

Supplementary Table S1. Individual fatty acid in weight percentage (%) of the total plasma phospholipid FA fraction

Fatty acids	% of total plasma phospholipid FAs Mean, SD
SFAs	
myristic acid (14:0)	0.31 ± 0.08
pentadecanoic acid (15:0)	0.25 ± 0.07
palmitic acid (16:0)	27.45 ± 1.62
heptadecanoic acid (17:0)	0.43 ± 0.73
stearic acid (18:0)	12.72 ± 1.21
eicosanoic acid (20:0)	0.29 ± 0.10
docosanoic acid (22:0)	0.74 ± 0.32
tetracosanoic acid (24:0)	0.56 ± 0.20
MUFAs	
palmitoleic acid (16:1n7)	0.54 ± 0.20
petroselinic acid (18:1n6)	0.20 ± 0.08
vacenic acid (18:1n7)	1.38 ± 0.20
oleic acid (18:1n9)	7.34 ± 0.90
gondoic acid (20:1n9)	0.14 ± 0.07
vervonic acid (24:1n9)	1.04 ± 0.47
PUFAs	
alpha-linolenic acid (ALA; 18:3n3)	0.22 ± 0.07
eicosapentaenoic acid (EPA; 20:5n3)	0.33 ± 0.18
n-3 docosapentaenoic acid (DPA; 22:5n3)	0.69 ± 0.21
docosahexaenoic acid (DHA; 22:6n3)	4.24 ± 1.25
linolenic acid (LA;18:2n6)	20.40 ± 2.73
gamma-linolenic acid (GLA; 18:3n6)	0.08 ± 0.03
eicosadienoic acid (EDA; 20:2n6)	0.51 ± 0.10
dihomo-gamma-linolenic acid (DGLA; 20:3n6)	3.58 ± 0.92
arachidonic acid (AA; 20:4n6)	11.21 ± 2.08
docosatetraenoic acid (DTA; 22:4n6)	0.49 ± 0.20
n-6 docosapentaenoic acid (n-6 DPA; 22:5n6)	0.54 ± 0.21

Supplementary Table S2. Numbers in different ultrasound schedule groups among 321 subjects

Ultrasound schedule,	GDM group	Non-GDM group	Total number	Total
Group A	28	56	84	
Group B	35	70	105	
Group C	24	48	72	
Group D	20	40	60	321

Supplementary Table S3. Maternal characteristics according to weighting

Maternal characteristics	Overall (n=2802)	Fetal growth study (n=321)	
		Non-weighted	Weighted
	n (%)	n (%)	Mean percentage (95% CI)
Age, years			
<25	805 (28.7%)	54 (16.8%)	30.0 (21.6, 38.4)%
25-29	821 (29.3%)	85 (26.5%)	29.7 (22.7, 36.7)%
30-34	788 (28.1%)	97 (30.2%)	25.8 (19.6, 31.9)%
≥ 35	388 (13.8%)	85 (26.5%)	14.5 (10.5, 18.5)%
Race/ethnicity			%
Non-Hispanic White	751 (26.8)	75 (23.4%)	30.9 (23.3, 38.6)%
Non-Hispanic Black	781 (27.9)	45 (14.0%)	23.3 (15.6, 31.0)%
Hispanic	803 (28.7)	123 (38.3%)	27.2 (21.2, 33.2)%
Asian/Pacific Islander	467 (16.7)	78 (24.3%)	18.5 (13.4, 23.7)%
Pre-pregnancy BMI, kg/m ²			
<25.0	1567 (55.9%)	156 (48.6%)	51.7 (43.9, 59.6)%
25.0-29.9	767 (27.4%)	99 (30.8%)	33.1 (25.3, 40.8)%
≥ 30	453 (16.2%)	64 (19.9%)	15.0 (9.83, 20.15)%
Education			
Missing	839 (29.9)	81 (25.2%)	25.1 (17.8, 32.4)%
Below college	850 (30.3)	117 (36.4%)	35.2 (27.7, 42.7)%
College degree and above	1111 (39.7)	123 (38.3%)	39.8 (32.3, 47.3)%
Family history of diabetes, Yes	590 (21.1%)	88 (27.4%)	20.4 (14.6, 26.3)%
Married or co-habiting, Yes	2082 (74.3%)	259 (80.7%)	72.87 (65.18, 80.56)%
Nulliparous, Yes	1319 (47.1)	144 (44.9%)	51.1 (43.3, 58.9)%
GDM diagnosis, Yes	107 (3.8)	107 (33.3%)	3.9 (2.9, 4.8)%
Gestational weeks at delivery			
<37 weeks	159 (5.7%)	22 (6.9%)	9.12 (3.61, 14.6)%
37-39 weeks	1540 (55.0%)	204 (63.6%)	56.1 (48.2, 64.1)%
≥ 40 weeks	858 (30.6%)	93 (29.0%)	34.7 (27.1, 42.4)%
Fetal sex, Male	1309 (46.7%)	166 (51.7%)	51.5 (43.6, 59.4)%
Birth weight, g			
≤ 2500	131 (4.7%)	14 (4.4%)	6.75 (1.76, 11.7)%
2501-3999	2228 (79.5%)	274 (85.4%)	87.2 (81.5, 92.9)%
≥ 4000	192 (6.9%)	30 (9.3%)	6.03 (2.79, 9.26)%
SGA, Yes	221 (7.9%)	13 (4.0%)	4.65 (1.94, 7.36)%
LGA, Yes	223 (8.0%)	34 (10.6%)	7.13 (3.38, 10.9)%
Delivery mode,			
Vaginal delivery	1810 (64.6%)	203 (63.2%)	62.4 (54.5, 70.3)%
C-section	750 (26.8%)	116 (36.1%)	37.6 (29.7, 45.5)%

Abbreviations: BMI, Body mass index; GDM, gestational diabetes mellitus; SGA, smaller than gestational age; LGA, larger than gestational age.

Supplementary Table S4A. Association between individual SFA and fetal growth biometrics (EFW, AC & FL) throughout between 10-40 weeks gestation

SFAs in tertiles	Estimated fetal growth (EFW), g				Abdominal circumference (AC), mm				Femur length (FL), mm			
	Global test after adjusting for maternal age, ethnicity/race, nulliparity, pre-pregnancy body mass index and fetal sex				Global test after adjusting for maternal age, ethnicity/race, nulliparity, pre-pregnancy body mass index and fetal sex				Global test after adjusting for maternal age, ethnicity/race, nulliparity, pre-pregnancy body mass index and fetal sex			
	Without interaction term SFA*GA		With additional interaction SFA*GA		Without interaction term SFA*GA		With additional interaction SFA*GA		Without interaction term PUFA*GA		With additional interaction SFA*GA	
			likelihood ratio	Bonferroni correction			likelihood ratio	Bonferroni correction			likelihood ratio	Bonferroni correction
	Mean difference in log (SE)		P value	P value	Mean difference in log (SE)		P value	P value	Mean difference in log (SE)		P value	P value
Myristic acid (14:0)	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.001	0.012
	2 nd tertile	-0.0221 (0.0222)			2 nd tertile	-0.0224 (0.0040)			2 nd tertile	-0.0152 (0.0201)		
	3 rd tertile	-0.0269 (0.0236)			3 rd tertile	-0.0252 (0.0042)			3 rd tertile	-0.0202 (0.0213)		
	4 th tertile				4 th tertile				4 th tertile			
Pentadecanoic acid (15:0)	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	0.005
	2 nd tertile	0.0149 (0.0224)			2 nd tertile	-0.0067 (0.0044)			2 nd tertile	0.0109 (0.0206)		
	3 rd tertile	0.02937 (0.0225)			3 rd tertile	-0.0036 (0.0040)			3 rd tertile	0.0135 (0.0207)		
	4 th tertile				4 th tertile				4 th tertile			
Palmitic acid (16:0)	1 st tertile	Reference	0.003	0.207	1 st tertile	Reference	<0.001	0.020	1 st tertile	Reference	0.399	1.00
	2 nd tertile	-0.0100 (0.0226)			2 nd tertile	0.0024 (0.0041)			2 nd tertile	-0.0030 (0.0205)		
	3 rd tertile	-0.0273 (0.0229)			3 rd tertile	0.0046 (0.0042)			3 rd tertile	-0.0175 (0.0208)		
	4 th tertile				4 th tertile				4 th tertile			
Heptadecanoic acid (17:0)	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	-0.0369 (0.0216)			2 nd tertile	-0.0220 (0.0040)			2 nd tertile	-0.0093 (0.0197)		
	3 rd tertile	0.0001 (0.0225)			3 rd tertile	0.0010 (0.0040)			3 rd tertile	0.0039 (0.0206)		
	4 th tertile				4 th tertile				4 th tertile			
Stearic acid (18:0)	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	-0.0221 (0.0219)			2 nd tertile	-0.0123 (0.0042)			2 nd tertile	-0.0158 (0.0199)		
	3 rd tertile	-0.0146 (0.0225)			3 rd tertile	-0.0195 (0.0042)			3 rd tertile	-0.0044 (0.0205)		
	4 th tertile				4 th tertile				4 th tertile			
Arachidic acid (20:0)	1 st tertile	Reference	0.0019	0.124	1 st tertile	Reference	0.012	0.790	1 st tertile	Reference	<0.00001	<0.001
	2 nd tertile	-0.0249 (0.0214)			2 nd tertile	0.0027 (0.0044)			2 nd tertile	-0.0199 (0.0194)		
	3 rd tertile	-0.0410 (0.0239)			3 rd tertile	-0.0139 (0.0042)			3 rd tertile	-0.0221 (0.0219)		
	4 th tertile				4 th tertile				4 th tertile			

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Supplementary Table S4B. Association between individual SFA and fetal growth biometrics (HC, BPD, HC/AC ratio) throughout between 10-40 weeks gestation

SFAs in tertiles	Head circumference (HC), mm				Biparietal diameter (BPD), mm				HC/AC ratio			
	Global test after adjusting for maternal age, ethnicity/race, nulliparity, pre-pregnancy body mass index and fetal sex				Global test after adjusting for maternal age, ethnicity/race, nulliparity, pre-pregnancy body mass index and fetal sex				Global test after adjusting for maternal age, ethnicity/race, nulliparity, pre-pregnancy body mass index and fetal sex			
	Without interaction term		With additional interaction SFA*GA		Without interaction term		With additional interaction SFA*GA		Without interaction term		With additional interaction SFA*GA	
	SFA*GA		SFA*GA		SFA*GA		SFA*GA		SFA*GA		SFA*GA	
			likelihood ratio	Bonferroni correction			likelihood ratio	Bonferroni correction			likelihood ratio	Bonferroni correction
	Mean difference in log (SE)	P value	P value		Mean difference in log (SE)	P value	P value		Mean difference in log (SE)	P value	P value	
14:0	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	-0.0135 (0.0033)			2 nd tertile	-0.0166 (0.0038)			2 nd tertile	0.0094 (0.0030)		
	3 rd tertile	-0.0267 (0.0034)			3 rd tertile	-0.0239 (0.0039)			3 rd tertile	-0.0011 (0.0032)		
15:0	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	0.0006 (0.0136)			2 nd tertile	0.0017 (0.0041)			2 nd tertile	0.0037 (0.0033)		
	3 rd tertile	0.0112 (0.0137)			3 rd tertile	0.0037 (0.0037)			3 rd tertile	-0.0012 (0.0030)		
16:0	1 st tertile	Reference	0.717	1.00	1 st tertile	Reference	0.025	1.00	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	0.0003 (0.0139)			2 nd tertile	-0.0007 (0.0038)			2 nd tertile	-0.0044 (0.0031)		
	3 rd tertile	-0.0054 (0.0140)			3 rd tertile	-0.0003 (0.0039)			3 rd tertile	-0.0103 (0.0031)		
17:0	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	0.028	1.00
	2 nd tertile	-0.0256 (0.0032)			2 nd tertile	-0.0218 (0.0037)			2 nd tertile	-0.0038 (0.0030)		
	3 rd tertile	0.0021 (0.0032)			3 rd tertile	0.0066 (0.0037)			3 rd tertile	0.0016 (0.0030)		
18:0	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	0.0084 (0.0034)			2 nd tertile	0.0132 (0.0039)			2 nd tertile	0.0208 (0.0031)		
	3 rd tertile	0.0030 (0.0035)			3 rd tertile	0.0023 (0.0039)			3 rd tertile	0.0225 (0.0031)		
20:0	1 st tertile	Reference	<0.00001	0.001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.001	0.017
	2 nd tertile	-0.0025 (0.0036)			2 nd tertile	-0.0025 (0.0041)			2 nd tertile	-0.0057 (0.0033)		
	3 rd tertile	-0.0188 (0.0034)			3 rd tertile	-0.0192 (0.0039)			3 rd tertile	-0.0052 (0.0031)		
22:0	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	2.97E-06 (0.0036)			2 nd tertile	-0.0012 (0.0041)			2 nd tertile	-0.0112 (0.0033)		
	3 rd tertile	-0.0201 (0.0035)			3 rd tertile	-0.0216 (0.0039)			3 rd tertile	-0.0030 (0.0032)		
24:0	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	-0.0250 (0.0035)			2 nd tertile	-0.0321 (0.0039)			2 nd tertile	-0.0153 (0.0031)		
	3 rd tertile	-0.0075 (0.0035)			3 rd tertile	-0.0170 (0.0039)			3 rd tertile	0.0049 (0.0032)		
Sum of even-chain SFAs (14:0 + 16:0 + 18:0)	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	0.0100 (0.0032)			2 nd tertile	0.0134 (0.0037)			2 nd tertile	-0.0009 (0.0030)		
	3 rd tertile	-0.0132 (0.0034)			3 rd tertile	-0.0093 (0.0039)			3 rd tertile	-0.0066 (0.0032)		
Sum of odd-chain SFAs (15:0 + 17:0)	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	0.002	0.117
	2 nd tertile	-0.0101 (0.0034)			2 nd tertile	-0.0077 (0.0038)			2 nd tertile	-0.0041 (0.0031)		
	3 rd tertile	0.0043 (0.0033)			3 rd tertile	0.0108 (0.0037)			3 rd tertile	0.0031 (0.0030)		
Sum of very-long-even-chain SFAs (20:0 + 22:0 + 24:0)	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001	1 st tertile	Reference	<0.00001	<0.00001
	2 nd tertile	-0.0091 (0.0036)			2 nd tertile	-0.0124 (0.0041)			2 nd tertile	-0.0076 (0.0033)		
	3 rd tertile	-0.0020 (0.0035)			3 rd tertile	-0.0245 (0.0039)			3 rd tertile	0.0008 (0.0032)		

Supplementary Table S5A. Back-transformed and pairwise comparison of weekly fetal growth biometrics across myristic acid (14:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Estimated fetal weight (EFW), g					Abdominal circumference (AC), mm					Femur length (FL), mm				
	<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	gram			<u>comparison</u>		mean mm			<u>comparison</u>		mean mm			<u>comparison</u>	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value
10	37.47	38.76	33.86	0.711	0.241	39.67	40.25	36.11	0.785	0.037	2.61	2.30	2.41	0.112	0.278
11	45.81	46.22	43.51	0.852	0.258	48.21	48.10	45.95	0.937	0.052	4.43	4.02	4.11	0.025	0.056
12	56.84	56.27	55.86	0.652	0.431	57.73	56.92	56.73	0.280	0.217	6.87	6.38	6.40	0.002	0.001
13	71.32	69.63	71.59	0.183	0.830	68.16	66.69	68.16	0.040	0.994	9.82	9.29	9.24	0.009	0.001
14	90.09	87.16	91.41	0.130	0.479	79.38	77.33	79.95	0.043	0.608	13.10	12.58	12.45	0.081	0.017
15	114.13	109.85	116.11	0.096	0.412	91.23	88.73	91.86	0.040	0.630	16.50	16.02	15.85	0.207	0.064
16	144.40	138.74	146.52	0.061	0.455	103.54	100.75	103.70	0.030	0.910	19.84	19.39	19.26	0.309	0.149
17	181.71	174.76	183.37	0.044	0.619	116.11	113.17	115.39	0.025	0.637	23.01	22.58	22.56	0.367	0.310
18	226.52	218.53	227.28	0.057	0.859	128.70	125.73	126.94	0.037	0.300	26.05	25.59	25.75	0.384	0.557
19	278.82	270.03	278.63	0.095	0.972	141.12	138.17	138.46	0.062	0.161	29.05	28.53	28.90	0.379	0.789
20	338.92	329.27	337.98	0.130	0.886	153.23	150.30	149.90	0.086	0.110	32.01	31.47	31.97	0.407	0.953
21	407.24	396.66	405.89	0.153	0.859	164.92	162.03	161.21	0.103	0.095	34.89	34.37	34.93	0.466	0.946
22	484.19	472.64	482.91	0.169	0.881	176.15	173.33	172.34	0.117	0.103	37.65	37.22	37.74	0.562	0.897
23	570.18	557.74	569.55	0.195	0.948	186.93	184.19	183.28	0.142	0.139	40.28	39.98	40.38	0.702	0.891
24	665.69	652.59	666.34	0.248	0.954	197.28	194.68	194.03	0.191	0.216	42.77	42.64	42.85	0.874	0.921
25	771.31	758.04	773.79	0.333	0.854	207.31	204.91	204.64	0.269	0.346	45.13	45.19	45.16	0.947	0.972
26	887.78	875.21	892.49	0.445	0.771	217.16	215.02	215.18	0.368	0.517	47.37	47.63	47.34	0.790	0.972
27	1016.07	1005.63	1023.07	0.582	0.707	226.99	225.22	225.74	0.479	0.700	49.53	49.97	49.43	0.663	0.921
28	1157.5	1151.32	1166.31	0.763	0.664	237.03	235.74	236.45	0.607	0.863	51.63	52.23	51.49	0.567	0.884
29	1313.48	1314.54	1322.95	0.960	0.652	247.48	246.84	247.41	0.786	0.984	53.72	54.43	53.56	0.501	0.868
30	1484.95	1495.09	1493.01	0.654	0.722	258.36	258.40	258.57	0.988	0.953	55.80	56.57	55.64	0.474	0.874
31	1672.73	1690.64	1676.05	0.508	0.902	269.62	270.13	269.80	0.842	0.963	57.86	58.64	57.71	0.495	0.893
32	1877.61	1897.1	1871.22	0.562	0.846	281.20	281.71	280.96	0.865	0.954	59.88	60.63	59.75	0.550	0.908
33	2100.32	2108.42	2077.26	0.837	0.546	293.04	292.73	291.89	0.925	0.799	61.86	62.53	61.71	0.617	0.903
34	2341.57	2316.43	2292.41	0.544	0.221	305.04	302.78	302.41	0.479	0.571	63.79	64.34	63.58	0.690	0.864
35	2599.99	2512.83	2514.32	0.039	0.042	317.07	311.50	312.34	0.068	0.323	65.66	66.03	65.33	0.789	0.779
36	2864.36	2700.45	2737.9	0.001	0.017	328.76	319.41	321.91	0.007	0.187	67.47	67.57	66.92	0.947	0.677
37	3116.67	2889.51	2954.85	<0.001	0.014	339.64	327.44	331.91	0.003	0.173	69.22	68.89	68.39	0.841	0.568
38	3334.04	3093.96	3155.12	<0.001	0.009	349.17	336.60	343.25	0.003	0.317	70.92	69.92	69.72	0.564	0.421
39	3490.46	3331.94	3327.35	0.077	0.078	356.81	348.05	356.99	0.089	0.979	72.57	70.60	70.94	0.330	0.368
40	3559.90	3627.07	3459.62	0.718	0.631	362.00	363.09	374.37	0.917	0.288	74.18	70.87	72.06	0.346	0.555

Supplementary Table S5B. Back-transformed and pairwise comparison of weekly fetal growth biometrics across myristic acid (14:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Head circumference (HC), mm					Biparietal diameter (BPD), mm					HC/AC ratio				
	Back-transformed geometric			Wald test for pairwise		Back-transformed geometric			Wald test for pairwise		Back-transformed geometric			Wald test for pairwise	
	mean			comparison		mean mm			comparison		mean			comparison	
	mm			p value		mm			p value		mm			p value	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	55.24	48.44	47.05	0.002	<0.0001	13.35	12.27	11.77	0.077	0.002	1.39	1.21	1.25	<0.001	0.005
11	64.60	59.49	59.18	<0.001	<0.0001	16.41	15.49	15.41	0.022	0.003	1.34	1.24	1.25	<0.001	<0.001
12	74.83	71.38	72.17	<0.0001	<0.0001	19.68	18.98	19.32	0.002	0.078	1.30	1.26	1.24	<0.001	<0.0001
13	85.89	83.88	85.60	0.006	0.653	23.09	22.63	23.32	0.037	0.216	1.26	1.26	1.23	0.677	0.002
14	97.67	96.72	99.12	0.357	0.085	26.56	26.34	27.25	0.481	0.007	1.23	1.25	1.22	0.113	0.299
15	110.04	109.70	112.43	0.780	0.015	30.03	30.03	30.98	0.995	0.001	1.21	1.24	1.21	0.018	0.977
16	122.84	122.63	125.35	0.872	0.0132	33.46	33.63	34.47	0.654	0.001	1.19	1.22	1.19	0.006	0.483
17	135.86	135.42	137.85	0.727	0.057	36.81	37.12	37.73	0.432	0.004	1.17	1.2	1.18	0.008	0.263
18	148.90	148.03	150.06	0.526	0.316	40.10	40.50	40.85	0.330	0.033	1.16	1.18	1.17	0.029	0.210
19	161.71	160.54	162.17	0.432	0.722	43.35	43.82	43.96	0.281	0.122	1.15	1.16	1.16	0.085	0.203
20	174.16	172.90	174.16	0.430	0.996	46.53	47.10	47.05	0.229	0.218	1.14	1.15	1.15	0.133	0.201
21	186.16	185.04	185.95	0.496	0.885	49.64	50.30	50.12	0.171	0.266	1.13	1.14	1.14	0.137	0.201
22	197.65	196.88	197.46	0.641	0.893	52.67	53.43	53.15	0.120	0.263	1.12	1.14	1.13	0.108	0.210
23	208.63	208.37	208.64	0.877	0.995	55.60	56.46	56.12	0.087	0.235	1.12	1.13	1.13	0.074	0.247
24	219.11	219.47	219.46	0.844	0.821	58.44	59.40	59.02	0.075	0.213	1.11	1.13	1.12	0.055	0.329
25	229.15	230.17	229.9	0.606	0.653	61.22	62.25	61.84	0.078	0.212	1.11	1.12	1.11	0.048	0.456
26	238.84	240.49	239.97	0.443	0.536	63.93	65.02	64.57	0.086	0.236	1.10	1.12	1.11	0.049	0.608
27	248.31	250.45	249.66	0.341	0.475	66.61	67.74	67.22	0.092	0.287	1.10	1.11	1.10	0.054	0.764
28	257.70	260.11	259.04	0.278	0.478	69.29	70.42	69.77	0.088	0.395	1.09	1.10	1.09	0.065	0.919
29	267.15	269.52	268.12	0.255	0.586	72.00	73.09	72.24	0.079	0.645	1.08	1.09	1.08	0.105	0.915
30	276.53	278.62	276.86	0.305	0.854	74.69	75.72	74.63	0.088	0.913	1.07	1.08	1.07	0.243	0.766
31	285.67	287.27	285.19	0.469	0.802	77.31	78.26	76.94	0.152	0.515	1.06	1.06	1.06	0.520	0.696
32	294.35	295.36	293.06	0.690	0.551	79.81	80.65	79.17	0.266	0.328	1.05	1.05	1.04	0.717	0.714
33	302.33	302.73	300.39	0.884	0.402	82.11	82.82	81.34	0.381	0.272	1.03	1.03	1.03	0.644	0.801
34	309.38	309.26	307.13	0.964	0.315	84.14	84.72	83.46	0.463	0.315	1.01	1.02	1.01	0.275	0.988
35	315.28	314.83	313.20	0.856	0.332	85.85	86.30	85.53	0.550	0.626	0.99	1.01	1.00	0.016	0.687
36	320.03	319.52	318.38	0.853	0.510	87.25	87.57	87.45	0.701	0.793	0.97	1.00	0.98	<0.001	0.437
37	323.68	323.48	322.34	0.949	0.642	88.40	88.63	89.04	0.809	0.474	0.96	0.99	0.96	<0.0001	0.301
38	326.31	326.87	324.71	0.868	0.579	89.33	89.56	90.07	0.822	0.405	0.94	0.97	0.95	<0.0001	0.183
39	328.00	329.90	325.16	0.635	0.448	90.11	90.44	90.33	0.781	0.844	0.92	0.95	0.93	0.004	0.263
40	328.84	332.73	323.38	0.617	0.501	90.78	91.36	89.63	0.803	0.646	0.91	0.92	0.92	0.558	0.646

HC/AC ratio, head circumference/abdominal circumference ratio.

Supplementary Table S6. Back-transformed and pairwise comparison of weekly fetal growth biometrics across palmitic acid (16:0) tertiles in the NICHD Fetal Growth Studies-Singletons

GW	Abdominal circumference, mm				
	Back-transformed geometric mean, mm			Wald test p value for pairwise comparison	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	38.83	38.74	37.30	0.961	0.384
11	47.45	47.79	46.79	0.771	0.581
12	57.11	57.77	57.15	0.330	0.958
13	67.72	68.55	68.13	0.249	0.604
14	79.17	79.96	79.50	0.430	0.749
15	91.28	91.83	91.06	0.647	0.860
16	103.86	103.99	102.66	0.917	0.377
17	116.65	116.28	114.23	0.775	0.089
18	129.4	128.59	125.80	0.564	0.019
19	141.85	140.85	137.36	0.524	0.008
20	153.84	152.97	148.85	0.609	0.007
21	165.28	164.84	160.20	0.802	0.011
22	176.17	176.40	171.38	0.900	0.023
23	186.54	187.60	182.41	0.565	0.066
24	196.50	198.44	193.32	0.316	0.187
25	206.21	208.94	204.16	0.192	0.433
26	215.88	219.17	215.04	0.150	0.767
27	225.77	229.19	226.08	0.157	0.916
28	236.20	239.15	237.46	0.226	0.689
29	247.48	249.16	249.23	0.472	0.591
30	259.49	259.28	261.23	0.924	0.612
31	271.91	269.53	273.21	0.337	0.725
32	284.34	279.95	284.92	0.122	0.886
33	296.31	290.56	296.04	0.065	0.952
34	307.28	301.42	306.25	0.058	0.820
35	316.81	312.55	315.32	0.150	0.749
36	325.36	323.77	323.95	0.639	0.779
37	333.84	334.77	333.30	0.821	0.922
38	343.25	345.19	344.66	0.654	0.809
39	354.71	354.61	359.51	0.982	0.449
40	369.52	362.63	379.64	0.420	0.285

Supplementary Table S7A. Back-transformed and pairwise comparison of weekly fetal growth biometrics across sum of even-chain SFAs tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Estimated fetal weight, g					Abdominal circumference, mm					Femur length, mm				
	<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	gram			comparison		mean mm			comparison		mean			comparison	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value
10	31.44	41.46	35.96	0.002	0.073	34.40	44.93	36.03	<0.0001	0.307	1.67	2.97	2.66	<0.0001	<0.0001
11	41.77	48.67	43.96	0.001	0.218	44.53	51.78	45.66	<0.0001	0.328	3.45	4.73	4.31	<0.0001	<0.0001
12	54.94	58.75	54.56	0.001	0.769	55.79	59.75	56.19	<0.0001	0.632	6.14	7.02	6.48	<0.0001	0.028
13	71.53	72.48	68.47	0.452	0.030	67.85	68.9	67.36	0.130	0.578	9.63	9.78	9.12	0.295	0.009
14	92.19	90.82	86.53	0.478	0.005	80.39	79.23	78.92	0.235	0.198	13.53	12.89	12.11	0.010	<0.0001
15	117.58	114.87	109.67	0.287	0.003	93.07	90.67	90.64	0.040	0.073	17.42	16.19	15.31	<0.001	<0.0001
16	148.38	145.77	138.82	0.376	0.003	105.64	103.06	102.35	0.034	0.027	20.93	19.54	18.59	<0.001	<0.0001
17	185.24	184.44	174.77	0.812	0.006	117.94	116.12	114.00	0.139	0.013	23.93	22.84	21.86	0.004	<0.0001
18	228.72	231.26	217.96	0.537	0.022	129.92	129.42	125.62	0.707	0.012	26.56	26.05	25.10	0.221	0.005
19	279.30	285.9	268.51	0.208	0.065	141.65	142.48	137.26	0.588	0.020	29.15	29.21	28.33	0.905	0.155
20	337.50	348.43	326.93	0.088	0.138	153.10	155.06	148.85	0.238	0.038	31.82	32.27	31.47	0.401	0.581
21	403.91	419.14	393.77	0.041	0.233	164.22	167.06	160.32	0.101	0.075	34.56	35.18	34.49	0.266	0.921
22	479.14	498.28	469.61	0.023	0.342	174.99	178.42	171.64	0.052	0.149	37.34	37.93	37.35	0.306	0.986
23	563.85	586.14	555.07	0.020	0.459	185.44	189.14	182.79	0.040	0.280	40.12	40.49	40.02	0.541	0.893
24	658.79	683.08	650.86	0.030	0.573	195.65	199.31	193.78	0.053	0.476	42.88	42.87	42.51	0.978	0.637
25	764.86	789.65	757.81	0.064	0.675	205.71	209.05	204.64	0.104	0.705	45.59	45.10	44.83	0.472	0.374
26	883.12	906.59	876.94	0.141	0.757	215.80	218.55	215.46	0.217	0.911	48.20	47.21	47.01	0.186	0.196
27	1014.91	1035.03	1009.55	0.274	0.818	226.09	228.04	226.32	0.408	0.944	50.69	49.27	49.12	0.073	0.105
28	1161.88	1176.48	1157.30	0.465	0.863	236.84	237.81	237.36	0.679	0.876	53.00	51.33	51.21	0.035	0.069
29	1325.66	1332.84	1321.76	0.729	0.896	248.23	248.15	248.68	0.970	0.897	55.12	53.47	53.34	0.029	0.070
30	1506.06	1505.00	1502.34	0.962	0.912	260.15	259.07	260.18	0.625	0.994	57.07	55.69	55.51	0.060	0.118
31	1701.57	1693.18	1696.84	0.751	0.904	272.3	270.46	271.66	0.446	0.869	58.88	57.93	57.71	0.229	0.262
32	1909.43	1897.20	1901.60	0.707	0.865	284.33	282.17	282.92	0.436	0.736	60.63	60.14	59.90	0.588	0.521
33	2125.50	2116.46	2111.29	0.811	0.786	295.85	294.03	293.71	0.549	0.632	62.37	62.26	62.07	0.916	0.803
34	2344.21	2349.80	2318.86	0.888	0.659	306.39	305.84	303.77	0.856	0.570	64.18	64.24	64.18	0.949	0.998
35	2562.92	2595.01	2516.84	0.446	0.469	315.69	317.37	312.87	0.568	0.554	66.11	66.00	66.20	0.905	0.941
36	2784.87	2844.17	2709.98	0.255	0.305	324.45	328.39	321.5	0.253	0.568	68.09	67.55	68.04	0.620	0.972
37	3015.66	3083.73	2914.06	0.291	0.219	333.70	338.62	330.64	0.230	0.585	69.99	68.94	69.55	0.418	0.773
38	3263.23	3296.78	3150.31	0.630	0.211	344.59	347.80	341.36	0.447	0.580	71.68	70.25	70.59	0.281	0.481
39	3538.17	3464.08	3446.96	0.393	0.418	358.44	355.64	354.93	0.570	0.604	73.02	71.55	71.01	0.352	0.275
40	3854.39	3565.81	3842.83	0.109	0.953	376.82	361.85	372.80	0.144	0.724	73.85	72.90	70.66	0.772	0.345

Supplementary Table S7B. Back-transformed and pairwise comparison of weekly fetal growth biometrics across sum of even-chain saturated fatty acids tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Head circumference, mm					Biparietal diameter, mm					HC/AC ratio				
	Back-transformed geometric			Wald test for pairwise		Back-transformed geometric			Wald test for pairwise		Back-transformed geometric			Wald test for pairwise	
	mean			comparison		mean mm			comparison		mean			comparison	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	47.46	55.48	46.80	<0.001	0.692	11.84	13.43	11.90	0.007	0.908	1.38	1.24	1.26	0.007	0.024
11	59.35	64.72	58.32	<0.0001	0.383	15.32	16.58	15.26	0.001	0.867	1.33	1.25	1.26	0.002	0.007
12	72.05	74.98	70.68	<0.0001	0.111	19.05	19.97	18.88	<0.0001	0.431	1.29	1.26	1.25	0.003	0.003
13	85.18	86.21	83.55	0.150	0.071	22.86	23.54	22.62	0.002	0.232	1.26	1.25	1.24	0.663	0.225
14	98.40	98.34	96.62	0.949	0.117	26.63	27.20	26.37	0.059	0.342	1.22	1.24	1.23	0.160	0.409
15	111.44	111.22	109.65	0.853	0.176	30.24	30.89	30.02	0.072	0.504	1.2	1.23	1.22	0.017	0.037
16	124.12	124.66	122.48	0.653	0.246	33.65	34.53	33.54	0.016	0.738	1.18	1.21	1.21	0.002	0.003
17	136.43	138.4	135.06	0.098	0.357	36.87	38.11	36.91	0.001	0.915	1.16	1.19	1.2	<0.001	<0.0001
18	148.47	152.13	147.46	0.004	0.530	39.96	41.59	40.18	<0.0001	0.560	1.14	1.18	1.18	<0.001	<0.0001
19	160.44	165.5	159.77	<0.001	0.702	43.04	44.99	43.41	<0.0001	0.368	1.13	1.16	1.17	0.002	<0.0001
20	172.35	178.35	171.90	0.0001	0.811	46.13	48.28	46.58	<0.0001	0.305	1.13	1.15	1.16	0.010	0.0001
21	184.13	190.58	183.78	<0.0001	0.859	49.21	51.45	49.66	<0.0001	0.314	1.12	1.14	1.15	0.033	0.001
22	195.71	202.15	195.34	<0.0001	0.859	52.26	54.48	52.66	<0.0001	0.393	1.12	1.13	1.14	0.097	0.008
23	207.04	213.06	206.55	<0.001	0.825	55.29	57.39	55.57	<0.0001	0.562	1.12	1.13	1.13	0.249	0.070
24	218.08	223.37	217.41	0.003	0.775	58.27	60.18	58.39	<0.001	0.818	1.12	1.12	1.12	0.507	0.389
25	228.81	233.17	227.92	0.021	0.724	61.20	62.88	61.13	0.003	0.903	1.11	1.12	1.11	0.768	0.982
26	239.23	242.63	238.13	0.097	0.684	64.08	65.51	63.81	0.020	0.668	1.11	1.11	1.1	0.908	0.554
27	249.34	251.91	248.10	0.230	0.663	66.9	68.13	66.46	0.058	0.499	1.1	1.1	1.09	0.876	0.333
28	259.16	261.25	257.91	0.326	0.670	69.68	70.77	69.10	0.087	0.390	1.09	1.1	1.09	0.632	0.273
29	268.72	270.85	267.62	0.288	0.716	72.39	73.49	71.76	0.071	0.338	1.08	1.09	1.08	0.237	0.372
30	277.91	280.57	277.13	0.175	0.803	75.03	76.24	74.41	0.042	0.356	1.07	1.08	1.07	0.035	0.757
31	286.60	290.11	286.25	0.099	0.916	77.54	78.93	76.99	0.031	0.448	1.05	1.07	1.06	0.006	0.653
32	294.65	299.14	294.79	0.063	0.968	79.88	81.48	79.45	0.029	0.583	1.04	1.06	1.04	0.003	0.282
33	301.92	307.27	302.54	0.039	0.867	82.02	83.78	81.71	0.024	0.717	1.02	1.04	1.03	0.003	0.127
34	308.26	314.10	309.28	0.020	0.786	83.90	85.72	83.72	0.017	0.832	1.01	1.03	1.02	0.007	0.071
35	313.67	319.28	314.84	0.022	0.763	85.51	87.21	85.41	0.023	0.903	0.99	1.01	1.01	0.089	0.083
36	318.40	323.00	319.35	0.102	0.820	86.94	88.30	86.90	0.114	0.965	0.98	0.98	0.99	0.701	0.175
37	322.77	325.81	323.14	0.352	0.933	88.26	89.19	88.40	0.351	0.895	0.97	0.96	0.98	0.712	0.231
38	327.11	328.30	326.61	0.720	0.912	89.57	90.08	90.16	0.617	0.592	0.95	0.94	0.96	0.698	0.136
39	331.78	331.08	330.12	0.860	0.751	90.97	91.17	92.43	0.874	0.291	0.92	0.93	0.94	0.563	0.083
40	337.15	334.79	334.11	0.764	0.714	92.56	92.66	95.49	0.969	0.269	0.9	0.93	0.93	0.164	0.167

HC/AC ratio, head circumference/abdominal circumference ratio.

Supplementary Table S8A. Back-transformed and pairwise comparison of weekly fetal growth biometrics across Heptadecanoic acid (17:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Estimated fetal weight, g					Abdominal circumference, mm					Femur length, mm				
	<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	gram			comparison		mean mm			comparison		mean mm			comparison	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value
10	32.59	34.34	37.61	0.382	0.103	38.57	35.61	40.28	0.006	0.390	2.25	2.38	2.91	0.302	0.001
11	42.65	43.47	45.73	0.572	0.146	47.75	45.41	48.52	0.006	0.569	4.07	4.07	4.55	0.982	0.010
12	55.36	55.24	56.58	0.918	0.379	57.77	56.21	57.77	0.045	0.998	6.54	6.38	6.69	0.286	0.379
13	71.25	70.33	70.92	0.483	0.815	68.45	67.71	68.01	0.411	0.601	9.54	9.25	9.30	0.166	0.212
14	90.93	89.50	89.66	0.434	0.544	79.60	79.63	79.14	0.978	0.678	12.8	12.52	12.29	0.344	0.070
15	115.06	113.61	113.85	0.547	0.669	91.07	91.7	91.06	0.614	0.994	16.05	16.00	15.54	0.896	0.162
16	144.33	143.51	144.53	0.789	0.955	102.71	103.71	103.57	0.478	0.553	19.12	19.48	18.93	0.397	0.644
17	179.47	180.03	182.66	0.884	0.454	114.46	115.53	116.45	0.492	0.190	21.99	22.83	22.34	0.082	0.438
18	221.18	223.78	228.8	0.604	0.153	126.3	127.15	129.44	0.624	0.057	24.80	26.00	25.70	0.027	0.068
19	270.2	275.06	282.85	0.448	0.062	138.21	138.65	142.23	0.818	0.028	27.67	29.05	29.00	0.022	0.016
20	327.34	334.24	344.72	0.387	0.041	150.09	150.03	154.61	0.977	0.024	30.59	32.05	32.21	0.026	0.008
21	393.41	401.81	414.71	0.388	0.041	161.88	161.25	166.50	0.780	0.032	33.51	34.96	35.27	0.041	0.007
22	469.24	478.23	493.20	0.445	0.058	173.51	172.25	177.86	0.605	0.058	36.41	37.75	38.15	0.076	0.011
23	555.66	563.93	580.65	0.562	0.101	184.96	183.05	188.71	0.464	0.123	39.25	40.39	40.83	0.153	0.029
24	653.54	659.33	677.70	0.738	0.189	196.23	193.65	199.14	0.361	0.261	42.02	42.90	43.31	0.299	0.094
25	763.76	764.89	785.25	0.957	0.333	207.32	204.12	209.28	0.292	0.482	44.69	45.28	45.61	0.515	0.266
26	887.22	881.11	904.59	0.810	0.515	218.30	214.55	219.34	0.250	0.730	47.25	47.56	47.77	0.753	0.560
27	1024.86	1008.58	1037.48	0.590	0.690	229.24	225.04	229.54	0.228	0.925	49.70	49.76	49.84	0.950	0.877
28	1177.69	1148.06	1186.36	0.401	0.814	240.24	235.74	240.19	0.223	0.987	52.03	51.95	51.91	0.940	0.898
29	1346.25	1300.4	1354.01	0.260	0.856	251.36	246.79	251.56	0.242	0.953	54.25	54.16	54.02	0.940	0.819
30	1529.87	1466.2	1540.62	0.177	0.828	262.51	258.13	263.57	0.289	0.768	56.36	56.39	56.19	0.979	0.863
31	1727.00	1645.99	1744.17	0.141	0.766	273.59	269.6	275.92	0.365	0.545	58.39	58.58	58.36	0.878	0.978
32	1935.12	1840.28	1960.83	0.138	0.703	284.48	281.03	288.25	0.464	0.365	60.37	60.66	60.51	0.818	0.904
33	2150.69	2049.66	2184.69	0.169	0.662	295.04	292.23	300.14	0.573	0.253	62.30	62.56	62.56	0.849	0.836
34	2369.05	2274.72	2407.58	0.254	0.659	305.13	302.96	311.13	0.678	0.196	64.24	64.20	64.47	0.979	0.856
35	2586.22	2514.06	2620.21	0.439	0.725	314.66	313.07	320.73	0.772	0.201	66.17	65.52	66.18	0.654	0.995
36	2802.81	2756.41	2823.32	0.664	0.850	323.72	322.97	329.24	0.899	0.275	67.97	66.70	67.70	0.416	0.849
37	3021.47	2983.93	3026.75	0.756	0.966	332.42	333.37	337.65	0.878	0.343	69.44	68.09	69.11	0.420	0.833
38	3246.42	3174.46	3244.36	0.581	0.988	340.93	345.05	347.12	0.524	0.287	70.38	70.06	70.50	0.851	0.945
39	3483.48	3303.28	3494.27	0.216	0.943	349.41	358.93	358.93	0.169	0.129	70.61	73.05	71.97	0.186	0.440
40	3740.33	3346.37	3800.12	0.060	0.765	358.06	376.06	374.55	0.039	0.069	69.92	77.58	73.62	0.005	0.153

Supplementary Table S8B. Back-transformed and pairwise comparison of weekly fetal growth biometrics across Heptadecanoic acid (17:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Head circumference, mm					Biparietal diameter, mm					HC/AC ratio				
	Back-transformed geometric			Wald test for pairwise		Back-transformed geometric			Wald test for pairwise		Back-transformed geometric			Wald test for pairwise	
	mean			comparison		mean mm			comparison		mean			comparison	
	mm			p value					p value					p value	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	49.54	46.49	53.20	0.020	0.112	11.94	11.71	13.06	0.570	0.068	1.25	1.29	1.31	0.342	0.308
11	61.07	58.41	62.73	0.005	0.263	15.59	15.32	16.03	0.349	0.284	1.27	1.28	1.29	0.614	0.501
12	73.33	71.21	73.20	0.004	0.873	19.46	19.20	19.26	0.139	0.389	1.27	1.26	1.26	0.509	0.681
13	86.00	84.48	84.52	0.064	0.041	23.40	23.15	22.69	0.187	0.001	1.26	1.25	1.24	0.061	0.030
14	98.81	97.89	96.61	0.356	0.027	27.22	27.03	26.27	0.428	0.001	1.25	1.23	1.22	0.054	0.015
15	111.52	111.13	109.33	0.732	0.068	30.83	30.71	29.91	0.662	0.009	1.23	1.21	1.20	0.092	0.015
16	124.00	124.02	122.52	0.983	0.243	34.20	34.14	33.58	0.856	0.095	1.21	1.20	1.18	0.210	0.016
17	136.21	136.52	135.98	0.819	0.859	37.35	37.34	37.21	0.981	0.698	1.19	1.18	1.17	0.554	0.027
18	148.25	148.72	149.51	0.752	0.357	40.41	40.40	40.77	0.989	0.356	1.17	1.17	1.15	0.949	0.077
19	160.15	160.82	162.86	0.686	0.073	43.45	43.45	44.26	0.984	0.061	1.16	1.16	1.14	0.561	0.214
20	171.85	172.83	175.87	0.584	0.015	46.46	46.53	47.65	0.854	0.011	1.14	1.15	1.14	0.301	0.464
21	183.29	184.67	188.41	0.470	0.003	49.42	49.61	50.92	0.651	0.002	1.13	1.14	1.13	0.141	0.813
22	194.44	196.27	200.43	0.365	0.001	52.35	52.69	54.07	0.424	0.001	1.12	1.14	1.13	0.059	0.795
23	205.29	207.57	211.90	0.287	<0.001	55.22	55.73	57.08	0.247	<0.001	1.12	1.13	1.12	0.028	0.466
24	215.86	218.55	222.82	0.242	0.001	58.04	58.73	59.97	0.152	<0.001	1.11	1.13	1.12	0.021	0.274
25	226.18	229.17	233.23	0.229	0.001	60.83	61.66	62.76	0.115	0.001	1.10	1.12	1.11	0.025	0.196
26	236.34	239.43	243.24	0.247	0.003	63.60	64.51	65.46	0.110	0.004	1.10	1.12	1.11	0.034	0.183
27	246.41	249.34	252.95	0.303	0.009	66.35	67.27	68.13	0.131	0.009	1.09	1.11	1.10	0.045	0.214
28	256.53	258.94	262.52	0.419	0.019	69.12	69.92	70.80	0.195	0.016	1.09	1.10	1.09	0.052	0.310
29	266.71	268.25	272.09	0.619	0.034	71.91	72.47	73.51	0.366	0.019	1.08	1.09	1.08	0.060	0.582
30	276.73	277.23	281.54	0.879	0.063	74.67	74.90	76.24	0.715	0.023	1.07	1.08	1.07	0.103	0.854
31	286.32	285.79	290.65	0.879	0.120	77.33	77.23	78.90	0.882	0.035	1.06	1.07	1.05	0.236	0.345
32	295.20	293.88	299.14	0.723	0.196	79.82	79.47	81.42	0.635	0.054	1.05	1.05	1.04	0.449	0.140
33	303.04	301.44	306.75	0.681	0.255	82.08	81.65	83.69	0.578	0.069	1.03	1.04	1.02	0.660	0.072
34	309.51	308.38	313.17	0.780	0.267	84.03	83.77	85.64	0.745	0.073	1.02	1.02	1.01	0.841	0.050
35	314.50	314.67	318.16	0.967	0.266	85.62	85.85	87.16	0.771	0.079	1.00	1.00	0.99	0.986	0.080
36	318.37	320.37	321.98	0.652	0.309	86.92	87.81	88.34	0.338	0.136	0.99	0.99	0.98	0.983	0.298
37	321.59	325.59	325.22	0.394	0.354	88.02	89.54	89.35	0.143	0.212	0.97	0.97	0.97	0.790	0.668
38	324.64	330.44	328.51	0.229	0.340	89.00	90.91	90.38	0.059	0.213	0.95	0.96	0.95	0.355	0.856
39	328.04	335.05	332.50	0.165	0.301	89.96	91.81	91.62	0.108	0.163	0.93	0.95	0.93	0.084	0.710
40	332.33	339.57	337.89	0.266	0.412	91.01	92.10	93.27	0.628	0.250	0.91	0.94	0.90	0.163	0.505

HC/AC ratio, head circumference/abdominal circumference ratio.

Supplementary Table S9A. Back-transformed and pairwise comparison of weekly fetal growth biometrics across sum of odd-chain saturated fatty acids tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Estimated fetal weight, g					Femur length, mm				
	<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	gram			<u>comparison</u>		<u>mean mm</u>			<u>comparison</u>	
	1 st tertile	2 nd tertile	3 rd tertile	p value					p value	
				2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	33.60	35.77	36.09	0.362	0.283	2.33	2.61	2.50	0.092	0.195
11	43.44	44.38	45.41	0.577	0.234	4.11	4.27	4.28	0.298	0.220
12	55.86	55.74	57.46	0.927	0.188	6.51	6.50	6.69	0.925	0.276
13	71.42	70.62	72.91	0.559	0.258	9.43	9.23	9.65	0.313	0.323
14	90.75	89.89	92.58	0.646	0.315	12.64	12.36	12.97	0.307	0.269
15	114.54	114.52	117.36	0.994	0.237	15.92	15.73	16.45	0.598	0.152
16	143.52	145.51	148.15	0.510	0.109	19.06	19.17	19.88	0.795	0.060
17	178.43	183.67	185.81	0.157	0.032	22.03	22.56	23.14	0.246	0.022
18	220.00	229.47	230.98	0.042	0.009	24.89	25.86	26.23	0.064	0.013
19	268.98	282.86	283.92	0.016	0.004	27.8	29.08	29.25	0.030	0.015
20	326.17	344.02	344.94	0.011	0.004	30.75	32.22	32.25	0.022	0.022
21	392.40	413.33	414.55	0.011	0.004	33.70	35.24	35.18	0.025	0.036
22	468.49	491.12	493.32	0.019	0.007	36.62	38.10	38.02	0.040	0.065
23	555.25	577.82	581.86	0.045	0.013	39.48	40.78	40.73	0.087	0.121
24	653.44	673.92	680.86	0.127	0.031	42.26	43.28	43.32	0.209	0.218
25	763.80	780.08	791.15	0.312	0.070	44.93	45.61	45.77	0.443	0.363
26	887.04	897.21	913.79	0.596	0.135	47.49	47.79	48.1	0.752	0.539
27	1023.79	1026.55	1050.10	0.902	0.208	49.93	49.88	50.31	0.960	0.714
28	1174.68	1169.79	1201.78	0.847	0.257	52.25	51.92	52.45	0.757	0.856
29	1340.05	1328.58	1370.81	0.683	0.252	54.45	53.97	54.54	0.657	0.942
30	1519.34	1503.5	1556.93	0.615	0.216	56.55	56.05	56.58	0.648	0.981
31	1711.13	1694.69	1757.36	0.651	0.188	58.56	58.13	58.57	0.714	0.997
32	1913.27	1901.89	1967.45	0.788	0.184	60.50	60.22	60.48	0.827	0.985
33	2122.78	2124.33	2180.45	0.974	0.215	62.39	62.31	62.28	0.955	0.942
34	2335.80	2360.66	2387.49	0.639	0.311	64.26	64.39	63.97	0.923	0.852
35	2548.11	2607.75	2579.39	0.304	0.572	66.11	66.45	65.53	0.814	0.714
36	2756.66	2856.28	2763.50	0.135	0.913	67.83	68.41	67.01	0.712	0.626
37	2958.92	3092.69	2961.71	0.082	0.969	69.24	70.15	68.51	0.598	0.689
38	3152.56	3300.40	3203.03	0.073	0.513	70.12	71.52	70.16	0.436	0.984
39	3335.59	3460.86	3526.18	0.164	0.044	70.28	72.38	72.06	0.264	0.376
40	3506.38	3555.38	3986.26	0.720	0.005	69.56	72.60	74.37	0.258	0.055

Supplementary Table S9B. Back-transformed and pairwise comparison of weekly fetal growth biometrics across sum of odd-chain saturated fatty acids tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Head circumference, mm					Biparietal diameter, mm				
	<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	<u>mean</u>			<u>comparison</u>		<u>mean mm</u>			<u>comparison</u>	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	50.81	47.07	51.48	0.042	0.695	12.14	11.71	12.87	0.410	0.178759
11	61.85	58.83	62.33	0.013	0.661	15.66	15.22	16.10	0.223	0.217932
12	73.67	71.52	74.00	0.005	0.611	19.39	19.03	19.57	0.094	0.378239
13	86.01	84.79	86.28	0.099	0.675	23.18	22.97	23.19	0.333	0.937566
14	98.65	98.32	98.96	0.730	0.716	26.88	26.91	26.86	0.933	0.941149
15	111.38	111.83	111.84	0.688	0.639	30.42	30.72	30.50	0.365	0.787813
16	124.03	125.12	124.76	0.364	0.483	33.74	34.35	34.06	0.088	0.348725
17	136.52	138.1	137.59	0.215	0.315	36.90	37.77	37.49	0.018	0.079
18	148.81	150.77	150.28	0.162	0.206	39.98	41.05	40.83	0.009	0.022
19	160.89	163.28	162.82	0.121	0.130	43.06	44.28	44.09	0.07	0.011
20	172.67	175.60	175.18	0.072	0.067	46.11	47.48	47.30	0.004	0.006
21	184.11	187.67	187.27	0.033	0.026	49.12	50.63	50.45	0.002	0.003
22	195.17	199.40	199.04	0.012	0.008	52.09	53.73	53.52	0.001	0.001
23	205.86	210.75	210.43	0.005	0.002	55.00	56.76	56.51	<0.001	<0.001
24	216.24	221.70	221.45	0.003	0.001	57.84	59.71	59.41	<0.001	0.001
25	226.37	232.24	232.08	0.003	0.001	60.62	62.57	62.24	<0.001	0.002
26	236.37	242.39	242.38	0.006	0.001	63.34	65.35	65.01	0.001	0.003
27	246.37	252.20	252.39	0.011	0.002	66.01	68.05	67.75	0.002	0.004
28	256.53	261.72	262.19	0.023	0.003	68.64	70.68	70.47	0.002	0.002
29	266.91	271.02	271.88	0.063	0.008	71.24	73.25	73.20	<0.001	<0.001
30	277.23	280.04	281.37	0.200	0.027	73.77	75.76	75.93	<0.001	<0.0001
31	287.14	288.70	290.41	0.504	0.102	76.22	78.18	78.58	0.002	<0.0001
32	296.23	296.93	298.71	0.786	0.260	78.55	80.53	81.06	0.006	<0.001
33	304.08	304.65	305.96	0.833	0.419	80.73	82.79	83.26	0.007	<0.001
34	310.23	311.79	311.86	0.556	0.477	82.72	84.95	85.10	0.003	<0.001
35	314.46	318.26	316.14	0.143	0.452	84.48	87.00	86.48	0.001	<0.001
36	317.33	323.94	319.28	0.022	0.428	85.91	88.91	87.54	<0.001	0.037
37	319.57	328.73	322.17	0.005	0.343	86.91	90.6	88.57	<0.001	0.067
38	321.96	332.50	325.79	0.001	0.164	87.37	92.03	89.85	<0.0001	0.006
39	325.27	335.14	331.11	0.004	0.073	87.20	93.13	91.69	<0.0001	<0.0001
40	330.34	336.56	339.23	0.314	0.170	86.31	93.84	94.45	<0.0001	<0.001

Supplementary Table S10A. Back-transformed and pairwise comparison of weekly fetal growth biometrics across lignoceric acid (24:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Estimated fetal weight (EFW), g					Abdominal circumference (AC), mm					Femur length (FL), mm				
	<u>Back-transformed geometric</u>		<u>Wald test for pairwise</u>			<u>Back-transformed geometric</u>		<u>Wald test for pairwise</u>			<u>Back-transformed geometric</u>		<u>Wald test for pairwise</u>		
	<u>mean</u>		<u>comparison</u>			<u>mean mm</u>		<u>comparison</u>			<u>mean</u>		<u>comparison</u>		
	gram	gram	p value			mm	mm	p value			mm	mm	p value		
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	37.47	35.31	37.65	0.246	0.945	41.76	35.89	40.33	<0.001	0.494	2.81	2.06	2.85	<0.0001	0.859
11	45.81	43.84	45.92	0.122	0.945	49.72	45.85	48.28	<0.001	0.263	4.49	3.82	4.56	<0.0001	0.710
12	56.75	55.10	56.85	0.061	0.919	58.61	56.81	57.24	0.013	0.056	6.71	6.31	6.80	<0.001	0.464
13	70.98	69.84	71.16	0.225	0.879	68.42	68.46	67.21	0.961	0.089	9.40	9.44	9.51	0.764	0.471
14	89.32	88.92	89.68	0.767	0.832	79.07	80.50	78.12	0.145	0.333	12.45	12.98	12.55	0.025	0.673
15	112.67	113.29	113.37	0.729	0.756	90.46	92.65	89.85	0.060	0.594	15.73	16.62	15.80	0.004	0.830
16	141.98	143.91	143.19	0.391	0.654	102.44	104.7	102.21	0.074	0.847	19.08	20.11	19.10	0.004	0.968
17	178.08	181.53	179.98	0.211	0.557	114.81	116.52	114.95	0.200	0.910	22.40	23.33	22.36	0.019	0.913
18	221.54	226.55	224.27	0.148	0.503	127.33	128.13	127.78	0.583	0.750	25.65	26.31	25.58	0.134	0.861
19	272.50	278.81	276.22	0.150	0.472	139.76	139.6	140.41	0.918	0.678	28.85	29.23	28.76	0.447	0.847
20	331.36	338.39	336.30	0.198	0.437	151.96	150.91	152.71	0.548	0.657	31.97	32.11	31.84	0.801	0.812
21	398.71	405.60	405.03	0.302	0.404	163.85	162.00	164.57	0.325	0.683	34.97	34.93	34.80	0.940	0.757
22	475.18	480.79	482.92	0.486	0.384	175.40	172.86	175.93	0.202	0.767	37.82	37.66	37.58	0.795	0.690
23	561.43	564.39	570.41	0.760	0.392	186.61	183.47	186.79	0.138	0.923	40.49	40.28	40.19	0.742	0.627
24	658.23	657.01	667.96	0.917	0.439	197.54	193.88	197.19	0.106	0.858	42.99	42.78	42.63	0.760	0.584
25	766.52	759.51	776.04	0.619	0.532	208.29	204.16	207.23	0.090	0.620	45.33	45.17	44.93	0.821	0.571
26	887.43	873.11	895.16	0.397	0.673	219.00	214.41	217.06	0.079	0.403	47.55	47.45	47.12	0.895	0.579
27	1022.41	999.48	1025.94	0.253	0.870	229.88	224.75	226.85	0.067	0.218	49.70	49.65	49.27	0.952	0.604
28	1173.27	1140.89	1169.13	0.168	0.866	241.15	235.37	236.85	0.049	0.081	51.83	51.79	51.45	0.965	0.644
29	1341.96	1299.72	1325.47	0.120	0.546	253.04	246.40	247.25	0.029	0.014	54.01	53.92	53.71	0.909	0.703
30	1528.28	1475.76	1494.93	0.096	0.280	265.45	257.76	257.99	0.016	0.001	56.25	56.02	56.03	0.787	0.773
31	1730.03	1666.98	1676.94	0.088	0.141	278.09	269.29	268.9	0.010	<0.001	58.50	58.07	58.32	0.637	0.834
32	1943.40	1869.74	1870.54	0.088	0.089	290.62	280.79	279.81	0.007	<0.001	60.70	60.04	60.51	0.498	0.844
33	2162.70	2078.55	2074.31	0.090	0.073	302.65	292.07	290.51	0.007	0.0001	62.79	61.88	62.50	0.380	0.777
34	2380.24	2285.90	2286.35	0.091	0.084	313.72	302.85	300.74	0.008	<0.0001	64.70	63.57	64.18	0.277	0.606
35	2587.39	2485.65	2503.97	0.101	0.159	323.40	312.97	310.31	0.014	<0.0001	66.37	65.07	65.49	0.210	0.358
36	2784.15	2685.22	2722.53	0.159	0.363	331.92	322.81	319.38	0.045	<0.001	67.85	66.53	66.59	0.234	0.238
37	2978.31	2899.55	2936.06	0.318	0.591	340.17	333.04	328.28	0.145	0.003	69.29	68.13	67.73	0.340	0.217
38	3181.02	3148.79	3137.60	0.708	0.613	349.19	344.41	337.35	0.349	0.005	70.87	70.10	69.18	0.533	0.201
39	3406.85	3459.97	3319.40	0.595	0.355	360.09	357.79	347.01	0.689	0.005	72.78	72.69	71.25	0.952	0.291
40	3674.53	3870.51	3473.30	0.198	0.161	374.16	374.18	357.71	0.998	0.068	75.22	76.19	74.27	0.730	0.738

Supplementary Table S10B. Back-transformed and pairwise comparison of weekly fetal growth biometrics across lignoceric acid (24:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Head circumference (HC), mm					Biparietal diameter (BPD), mm					HC/AC ratio				
	<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise comparison</u>		<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise comparison</u>		<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise comparison</u>	
	mm			p value		mm			p value		mean			p value	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	48.84	46.33	51.18	0.043	0.186	13.25	11.63	12.62	0.002	0.278	1.27	1.26	1.28	0.899	0.671
11	60.23	58.34	61.69	0.044	0.225	16.28	15.30	15.82	0.005	0.213	1.26	1.25	1.29	0.737	0.312
12	72.46	71.25	72.97	0.113	0.554	19.56	19.26	19.25	0.143	0.143	1.26	1.25	1.28	0.402	0.035
13	85.24	84.68	84.85	0.491	0.682	23.02	23.31	22.80	0.115	0.318	1.24	1.23	1.26	0.208	0.038
14	98.30	98.25	97.15	0.964	0.325	26.59	27.27	26.40	0.006	0.522	1.23	1.22	1.24	0.269	0.274
15	111.40	111.66	109.68	0.821	0.197	30.20	31.01	29.95	0.006	0.471	1.22	1.21	1.22	0.303	0.768
16	124.39	124.70	122.29	0.806	0.146	33.81	34.49	33.42	0.029	0.277	1.20	1.19	1.20	0.295	0.571
17	137.19	137.3	134.89	0.934	0.139	37.38	37.71	36.78	0.295	0.109	1.19	1.18	1.17	0.289	0.124
18	149.81	149.53	147.42	0.849	0.161	40.89	40.75	40.07	0.686	0.044	1.18	1.17	1.15	0.321	0.020
19	162.36	161.57	159.83	0.627	0.180	44.34	43.77	43.31	0.114	0.021	1.16	1.16	1.14	0.376	0.005
20	174.76	173.42	172.04	0.442	0.179	47.72	46.77	46.48	0.014	0.010	1.16	1.15	1.13	0.434	0.002
21	186.94	184.99	183.95	0.300	0.162	51.01	49.76	49.58	0.002	0.004	1.15	1.14	1.12	0.499	<0.001
22	198.81	196.25	195.51	0.200	0.141	54.18	52.72	52.58	<0.001	0.001	1.14	1.14	1.11	0.589	<0.001
23	210.34	207.15	206.68	0.136	0.122	57.24	55.63	55.48	<0.0001	0.001	1.13	1.13	1.11	0.727	<0.001
24	221.47	217.70	217.45	0.098	0.111	60.18	58.49	58.29	<0.0001	<0.001	1.13	1.13	1.10	0.917	0.003
25	232.22	227.90	227.84	0.078	0.108	63.04	61.3	61.02	<0.001	<0.001	1.12	1.12	1.10	0.865	0.018
26	242.57	237.80	237.90	0.068	0.109	65.81	64.06	63.68	<0.001	<0.001	1.11	1.12	1.10	0.646	0.087
27	252.58	247.46	247.69	0.065	0.113	68.54	66.75	66.30	<0.001	<0.001	1.10	1.11	1.09	0.430	0.286
28	262.28	256.96	257.31	0.068	0.118	71.27	69.4	68.91	<0.001	<0.001	1.09	1.10	1.09	0.223	0.683
29	271.74	266.35	266.83	0.077	0.130	74.02	72.01	71.53	<0.0001	<0.0001	1.08	1.09	1.08	0.071	0.727
30	280.85	275.52	276.13	0.096	0.158	76.76	74.54	74.13	<0.0001	<0.0001	1.06	1.08	1.07	0.017	0.237
31	289.47	284.29	285.02	0.125	0.209	79.43	76.97	76.65	<0.0001	<0.0001	1.05	1.06	1.06	0.008	0.069
32	297.47	292.47	293.32	0.162	0.275	81.96	79.28	79.04	<0.0001	<0.0001	1.03	1.05	1.05	0.009	0.033
33	304.69	299.85	300.81	0.198	0.334	84.29	81.43	81.22	<0.0001	<0.0001	1.02	1.03	1.03	0.013	0.022
34	310.97	306.23	307.28	0.223	0.368	86.33	83.39	83.13	<0.0001	<0.0001	1.00	1.02	1.02	0.023	0.018
35	316.18	311.48	312.55	0.245	0.382	88.00	85.13	84.71	<0.0001	<0.0001	0.99	1.00	1.01	0.103	0.029
36	320.43	315.93	316.59	0.293	0.384	89.34	86.70	85.93	<0.001	<0.0001	0.98	0.98	0.99	0.542	0.178
37	324.02	320.05	319.41	0.377	0.333	90.46	88.12	86.77	0.005	<0.001	0.97	0.97	0.97	0.879	0.682
38	327.30	324.32	321.06	0.515	0.202	91.47	89.44	87.25	0.011	<0.0001	0.95	0.95	0.95	0.490	0.645
39	330.63	329.25	321.60	0.778	0.071	92.51	90.73	87.35	0.067	<0.0001	0.94	0.93	0.93	0.490	0.178
40	334.38	335.39	321.09	0.880	0.046	93.70	92.02	87.08	0.449	<0.001	0.92	0.92	0.90	0.885	0.231

HC/AC ratio, head circumference/abdominal circumference ratio.

Supplementary Table S11. Back-transformed and pairwise comparison of weekly fetal growth biometrics across arachidic acid (20:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Femur length, mm					Head circumference, mm					Biparietal diameter, mm				
	<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	<u>mean</u>			<u>comparison</u>		<u>mean</u>			<u>comparison</u>		<u>mean mm</u>			<u>comparison</u>	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	2.24	2.65	2.37	0.006	0.336	52.07	51.06	46.51	0.570	0.003	12.94	13.19	10.93	0.612	<0.0001
11	3.99	4.48	4.06	0.001	0.668	62.47	61.99	58.75	0.674	0.003	16.10	16.38	14.75	0.403	0.0001
12	6.43	6.90	6.33	<0.0001	0.565	73.69	73.7	71.85	0.986	0.010	19.49	19.77	18.88	0.160	0.003
13	9.46	9.83	9.13	0.014	0.138	85.56	85.97	85.39	0.539	0.779	23.02	23.29	23.10	0.170	0.650
14	12.88	13.07	12.29	0.431	0.063	97.91	98.57	98.99	0.455	0.183	26.60	26.85	27.21	0.354	0.014
15	16.43	16.40	15.63	0.943	0.056	110.56	111.31	112.34	0.472	0.067	30.16	30.37	31.04	0.507	0.003
16	19.86	19.67	18.97	0.609	0.079	123.37	124.05	125.28	0.536	0.062	33.66	33.82	34.55	0.621	0.004
17	23.06	22.77	22.22	0.518	0.161	136.21	136.68	137.79	0.666	0.136	37.06	37.18	37.78	0.722	0.027
18	26.03	25.75	25.41	0.603	0.377	148.98	149.21	150.02	0.844	0.373	40.39	40.47	40.84	0.807	0.197
19	28.89	28.70	28.58	0.765	0.706	161.63	161.64	162.15	0.992	0.688	43.68	43.74	43.9	0.862	0.565
20	31.74	31.63	31.71	0.878	0.974	174.07	173.9	174.14	0.904	0.962	46.93	46.98	46.96	0.903	0.943
21	34.55	34.49	34.75	0.943	0.857	186.22	185.92	185.9	0.833	0.828	50.12	50.16	49.99	0.934	0.766
22	37.29	37.26	37.64	0.972	0.770	198.01	197.6	197.38	0.784	0.673	53.25	53.27	52.99	0.954	0.560
23	39.95	39.91	40.38	0.976	0.744	209.4	208.92	208.53	0.762	0.569	56.29	56.31	55.93	0.964	0.426
24	42.50	42.44	42.96	0.963	0.758	220.35	219.84	219.33	0.761	0.516	59.25	59.27	58.81	0.964	0.350
25	44.95	44.84	45.37	0.939	0.799	230.89	230.36	229.76	0.772	0.505	62.13	62.16	61.61	0.954	0.309
26	47.30	47.13	47.64	0.912	0.853	241.04	240.49	239.84	0.783	0.515	64.93	64.98	64.32	0.933	0.278
27	49.57	49.32	49.80	0.883	0.908	250.86	250.28	249.61	0.782	0.524	67.66	67.74	66.95	0.900	0.230
28	51.78	51.44	51.91	0.858	0.954	260.43	259.79	259.11	0.759	0.513	70.35	70.47	69.49	0.851	0.156
29	53.95	53.53	54.01	0.838	0.981	269.82	269.05	268.43	0.704	0.481	73.01	73.18	71.93	0.790	0.074
30	56.08	55.59	56.13	0.825	0.984	278.93	278	277.52	0.644	0.473	75.61	75.82	74.29	0.732	0.029
31	58.16	57.61	58.26	0.824	0.969	287.59	286.52	286.25	0.623	0.519	78.10	78.37	76.57	0.687	0.017
32	60.16	59.61	60.37	0.837	0.942	295.63	294.52	294.48	0.647	0.613	80.43	80.78	78.78	0.645	0.019
33	62.06	61.57	62.42	0.864	0.909	302.86	301.89	302.02	0.710	0.733	82.54	82.99	80.93	0.584	0.032
34	63.86	63.51	64.40	0.907	0.874	309.08	308.53	308.73	0.831	0.886	84.39	84.95	83.03	0.485	0.075
35	65.54	65.42	66.25	0.969	0.842	314.21	314.33	314.41	0.960	0.933	85.93	86.63	85.09	0.376	0.278
36	67.08	67.28	67.94	0.953	0.819	318.63	319.33	318.94	0.801	0.912	87.25	88.02	86.98	0.374	0.763
37	68.47	69.07	69.42	0.870	0.814	322.93	323.62	322.2	0.824	0.819	88.47	89.14	88.48	0.490	0.986
38	69.70	70.76	70.62	0.787	0.827	327.68	327.32	324.07	0.909	0.253	89.72	90.03	89.36	0.756	0.717
39	70.76	72.30	71.49	0.713	0.869	333.54	330.55	324.46	0.425	0.010	91.13	90.72	89.37	0.722	0.107
40	71.64	73.67	71.98	0.679	0.946	341.18	333.45	323.31	0.276	0.011	92.86	91.26	88.32	0.454	0.031

Supplementary Table S12A. Back-transformed and pairwise comparison of weekly fetal growth biometrics across Behenic acid (22:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	Estimated fetal weight, g					Abdominal circumference, mm				
	<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	gram			<u>comparison</u>		<u>mean mm</u>			<u>comparison</u>	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st p value	3 rd vs 1 st p value
10	33.88	38.61	37.12	0.060	0.228	40.17	42.07	36.27	0.286	0.033
11	43.44	45.34	46.10	0.253	0.155	48.88	48.85	46.47	0.976	0.046
12	55.75	54.79	57.74	0.402	0.111	58.61	56.74	57.55	0.004	0.132
13	71.49	67.69	72.73	0.004	0.314	69.26	65.80	69.16	<0.0001	0.869
14	91.43	84.98	91.87	0.001	0.800	80.73	76.05	80.98	<0.0001	0.769
15	116.40	107.75	116.00	<0.001	0.860	92.86	87.42	92.75	<0.0001	0.920
16	147.26	137.10	145.99	<0.001	0.649	105.45	99.77	104.32	<0.0001	0.300
17	184.76	173.99	182.57	0.002	0.520	118.3	112.81	115.67	<0.0001	0.021
18	229.49	218.86	226.23	0.015	0.445	131.18	126.13	126.93	<0.0001	0.001
19	281.80	271.39	277.18	0.058	0.389	143.87	139.25	138.24	0.001	<0.0001
20	342.18	331.56	335.95	0.113	0.338	156.22	151.87	149.54	0.005	<0.0001
21	411.21	399.63	403.11	0.143	0.290	168.14	163.88	160.77	0.008	<0.0001
22	489.45	475.82	479.24	0.138	0.251	179.59	175.23	171.90	0.008	<0.0001
23	577.46	560.38	564.94	0.109	0.225	190.56	185.92	182.90	0.006	<0.0001
24	675.84	653.66	660.84	0.078	0.217	201.11	196.03	193.77	0.004	<0.0001
25	785.27	756.16	767.69	0.053	0.225	211.34	205.70	204.53	0.004	<0.001
26	906.54	868.65	886.35	0.034	0.242	221.40	215.14	215.24	0.003	0.003
27	1040.59	992.22	1017.87	0.021	0.261	231.46	224.59	225.97	0.002	0.012
28	1188.62	1128.43	1163.55	0.011	0.276	241.78	234.36	236.80	0.001	0.023
29	1351.68	1279.21	1324.85	0.005	0.293	252.51	244.77	247.84	<0.001	0.026
30	1529.40	1445.74	1501.74	0.004	0.331	263.57	255.82	259.05	<0.001	0.029
31	1720.47	1628.65	1692.48	0.005	0.393	274.79	267.39	270.27	0.001	0.043
32	1922.67	1828.41	1894.09	0.016	0.456	285.98	279.32	281.32	0.009	0.065
33	2132.82	2045.22	2102.21	0.053	0.488	296.93	291.42	292.01	0.051	0.073
34	2346.69	2278.99	2310.98	0.175	0.464	307.38	303.48	302.11	0.167478	0.055
35	2560.58	2528.79	2513.30	0.553	0.375	317.21	315.24	311.39	0.469981	0.035
36	2774.96	2787.92	2704.15	0.831	0.251	326.77	326.50	319.80	0.928129	0.034
37	2992.16	3043.80	2881.43	0.466	0.122	336.60	337.14	327.45	0.880475	0.018
38	3215.82	3280.04	3044.01	0.413	0.024	347.30	347.07	334.47	0.949557	<0.001
39	3451.05	3477.22	3191.62	0.766	0.002	359.55	356.16	341.04	0.452523	<0.0001
40	3704.55	3614.42	3324.84	0.517	0.010	374.12	364.32	347.32	0.305199	0.009

Supplementary Table S12B. Back-transformed and pairwise comparison of weekly fetal growth biometrics across Behenic acid (22:0) tertiles in the NICHD Fetal Growth Studies-Singletons

G W	HC, mm					BPD, mm				
	<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	<u>mean mm</u>			<u>comparison</u>		<u>mean mm</u>			<u>comparison</u>	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	47.17	53.18	50.23	<0.001	0.075	11.46	13.26	12.17	<0.0001	0.121
11	59.39	62.42	61.67	0.007	0.057	15.13	16.16	15.75	0.001	0.066
12	72.41	72.60	73.90	0.811	0.068	19.08	19.31	19.58	0.298	0.034
13	85.82	83.67	86.64	0.011	0.297	23.11	22.65	23.49	0.057	0.100
14	99.23	95.55	99.62	<0.001	0.693	27.05	26.11	27.35	0.003	0.314
15	112.38	108.09	112.62	<0.001	0.832	30.77	29.64	31.03	0.002	0.449
16	125.08	121.14	125.47	0.003	0.755	34.23	33.19	34.51	0.007	0.450
17	137.36	134.48	138.11	0.036	0.574	37.44	36.71	37.79	0.071	0.384
18	149.37	147.86	150.55	0.313	0.416	40.52	40.19	40.94	0.444	0.327
19	161.35	161.01	162.87	0.838	0.341	43.60	43.60	44.08	0.990	0.310
20	173.29	173.77	175.00	0.786	0.320	46.70	46.92	47.20	0.673	0.326
21	185.11	186.03	186.85	0.623	0.335	49.81	50.14	50.28	0.541	0.371
22	196.75	197.73	198.37	0.614	0.387	52.89	53.23	53.31	0.549	0.453
23	208.14	208.84	209.51	0.730	0.483	55.95	56.20	56.27	0.676	0.585
24	219.23	219.38	220.26	0.947	0.621	58.97	59.05	59.15	0.905	0.767
25	230.00	229.40	230.61	0.794	0.780	61.94	61.79	61.96	0.822	0.978
26	240.43	239.01	240.6	0.566	0.943	64.84	64.44	64.67	0.579	0.814
27	250.51	248.33	250.28	0.405	0.926	67.67	67.03	67.31	0.406	0.626
28	260.26	257.53	259.72	0.311	0.835	70.43	69.61	69.86	0.303	0.467
29	269.66	266.75	268.99	0.285	0.799	73.10	72.20	72.35	0.265	0.341
30	278.64	275.93	278.04	0.329	0.825	75.66	74.79	74.76	0.293	0.265
31	287.08	284.88	286.72	0.451	0.898	78.08	77.34	77.09	0.395	0.245
32	294.89	293.39	294.86	0.633	0.991	80.33	79.79	79.34	0.563	0.274
33	301.96	301.23	302.29	0.828	0.920	82.39	82.09	81.49	0.766	0.352
34	308.19	308.18	308.82	0.997	0.847	84.22	84.18	83.55	0.972	0.501
35	313.55	313.98	314.29	0.900	0.828	85.81	86.00	85.50	0.850	0.763
36	318.26	318.67	318.49	0.907	0.950	87.20	87.53	87.22	0.759	0.992
37	322.57	322.51	321.24	0.988	0.738	88.46	88.80	88.46	0.771	0.999
38	326.76	325.78	322.39	0.807	0.274	89.65	89.84	89.00	0.876	0.594
39	331.14	328.79	321.79	0.582	0.026	90.84	90.68	88.6	0.907	0.081
40	336.02	331.85	319.31	0.512	0.013	92.08	91.36	87.05	0.711	0.015

Supplementary Table S13A. Back-transformed and pairwise comparison of weekly fetal growth biometrics across sum of very-long-even-chain saturated fatty acids tertiles in the NICHD Fetal Growth Studies-Singletons

G W	EFW, g					AC, mm				
	<u>Back-transformed geometric mean</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	gram			<u>comparison</u>		mean mm			<u>comparison</u>	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	32.15	35.36	37.55	0.059	0.027	38.31	42.46	36.83	0.028	0.417
11	42.21	43.57	46.46	0.301	0.013	47.63	49.16	46.85	0.199	0.517
12	55.08	54.39	58.01	0.550	0.012	57.95	56.96	57.72	0.141	0.743
13	71.38	68.50	72.90	0.038	0.204	69.12	65.95	69.13	<0.0001	0.983
14	91.80	86.73	91.92	0.007	0.945	80.94	76.12	80.79	<0.0001	0.868
15	117.10	110.00	115.94	0.003	0.604	93.22	87.41	92.46	<0.0001	0.490
16	148.04	139.21	145.84	0.004	0.423	105.74	99.66	104.02	<0.0001	0.135
17	185.37	175.16	182.44	0.006	0.381	118.34	112.58	115.44	<0.0001	0.016
18	229.76	218.29	226.29	0.014	0.409	130.87	125.74	126.85	<0.0001	0.002
19	281.72	268.68	277.68	0.026	0.443	143.22	138.67	138.33	0.001	0.001
20	341.83	326.67	337.18	0.036	0.466	155.30	151.12	149.81	0.006	<0.001
21	410.73	392.74	405.41	0.041	0.480	167.01	162.97	161.23	0.010	<0.001
22	489.00	467.37	482.98	0.041	0.490	178.32	174.17	172.53	0.010	<0.001
23	577.23	551.07	570.45	0.039	0.505	189.22	184.75	183.68	0.007	0.001
24	676.03	644.44	668.43	0.036	0.528	199.75	194.77	194.68	0.004	0.005
25	786.01	748.21	777.52	0.035	0.556	210.01	204.38	205.55	0.003	0.022
26	907.86	863.30	898.38	0.035	0.582	220.10	213.79	216.31	0.002	0.075
27	1042.34	990.94	1031.75	0.038	0.599	230.19	223.23	227.03	0.001	0.159
28	1190.37	1132.68	1178.51	0.047	0.603	240.50	233.02	237.79	<0.001	0.230
29	1352.79	1290.15	1339.53	0.059	0.599	251.19	243.46	248.68	<0.001	0.245
30	1529.36	1463.47	1514.55	0.085	0.599	262.19	254.52	259.65	<0.001	0.232
31	1719.07	1651.74	1702.34	0.126	0.607	273.34	266.09	270.61	0.001	0.233
32	1920.25	1853.13	1900.87	0.185	0.613	284.46	278.00	281.43	0.010	0.244
33	2130.45	2064.81	2107.28	0.254	0.598	295.33	290.07	291.99	0.057	0.239
34	2346.44	2282.76	2317.78	0.324	0.554	305.71	302.08	302.15	0.191	0.211
35	2564.55	2502.46	2527.54	0.388	0.487	315.44	313.79	311.75	0.533	0.195
36	2782.18	2726.16	2730.22	0.485	0.404	324.92	325.05	320.68	0.964	0.207
37	2997.14	2962.55	2918.28	0.699	0.275	334.77	335.87	328.80	0.753	0.132
38	3207.39	3223.83	3083.48	0.868	0.104	345.71	346.24	336.02	0.884	0.014
39	3411.10	3526.40	3217.33	0.296	0.019	358.52	356.17	342.21	0.573	<0.001
40	3606.71	3892.30	3311.66	0.037	0.035	374.15	365.68	347.29	0.324	0.0038

Supplementary Table S13B. Back-transformed and pairwise comparison of weekly fetal growth biometrics across sum of very-long-even-chain saturated fatty acids tertiles in the NICHD Fetal Growth Studies-Singleton

G W	HC, mm					BPD, mm				
	<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>		<u>Back-transformed geometric</u>			<u>Wald test for pairwise</u>	
	<u>mean mm</u>			<u>comparison</u>		<u>mean mm</u>			<u>comparison</u>	
	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile	1 st tertile	2 nd tertile	3 rd tertile	2 nd vs 1 st tertile	3 rd vs 1 st tertile
10	51.89	51.94	48.6	0.976	0.071	13.45	12.75	11.8	0.180	<0.001
11	62.43	61.78	60.51	0.585	0.110	16.45	15.87	15.47	0.092	0.004
12	73.79	72.48	73.22	0.059	0.418	19.68	19.22	19.40	0.025	0.172
13	85.82	83.94	86.35	0.005	0.416	23.08	22.72	23.40	0.064	0.102
14	98.32	96.04	99.58	0.011	0.148	26.60	26.26	27.32	0.213	0.005
15	111.12	108.61	112.66	0.016	0.139	30.16	29.79	31.03	0.249	0.005
16	124.07	121.48	125.42	0.018	0.220	33.72	33.26	34.49	0.165	0.019
17	137.03	134.48	137.83	0.023	0.479	37.24	36.64	37.72	0.072	0.161
18	149.91	147.44	150.02	0.041	0.932	40.71	39.93	40.82	0.032	0.777
19	162.67	160.19	162.15	0.066	0.701	44.14	43.17	43.92	0.017	0.595
20	175.22	172.62	174.18	0.073	0.481	47.50	46.35	47.03	0.008	0.293
21	187.46	184.62	186.05	0.060	0.356	50.77	49.44	50.14	0.003	0.170
22	199.33	196.13	197.68	0.039	0.289	53.93	52.44	53.22	<0.001	0.127
23	210.77	207.13	209.00	0.023	0.271	56.98	55.34	56.25	<0.001	0.128
24	221.77	217.61	219.98	0.014	0.293	59.92	58.15	59.21	<0.001	0.166
25	232.34	227.62	230.60	0.010	0.346	62.75	60.88	62.10	<0.001	0.236
26	242.50	237.23	240.85	0.008	0.407	65.49	63.54	64.88	<0.001	0.309
27	252.33	246.54	250.73	0.006	0.448	68.16	66.16	67.56	0.002	0.338
28	261.89	255.68	260.26	0.004	0.446	70.80	68.78	70.11	0.002	0.284
29	271.27	264.77	269.49	0.002	0.395	73.41	71.41	72.53	0.001	0.161
30	280.36	273.72	278.36	0.001	0.338	75.99	74.03	74.83	0.002	0.068
31	289.02	282.38	286.78	0.003	0.315	78.47	76.60	77.03	0.006	0.034
32	297.10	290.61	294.65	0.008	0.320	80.81	79.05	79.16	0.019	0.027
33	304.43	298.23	301.89	0.018	0.334	82.96	81.34	81.25	0.045	0.033
34	310.84	305.06	308.39	0.029	0.353	84.85	83.39	83.33	0.073	0.060
35	316.24	310.96	314.04	0.040	0.407	86.45	85.17	85.41	0.107	0.205
36	320.83	315.98	318.56	0.082	0.452	87.80	86.69	87.30	0.197	0.597
37	324.90	320.34	321.62	0.147	0.337	88.94	88.02	88.71	0.340	0.826
38	328.76	324.27	322.90	0.168	0.083	89.96	89.27	89.35	0.488	0.553
39	332.74	328.04	322.09	0.196	0.003	90.92	90.51	88.91	0.717	0.070
40	337.20	331.89	318.91	0.415	0.007	91.89	91.86	87.15	0.990	0.020

Supplementary Table S14. Association between individual SFA and fetal growth throughout between 10-40 weeks gestation using cubic spline model with gestational weeks after adjusting for maternal family history of diabetes

	Estimated Fetal Weight, g	Abdominal circumference, mm	Femur length, mm	Head circumference, mm	Biparietal diameter, mm	HC/AC ratio
SFAs in tertiles	Globa test (after adjusting for maternal ge, ethnicity/race, nulliparity, pre-pregnacy body mass index and fetal sex) with interaction term SFA*GA					
	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction
Myristic acid (14:0)	<0.00001	<0.00001	0.011	<0.0001	<0.00001	<0.00001
Pentadecanoic acid (15:0)	<0.00001	<0.00001	0.005	<0.00001	<0.00001	<0.00001
Palmitic acid (16:0)	0.171	0.021	1.00	1.00	1.00	<0.00001
Heptadecanoic acid (17:0)	<0.00001	<0.001	<0.00001	<0.00001	<0.00001	1.00
Stearic acid (18:0)	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Arachidic acid (20:0)	0.129	1.00	0.002	0.005	<0.00001	0.019
Behenic acid (22:0)	<0.00001	<0.00001	0.226	<0.00001	<0.00001	<0.00001
Lignoceric acid (24:0)	<0.00001	<0.00001	0.031	<0.00001	<0.00001	<0.00001
Sum of even-chain SFAs (14:0 + 16:0 + 18:0)	1.00	<0.00001	<0.00001	<0.00001	<0.00001	0.0001
Sum of odd-chain SFAs (15:0 + 17:0)	<0.00001	1.00	0.0039	<0.00001	<0.00001	0.178
Sum of very-long-even-chain SFAs (20:0 + 22:0 + 24:0)	<0.00001	<0.00001	0.073	<0.00001	<0.00001	<0.00001

Abbreviations: GA, gestational age, SFA, saturated fatty acids; HC/AC ratio, head circumference/abdominal circumference ratio.

Supplementary Table S15. Association between individual SFA and fetal growth throughout between 10-40 weeks gestation using cubic spline model with gestational weeks after adjusting for maternal random glucose level at visit 0

	Estimated Fetal Weight, g	Abdominal circumference, mm	Femur length, mm	Head circumference, mm	Biparietal diameter, mm	HC/AC ratio
SFAs in tertiles	Globa test (after adjusting for maternal ge, ethnicity/race, nulliparity, pre-pregnacy body mass index and fetal sex) with interaction term SFA*GA					
	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction
Myristic acid (14:0)	<0.00001	<0.00001	0.012	<0.00001	<0.00001	<0.00001
Pentadecanoic acid (15:0)	<0.00001	<0.00001	0.005	<0.00001	<0.00001	<0.00001
Palmitic acid (16:0)	0.206	0.041	1.00	1.00	1.00	<0.00001
Heptadecanoic acid (17:0)	<0.00001	0.001	<0.00001	<0.00001	<0.00001	1.00
Stearic acid (18:0)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Arachidic acid (20:0)	0.140	0.521	0.002	<0.001	<0.00001	0.026
Behenic acid (22:0)	<0.00001	<0.00001	0.2160	<0.00001	<0.00001	<0.00001
Lignoceric acid (24:0)	<0.00001	<0.00001	0.030	<0.00001	<0.00001	<0.00001
Sum of even-chain SFAs (14:0 + 16:0 + 18:0)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sum of odd-chain SFAs (15:0 + 17:0)	<0.00001	1.00	0.004	<0.00001	<0.00001	0.119
Sum of very-long-even-chain SFAs (20:0 + 22:0 + 24:0)	<0.00001	<0.00001	0.061	<0.00001	<0.00001	<0.00001

Abbreviations: GA, gestational age, SFA, saturated fatty acids; HC/AC ratio, head circumference/abdominal circumference ratio.

Supplementary Table S16. Association between individual SFA and fetal growth throughout between 10-40 weeks gestation using cubic spline model with gestational weeks after adjusting for maternal total cholesterol level at visit 0

	Estimated Fetal Weight, g	Abdominal circumference, mm	Femur length, mm	Head circumference, mm	Biparietal diameter, mm	HC/AC ratio
SFAs in tertiles	Globa test (after adjusting for maternal ge, ethnicity/race, nulliparity, pre-pregnacy body mass index and fetal sex) with interaction term SFA*GA					
	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction
Myristic acid (14:0)	<0.00001	<0.00001	0.013	<0.00001	<0.00001	<0.00001
Pentadecanoic acid (15:0)	<0.00001	<0.00001	0.005	<0.00001	<0.00001	<0.00001
Palmitic acid (16:0)	0.202	0.016	1.00	1.00	1.00	<0.00001
Heptadecanoic acid (17:0)	<0.00001	0.003	<0.00001	<0.00001	<0.00001	0.587
Stearic acid (18:0)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Arachidic acid (20:0)	0.131	0.600	0.002	<0.001	<0.00001	0.003
Behenic acid (22:0)	<0.00001	<0.00001	0.230	<0.00001	<0.00001	<0.00001
Lignoceric acid (24:0)	<0.00001	<0.00001	0.027	<0.00001	<0.00001	<0.00001
Sum of even-chain SFAs (14:0 + 16:0 + 18:0)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sum of odd-chain SFAs (15:0 + 17:0)	<0.00001	1.00	0.004	<0.00001	<0.00001	0.009
Sum of very-long-even-chain SFAs (20:0 + 22:0 + 24:0)	<0.00001	<0.00001	0.066	<0.00001	<0.00001	<0.00001

Abbreviations: GA, gestational age, SFA, saturated fatty acids; HC/AC ratio, head circumference/abdominal circumference ratio.

Supplementary Table S17. Association between individual SFA and fetal growth throughout between 10-40 weeks gestation using cubic spline model with gestational weeks after adjusting for subgroup SFAs at visit 0

	Estimated Fetal Weight, g	Abdominal circumference, mm	Femur length, mm	Head circumference, mm	Biparietal diameter, mm	HC/AC ratio
SFAs in tertiles	Globa test (after adjusting for maternal ge, ethnicity/race, nulliparity, pre-pregnacy body mass index and fetal sex) with interaction term SFA*GA					
	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction	Likelihood ratio with Bonferroni correction
Myristic acid (14:0)	0.99	0.005	0.007	<0.00001	<0.00001	<0.00001
Pentadecanoic acid (15:0)	<0.00001	<0.00001	0.003	<0.00001	<0.00001	<0.00001
Palmitic acid (16:0)	0.258	0.005	0.99	0.99	0.99	<0.00001
Heptadecanoic acid (17:0)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.550
Stearic acid (18:0)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Arachidic acid (20:0)	0.99	0.99	0.0004	0.037	<0.00001	0.020
Behenic acid (22:0)	0.124	<0.00001	0.058	<0.00001	<0.00001	<0.00001
Lignoceric acid (24:0)	<0.00001	<0.00001	0.022	<0.00001	<0.00001	<0.00001
Sum of even-chain SFAs (14:0 + 16:0 + 18:0)	0.99	0.99	<0.00001	<0.00001	0.0006	<0.00001
Sum of odd-chain SFAs (15:0 + 17:0)	<0.00001	<0.00001	0.001	<0.00001	<0.00001	0.071
Sum of very-long-even-chain SFAs (20:0 + 22:0 + 24:0)	<0.00001	<0.00001	0.007	<0.00001	<0.00001	<0.00001

Abbreviations: GA, gestational age; SFA, saturated fatty acids; HC/AC ratio, head circumference/abdominal circumference ratio.