-0.10 (-0.32, 0.11)	0.18 (-0.13, 0.50)
n-3 PUFA (mol%)	18:3n-3	0.13 (-0.09, 0.36)	0.35 (0.03, 0.67)	0.03 (-0.26, 0.32)	0.02 (-0.33, 0.37)	-0.11 (-0.41, 0.20)	0.14 (-0.16, 0.44)	-0.14 (-0.40, 0.13)	0.32 (-0.07, 0.70)
	20:3n-3	0.08 (-0.12, 0.29)	0.16 (-0.12, 0.44)	0.48 (0.22, 0.74)	0.36 (0.05, 0.68)	0.35 (0.08, 0.63)	0.10 (-0.16, 0.37)	0.02 (-0.22, 0.25)	0.11 (-0.24, 0.46)
	20:5n-3 (EPA)	-0.09 (-0.34, 0.16)	0.02 (-0.34, 0.38)	-0.32 (-0.65, 0.01)	-0.13 (-0.52, 0.27)	-0.25 (-0.60, 0.10)	-0.16 (-0.49, 0.17)	0.14 (-0.16, 0.45)	0.34 (-0.12, 0.79)
	22:5n-3 (DPA)	0.02 (-0.23, 0.26)	0.06 (-0.28, 0.40)	0.18 (-0.13, 0.49)	0.14 (-0.24, 0.51)	0.08 (-0.25, 0.41)	-0.02 (-0.34, 0.30)	0.17 (-0.11, 0.45)	0.26 (-0.15, 0.68)
	22:6n-3 (DHA)	-0.14 (-0.38, 0.10)	-0.26 (-0.61, 0.09)	0.46 (0.14, 0.78)	0.09 (-0.29, 0.47)	0.21 (-0.12, 0.55)	-0.22 (-0.55, 0.10)	0.39 (0.11, 0.68)	0.34 (-0.08, 0.77)
	Total n-3 PUFA	0.06 (-0.17, 0.29)	0.18 (-0.14, 0.5)	0.10 (-0.18, 0.39)	0.11 (-0.24, 0.46)	-0.06 (-0.37, 0.24)	0.04 (-0.26, 0.33)	-0.03 (-0.29, 0.23)	0.23 (-0.16, 0.61)

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n-6 PUFA (mol%)	18:2n-6 (LA)	0.15 (-0.08, 0.38)	0.19 (-0.14, 0.51)	0.25 (-0.04, 0.54)	-0.14 (-0.49, 0.22)	-0.10 (-0.41, 0.21)	0.22 (-0.08, 0.52)	-0.19 (-0.46, 0.08)	0.18 (-0.23, 0.58)
	18:3n-6 (GLA)	0.08 (-0.19, 0.36)	0.07 (-0.31, 0.44)	-0.87 (-1.22, -0.52)	-0.66 (-1.07, -0.24)	-0.63 (-1.00, -0.27)	-0.09 (-0.44, 0.26)	-0.05 (-0.36, 0.25)	0.52 (0.07, 0.98)
	20:2n-6	-0.04 (-0.25, 0.18)	0.01 (-0.29, 0.31)	0.27 (0.00, 0.54)	0.08 (-0.25, 0.41)	0.08 (-0.21, 0.37)	-0.09 (-0.37, 0.2)	-0.14 (-0.40, 0.12)	-0.17 (-0.55, 0.22)
	20:3n-6 (DGLA)	0.13 (-0.12, 0.39)	0.15 (-0.21, 0.50)	-0.52 (-0.85, -0.19)	-0.10 (-0.50, 0.29)	-0.20 (-0.55, 0.15)	0.08 (-0.25, 0.42)	0.09 (-0.20, 0.39)	0.30 (-0.14, 0.75)
	20:4n-6 (ARA)	0.24 (-0.01, 0.48)	-0.13 (-0.47, 0.21)	0.01 (-0.31, 0.32)	-0.08 (-0.46, 0.30)	0.61 (0.28, 0.94)	0.03 (-0.29, 0.35)	0.31 (0.03, 0.58)	0.35 (-0.06, 0.76)
	22:4n-6	0.43 (0.19, 0.67)	-0.22 (-0.56, 0.12)	0.51 (0.19, 0.82)	0.04 (-0.34, 0.41)	0.18 (-0.15, 0.51)	0.34 (0.02, 0.66)	0.03 (-0.26, 0.33)	-0.23 (-0.67, 0.21)
	22:5n-6	0.04 (-0.16, 0.24)	-0.30 (-0.59, -0.02)	0.45 (0.20, 0.71)	0.30 (-0.02, 0.61)	0.18 (-0.1, 0.45)	0.06 (-0.21, 0.32)	0.09 (-0.13, 0.32)	0.22 (-0.12, 0.56)
	Total n-6 PUFA	0.16 (-0.07, 0.40)	0.18 (-0.15, 0.51)	0.35 (0.05, 0.64)	-0.10 (-0.47, 0.26)	-0.04 (-0.36, 0.27)	0.19 (-0.11, 0.50)	-0.23 (-0.50, 0.05)	0.13 (-0.27, 0.54)
Ratios	n-6:n-3 PUFA	0.03 (-0.16, 0.22)	0.08 (-0.18, 0.34)	0.13 (-0.1, 0.37)	-0.11 (-0.40, 0.18)	0.14 (-0.11, 0.40)	0.05 (-0.19, 0.30)	-0.09 (-0.31, 0.14)	0.00 (-0.34, 0.33)
	ARA:DHA	0.30 (0.01, 0.59)	0.11 (-0.30, 0.53)	-0.77 (-1.17, -0.37)	-0.34 (-0.81, 0.13)	-0.15 (-0.56, 0.26)	0.28 (-0.12, 0.67)	-0.13 (-0.46, 0.21)	-0.24 (-0.75, 0.26)

Supplementary Material

		Environmental Characteristics (95% CI)		
		Season of delivery (fall vs spring)	Summer vs spring	Winter vs spring
Total Fat		-0.32 (-0.64, 0.00)	0.01 (-0.29, 0.32)	-0.27 (-0.55, 0.00)
Monounsaturated fats (mol%)	10:0	-0.53 (-0.91, -0.15)	0.32 (-0.01, 0.66)	0.00 (-0.31, 0.30)
	12:0	-0.45 (-0.78, -0.13)	-0.03 (-0.35, 0.28)	-0.10 (-0.39, 0.19)
	14:0	0.32 (0.00, 0.64)	0.19 (-0.12, 0.50)	0.28 (0.00, 0.56)
	16:0	0.23 (-0.09, 0.55)	0.47 (0.15, 0.78)	0.06 (-0.22, 0.34)
	18:0	0.50 (0.15, 0.86)	0.19 (-0.16, 0.53)	0.03 (-0.28, 0.34)
	20:0	0.61 (0.25, 0.98)	0.14 (-0.22, 0.49)	0.27 (-0.05, 0.59)
	21:0	-0.16 (-0.57, 0.25)	0.06 (-0.34, 0.45)	-0.12 (-0.48, 0.24)
	22:0	0.28 (-0.04, 0.60)	-0.18 (-0.49, 0.13)	0.01 (-0.27, 0.3)
	23:0	-0.11 (-0.48, 0.25)	0.00 (-0.36, 0.35)	-0.23 (-0.54, 0.09)
	24:0	0.31 (0.01, 0.61)	-0.05 (-0.35, 0.24)	0.09 (-0.17, 0.36)
Total SFA		0.13 (-0.16, 0.42)	0.32 (0.03, 0.60)	0.09 (-0.16, 0.35)
Monounsaturated Fats	14:1n-5	-0.28 (-0.59, 0.03)	0.29 (-0.01, 0.60)	-0.15 (-0.42, 0.13)
	16:1n-7	-0.22 (-0.54, 0.10)	0.26 (-0.06, 0.57)	-0.26 (-0.54, 0.02)

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	17:1n-7	-0.06 (-0.41, 0.30)	0.32 (-0.03, 0.67)	-0.19 (-0.52, 0.13)
	18:1n-7	-0.14 (-0.46, 0.19)	-0.05 (-0.36, 0.26)	-0.27 (-0.55, 0.01)
	18:1n-9	-0.11 (-0.39, 0.18)	-0.14 (-0.42, 0.14)	-0.16 (-0.41, 0.09)
	20:1n-9	0.24 (-0.07, 0.54)	-0.19 (-0.49, 0.10)	-0.02 (-0.29, 0.25)
	22:1n-9	0.23 (-0.04, 0.50)	-0.15 (-0.42, 0.11)	-0.03 (-0.27, 0.2)
	24:1n-9	0.27 (0.02, 0.53)	-0.10 (-0.35, 0.15)	0.01 (-0.21, 0.24)
	Total MUFA	-0.15 (-0.43, 0.14)	-0.17 (-0.45, 0.10)	-0.23 (-0.48, 0.02)
n-3 PUFA (mol%)	18:3n-3	-0.22 (-0.55, 0.10)	-0.23 (-0.55, 0.09)	0.10 (-0.19, 0.38)
	20:3n-3	0.15 (-0.14, 0.44)	-0.29 (-0.57, 0.00)	-0.01 (-0.27, 0.24)
	20:5n-3 (EPA)	0.08 (-0.29, 0.45)	0.12 (-0.24, 0.47)	0.29 (-0.03, 0.61)
	22:5n-3 (DPA)	-0.22 (-0.56, 0.13)	0.19 (-0.14, 0.53)	0.13 (-0.17, 0.44)
	22:6n-3 (DHA)	0.00 (-0.36, 0.35)	0.08 (-0.26, 0.43)	0.32 (0.00, 0.63)
	Total n-3 PUFA	-0.12 (-0.44, 0.21)	-0.09 (-0.41, 0.22)	0.21 (-0.07, 0.50)
n-6 PUFA (mol%)	18:2n-6 (LA)	-0.12 (-0.45, 0.21)	-0.38 (-0.7, -0.06)	0.10 (-0.19, 0.39)
	18:3n-6 (GLA)	-0.31 (-0.71, 0.09)	-0.10 (-0.48, 0.29)	-0.18 (-0.52, 0.17)
	20:2n-6	0.24 (-0.07, 0.55)	-0.04 (-0.35, 0.26)	0.02 (-0.25, 0.30)

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	20:3n-6 (DGLA)	-0.07 (-0.45, 0.31)	-0.19 (-0.55, 0.18)	-0.22 (-0.55, 0.12)
	20:4n-6 (ARA)	-0.17 (-0.52, 0.19)	0.10 (-0.24, 0.45)	0.19 (-0.13, 0.50)
	22:4n-6	0.41 (0.06, 0.77)	-0.03 (-0.37, 0.32)	-0.07 (-0.38, 0.24)
	22:5n-6	-0.02 (-0.32, 0.27)	0.00 (-0.28, 0.29)	0.26 (0.01, 0.52)
	Total n-6 PUFA	-0.02 (-0.36, 0.32)	-0.39 (-0.72, -0.06)	0.09 (-0.21, 0.39)
Ratios	n-6:n-3 PUFA	0.08 (-0.20, 0.35)	-0.15 (-0.42, 0.12)	0.04 (-0.20, 0.28)
	ARA:DHA	-0.01 (-0.46, 0.44)	-0.13 (-0.56, 0.31)	-0.16 (-0.56, 0.23)

¹Adjusted associations (β estimates) of infant, maternal, sociodemographic, or environmental factors with mother's milk fatty acid composition standard deviation scores. Associations were analyzed using PROC MIXED accounting for repeated measures using an autoregressive correlation structure, adjusting for maternal pre-pregnancy BMI (underweight [$<18.5 \text{ kg/m}^2$], normal weight [18.6-24.9], overweight [25.0-29.9] or obese [≥ 30]), maternal education (post-secondary vs none), maternal ethnicity (East or Southeast Asian, South or West Asian European, African or Caribbean, or Other), family income above or below the family size-adjusted Ontario poverty line (y/n), smoking (y/n), and timing of sample collection (weeks). A negative sign indicates a negative association for continuous variables (gestational age, lactation stage, and maternal age) or lower than the listed reference value for categorical variables (all others). Sample size is 99 mothers, 469 human milk samples (one subject not included from the unadjusted due to

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missing covariate data). Estimates in **bold** type represent associations that remain significant after adjusting for multiple testing ($p < 0.007$) while those in red are associated with p-values < 0.05 .

Alpha linolenic acid (ALA), Arachidonic acid (ARA), Docosahexaenoic acid (DHA), Docosapentaenoic acid (DPA), Eicosapentaenoic acid (EPA), Female (F), Dihomo gamma linolenic acid (DGLA), Gamma linolenic acid (GLA), Linoleic acid (LA), Monounsaturated fatty acid (MUFA), Polyunsaturated fatty acid (PUFA), Saturated Fatty Acids (SFA), Standard deviation scores (SDS).

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Supplementary TABLE 3 – Determinants of fat and fatty acid content of mother’s milk – unadjusted, unstandardized data (mol% of total quantified fatty acids)¹

		Fat - g/dl (95% CI)	Saturated fats - mol% (95% CI)										Total SFA
			10:0	12:0	14:0	16:0	18:0	20:0	21:0	22:0	23:0	24:0	
Gestational Age	<i>Intercept</i>	4.33 (3.02, 5.63)	0.08 (-0.42, 0.58)	9.24 (6.27, 12.21)	13.13 (9.56, 16.70)	19.97 (16.73, 23.22)	5.94 (4.43, 7.44)	0.17 (0.12, 0.22)	-0.02 (-0.11, 0.06)	0.07 (0.00, 0.14)	0.10 (0.01, 0.18)	0.09 (0.05, 0.14)	49.60 (42.55, 56.64)
	β /week	-0.02 (-0.07, 0.03)	0.01 (-0.01, 0.03)	-0.17 (-0.27, -0.06)	-0.20 (-0.33, -0.07)	0.05 (-0.07, 0.17)	-0.01 (-0.06, 0.05)	-0.00 (-0.00, 0.00)	0.00 (0.00 , 0.01)	0.00 (-0.00, 0.00)	0.00 (-0.00, 0.00)	-0.00 (-0.00, 0.00)	-0.32 (-0.58, -0.07)
	<i>Female</i>	3.76 (3.61, 3.91)	0.25 (0.20, 0.30)	4.63 (4.29, 4.97)	7.55 (7.13, 7.97)	20.97 (20.58, 21.36)	5.63 (5.45, 5.80)	0.16 (0.16, 0.17)	0.09 (0.08, 0.10)	0.07 (0.06, 0.08)	0.12 (0.11, 0.13)	0.08 (0.07, 0.08)	40.15 (39.31, 41.00)
Infant Sex	<i>Male</i>	3.81 (3.64, 3.98)	0.33 (0.26, 0.39)	4.55 (4.17, 4.94)	7.53 (7.06, 8.01)	21.35 (20.91, 21.79)	5.79 (5.59, 5.98)	0.16 (0.16, 0.17)	0.09 (0.08, 0.10)	0.07 (0.06, 0.08)	0.12 (0.11, 0.14)	0.08 (0.07, 0.09)	40.66 (39.70, 41.61)
	<i>Intercept</i>	4.06 (3.57, 4.55)	0.28 (0.11, 0.45)	5.89 (4.79, 6.98)	8.69 (7.30, 10.07)	20.85 (19.56, 22.14)	5.44 (4.87, 6.01)	0.16 (0.14, 0.18)	0.05 (0.02, 0.08)	0.07 (0.04, 0.09)	0.10 (0.07, 0.13)	0.09 (0.07, 0.11)	42.16 (39.36, 44.95)
Birth Weight	β /100g	-0.03 (-0.09, 0.02)	-0.00 (-0.02, 0.02)	-0.15 (-0.27, -0.03)	-0.13 (-0.29, 0.02)	0.03 (-0.11, 0.18)	0.03 (-0.03, 0.09)	0.00 (-0.00, 0.00)	0.00 (0.00 , 0.01)	0.00 (-0.00, 0.00)	0.00 (-0.00, 0.01)	-0.00 (-0.00, 0.00)	-0.20 (-0.52, 0.11)
	<i>Intercept</i>	3.59 (3.40, 3.78)	0.38 (0.30, 0.45)	5.19 (4.78, 5.61)	8.30 (7.82, 8.78)	21.64 (21.19, 22.10)	5.55 (5.35, 5.76)	0.17 (0.16, 0.17)	0.08 (0.07, 0.09)	0.07 (0.06, 0.08)	0.14 (0.12, 0.15)	0.10 (0.10, 0.11)	42.17 (41.18, 43.16)
Lactation Stage	β /week	0.06 (0.02 , 0.10)	-0.02 (-0.03, -0.00)	-0.14 (-0.23, -0.06)	-0.19 (-0.29, -0.09)	-0.09 (-0.18, 0.00)	0.05 (0.00 , 0.09)	-0.00 (-0.00, 0.00)	0.00 (- 0.00, 0.00)	0.00 (-0.00, 0.00)	-0.00 (-0.01, -0.00)	-0.01 (-0.01, -0.00)	-0.40 (-0.60, -0.19)

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BMI	Multiple birth	<i>Singleton</i>	3.90 (3.76, 4.04)	0.33 (0.28, 0.38)	5.00 (4.68, 5.32)	7.99 (7.60, 8.38)	21.59 (21.25, 21.93)	5.72 (5.55, 5.88)	0.16 (0.16, 0.17)	0.08 (0.07, 0.09)	0.07 (0.07, 0.08)	0.12 (0.11, 0.13)	0.08 (0.08, 0.09)	41.72 (40.97, 42.48)
		<i>Multiple</i>	3.63 (3.40, 3.86)	0.24 (0.15, 0.33)	3.80 (3.27, 4.32)	6.59 (5.95, 7.23)	20.60 (20.03, 21.16)	5.72 (5.45, 5.98)	0.16 (0.15, 0.17)	0.10 (0.08, 0.11)	0.07 (0.05, 0.08)	0.13 (0.11, 0.14)	0.07 (0.07, 0.08)	38.10 (36.86, 39.33)
	<i>Normal</i>	3.64 (3.47, 3.80)	0.24 (0.18, 0.30)	4.44 (4.05, 4.83)	7.26 (6.78, 7.74)	20.73 (20.32, 21.14)	5.70 (5.50, 5.90)	0.17 (0.16, 0.17)	0.08 (0.07, 0.09)	0.08 (0.07, 0.08)	0.12 (0.10, 0.13)	0.08 (0.08, 0.09)	0.08 (0.10, 0.09)	39.48 (38.57, 40.39)
	<i>Underweight</i>	3.23 (2.79, 3.67)	0.43 (0.25, 0.62)	3.59 (2.56, 4.62)	6.87 (5.61, 8.13)	20.97 (19.89, 22.05)	6.44 (5.92, 6.96)	0.18 (0.16, 0.20)	0.08 (0.05, 0.11)	0.07 (0.05, 0.09)	0.14 (0.11, 0.17)	0.08 (0.06, 0.09)	0.08 (0.09, 0.09)	39.35 (36.93, 41.77)
	<i>Overweight</i>	4.11 (3.91, 4.32)	0.41 (0.34, 0.49)	5.40 (4.91, 5.89)	8.09 (7.49, 8.70)	21.59 (21.07, 22.10)	5.46 (5.21, 5.71)	0.16 (0.15, 0.17)	0.07 (0.06, 0.09)	0.07 (0.06, 0.08)	0.12 (0.10, 0.13)	0.08 (0.07, 0.08)	0.08 (0.08, 0.08)	41.99 (40.84, 43.14)
	<i>Obese</i>	4.15 (3.85, 4.44)	0.24 (0.12, 0.35)	4.57 (3.88, 5.25)	8.18 (7.34, 9.02)	22.81 (22.09, 23.53)	5.94 (5.59, 6.29)	0.16 (0.15, 0.18)	0.12 (0.10, 0.14)	0.06 (0.05, 0.08)	0.15 (0.13, 0.17)	0.08 (0.07, 0.09)	0.08 (0.07, 0.09)	43.03 (41.42, 44.64)
	Delivery	<i>Vaginal</i>	3.82 (3.63, 4.01)	0.29 (0.22, 0.36)	4.97 (4.53, 5.41)	7.94 (7.41, 8.47)	21.18 (20.70, 21.65)	5.92 (5.70, 6.14)	0.17 (0.16, 0.18)	0.08 (0.07, 0.09)	0.08 (0.07, 0.08)	0.13 (0.12, 0.14)	0.08 (0.08, 0.09)	41.45 (40.41, 42.49)
		<i>Caesarean</i>	3.83 (3.68, 3.98)	0.31 (0.26, 0.37)	4.49 (4.14, 4.84)	7.40 (6.98, 7.83)	21.42 (21.04, 21.80)	5.59 (5.41, 5.76)	0.16 (0.15, 0.17)	0.09 (0.08, 0.10)	0.07 (0.06, 0.08)	0.12 (0.11, 0.13)	0.08 (0.07, 0.08)	40.30 (39.47, 41.13)
		<i>Intercept</i>	3.56 (2.76, 4.36)	0.10 (-0.20, 0.40)	4.44 (2.56, 6.32)	9.81 (7.58, 12.03)	21.26 (19.25, 23.27)	6.32 (5.39, 7.25)	0.17 (0.13, 0.20)	0.05 (-0.01, 0.10)	0.06 (0.02, 0.10)	0.15 (0.10, 0.20)	0.10 (0.08, 0.13)	0.10 (0.08, 0.13)
	Maternal Age	$\beta/5$ years	0.04 (-0.08, 0.16)	0.03 (-0.01, 0.08)	0.03 (-0.24, 0.31)	-0.33 (-0.66, 0.00)	0.01 (-0.29, 0.31)	-0.09 (-0.23, 0.05)	-0.00 (-0.01, 0.00)	0.01 (-0.00, 0.01)	0.00 (-0.00, 0.01)	-0.00 (-0.01, 0.00)	-0.00 (-0.01, 0.00)	-0.33 (-0.99, 0.33)
<i>1</i>		3.70 (3.56, 3.85)	0.29 (0.24, 0.35)	4.65 (4.30, 5.00)	7.34 (6.92, 7.76)	21.24 (20.86, 21.62)	5.67 (5.50, 5.85)	0.17 (0.16, 0.17)	0.08 (0.07, 0.09)	0.07 (0.07, 0.08)	0.12 (0.11, 0.13)	0.08 (0.08, 0.09)	40.35 (39.51, 41.18)	
Parity	<i>>1</i>	4.04 (3.85, 4.23)	0.32 (0.25, 0.40)	4.72 (4.26, 5.17)	8.06 (7.53, 8.60)	21.46 (20.97, 21.94)	5.79 (5.56, 6.01)	0.16 (0.15, 0.16)	0.09 (0.08, 0.11)	0.06 (0.05, 0.07)	0.13 (0.12, 0.14)	0.08 (0.07, 0.08)	41.42 (40.35, 42.49)	

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Maternal Education	<i>No post-secondary degree</i>	3.88 (3.57, 4.18)	0.36 (0.24, 0.48)	4.92 (4.21, 5.63)	7.93 (7.08, 8.78)	22.36 (21.61, 23.11)	6.11 (5.76, 6.45)	0.17 (0.15, 0.18)	0.08 (0.06, 0.10)	0.07 (0.05, 0.08)	0.11 (0.10, 0.13)	0.08 (0.07, 0.09)	42.74 (41.06, 44.41)
	<i>Post-secondary Degree</i>	3.82 (3.69, 3.95)	0.30 (0.25, 0.34)	4.65 (4.34, 4.95)	7.57 (7.20, 7.94)	21.14 (20.81, 21.46)	5.64 (5.49, 5.79)	0.16 (0.16, 0.17)	0.09 (0.08, 0.09)	0.07 (0.06, 0.08)	0.12 (0.12, 0.13)	0.08 (0.08, 0.08)	40.42 (39.70, 41.14)
	<i>European</i>	3.81 (3.61, 4.00)	0.31 (0.23, 0.38)	4.27 (3.84, 4.70)	6.86 (6.37, 7.35)	21.02 (20.54, 21.51)	5.77 (5.54, 6.00)	0.17 (0.16, 0.17)	0.09 (0.08, 0.11)	0.07 (0.06, 0.08)	0.14 (0.13, 0.15)	0.08 (0.07, 0.09)	39.43 (38.43, 40.44)
	<i>East or Southeast Asian</i>	3.74 (3.50, 3.98)	0.27 (0.18, 0.35)	3.81 (3.29, 4.34)	6.15 (5.55, 6.75)	21.04 (20.44, 21.64)	5.81 (5.53, 6.09)	0.16 (0.15, 0.17)	0.08 (0.06, 0.10)	0.07 (0.06, 0.09)	0.10 (0.08, 0.11)	0.07 (0.06, 0.08)	38.10 (36.87, 39.34)
Maternal Ethnicity	<i>South or West Asian</i>	4.02 (3.73, 4.31)	0.24 (0.14, 0.35)	5.34 (4.71, 5.98)	9.17 (8.46, 9.89)	22.39 (21.67, 23.11)	5.35 (5.01, 5.69)	0.16 (0.15, 0.17)	0.08 (0.06, 0.10)	0.07 (0.06, 0.09)	0.13 (0.11, 0.15)	0.09 (0.08, 0.10)	43.72 (42.24, 45.21)
	<i>African or Caribbean</i>	3.83 (3.57, 4.10)	0.38 (0.28, 0.49)	5.60 (5.03, 6.17)	8.99 (8.35, 9.64)	21.29 (20.65, 21.94)	5.80 (5.49, 6.10)	0.16 (0.15, 0.17)	0.08 (0.06, 0.09)	0.07 (0.06, 0.08)	0.12 (0.10, 0.14)	0.08 (0.07, 0.09)	43.06 (41.73, 44.39)
	<i>Other</i>	3.78 (3.03, 4.53)	0.55 (0.28, 0.82)	7.09 (5.54, 8.64)	10.65 (8.93, 12.37)	21.59 (19.84, 23.35)	5.68 (4.86, 6.50)	0.15 (0.12, 0.18)	0.12 (0.07, 0.16)	0.07 (0.03, 0.11)	0.13 (0.08, 0.17)	0.09 (0.07, 0.12)	46.78 (43.17, 50.39)
	<i>Above poverty line</i>	3.74 (3.61, 3.86)	0.32 (0.27, 0.37)	4.52 (4.21, 4.82)	7.23 (6.87, 7.59)	21.30 (20.97, 21.63)	5.78 (5.62, 5.93)	0.17 (0.16, 0.17)	0.09 (0.08, 0.09)	0.07 (0.07, 0.08)	0.12 (0.11, 0.13)	0.08 (0.08, 0.09)	40.29 (39.56, 41.02)
Income	<i>Below poverty line</i>	4.26 (4.00, 4.52)	0.26 (0.16, 0.37)	5.37 (4.74, 6.01)	8.93 (8.19, 9.67)	21.58 (20.90, 22.26)	5.49 (5.18, 5.80)	0.15 (0.14, 0.16)	0.08 (0.06, 0.10)	0.06 (0.05, 0.08)	0.12 (0.10, 0.14)	0.08 (0.07, 0.09)	42.60 (41.11, 44.10)
	<i>Yes</i>	3.79 (3.63, 3.96)	0.34 (0.27, 0.41)	4.72 (4.33, 5.10)	7.61 (7.14, 8.08)	21.22 (20.80, 21.63)	5.71 (5.50, 5.91)	0.17 (0.16, 0.17)	0.08 (0.07, 0.09)	0.08 (0.07, 0.08)	0.11 (0.10, 0.12)	0.08 (0.08, 0.09)	40.69 (39.78, 41.60)
English	<i>Mixed</i>	3.75 (3.55, 3.96)	0.26 (0.18, 0.35)	4.64 (4.15, 5.12)	7.66 (7.07, 8.25)	21.53 (21.00, 22.06)	5.81 (5.55, 6.07)	0.16 (0.15, 0.17)	0.09 (0.07, 0.10)	0.07 (0.06, 0.08)	0.13 (0.12, 0.14)	0.08 (0.07, 0.09)	41.03 (39.88, 42.19)

Supplementary Material

Marital Status	<i>No</i>	3.68 (3.33, 4.03)	0.28 (0.13, 0.44)	4.09 (3.24, 4.93)	6.69 (5.66, 7.72)	20.34 (19.42, 21.25)	5.52 (5.06, 5.97)	0.16 (0.15, 0.18)	0.08 (0.06, 0.11)	0.07 (0.05, 0.09)	0.13 (0.11, 0.16)	0.08 (0.06, 0.09)	37.96 (35.95, 39.97)
	<i>Single</i>	3.84 (3.33, 4.36)	0.28 (0.08, 0.47)	6.47 (5.30, 7.64)	9.78 (8.38, 11.17)	21.61 (20.31, 22.92)	4.86 (4.24, 5.48)	0.15 (0.13, 0.17)	0.06 (0.03, 0.10)	0.07 (0.04, 0.10)	0.12 (0.09, 0.16)	0.09 (0.07, 0.11)	44.13 (41.30, 46.95)
	<i>Married</i>	3.76 (3.64, 3.89)	0.31 (0.26, 0.36)	4.51 (4.22, 4.80)	7.38 (7.04, 7.73)	21.20 (20.89, 21.52)	5.77 (5.62, 5.92)	0.17 (0.16, 0.17)	0.08 (0.07, 0.09)	0.07 (0.07, 0.08)	0.12 (0.11, 0.13)	0.08 (0.08, 0.08)	40.29 (39.60, 40.97)
Smoking	<i>No</i>	3.81 (3.69, 3.93)	0.28 (0.24, 0.33)	4.60 (4.32, 4.88)	7.55 (7.21, 7.89)	21.27 (20.96, 21.57)	5.70 (5.55, 5.84)	0.16 (0.16, 0.17)	0.08 (0.08, 0.09)	0.07 (0.06, 0.08)	0.12 (0.12, 0.13)	0.08 (0.08, 0.08)	40.51 (39.85, 41.18)
	<i>Yes</i>	4.24 (3.70, 4.79)	0.79 (0.58, 1.00)	6.17 (4.92, 7.41)	8.90 (7.41, 10.38)	22.42 (21.07, 23.77)	6.12 (5.49, 6.75)	0.16 (0.14, 0.18)	0.11 (0.08, 0.15)	0.06 (0.03, 0.09)	0.11 (0.07, 0.14)	0.09 (0.07, 0.10)	45.39 (42.45, 48.34)
	<i>Spring</i>	3.94 (3.72, 4.17)	0.32 (0.24, 0.39)	5.08 (4.57, 5.59)	7.24 (6.61, 7.87)	20.98 (20.43, 21.54)	5.48 (5.22, 5.74)	0.16 (0.15, 0.16)	0.09 (0.07, 0.10)	0.07 (0.06, 0.08)	0.13 (0.11, 0.14)	0.08 (0.07, 0.09)	40.27 (39.02, 41.51)
Season	<i>Fall</i>	3.61 (3.35, 3.86)	0.14 (0.04, 0.24)	3.77 (3.19, 4.36)	7.53 (6.81, 8.26)	21.31 (20.67, 21.95)	6.19 (5.89, 6.49)	0.18 (0.17, 0.19)	0.08 (0.06, 0.10)	0.09 (0.07, 0.10)	0.11 (0.10, 0.13)	0.08 (0.08, 0.09)	40.04 (38.61, 41.47)
	<i>Summer</i>	3.94 (3.68, 4.20)	0.41 (0.32, 0.50)	4.86 (4.28, 5.45)	7.73 (7.01, 8.45)	21.68 (21.04, 22.32)	5.70 (5.40, 6.00)	0.16 (0.15, 0.17)	0.09 (0.08, 0.11)	0.06 (0.04, 0.07)	0.13 (0.12, 0.15)	0.08 (0.07, 0.08)	41.48 (40.05, 42.91)
	<i>Winter</i>	3.80 (3.58, 4.02)	0.31 (0.23, 0.39)	4.81 (4.31, 5.32)	7.97 (7.34, 8.59)	21.40 (20.84, 21.95)	5.61 (5.35, 5.87)	0.17 (0.16, 0.17)	0.08 (0.07, 0.10)	0.07 (0.06, 0.08)	0.12 (0.10, 0.13)	0.08 (0.07, 0.09)	41.21 (39.98, 42.45)

Supplementary Material

		Monounsaturated Fats - mol% (95% CI)								Total MUFA
		14:1n-5	16:1n-7	17:1n-7	18:1n-7	18:1n-9	20:1n-9	22:1n-9	24:1n-9	
Gestational	<i>Intercept</i>	0.21 (0.09, 0.34)	2.02 (1.25, 2.79)	0.19 (0.14, 0.25)	1.28 (0.88, 1.67)	26.83 (21.49, 32.17)	0.36 (0.21, 0.51)	0.05 (0.01, 0.09)	0.06 (-0.01, 0.12)	31.69 (25.67, 37.70)
	Age β /week	-0.00 (-0.01, 0.00)	0.01 (-0.02, 0.04)	-0.00 (-0.00, 0.00)	0.02 (0.01, 0.04)	0.28 (0.08, 0.47)	0.01 (0.00, 0.01)	0.00 (0.00, 0.00)	0.00 (-0.00, 0.00)	0.32 (0.10, 0.54)
Infant Sex	<i>Female</i>	0.18 (0.17, 0.20)	2.28 (2.19, 2.36)	0.17 (0.16, 0.17)	1.96 (1.92, 2.01)	34.68 (34.06, 35.30)	0.54 (0.53, 0.56)	0.09 (0.09, 0.10)	0.09 (0.08, 0.09)	40.68 (39.99, 41.37)
	<i>Male</i>	0.16 (0.15, 0.18)	2.10 (2.00, 2.19)	0.17 (0.16, 0.17)	1.91 (1.86, 1.96)	34.57 (33.86, 35.27)	0.55 (0.53, 0.57)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	40.50 (39.71, 41.29)
Birth Weight	<i>Intercept</i>	0.13 (0.08, 0.17)	2.16 (1.88, 2.44)	0.17 (0.14, 0.19)	1.95 (1.80, 2.10)	32.24 (30.21, 34.27)	0.57 (0.51, 0.62)	0.10 (0.09, 0.12)	0.11 (0.09, 0.13)	38.16 (35.90, 40.43)
	β /100g	0.01 (0.00, 0.01)	0.00 (-0.03, 0.04)	-0.00 (-0.00, 0.00)	-0.00 (-0.02, 0.02)	0.27 (0.05, 0.50)	-0.00 (-0.01, 0.00)	-0.00 (-0.00, 0.00)	-0.00 (-0.01, 0.00)	0.28 (0.03, 0.53)
Lactation Stage	<i>Intercept</i>	0.17 (0.15, 0.18)	2.16 (2.05, 2.26)	0.17 (0.16, 0.17)	1.99 (1.94, 2.05)	33.51 (32.75, 34.26)	0.60 (0.58, 0.63)	0.12 (0.12, 0.13)	0.13 (0.12, 0.14)	39.75 (38.88, 40.61)
	β /week	0.00 (-0.00, 0.01)	0.02 (-0.00, 0.04)	0.00 (-0.00, 0.00)	-0.01 (-0.03, -0.00)	0.26 (0.10, 0.42)	-0.02 (-0.02, -0.01)	-0.01 (-0.01, -0.01)	-0.01 (-0.01, -0.01)	0.20 (0.02, 0.38)
Multiple birth	<i>Singleton</i>	0.18 (0.16, 0.19)	2.24 (2.16, 2.33)	0.17 (0.16, 0.18)	1.93 (1.88, 1.97)	33.61 (33.06, 34.15)	0.55 (0.53, 0.56)	0.10 (0.09, 0.10)	0.09 (0.09, 0.10)	39.64 (39.01, 40.26)
	<i>Multiple</i>	0.17 (0.15, 0.20)	2.19 (2.05, 2.32)	0.17 (0.16, 0.18)	1.99 (1.91, 2.06)	36.69 (35.79, 37.60)	0.55 (0.53, 0.58)	0.09 (0.09, 0.10)	0.08 (0.07, 0.09)	42.70 (41.67, 43.73)
BMI	<i>Underweight</i>	0.17 (0.13, 0.21)	2.48 (2.22, 2.74)	0.18 (0.16, 0.20)	2.05 (1.91, 2.20)	36.33 (34.53, 38.13)	0.55 (0.50, 0.60)	0.09 (0.08, 0.11)	0.09 (0.07, 0.11)	42.60 (40.58, 44.61)
	<i>Normal</i>	0.17 (0.15, 0.18)	2.17 (2.07, 2.26)	0.17 (0.16, 0.17)	1.95 (1.89, 2.00)	35.21 (34.53, 35.88)	0.57 (0.55, 0.59)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	41.33 (40.58, 42.09)
	<i>Overweight</i>	0.16 (0.14, 0.18)	2.13 (2.01, 2.26)	0.16 (0.15, 0.17)	1.89 (1.82, 1.96)	32.88 (32.03, 33.73)	0.52 (0.49, 0.54)	0.09 (0.08, 0.10)	0.08 (0.07, 0.09)	38.43 (37.48, 39.38)
	<i>Obese</i>	0.24 (0.21, 0.26)	2.44 (2.26, 2.61)	0.19 (0.17, 0.20)	1.95 (1.85, 2.04)	34.08 (32.89, 35.27)	0.55 (0.51, 0.58)	0.10 (0.09, 0.11)	0.10 (0.08, 0.11)	40.59 (39.25, 41.92)
Delivery	<i>Vaginal</i>	0.18 (0.17, 0.20)	2.20 (2.09, 2.31)	0.17 (0.17, 0.18)	1.88 (1.82, 1.94)	34.07 (33.28, 34.86)	0.53 (0.51, 0.56)	0.09 (0.09, 0.10)	0.09 (0.08, 0.10)	40.09 (39.20, 40.98)

Supplementary Material

Maternal Age	<i>Caesarean</i>	0.17 (0.16, 0.18)	2.25 (2.16, 2.34)	0.17 (0.16, 0.17)	1.98 (1.93, 2.03)	34.66 (34.03, 35.30)	0.56 (0.54, 0.57)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	40.70 (39.98, 41.41)
	<i>Intercept</i>	0.16 (0.08, 0.24)	2.32 (1.84, 2.80)	0.13 (0.09, 0.16)	1.98 (1.72, 2.24)	32.22 (28.90, 35.54)	0.57 (0.47, 0.66)	0.11 (0.08, 0.13)	0.11 (0.07, 0.16)	38.14 (34.41, 41.86)
	$\beta/5$ years	0.00 (-0.01, 0.01)	-0.01 (-0.08, 0.06)	0.01 (0.00, 0.01)	-0.01 (-0.04, 0.03)	0.33 (-0.16, 0.83)	-0.00 (-0.02, 0.01)	-0.00 (-0.01, 0.00)	-0.00 (-0.01, 0.00)	0.35 (-0.20, 0.90)
Parity	<i>1</i>	0.18 (0.16, 0.19)	2.23 (2.14, 2.31)	0.17 (0.16, 0.18)	1.96 (1.91, 2.01)	35.04 (34.43, 35.66)	0.56 (0.55, 0.58)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	41.03 (40.34, 41.73)
	<i>>1</i>	0.17 (0.15, 0.19)	2.23 (2.12, 2.35)	0.17 (0.16, 0.18)	1.92 (1.85, 1.98)	33.43 (32.64, 34.21)	0.52 (0.50, 0.54)	0.09 (0.08, 0.10)	0.09 (0.08, 0.10)	39.51 (38.62, 40.41)
Maternal Education	<i>No post-secondary degree</i>	0.16 (0.14, 0.19)	2.32 (2.14, 2.49)	0.16 (0.15, 0.18)	1.95 (1.85, 2.05)	33.22 (31.96, 34.48)	0.52 (0.49, 0.56)	0.10 (0.09, 0.11)	0.09 (0.07, 0.10)	39.55 (38.13, 40.96)
	<i>Post-secondary Degree</i>	0.18 (0.17, 0.19)	2.20 (2.13, 2.28)	0.17 (0.16, 0.18)	1.94 (1.89, 1.98)	34.61 (34.07, 35.15)	0.55 (0.54, 0.57)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	40.57 (39.96, 41.17)
Maternal Ethnicity	<i>European</i>	0.22 (0.20, 0.23)	2.34 (2.23, 2.44)	0.18 (0.17, 0.19)	1.92 (1.87, 1.97)	36.15 (35.42, 36.89)	0.55 (0.52, 0.57)	0.09 (0.09, 0.10)	0.08 (0.07, 0.09)	42.42 (41.61, 43.22)
	<i>East or Southeast Asian</i>	0.13 (0.12, 0.15)	2.38 (2.25, 2.51)	0.17 (0.16, 0.18)	2.14 (2.08, 2.21)	35.42 (34.52, 36.32)	0.59 (0.56, 0.61)	0.10 (0.09, 0.11)	0.09 (0.08, 0.10)	41.79 (40.80, 42.78)
	<i>South or West Asian</i>	0.20 (0.18, 0.22)	2.07 (1.91, 2.22)	0.16 (0.15, 0.17)	1.74 (1.66, 1.82)	32.09 (31.00, 33.18)	0.52 (0.48, 0.55)	0.10 (0.09, 0.11)	0.09 (0.08, 0.11)	37.44 (36.24, 38.64)
	<i>African or Caribbean</i>	0.13 (0.11, 0.15)	1.92 (1.78, 2.06)	0.15 (0.14, 0.16)	1.86 (1.79, 1.93)	32.43 (31.45, 33.41)	0.54 (0.51, 0.57)	0.10 (0.09, 0.11)	0.09 (0.08, 0.11)	38.08 (37.00, 39.16)
Income	<i>Other</i>	0.23 (0.18, 0.29)	2.30 (1.92, 2.68)	0.16 (0.13, 0.19)	1.99 (1.79, 2.18)	31.04 (28.35, 33.73)	0.51 (0.43, 0.60)	0.11 (0.08, 0.13)	0.11 (0.07, 0.15)	37.39 (34.38, 40.39)
	<i>Above poverty line</i>	0.18 (0.17, 0.20)	2.25 (2.17, 2.33)	0.17 (0.17, 0.18)	1.96 (1.91, 2.00)	34.99 (34.47, 35.51)	0.56 (0.54, 0.58)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	41.15 (40.57, 41.73)
	<i>Below poverty line</i>	0.15 (0.12, 0.17)	2.11 (1.95, 2.27)	0.15 (0.14, 0.16)	1.87 (1.78, 1.96)	32.27 (31.20, 33.34)	0.50 (0.47, 0.53)	0.09 (0.08, 0.10)	0.08 (0.07, 0.10)	37.70 (36.50, 38.89)

Supplementary Material

English	<i>Yes</i>	0.17 (0.16, 0.19)	2.23 (2.13, 2.33)	0.17 (0.16, 0.18)	1.95 (1.90, 2.00)	34.53 (33.86, 35.20)	0.56 (0.54, 0.58)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	40.63 (39.87, 41.40)
	<i>Mixed</i>	0.19 (0.17, 0.21)	2.29 (2.16, 2.42)	0.18 (0.17, 0.19)	1.92 (1.85, 1.99)	34.50 (33.66, 35.35)	0.53 (0.51, 0.56)	0.09 (0.09, 0.10)	0.09 (0.08, 0.10)	40.49 (39.53, 41.45)
	<i>No</i>	0.13 (0.10, 0.16)	2.00 (1.78, 2.22)	0.15 (0.13, 0.17)	2.01 (1.89, 2.12)	36.06 (34.59, 37.53)	0.57 (0.53, 0.62)	0.10 (0.08, 0.11)	0.08 (0.07, 0.10)	41.78 (40.10, 43.45)
Marital Status	<i>Single</i>	0.17 (0.12, 0.21)	2.07 (1.75, 2.38)	0.14 (0.12, 0.16)	1.76 (1.60, 1.92)	31.96 (29.89, 34.03)	0.51 (0.45, 0.57)	0.10 (0.08, 0.12)	0.11 (0.08, 0.13)	37.46 (35.12, 39.80)
	<i>Married</i>	0.17 (0.16, 0.18)	2.24 (2.16, 2.31)	0.17 (0.17, 0.18)	1.96 (1.92, 2.00)	34.86 (34.35, 35.36)	0.55 (0.54, 0.57)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	40.91 (40.34, 41.48)
Smoking	<i>No</i>	0.17 (0.16, 0.18)	2.22 (2.15, 2.30)	0.17 (0.16, 0.17)	1.94 (1.90, 1.98)	34.53 (34.03, 35.03)	0.55 (0.53, 0.56)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	40.54 (39.97, 41.10)
	<i>Yes</i>	0.22 (0.17, 0.26)	2.31 (2.00, 2.63)	0.18 (0.15, 0.20)	1.92 (1.75, 2.09)	32.48 (30.23, 34.73)	0.52 (0.46, 0.59)	0.10 (0.08, 0.12)	0.10 (0.07, 0.12)	38.95 (36.40, 41.50)
	<i>Spring</i>	0.18 (0.16, 0.20)	2.24 (2.11, 2.37)	0.17 (0.16, 0.18)	1.97 (1.90, 2.03)	34.72 (33.78, 35.65)	0.55 (0.53, 0.58)	0.10 (0.09, 0.11)	0.09 (0.08, 0.10)	40.92 (39.88, 41.97)
Season	<i>Fall</i>	0.14 (0.12, 0.17)	2.17 (2.03, 2.32)	0.17 (0.15, 0.18)	2.00 (1.92, 2.08)	34.78 (33.71, 35.85)	0.59 (0.56, 0.62)	0.10 (0.09, 0.11)	0.10 (0.09, 0.11)	40.99 (39.79, 42.18)
	<i>Summer</i>	0.20 (0.18, 0.22)	2.39 (2.25, 2.54)	0.18 (0.17, 0.19)	1.97 (1.89, 2.05)	34.43 (33.35, 35.50)	0.53 (0.50, 0.56)	0.09 (0.08, 0.10)	0.08 (0.07, 0.10)	40.43 (39.23, 41.63)
	<i>Winter</i>	0.18 (0.16, 0.20)	2.14 (2.01, 2.26)	0.16 (0.15, 0.17)	1.85 (1.79, 1.92)	33.89 (32.97, 34.82)	0.53 (0.50, 0.55)	0.09 (0.08, 0.10)	0.08 (0.07, 0.09)	39.64 (38.61, 40.67)

Supplementary Material

		n-3 PUFA - mol% (95% CI)					
		18:3n-3 (ALA)	20:3n-3	20:5n-3 (EPA)	22:5n-3 (DPA)	22:6n-3 (DHA)	Total n-3 PUFA
Gestational Age	<i>Intercept</i>	1.86 (1.18, 2.55)	0.08 (0.04, 0.13)	0.07 (-0.02, 0.16)	0.13 (0.05, 0.22)	0.02 (-0.20, 0.25)	2.15 (1.35, 2.94)
	β /week	-0.01 (-0.03, 0.02)	0.00 (-0.00, 0.00)	0.00 (-0.00, 0.00)	0.00 (-0.00, 0.01)	0.01 (0.00, 0.02)	0.01 (-0.02, 0.04)
Infant Sex	<i>Female</i>	1.73 (1.65, 1.80)	0.09 (0.09, 0.10)	0.09 (0.08, 0.10)	0.19 (0.18, 0.20)	0.36 (0.33, 0.39)	2.45 (2.36, 2.54)
	<i>Male</i>	1.76 (1.67, 1.85)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	0.19 (0.18, 0.20)	0.35 (0.32, 0.39)	2.43 (2.33, 2.54)
Birth Weight	<i>Intercept</i>	1.72 (1.46, 1.98)	0.11 (0.10, 0.13)	0.04 (0.01, 0.07)	0.18 (0.15, 0.21)	0.22 (0.13, 0.32)	2.22 (1.92, 2.52)
	β /100g	0.00 (-0.03, 0.03)	-0.00 (-0.00, -0.00)	0.01 (0.00, 0.01)	0.00 (-0.00, 0.00)	0.02 (0.00, 0.03)	0.03 (-0.01, 0.06)
Lactation Stage	<i>Intercept</i>	1.58 (1.48, 1.68)	0.12 (0.11, 0.12)	0.08 (0.07, 0.10)	0.20 (0.19, 0.22)	0.41 (0.38, 0.44)	2.34 (2.22, 2.45)
	β /week	0.04 (0.02, 0.06)	-0.01 (-0.01, -0.00)	0.00 (-0.00, 0.00)	-0.00 (-0.01, -0.00)	-0.02 (-0.02, -0.01)	0.02 (-0.01, 0.04)
Multiple birth	<i>Singleton</i>	1.68 (1.61, 1.76)	0.10 (0.09, 0.10)	0.08 (0.07, 0.09)	0.19 (0.18, 0.20)	0.35 (0.33, 0.38)	2.37 (2.28, 2.45)
	<i>Multiple</i>	1.80 (1.68, 1.92)	0.09 (0.08, 0.10)	0.10 (0.08, 0.12)	0.19 (0.18, 0.21)	0.35 (0.31, 0.40)	2.52 (2.38, 2.66)
BMI	<i>Underweight</i>	1.62 (1.38, 1.86)	0.09 (0.07, 0.10)	0.08 (0.05, 0.11)	0.19 (0.16, 0.22)	0.34 (0.26, 0.42)	2.23 (1.95, 2.51)
	<i>Normal</i>	1.76 (1.67, 1.84)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	0.19 (0.18, 0.20)	0.38 (0.35, 0.41)	2.48 (2.37, 2.58)
	<i>Overweight</i>	1.78 (1.66, 1.89)	0.10 (0.09, 0.10)	0.09 (0.07, 0.10)	0.19 (0.18, 0.21)	0.35 (0.32, 0.39)	2.48 (2.35, 2.61)
	<i>Obese</i>	1.54 (1.38, 1.70)	0.09 (0.08, 0.10)	0.07 (0.05, 0.10)	0.18 (0.16, 0.20)	0.28 (0.22, 0.33)	2.16 (1.98, 2.35)
Delivery	<i>Vaginal</i>	1.70 (1.60, 1.80)	0.09 (0.09, 0.10)	0.09 (0.08, 0.11)	0.19 (0.18, 0.20)	0.35 (0.31, 0.38)	2.37 (2.26, 2.49)
	<i>Caesarean</i>	1.73 (1.65, 1.81)	0.10 (0.09, 0.10)	0.08 (0.07, 0.09)	0.19 (0.18, 0.20)	0.36 (0.33, 0.39)	2.43 (2.34, 2.52)
Maternal Age	<i>Intercept</i>	1.63 (1.21, 2.06)	0.12 (0.10, 0.15)	0.08 (0.02, 0.14)	0.18 (0.13, 0.23)	0.23 (0.09, 0.37)	2.28 (1.79, 2.77)
	β /5 years	0.01 (-0.05, 0.07)	-0.00 (-0.01, -0.00)	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	0.02 (-0.00, 0.04)	0.02 (-0.05, 0.09)
Parity	<i>1</i>	1.69 (1.61, 1.76)	0.09 (0.09, 0.10)	0.09 (0.08, 0.10)	0.19 (0.18, 0.20)	0.37 (0.34, 0.39)	2.40 (2.30, 2.49)
	<i>>1</i>	1.77 (1.66, 1.87)	0.10 (0.09, 0.10)	0.08 (0.07, 0.09)	0.19 (0.18, 0.20)	0.33 (0.30, 0.37)	2.43 (2.31, 2.55)
Maternal Education	<i>No post-secondary degree</i>	1.52 (1.37, 1.68)	0.09 (0.08, 0.10)	0.08 (0.06, 0.10)	0.19 (0.17, 0.21)	0.38 (0.33, 0.44)	2.26 (2.07, 2.44)

Supplementary Material

	<i>Post-secondary Degree</i>	1.76 (1.69, 1.82)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	0.19 (0.18, 0.20)	0.35 (0.33, 0.37)	2.44 (2.36, 2.52)
	<i>European</i>	1.70 (1.59, 1.80)	0.09 (0.08, 0.09)	0.10 (0.08, 0.11)	0.18 (0.17, 0.20)	0.32 (0.29, 0.35)	2.36 (2.24, 2.48)
	<i>East or Southeast Asian</i>	1.77 (1.64, 1.89)	0.10 (0.09, 0.11)	0.08 (0.06, 0.09)	0.20 (0.18, 0.21)	0.40 (0.35, 0.44)	2.47 (2.32, 2.62)
Maternal Ethnicity	<i>South or West Asian</i>	1.78 (1.63, 1.93)	0.10 (0.09, 0.11)	0.09 (0.07, 0.11)	0.19 (0.18, 0.21)	0.33 (0.28, 0.38)	2.49 (2.31, 2.66)
	<i>African or Caribbean</i>	1.69 (1.55, 1.83)	0.10 (0.09, 0.11)	0.09 (0.07, 0.10)	0.19 (0.17, 0.21)	0.39 (0.34, 0.44)	2.43 (2.27, 2.59)
	<i>Other</i>	1.46 (1.08, 1.85)	0.11 (0.09, 0.13)	0.09 (0.04, 0.13)	0.24 (0.19, 0.28)	0.35 (0.22, 0.47)	2.05 (1.60, 2.50)
	<i>Above poverty line</i>	1.70 (1.63, 1.77)	0.09 (0.09, 0.10)	0.09 (0.08, 0.10)	0.19 (0.18, 0.20)	0.36 (0.33, 0.38)	2.39 (2.31, 2.48)
Income	<i>Below poverty line</i>	1.76 (1.62, 1.90)	0.10 (0.09, 0.11)	0.08 (0.06, 0.09)	0.19 (0.17, 0.21)	0.34 (0.29, 0.39)	2.44 (2.27, 2.61)
	<i>Yes</i>	1.67 (1.58, 1.76)	0.10 (0.09, 0.10)	0.08 (0.07, 0.09)	0.18 (0.17, 0.20)	0.34 (0.30, 0.37)	2.36 (2.25, 2.46)
English	<i>Mixed</i>	1.66 (1.55, 1.78)	0.09 (0.09, 0.10)	0.09 (0.08, 0.11)	0.20 (0.18, 0.21)	0.39 (0.35, 0.43)	2.40 (2.27, 2.53)
	<i>No</i>	1.91 (1.71, 2.10)	0.10 (0.09, 0.11)	0.10 (0.07, 0.13)	0.20 (0.18, 0.22)	0.40 (0.34, 0.47)	2.55 (2.32, 2.78)
Marital Status	<i>Single</i>	1.56 (1.28, 1.84)	0.09 (0.07, 0.11)	0.09 (0.06, 0.13)	0.21 (0.17, 0.24)	0.42 (0.33, 0.52)	2.27 (1.93, 2.60)
	<i>Married</i>	1.70 (1.64, 1.77)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	0.19 (0.18, 0.20)	0.36 (0.33, 0.38)	2.40 (2.32, 2.48)
Smoking	<i>No</i>	1.73 (1.67, 1.79)	0.10 (0.09, 0.10)	0.09 (0.08, 0.10)	0.19 (0.18, 0.20)	0.36 (0.33, 0.38)	2.42 (2.35, 2.50)
	<i>Yes</i>	1.42 (1.13, 1.71)	0.10 (0.08, 0.11)	0.07 (0.03, 0.10)	0.19 (0.15, 0.22)	0.31 (0.22, 0.41)	2.08 (1.74, 2.41)
	<i>Spring</i>	1.74 (1.63, 1.86)	0.10 (0.09, 0.11)	0.08 (0.07, 0.10)	0.19 (0.17, 0.20)	0.34 (0.30, 0.38)	2.40 (2.27, 2.54)
	<i>Fall</i>	1.63 (1.50, 1.76)	0.10 (0.09, 0.11)	0.08 (0.06, 0.10)	0.17 (0.16, 0.19)	0.35 (0.31, 0.40)	2.32 (2.17, 2.48)
Season	<i>Summer</i>	1.66 (1.53, 1.80)	0.09 (0.08, 0.10)	0.09 (0.07, 0.11)	0.20 (0.19, 0.22)	0.36 (0.31, 0.41)	2.38 (2.22, 2.54)
	<i>Winter</i>	1.79 (1.68, 1.91)	0.09 (0.09, 0.10)	0.10 (0.08, 0.11)	0.19 (0.18, 0.21)	0.36 (0.33, 0.40)	2.50 (2.37, 2.63)

Supplementary Material

		n-6 PUFA - mol% (95% CI)						Ratios (95% CI)			
		18:2n-6 (LA)	18:3n-6 (GLA)	20:2n-6	20:3n-6 (DGLA)	20:4n-6 (ARA)	22:4n-6	22:5n-6	Total n-6 PUFA	n-6:n-3 PUFA	ARA:DHA
Gestational Age	<i>Intercept</i>	16.26	0.06	0.35	0.29	0.22	-0.00	0.02	17.41	8.87	2.22 (1.18, 3.27)
		(12.03, 20.50)	(-0.02, 0.15)	(-0.88, 1.59)	(0.03, 0.55)	(-0.01, 0.45)	(-0.19, 0.19)	(-0.02, 0.05)	(13.06, 21.76)	(5.57, 12.17)	
	<i>β/week</i>	-0.04	0.00	0.01	0.01	0.01	0.01	0.00	-0.00	-0.04	-0.01
Infant Sex	<i>Female</i>	(-0.20, 0.11)	(-0.00, 0.00)	(-0.04, 0.05)	(-0.00, 0.02)	(0.01, 0.02)	(0.00, 0.01)	(-0.00, 0.00)	(-0.16, 0.15)	(-0.16, 0.08)	(-0.05, 0.03)
		15.35	0.10	0.55	0.53	0.59	0.20	0.05	17.52	7.47	1.92 (1.80, 2.04)
	<i>Male</i>	(14.84, 15.86)	(0.09, 0.11)	(0.42, 0.67)	(0.50, 0.56)	(0.57, 0.62)	(0.18, 0.22)	(0.05, 0.06)	(17.00, 18.04)	(7.13, 7.82)	
Birth Weight	<i>Intercept</i>	15.28	0.10	0.47	0.54	0.59	0.19	0.05	17.37	7.77	1.88 (1.75, 2.02)
		(14.71, 15.86)	(0.09, 0.11)	(0.32, 0.61)	(0.50, 0.57)	(0.56, 0.62)	(0.17, 0.22)	(0.05, 0.06)	(16.78, 17.95)	(7.37, 8.16)	
	<i>β/100g</i>	16.36	0.07	0.47	0.49	0.54	0.18	0.06	18.27	8.75	2.15 (1.75, 2.56)
Lactation Stage	<i>Intercept</i>	(14.69, 18.02)	(0.04, 0.10)	(0.06, 0.88)	(0.39, 0.58)	(0.45, 0.62)	(0.11, 0.24)	(0.04, 0.07)	(16.57, 19.97)	(7.64, 9.87)	
		-0.12	0.00	0.01	0.01	0.01	0.00	-0.00	-0.09	-0.13	-0.03 (-0.07, 0.02)
	<i>β/week</i>	(-0.31, 0.07)	(-0.00, 0.01)	(-0.04, 0.05)	(-0.01, 0.02)	(-0.00, 0.02)	(-0.01, 0.01)	(-0.00, 0.00)	(-0.28, 0.10)	(-0.26, -0.01)	
Multiple birth	<i>Singleton</i>	14.37	0.09	0.54	0.63	0.67	0.24	0.07	16.73	7.66	1.78 (1.67, 1.90)
		(13.80, 14.95)	(0.08, 0.10)	(0.35, 0.74)	(0.60, 0.66)	(0.64, 0.70)	(0.21, 0.26)	(0.07, 0.08)	(16.13, 17.34)	(7.16, 8.16)	
	<i>Multiple</i>	14.96	0.09	0.57	0.54	0.59	0.21	0.06	17.18	7.79	1.88 (1.76, 1.99)
Multiple birth	<i>Singleton</i>	(14.51, 15.42)	(0.08, 0.10)	(0.44, 0.70)	(0.51, 0.57)	(0.56, 0.61)	(0.19, 0.23)	(0.05, 0.06)	(16.71, 17.64)	(7.45, 8.14)	
		15.54	0.11	0.42	0.54	0.59	0.18	0.05	17.53	7.28	1.93 (1.74, 2.12)
	<i>Multiple</i>	(14.79, 16.29)	(0.10, 0.13)	(0.21, 0.63)	(0.49, 0.58)	(0.55, 0.63)	(0.15, 0.22)	(0.04, 0.05)	(16.76, 18.30)	(6.72, 7.85)	

Supplementary Material

BMI	<i>Underweight</i>	14.40	0.11	0.44	0.55	0.61	0.22	0.05	16.53	7.93	2.04 (1.68, 2.39)
		(12.97, 15.82)	(0.09, 0.14)	(0.00, 0.88)	(0.46, 0.64)	(0.53, 0.69)	(0.15, 0.28)	(0.04, 0.07)	(15.06, 18.01)	(6.76, 9.10)	
		15.50	0.09	0.60	0.52	0.59	0.21	0.06	17.72	7.78	
	<i>Normal</i>	(14.96, 16.04)	(0.08, 0.10)	(0.44, 0.76)	(0.48, 0.55)	(0.56, 0.62)	(0.19, 0.24)	(0.05, 0.06)	(17.16, 18.27)	(7.35, 8.21)	1.78 (1.65, 1.92)
		15.68	0.10	0.49	0.52	0.58	0.19	0.05	17.75	7.58	
		(15.01, 16.36)	(0.08, 0.11)	(0.29, 0.69)	(0.48, 0.57)	(0.54, 0.62)	(0.16, 0.23)	(0.05, 0.06)	(17.05, 18.45)	(7.04, 8.12)	
	<i>Overweight</i>	13.30	0.11	0.43	0.62	0.58	0.19	0.04	15.41	7.24	2.26 (2.02, 2.49)
		(12.35, 14.25)	(0.09, 0.13)	(0.14, 0.72)	(0.56, 0.68)	(0.52, 0.63)	(0.14, 0.23)	(0.04, 0.05)	(14.43, 16.39)	(6.47, 8.02)	
		14.83	0.10	0.60	0.54	0.55	0.19	0.05	17.04	7.69	
	Delivery	<i>Vaginal</i>	(14.22, 15.44)	(0.09, 0.11)	(0.42, 0.77)	(0.50, 0.58)	(0.52, 0.58)	(0.17, 0.22)	(0.04, 0.06)	(16.41, 17.67)	(7.21, 8.16)
15.31			0.09	0.48	0.54	0.61	0.21	0.05	17.42	7.63	
(14.82, 15.79)			(0.08, 0.10)	(0.34, 0.63)	(0.51, 0.57)	(0.58, 0.64)	(0.19, 0.23)	(0.05, 0.06)	(16.92, 17.93)	(7.25, 8.02)	
<i>Caesarean</i>		15.35	0.08	0.32	0.58	0.68	0.15	0.07	17.28	7.90	2.87 (2.23, 3.51)
		(12.73, 17.97)	(0.03, 0.13)	(-0.43, 1.07)	(0.42, 0.74)	(0.53, 0.82)	(0.03, 0.27)	(0.04, 0.09)	(14.58, 19.97)	(5.89, 9.92)	
		-0.03	0.00	0.03	-0.01	-0.01	0.01	-0.00	-0.00	-0.04	
Maternal Age	$\beta/5$ years	(-0.42, 0.35)	(-0.00, 0.01)	(-0.08, 0.14)	(-0.03, 0.02)	(-0.04, 0.01)	(-0.01, 0.03)	(-0.01, 0.00)	(-0.40, 0.40)	(-0.34, 0.26)	(-0.24, -0.05)
	<i>Intercept</i>	14.92	0.10	0.55	0.53	0.57	0.18	0.05	17.07	7.62	1.81 (1.69, 1.92)
Parity	<i>1</i>	(14.44, 15.41)	(0.09, 0.11)	(0.41, 0.69)	(0.50, 0.56)	(0.55, 0.60)	(0.16, 0.20)	(0.05, 0.06)	(16.57, 17.57)	(7.25, 8.00)	
		15.44	0.10	0.49	0.55	0.61	0.24	0.05	17.61	7.71	
	<i>>1</i>	(14.82, 16.07)	(0.09, 0.11)	(0.31, 0.67)	(0.52, 0.59)	(0.57, 0.64)	(0.22, 0.27)	(0.05, 0.06)	(16.97, 18.25)	(7.22, 8.20)	2.02 (1.87, 2.17)
Maternal Education	<i>No post-secondary degree</i>	14.46	0.09	0.47	0.53	0.64	0.24	0.06	16.62	7.56	1.90 (1.66, 2.15)
		(13.47, 15.44)	(0.07, 0.11)	(0.19, 0.76)	(0.47, 0.59)	(0.58, 0.69)	(0.20, 0.29)	(0.05, 0.07)	(15.61, 17.64)	(6.79, 8.32)	

Supplementary Material

Maternal Ethnicity	<i>Post-secondary Degree</i>	15.26 (14.84, 15.69)	0.10 (0.09, 0.11)	0.54 (0.42, 0.66)	0.54 (0.51, 0.56)	0.58 (0.55, 0.60)	0.20 (0.18, 0.21)	0.05 (0.05, 0.05)	17.41 (16.98, 17.85)	7.67 (7.34, 7.99)	1.89 (1.78, 1.99)
	<i>European</i>	14.77 (14.14, 15.40)	0.12 (0.11, 0.14)	0.44 (0.26, 0.62)	0.58 (0.54, 0.61)	0.56 (0.53, 0.60)	0.17 (0.14, 0.20)	0.05 (0.04, 0.05)	16.80 (16.16, 17.45)	7.47 (6.98, 7.95)	2.08 (1.92, 2.24)
	<i>East or Southeast Asian</i>	16.09 (15.32, 16.87)	0.08 (0.06, 0.09)	0.73 (0.51, 0.96)	0.46 (0.41, 0.51)	0.56 (0.52, 0.60)	0.25 (0.22, 0.28)	0.06 (0.05, 0.07)	18.44 (17.64, 19.23)	8.02 (7.42, 8.62)	1.58 (1.38, 1.77)
	<i>South or West Asian</i>	14.94 (14.01, 15.87)	0.09 (0.07, 0.11)	0.47 (0.19, 0.75)	0.56 (0.50, 0.62)	0.55 (0.50, 0.60)	0.18 (0.14, 0.23)	0.06 (0.05, 0.06)	17.01 (16.05, 17.96)	7.18 (6.44, 7.92)	1.88 (1.65, 2.11)
	<i>African or Caribbean</i>	15.21 (14.38, 16.04)	0.09 (0.08, 0.11)	0.50 (0.25, 0.75)	0.54 (0.49, 0.59)	0.67 (0.63, 0.72)	0.21 (0.18, 0.25)	0.06 (0.05, 0.06)	17.40 (16.54, 18.25)	7.86 (7.20, 8.52)	1.86 (1.66, 2.06)
	<i>Other</i>	12.42 (10.16, 14.67)	0.05 (0.01, 0.09)	0.50 (-0.26, 1.26)	0.52 (0.39, 0.66)	0.74 (0.62, 0.86)	0.22 (0.12, 0.33)	0.07 (0.05, 0.09)	14.69 (12.36, 17.03)	8.16 (6.22, 10.09)	2.20 (1.69, 2.70)
	<i>Above poverty line</i>	14.99 (14.56, 15.41)	0.10 (0.09, 0.11)	0.54 (0.42, 0.66)	0.54 (0.51, 0.57)	0.58 (0.56, 0.61)	0.19 (0.17, 0.21)	0.05 (0.05, 0.06)	17.14 (16.70, 17.59)	7.65 (7.31, 7.98)	1.88 (1.77, 1.99)
	<i>Below poverty line</i>	15.73 (14.85, 16.61)	0.08 (0.07, 0.10)	0.48 (0.22, 0.74)	0.53 (0.47, 0.59)	0.59 (0.55, 0.64)	0.25 (0.21, 0.29)	0.06 (0.05, 0.07)	17.84 (16.94, 18.75)	7.74 (7.05, 8.42)	1.96 (1.74, 2.19)
	<i>Yes</i>	15.07 (14.50, 15.64)	0.09 (0.08, 0.11)	0.59 (0.42, 0.77)	0.53 (0.49, 0.56)	0.57 (0.54, 0.60)	0.21 (0.19, 0.24)	0.05 (0.05, 0.06)	17.29 (16.71, 17.87)	7.83 (7.38, 8.28)	1.91 (1.78, 2.05)
	English	<i>Mixed</i>	14.81 (14.09, 15.54)	0.10 (0.08, 0.11)	0.46 (0.25, 0.68)	0.55 (0.50, 0.59)	0.59 (0.55, 0.63)	0.20 (0.17, 0.23)	0.05 (0.05, 0.06)	16.88 (16.14, 17.62)	7.46 (6.90, 8.03)
	<i>No</i>	16.25 (14.99, 17.51)	0.12 (0.10, 0.14)	0.48 (0.11, 0.85)	0.54 (0.47, 0.62)	0.62 (0.56, 0.69)	0.18 (0.12, 0.24)	0.06 (0.05, 0.07)	18.38 (17.09, 19.66)	8.06 (7.08, 9.05)	1.64 (1.34, 1.94)

Supplementary Material

Marital Status	<i>Single</i>	14.65	0.09	0.48 (-	0.57	0.64	0.19	0.06	16.84	8.14	1.78 (1.35, 2.20)
		(12.89, 16.42)	(0.05, 0.12)	0.06, 1.03)	(0.46, 0.67)	(0.55, 0.74)	(0.11, 0.27)	(0.05, 0.08)	(15.02, 18.65)	(6.72, 9.56)	
	<i>Married</i>	15.14	0.10	0.54	0.53	0.58	0.20	0.05	17.30	7.70	1.86 (1.75, 1.96)
		(14.71, 15.58)	(0.09, 0.11)	(0.41, 0.67)	(0.51, 0.56)	(0.56, 0.60)	(0.18, 0.23)	(0.05, 0.06)	(16.86, 17.74)	(7.36, 8.04)	
Smoking	<i>No</i>	15.24	0.10	0.53	0.54	0.58	0.20	0.05	17.39	7.67	1.86 (1.76, 1.96)
		(14.85, 15.64)	(0.09, 0.11)	(0.42, 0.64)	(0.51, 0.56)	(0.56, 0.60)	(0.18, 0.22)	(0.05, 0.06)	(16.99, 17.80)	(7.36, 7.97)	
	<i>Yes</i>	12.67	0.07	0.48 (-	0.51	0.68	0.24	0.06	14.87	7.42	2.41 (2.02, 2.81)
		(10.94, 14.41)	(0.04, 0.10)	0.07, 1.02)	(0.40, 0.62)	(0.58, 0.77)	(0.16, 0.32)	(0.04, 0.08)	(13.07, 16.67)	(5.99, 8.86)	
	<i>Spring</i>	15.29	0.10	0.49	0.56	0.58	0.19	0.05	17.42	7.65	1.90 (1.72, 2.09)
		(14.57, 16.01)	(0.09, 0.12)	(0.27, 0.70)	(0.52, 0.61)	(0.54, 0.62)	(0.16, 0.22)	(0.05, 0.06)	(16.68, 18.16)	(7.09, 8.22)	
Season	<i>Fall</i>	15.22	0.08	0.77	0.52	0.56	0.27	0.05	17.69	8.11	1.91 (1.69, 2.12)
		(14.39, 16.04)	(0.07, 0.10)	(0.54, 1.01)	(0.47, 0.58)	(0.52, 0.61)	(0.23, 0.31)	(0.05, 0.06)	(16.84, 18.53)	(7.48, 8.75)	
	<i>Summer</i>	14.33	0.10	0.43	0.53	0.61	0.19	0.05	16.37	7.19	1.87 (1.66, 2.08)
		(13.50, 15.15)	(0.09, 0.12)	(0.19, 0.67)	(0.48, 0.58)	(0.56, 0.65)	(0.16, 0.23)	(0.04, 0.06)	(15.52, 17.21)	(6.55, 7.83)	
	<i>Winter</i>	15.47	0.10	0.46	0.52	0.59	0.17	0.05	17.49	7.65	1.89 (1.70, 2.07)
		(14.76, 16.18)	(0.09, 0.11)	(0.26, 0.66)	(0.48, 0.57)	(0.55, 0.63)	(0.14, 0.21)	(0.05, 0.06)	(16.77, 18.22)	(7.11, 8.20)	

¹Unadjusted means (categorical variables) and β estimates + intercepts (continuous variables) of infant, maternal, sociodemographic, or environmental factors with mother's milk fatty acid composition standard deviation scores. A negative sign indicates a negative association. Values in **bold** indicate a statistically significant association for continuous variables or significant difference from the top

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(reference) category for categorical variables (p<0.05). Sample size is 100 mothers, 472 human milk samples. Associations were analyzed using PROC MIXED accounting for repeated measures using an autoregressive correlation structure.

Alpha linolenic acid (ALA), Arachidonic acid (ARA), Docosahexaenoic acid (DHA), Docosapentaenoic acid (DPA), Eicosapentaenoic acid (EPA), Female (F), Dihomo gamma linolenic acid (DGLA), Gamma linolenic acid (GLA), Linoleic acid (LA), Monounsaturated fatty acid (MUFA), Polyunsaturated fatty acid (PUFA), Saturated Fatty Acids (SFA), Standard deviation scores (SDS).

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Supplementary TABLE 4 Estimated intakes of fat and fatty acids at full enteral feeding volumes (160 ml/kg/day)¹

Fatty Acid	Intakes from Donor Milk (g/kg/day)	Intakes from Average MoM (g/kg/day)	Intake Difference with 100% Donor Milk vs MoM (g/kg/day)			
			Colostrum	Transitional	Early-Mature	Later-Mature
Total Fat	5.220	5.960	0.088	-0.961	-0.832	-1.259
10:0 (capric acid)	0.016	0.017	0.013	-0.007	-0.004	-0.005
12:0 (lauric acid)	0.149	0.268	-0.010	-0.184	-0.145	-0.140
14:0 (myristic acid)	0.239	0.443	-0.093	-0.274	-0.222	-0.225
16:0 (palmitic acid)	0.948	1.271	-0.199	-0.359	-0.332	-0.405
18:0 (stearic acid)	0.268	0.334	-0.018	-0.070	-0.082	-0.095
20:0	0.007	0.010	-0.002	-0.003	-0.003	-0.003
21:0	0.007	0.005	0.003	0.002	0.001	0.002
22:0	0.003	0.004	-0.001	-0.001	-0.001	-0.001
23:0	0.005	0.007	-0.001	-0.003	-0.002	-0.002
24:0	0.002	0.005	-0.004	-0.003	-0.002	-0.002
Total SFA	1.663	2.403	-0.350	-0.914	-0.808	-0.889
14:1n-5	0.011	0.010	0.004	0.000	-0.001	-0.001
16:1n-7 (palmitoleic acid)	0.138	0.133	0.027	0.005	0.000	-0.013
17:1n-7	0.010	0.010	0.001	0.000	-0.001	-0.001
18:1n-7	0.099	0.118	-0.011	-0.024	-0.015	-0.025
18:1n-9 (oleic acid)	2.076	2.059	0.283	-0.017	0.008	-0.205
20:1n-9	0.024	0.034	-0.010	-0.012	-0.007	-0.008
22:1n-9	0.003	0.006	-0.005	-0.004	-0.002	-0.002

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24:1n-9	0.001	0.006	-0.008	-0.006	-0.003	-0.002
Total MUFA	2.402	2.425	0.290	-0.072	-0.033	-0.276
18:3n-3 (ALA)	0.115	0.106	0.027	0.013	0.008	-0.011
20:3n-3	0.003	0.006	-0.004	-0.004	-0.003	-0.002
20:5n-3 (EPA)	0.007	0.005	0.003	0.002	0.002	0.002
22:5n-3 (DPA)	0.011	0.012	-0.002	-0.001	0.000	-0.001
22:6n-3 (DHA)	0.016	0.022	-0.008	-0.009	-0.005	-0.003
Total n-3 PUFA	0.150	0.150	0.016	0.001	0.003	-0.018
18:2n-6 (LA)	0.955	0.914	0.170	0.059	0.019	-0.085
18:3n-6 (GLA)	0.008	0.006	0.004	0.003	0.001	0.000
20:2n-6	0.014	0.030	-0.021	-0.019	-0.013	-0.011
20:3n-6 (DGLA)	0.021	0.033	-0.015	-0.015	-0.010	-0.007
20:4n-6 (ARA)	0.032	0.036	-0.005	-0.009	-0.003	-0.001
22:4n-6 (adrenic acid)	0.012	0.013	-0.005	-0.001	0.000	0.002
22:5n-6	0.002	0.003	-0.003	-0.003	-0.001	-0.001
Total n-6 PUFA	1.049	1.042	0.126	0.009	-0.006	-0.104

¹Simulated diet based on mean fat and fatty acid contents (g/dl) of pooled donor human milk batches fed during the OptiMoM study (n=53) and mother's own milk (n=100 mothers) fed at full enteral feeding volumes (160 ml/kg/day). Colostrum was collected on post-partum days 1-4, transitional milk (days 8-14), early-mature milk (days 15-40), later-mature milk (>40 days).

Alpha linolenic acid (ALA), Arachidonic acid (ARA), Docosahexaenoic acid (DHA), Docosapentaenoic acid (DPA), Eicosapentaenoic acid (EPA), Dihomo gamma linolenic acid (DGLA), Gamma linolenic acid (GLA), Linoleic acid (LA), Mother's own Milk (MoM), Monounsaturated fatty acid (MUFA), Polyunsaturated fatty acid (PUFA), Saturated fatty acids (SFA).

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Supplementary TABLE 5 Model 1 Unadjusted fatty acid intakes (g/kg/day) of VLBW infants fed >50% donor milk compared to 100% mother's milk¹

	Weeks 1 and 2						Week 4					
	Model 1 Means (SE)				Model 1 ²		Model 1 Means (SE)				Model 1 ²	
	>50% DM		100% MoM		β (SE)		>50% DM		100% MoM		β (SE)	
Intakes g/kg/day												
Total Fat	4.287	(0.439)	5.670	(0.398)	-1.383	0.593	4.765	(0.364)	5.181	(0.307)	-0.416	0.476
10:0	0.011	(0.015)	0.028	(0.014)	-0.017	0.020	0.015	(0.005)	0.017	(0.004)	-0.001	0.006
12:0	0.104	(0.104)	0.334	(0.096)	-0.231	0.141	0.147	(0.023)	0.252	(0.019)	-0.105	0.030
14:0	0.176	(0.067)	0.415	(0.061)	-0.238	0.091	0.227	(0.031)	0.353	(0.027)	-0.126	0.041
16:0	0.748	(0.112)	1.221	(0.102)	-0.473	0.151	0.865	(0.095)	1.095	(0.080)	-0.230	0.125
18:0	0.204	(0.042)	0.314	(0.039)	-0.110	0.059	0.242	(0.032)	0.306	(0.027)	-0.064	0.042
20:0	0.005	(0.001)	0.010	(0.001)	-0.004	0.001	0.006	(0.001)	0.009	(0.001)	-0.003	0.001
21:0	0.005	(0.001)	0.004	(0.001)	0.001	0.001	0.006	(0.001)	0.003	(0.000)	0.004	0.001
22:0	0.002	(0.001)	0.005	(0.001)	-0.003	0.001	0.002	(0.001)	0.005	(0.000)	-0.002	0.001
23:0	0.004	(0.001)	0.007	(0.001)	-0.003	0.001	0.005	(0.001)	0.005	(0.000)	0.000	0.001
24:0	0.002	(0.001)	0.005	(0.001)	-0.004	0.001	0.002	(0.001)	0.004	(0.001)	-0.002	0.001
Total SFA	1.271	(0.289)	2.405	(0.265)	-1.135	0.392	1.539	(0.168)	2.082	(0.142)	-0.543	0.220
14:1n-5	0.009	(0.001)	0.008	(0.001)	0.000	0.002	0.010	(0.001)	0.007	(0.001)	0.003	0.001
16:1n-7	0.110	(0.014)	0.122	(0.012)	-0.013	0.018	0.125	(0.010)	0.105	(0.009)	0.020	0.013
17:1n-7	0.008	(0.002)	0.010	(0.001)	-0.003	0.002	0.009	(0.001)	0.008	(0.001)	0.001	0.001
18:1n-7	0.080	(0.009)	0.105	(0.008)	-0.025	0.012	0.090	(0.007)	0.095	(0.006)	-0.004	0.009
18:1n-9	1.729	(0.142)	1.883	(0.129)	-0.154	0.192	1.884	(0.134)	1.833	(0.113)	0.050	0.175
20:1n-9	0.019	(0.002)	0.031	(0.002)	-0.011	0.003	0.022	(0.002)	0.030	(0.002)	-0.008	0.003
22:1n-9	0.002	(0.000)	0.005	(0.000)	-0.003	0.001	0.003	(0.000)	0.005	(0.000)	-0.002	0.000
24:1n-9	0.001	(0.000)	0.006	(0.000)	-0.005	0.001	0.001	(0.000)	0.004	(0.000)	-0.003	0.000

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Total MUFA	1.995	(0.170)	2.248	(0.154)	-0.253	0.229	2.181	(0.154)	2.141	(0.130)	0.040	0.202
18:3n-3 (ALA)	0.094	(0.008)	0.075	(0.008)	0.019	0.011	0.104	(0.006)	0.085	(0.005)	0.019	0.008
20:3n-3	0.002	(0.000)	0.005	(0.000)	-0.003	0.000	0.003	(0.000)	0.004	(0.000)	-0.002	0.000
20:5n-3 (EPA)	0.006	(0.001)	0.004	(0.001)	0.002	0.001	0.006	(0.000)	0.003	(0.000)	0.003	0.000
22:5n-3 (DPA)	0.009	(0.001)	0.009	(0.001)	0.001	0.001	0.010	(0.001)	0.007	(0.000)	0.003	0.001
22:6n-3 (DHA)	0.012	(0.003)	0.022	(0.002)	-0.010	0.004	0.014	(0.001)	0.014	(0.001)	0.000	0.002
Total n-3 PUFA	0.125	(0.010)	0.115	(0.009)	0.010	0.013	0.136	(0.008)	0.110	(0.007)	0.025	0.011
18:2n-6 (LA)	0.783	(0.071)	0.790	(0.064)	-0.007	0.095	0.864	(0.057)	0.819	(0.048)	0.045	0.074
18:3n-6 (GLA)	0.006	(0.001)	0.005	(0.001)	0.001	0.001	0.007	(0.001)	0.005	(0.000)	0.002	0.001
20:2n-6	0.011	(0.003)	0.028	(0.002)	-0.018	0.004	0.013	(0.002)	0.024	(0.002)	-0.011	0.002
20:3n-6 (DGLA)	0.016	(0.003)	0.029	(0.003)	-0.013	0.004	0.019	(0.002)	0.213	(0.002)	-0.002	0.003
20:4n-6 (ARA)	0.026	(0.003)	0.029	(0.002)	-0.003	0.003	0.029	(0.002)	0.023	(0.001)	0.005	0.002
22:4n-6	0.010	(0.001)	0.007	(0.001)	0.003	0.001	0.011	(0.000)	0.005	(0.000)	0.006	0.001
22:5n-6	0.001	(0.000)	0.003	(0.000)	-0.002	0.000	0.001	(0.000)	0.002	(0.000)	-0.001	0.000
Total n-6 PUFA	0.860	(0.078)	0.903	(0.071)	-0.042	0.105	0.949	(0.062)	0.906	(0.053)	0.043	0.082
n-6:n-3 PUFA	7.005	(0.425)	8.049	(0.391)	-1.044	0.577	6.986	(1.462)	9.820	(1.234)	-2.833	1.913
ARA:DHA	2.027	(0.142)	1.466	(0.131)	0.561	0.193	1.995	(0.093)	1.739	(0.078)	0.256	0.121

¹Difference in intakes calculated for a subset of infants in the OptiMoM study at weeks 1 and 2 of life (n=13, days 1-14) and week 4 (n=31, days 22-28) not receiving parenteral nutrition, and in the bovine milk-based fortifier group between those receiving >50% donor milk and 100% mother's milk. Associations were analyzed using PROC MIXED accounting for repeated measures using an autoregressive correlation structure. Bold values indicated statistically significant differences in β estimates ($p < 0.05$).

²Estimates adjusted only for repeated measurements within subjects.

Alpha linolenic acid (ALA), Arachidonic acid (ARA), Docosahexaenoic acid (DHA), Donor milk (DM) Docosapentaenoic acid (DPA), Eicosapentaenoic acid (EPA), Dihomo gamma linolenic acid (DGLA), Gamma linolenic acid (GLA), Linoleic acid (LA), Mother's own Milk (MoM), Monounsaturated fatty acid (MUFA), Polyunsaturated fatty acid (PUFA), Saturated fatty acids (SFA).

Supplementary TABLE 6 Characteristics of participants with week 1 and 2 fatty acid intakes

Characteristics	Intakes Available (n=13)	No Intakes Available (n=112)
Sex, No. (% female) ¹	8 (61.5)	63 (56.3)
Birth weight, mean (SD), g	971.5 (196.8)	877.7 (201.8)
Gestational age at birth ² , mean (SD), weeks	28.8 (2.3)	27.6 (2.5)
Multiple birth status, No. (%)	3 (23.1)	41 (36.6)
Small for gestational age, No. (%)	5 (38.5)	24 (21.4)
Received antenatal steroids, No. (%)	12 (92.3)	98 (87.5)
SNAP-II score ³ , mean (SD)	17.2 (15.0)	13.2 (10.5)
Apgar score at 5 min, mean (SD)	7.7 (1.4)	7.3 (2.3)
Caesarean delivery, No. (%)	9 (69.2)	68 (60.7)
Season of Delivery		
Winter	3 (23.1)	37 (33.0)
Spring	3 (23.1)	28 (25.0)
Summer	5 (38.5)	22 (19.6)
Fall	2 (15.4)	25 (22.3)
Mother's age, mean (SD), years	34.2 (8.1)	33.2 (4.9)
Mother's education, No. (%)		
High school or less	4 (30.8)	15 (13.6)
College or vocational diploma	5 (38.5)	41 (37.3)
Baccalaureate	4 (30.8)	37 (33.6)
Post-baccalaureate	0 (0.0)	17 (15.5)
Mother's ethnicity, No. (%)		
Eastern or Western European	2 (15.4)	40 (36.4)
East or Southeast Asian	4 (30.8)	23 (20.9)
South or West Asian	1 (7.7)	21 (19.1)
African or Caribbean	5 (38.5)	21 (19.1)
Other (Latin American, and mixed backgrounds)	1 (7.7)	5 (4.6)
Maternal parity >1, No. (%)	4 (30.8)	42 (37.5)
Maternal BMI, mean (SD), kg/m ²	28.2 (9.0)	25.5 (5.8)
Maternal smoking, No. (%)	3 (23.1)	7 (6.3)
Language spoken at home		
English	6 (54.6)	55 (56.1)
Mixed English and other language	2 (18.2)	31 (31.6)
Language other than English	3 (27.3)	12 (12.2)

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Not Married, No. (%)	1 (9.1)	6 (6.1)
Family living below the poverty line ⁴ , No. (%)	3 (23.1)	27 (24.1)
Morbidity composite ⁵ , No. (%)	2 (15.4)	50 (44.6)
Brain injury ⁶ , No. (%)	1 (7.7)	18 (16.1)

¹Data are expressed as mean (SD) or frequency count (%). Baseline characteristics were compared between recruited participants with and without milk samples available for analysis using t-tests or Wilcoxon rank-sum tests and chi-square tests for continuous and categorical variables as appropriate.

²Gestational age determined using maternal estimates of last menstrual period. If early ultrasound prediction differed by two weeks or more, the gestational age estimate derived from early ultrasound was used.

³Score for Neonatal Acute Physiology II. Scores may range from 0 to 100 with higher values indicating higher neonatal risk and newborn illness.

⁴Based on 2012 Statistics Canada family size-adjusted cut-off values.

⁵Includes late-onset sepsis, chronic lung disease, necrotizing enterocolitis, retinopathy of prematurity requiring treatment.

⁶Includes echodense intraparenchymal lesions, periventricular leukomalacia, porencephalic cysts, or ventriculomegaly with or without intraventricular hemorrhage.

Appearance pulse grimace, activity respiration (Apgar), Human milk-based fortifier group (HMBF), Score for neonatal acute physiology (SNAP).

Supplementary TABLE 7 Characteristics of participants with week 4 fatty acid intakes

Characteristics	Intakes Available (n=31)	No Intakes Available (n=94)
Sex, No. (% female) ¹	20 (64.5)	51 (54.3)
Birth weight, mean (SD), g	885.2 (197.8)	888.2 (205.1)
Gestational age at birth ² , mean (SD), wk	27.4 (2.2)	27.8 (2.6)
Multiple birth status, No. (%)	10 (32.3)	34 (36.2)
Small for gestational age, No. (%)	7 (22.6)	22 (23.4)
Received antenatal steroids, No. (%)	26 (83.9)	84 (89.4)
SNAP-II score ³ , mean (SD)	16.5 (12.7)	12.7 (10.4)
Apgar score at 5 min, mean (SD)	7.4 (2.1)	7.3 (2.2)
Caesarean delivery, No. (%)	18 (58.1)	59 (62.8)
Season of Delivery		
Winter	11 (35.5)	29 (30.9)
Spring	9 (29.0)	22 (23.4)
Summer	4 (12.9)	23 (24.5)
Fall	7 (22.6)	20 (21.3)
Mother's age, mean (SD), yrs	32.4 (6.6)	33.6 (4.8)
Mother's education, No. (%)		
High school or less	6 (19.4)	13 (14.1)
College or vocational diploma	8 (25.8)	38 (41.3)
Baccalaureate	12 (38.7)	29 (31.5)
Post-baccalaureate	5 (16.1)	12 (13.0)
Mother's ethnicity, No. (%)		
Eastern or Western European	6 (19.4)	36 (39.1)
East or Southeast Asian	7 (22.6)	20 (21.7)
South or West Asian	8 (25.8)	14 (15.2)
African or Caribbean	8 (25.8)	18 (19.6)
Other (including Latin American or mixed ethnicities)	2 (6.5)	4 (4.4)
Maternal parity >1, No. (%)	10 (32.3)	36 (38.3)
Maternal BMI, mean (SD)	24.9 (7.5)	26.0 (5.8)
Maternal smoking	3 (9.7)	7 (7.5)
Language spoken at home		
English	14 (51.9)	47 (57.3)
Mixed English and other language	8 (29.6)	25 (30.5)
Language other than English	5 (18.5)	10 (12.2)

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Not Married, No. (%)	2 (7.4)	5 (6.1)
Family living below the poverty line ⁴ , No. (%)	8 (25.8)	22 (23.4)
Morbidity composite ⁵ , No. (%)	15 (48.4)	37 (39.4)
Brain injury ⁶ , No. (%)	5 (16.1)	14 (14.9)

¹Data are expressed as mean (SD) or frequency count (%). Baseline characteristics were compared between recruited participants with and without milk samples available for analysis using t-tests or Wilcoxon rank-sum tests and chi-square tests for continuous and categorical variables as appropriate.

²Gestational age determined using maternal estimates of last menstrual period. If early ultrasound prediction differed by two weeks or more, the gestational age estimate derived from early ultrasound was used.

³Score for Neonatal Acute Physiology II. Scores may range from 0 to 100 with higher values indicating higher neonatal risk and newborn illness.

⁴Based on 2012 Statistics Canada family size-adjusted cut-off values.

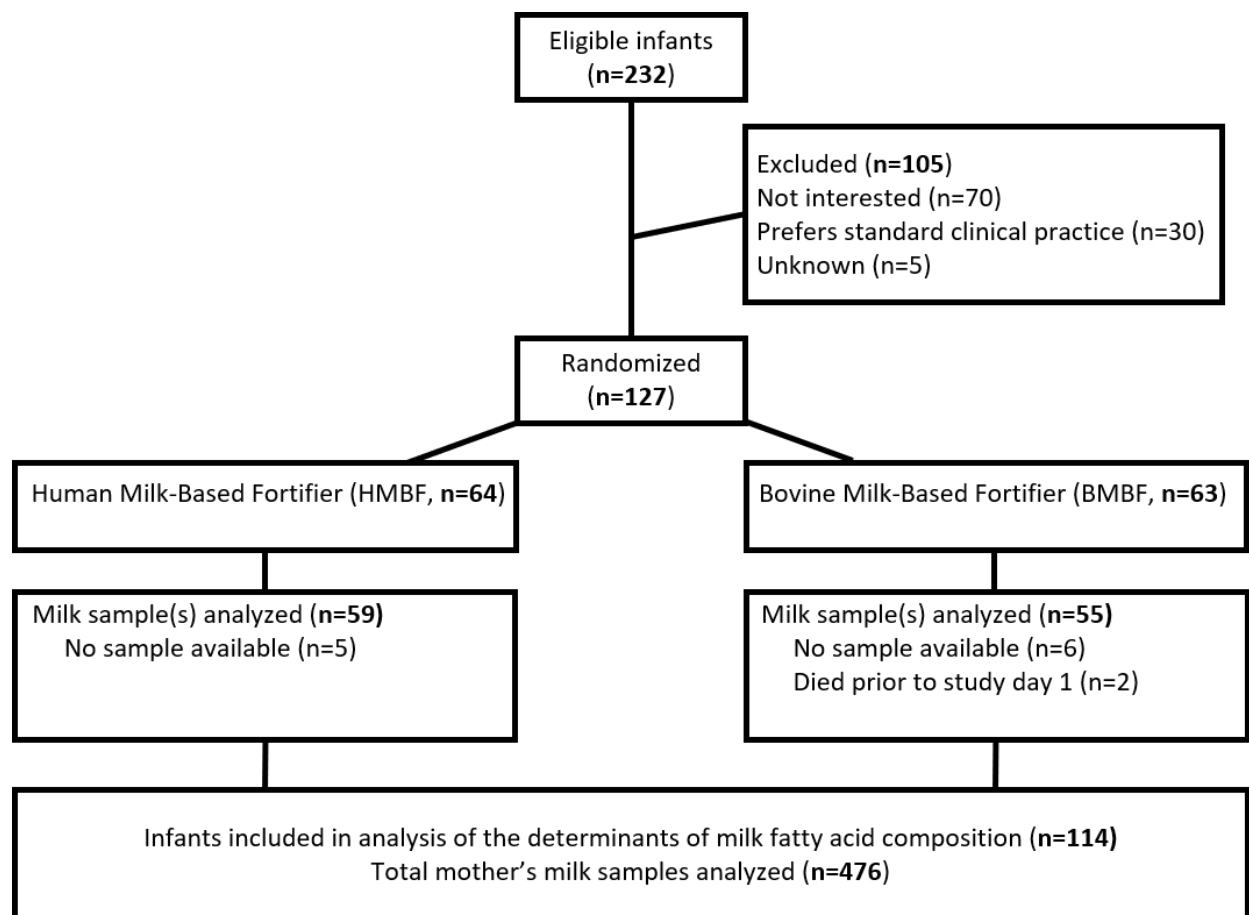
⁵Includes late-onset sepsis, chronic lung disease, necrotizing enterocolitis, retinopathy of prematurity requiring treatment.

⁶Includes echodense intraparenchymal lesions, periventricular leukomalacia, porencephalic cysts, or ventriculomegaly with or without intraventricular hemorrhage.

Appearance pulse grimace, activity respiration (Apgar), Human milk-based fortifier group (HMBF), Score for neonatal acute physiology (SNAP)

Supplementary Figure 1: Participant flow diagram

Flow diagram of participants in the OptiMoM Fortifier trial. Infants were randomized to receive a human milk-based fortifier (HMBF) or a bovine milk-based fortifier (BMBF) added to an entirely human milk diet (mother's own or donor) during initial hospitalization.



Supplementary Figure 2: Distribution of samples included in analysis by period of postpartum collection

