

Supplementary Material

Table S1. Data collection timepoints

Measurement/Questionnaire	Antenatal Care Visits				Birth
	Enrollment	24-28 wks	32-36 wks	38-40 wks	
Medical and obstetric history and risks	x				
Household sociodemographic	x				
Maternal anthropometrics & morbidity	x	x	x	x	
Food Frequency Questionnaire		x	x	x	
Delivery outcomes					x
Umbilical cord blood collection					x
Newborn anthropometrics & morbidity					x

Table S2. Frequency of intake of each of n = 39 FFQ items by time period of assessment

FFQ Food Item	Mean Frequency 24- 28 wks (n=250)	Mean Frequency 32- 36 wks (n=246)	Comparison between mean intake frequency at two time points (T1 V T2): Paired T-Test, n = 245		
	Mean (SD)	Mean (SD)	Mean difference	t Value	Pr > t
Any kind of red meat	0.61 (1.33)	0.52 (1.14)	0.09	1.14	0.254
Any kind of poultry	1.00 (1.39)	1.36 (1.55)	-0.36	-2.87	0.0044*
Any kind of liver	0.22 (0.70)	0.16 (0.58)	0.06	1.06	0.2912
Any kind of fish	5.79 (1.96)	5.91 (1.87)	-0.12	-0.89	0.3718
Egg	0.82 (1.44)	0.8 (1.34)	0.02	0.19	0.8482
Milk	0.61(1.61)	0.46 (1.36)	0.15	1.37	0.1727
Yoghurt/Curd	0.03 (0.23)	0.05 (0.50)	-0.02	-0.7	0.4866
Butter	0.09 (0.77)	0.12 (0.89)	-0.03	-0.43	0.6671
Peanuts	0.00 (0.06)	0.03 (0.45)	-0.03	-0.85	0.3972
Vegetable oil	6.88 (0.72)	6.9 (0.71)	-0.02	0.07	0.9481
Carrots	0.03 (0.23)	0.00 (0.00)	0.03	2.15	0.0322*
Corn	0.03 (0.45)	0.00 (0.00)	0.03	1	0.3183
Tomatoes (red)	1.11(1.56)	0.55 (1.16)	0.56	5.67	<.0001*
Pumpkin (yellow)	0.64 (1.09)	0.66 (1.09)	-0.02	-0.14	0.8917
Dark leafy greens	2.9 (2.21)	2.68 (2.18)	0.22	1.98	0.0491*
Beans / Peas	0.61(1.20)	0.32 (0.70)	0.29	4.08	<.0001*
Papaya (yellow)	0.15 (0.45)	0.23 (0.69)	-0.08	-1.37	0.1715
Jackfruit	0.86 (1.61)	1.38 (1.90)	-0.52	-2.87	0.0044*
Mango	1.20 (2.20)	1.76 (2.36)	-0.56	-2.39	0.0178*
Banana	0.37 (0.84)	0.40 (0.95)	-0.03	-0.47	0.6417

Orange	0.18 (0.71)	0.06 (0.36)	0.12	2.49	0.0134*
Watermelon	0.29 (0.82)	0.02 (0.15)	0.27	4.86	<.0001*
Melon (yellow)	0.00 (0.00)	0.00 (0.00)	0	-1	0.3183
Guava	0.21 (0.81)	0.36 (1.08)	-0.15	-1.71	0.0891
Moringa leaves	0.20 (1.03)	0.04 (0.41)	0.16	2.05	0.041*
Green pepper	1.94 (2.11)	1.60 (1.87)	0.34	2.12	0.0354*
Spinach or Cassava	0.41 (1.06)	0.65 (1.15)	-0.24	-2.68	0.0078*
Radish leaves	0.01 (0.09)	0.01 (0.11)	0	-0.45	0.6556
Sweet potato	0.12 (0.81)	0.00 (0.06)	0.12	2.1	0.0364*
Whole milk powder	1.85 (2.46)	2.01 (2.63)	-0.16	-0.92	0.3581
Khoa	0.29 (1.25)	0.39 (1.42)	-0.1	-0.8	0.4217
Cherries	0.00 (0.00)	0.00 (0.00)	0	.	.
Methi leaves	0.00 (0.00)	0.00 (0.00)	0	.	.
Bathua leaves	0.02 (0.22)	0.00 (0.00)	0.02	1.74	0.0833
Soyabean	0.09 (0.65)	0.08 (0.41)	0.01	0.3	0.7616
Lentils	1.59 (1.54)	1.54 (1.33)	0.05	0.62	0.5377
Bajra	0.01 (1.19)	0.00 (0.00)	0.01	-1	0.3183
Red palm oil	0.00 (0.00)	0.00 (0.00)	0	.	.
Plantain	0.15 (0.57)	0.10 (0.38)	0.05	0.98	0.3291

Table S3. The adjusted odds of cord blood inflammation (>75th percentile) by tertile of maternal nutrient intake (n=251 mothers and their healthy, term infants). [Reference is the middle tertile of intake]

Nutrient [†]	Tertiles of Intake (range)	IL-1α	IL-1β	IL-6	IL-8	CRP	Any marker ²
		AOR [‡] [95%CI]	AOR [‡] [95%CI]	AOR [‡] [95%CI]	AOR [‡] [95%CI]	AOR [‡] [95%CI]	AOR [‡] [95%CI]
Vit A (mcg)	<33% (32.1–286)	1.50 [0.7 - 3.21]	2.13 [0.93 - 4.87]	1.18 [0.56 - 2.52]	1.76 [0.81 - 3.79]	1.16 [0.56 - 2.41]	1.27 [0.64 - 2.51]
	>66% (482–2741)	0.96 [0.44 - 2.1]	1.81 [0.8 - 4.1]	0.78 [0.36 - 1.69]	0.79 [0.35 - 1.78]	0.62 [0.29 - 1.35]	1.15 [0.58 - 2.28]
Vit B1 (mg)	<33% (0.09–0.22)	2.13 [0.98 - 4.65]	1.76 [0.79 - 3.95]	2.07 [0.95 - 4.48]	2.27 [1.05 - 4.91]	1.11 [0.52 - 2.34]	1.14 [0.57 - 2.27]
	>66% (0.32–0.56)	1.30 [0.59 - 2.85]	0.75 [0.34 - 1.68]	1.02 [0.46 - 2.26]	0.74 [0.32 - 1.67]	1.01 [0.48 - 2.12]	0.91 [0.46 - 1.8]
Vit B2 (mg)	<33% (0.12–0.37)	3.17 [1.39 - 7.19]	2.11 [0.93 - 4.8]	2.25 [1.03 - 4.94]	2.45 [1.12 - 5.37]	2.52 [1.17 - 5.45]	2.84 [1.37 - 5.88]
	>66% (0.55–1.60)	1.86 [0.83 - 4.15]	1.14 [0.52 - 2.51]	1.10 [0.5 - 2.41]	0.74 [0.33 - 1.68]	1.10 [0.5 - 2.42]	1.45 [0.74 - 2.86]
Vit B3 (mg)	<33% (3.55 – 7.34)	2.30 [1.03 - 5.12]	2.94 [1.25 - 6.9]	1.60 [0.74 - 3.46]	3.23 [1.42 - 7.31]	0.96 [0.46 - 2.02]	1.70 [0.84 - 3.44]
	>66% (0.20–0.56)	1.61 [0.72 - 3.58]	1.70 [0.75 - 3.84]	0.80 [0.36 - 1.78]	1.32 [0.57 - 3.06]	0.62 [0.29 - 1.34]	1.04 [0.52 - 2.06]
Vit B6 (mg)	<33% (0.20–0.47)	1.78 [0.82 - 3.87]	1.92 [0.85 - 4.34]	2.47 [1.12 - 5.44]	2.35 [1.08 - 5.13]	1.56 [0.74 - 3.3]	1.43 [0.71 - 2.9]
	>66% (0.68–1.49)	1.20 [0.55 - 2.61]	0.75 [0.34 - 1.67]	1.09 [0.49 - 2.44]	0.71 [0.31 - 1.63]	0.90 [0.41 - 1.95]	0.80 [0.4 - 1.58]
Vit B9 (Folate) (mcg)	<33% (9.36–77.3)	1.60 [0.73 - 3.51]	2.04 [0.88 - 4.71]	1.16 [0.54 - 2.47]	2.28 [1.04 - 5.02]	1.36 [0.64 - 2.89]	1.14 [0.57 - 2.3]
	>66% (121–321)	1.28 [0.6 - 2.73]	1.26 [0.57 - 2.76]	0.55 [0.25 - 1.19]	0.78 [0.35 - 1.76]	0.86 [0.4 - 1.85]	0.89 [0.45 - 1.76]
Vit B12 (mcg)	<33% (0.20–1.60)	0.60 [0.28 - 1.3]	0.49 [0.21 - 1.13]	0.42 [0.19 - 0.92]	0.49 [0.23 - 1.07]	0.75 [0.35 - 1.6]	0.83 [0.41 - 1.67]
	>66% (1.89–2.75)	0.63 [0.29 - 1.37]	0.54 [0.24 - 1.24]	0.38 [0.17 - 0.84]	0.42 [0.19 - 0.95]	0.71 [0.33 - 1.56]	0.70 [0.35 - 1.4]
Vit C (mg)	<33% (1.50–57.3)	1.28 [0.59 - 2.8]	1.28 [0.57 - 2.89]	1.31 [0.61 - 2.81]	1.23 [0.57 - 2.62]	0.65 [0.31 - 1.38]	0.89 [0.45 - 1.77]
	>66% (101–261)	1.18 [0.56 - 2.48]	0.76 [0.35 - 1.65]	0.82 [0.38 - 1.74]	0.52 [0.24 - 1.15]	0.52 [0.25 - 1.1]	0.88 [0.45 - 1.73]
Vit D (mcg)	<33% (2.26–7.71)	0.66 [0.29 - 1.52]	1.44 [0.59 - 3.52]	1.33 [0.57 - 3.07]	1.18 [0.51 - 2.73]	0.90 [0.39 - 2.06]	0.84 [0.39 - 1.79]
	>66% (11.6–27.13)	0.48 [0.23 - 0.99]	0.65 [0.31 - 1.37]	0.80 [0.39 - 1.67]	0.57 [0.27 - 1.2]	0.86 [0.42 - 1.77]	0.46 [0.23 - 0.91]

Vit E (mg)	<33% (1.76–2.74)	0.91 [0.42 - 1.98]	1.00 [0.43 - 2.34]	0.82 [0.38 - 1.79]	1.06 [0.49 - 2.3]	0.90 [0.43 - 1.9]	0.54 [0.27 - 1.09]
	>66% (3.45–6.01)	0.79 [0.38 - 1.65]	0.76 [0.36 - 1.61]	0.60 [0.28 - 1.26]	0.42 [0.19 - 0.92]	0.56 [0.26 - 1.19]	0.44 [0.22 - 0.89]
Iron (mg)	<33% (1.05–2.76)	1.57 [0.73 - 3.38]	2.37 [1.03 - 5.45]	1.52 [0.72 - 3.25]	2.28 [1.05 - 4.97]	0.94 [0.45 - 1.94]	1.06 [0.54 - 2.09]
	>66% (4.20–7.14)	1.30 [0.61 - 2.78]	1.52 [0.68 - 3.37]	0.96 [0.45 - 2.05]	1.01 [0.45 - 2.24]	0.70 [0.34 - 1.48]	0.75 [0.38 - 1.46]
Selenium (mg)	<33% (0.01–0.03)	1.43 [0.67 - 3.06]	1.62 [0.72 - 3.66]	1.01 [0.48 - 2.16]	1.79 [0.84 - 3.83]	0.95 [0.46 - 1.97]	0.95 [0.48 - 1.89]
	>66% (0.04–0.08)	1.23 [0.58 - 2.62]	1.43 [0.66 - 3.1]	1.01 [0.48 - 2.11]	1.02 [0.47 - 2.23]	0.65 [0.3 - 1.37]	0.66 [0.33 - 1.3]
Zinc (mg)	<33% (1.07–2.56)	2.10 [0.95 - 4.65]	2.52 [1.07 - 5.91]	2.08 [0.93 - 4.65]	2.20 [1 - 4.86]	1.60 [0.73 - 3.47]	1.75 [0.86 - 3.58]
	>66% (3.61–7.60)	1.23 [0.56 - 2.7]	1.26 [0.56 - 2.82]	1.24 [0.57 - 2.73]	0.68 [0.3 - 1.55]	1.06 [0.49 - 2.28]	0.97 [0.49 - 1.92]
ALA (mg)	<33% (20.0–143)	1.48 [0.67 - 3.24]	1.58 [0.68 - 3.69]	1.25 [0.57 - 2.73]	2.10 [0.95 - 4.68]	1.35 [0.64 - 2.87]	1.10 [0.54 - 2.22]
	>66% (243–575)	1.13 [0.54 - 2.4]	1.30 [0.61 - 2.77]	0.99 [0.47 - 2.09]	0.94 [0.43 - 2.06]	0.67 [0.31 - 1.43]	0.72 [0.37 - 1.42]
DHA (mg)	<33% (17.7–74.1)	0.69 [0.33 - 1.44]	0.95 [0.44 - 2.08]	0.91 [0.43 - 1.93]	1.04 [0.49 - 2.22]	1.26 [0.61 - 2.64]	0.90 [0.46 - 1.75]
	>66% (85.3–118)	0.77 [0.36 - 1.69]	0.97 [0.42 - 2.23]	1.15 [0.53 - 2.51]	1.27 [0.57 - 2.82]	1.40 [0.63 - 3.08]	0.83 [0.41 - 1.67]
DPA (mg)	<33% (2.77–30.4)	0.89 [0.35 - 2.26]	0.93 [0.35 - 2.43]	0.75 [0.3 - 1.89]	1.02 [0.39 - 2.66]	1.76 [0.67 - 4.6]	1.31 [0.57 - 2.97]
	>66% (38.7–38.7)	1.32 [0.56 - 3.08]	1.46 [0.61 - 3.52]	1.08 [0.47 - 2.51]	1.46 [0.6 - 3.53]	1.86 [0.74 - 4.67]	1.39 [0.64 - 2.98]
ETA (mg)	<33% (3.27–21.1)	0.95 [0.44 - 2.05]	1.06 [0.47 - 2.42]	0.73 [0.34 - 1.58]	1.18 [0.53 - 2.61]	1.47 [0.68 - 3.18]	1.57 [0.78 - 3.16]
	>66% (24.5–35.7)	1.00 [0.48 - 2.1]	1.16 [0.53 - 2.54]	0.77 [0.37 - 1.6]	1.35 [0.63 - 2.9]	1.53 [0.72 - 3.26]	1.34 [0.69 - 2.61]
EPA (mg)	<33% (2.26–24.8)	0.86 [0.4 - 1.84]	0.74 [0.33 - 1.68]	0.97 [0.45 - 2.09]	0.92 [0.42 - 1.99]	1.40 [0.64 - 3.02]	1.46 [0.73 - 2.93]
	>66% (31.6–31.6)	0.89 [0.42 - 1.86]	0.79 [0.36 - 1.72]	0.90 [0.42 - 1.9]	0.89 [0.42 - 1.9]	1.59 [0.74 - 3.4]	1.17 [0.6 - 2.28]
ARA (mg)	<33% (33.2–67.1)	1.29 [0.6 - 2.75]	0.74 [0.33 - 1.63]	1.34 [0.64 - 2.8]	1.77 [0.83 - 3.81]	1.43 [0.68 - 3]	1.23 [0.62 - 2.44]
	>66% (96.5–234.8)	1.19 [0.55 - 2.58]	0.64 [0.28 - 1.45]	0.59 [0.27 - 1.34]	1.04 [0.46 - 2.35]	1.15 [0.53 - 2.49]	0.75 [0.38 - 1.5]
LA (mg)	<33% (1020–1994)	1.72 [0.81 - 3.67]	1.73 [0.76 - 3.9]	1.35 [0.63 - 2.9]	2.35 [1.07 - 5.15]	1.47 [0.69 - 3.12]	1.89 [0.93 - 3.86]
	>66% (2116–3561)	0.78 [0.36 - 1.69]	1.10 [0.51 - 2.38]	0.85 [0.4 - 1.8]	0.96 [0.43 - 2.12]	0.87 [0.41 - 1.85]	0.83 [0.42 - 1.64]
Low Nutrient Intake Categories (<33rd percentile)³							
Water-soluble vitamins ⁴		1.08 [0.55 - 2.13]	1.28 [0.64 - 2.57]	1.19 [0.6 - 2.35]	1.60 [0.79 - 3.24]	1.40 [0.71 - 2.79]	1.07 [0.58 - 1.97]
Fat-soluble vitamins ⁴		1.33 [0.7 - 2.55]	1.68 [0.86 - 3.27]	1.18 [0.61 - 2.26]	1.96 [1.01 - 3.82]	1.55 [0.81 - 2.95]	1.34 [0.74 - 2.43]
Minerals		1.51 [0.8 - 2.85]	2.12 [1.07 - 4.20]	1.23 [0.65 - 2.32]	2.07 [1.07 - 3.99]	1.68 [0.9 - 3.15]	1.49 [0.84 - 2.65]
LCPUFAs		1.03 [0.53 - 1.98]	0.90 [0.45 - 1.80]	1.99 [0.98 - 4.04]	1.42 [0.72 - 2.83]	1.38 [0.70 - 2.71]	0.96 [0.53 - 1.75]

¹ Reference category for models of individual nutrient intake tertiles are levels between the 33rd-67th percentile of the sample distribution. Models adjusted for socioeconomic status (continuous), primiparity, maternal upper-arm circumference < 22 cm at enrollment, tobacco and/or betel nut use, season of initial antenatal assessment, and maternal educational attainment (years).

Analytic sample, n = 244 dyads with both nutrient and inflammatory marker data available

² Any marker refers to elevation (> 75th percentile) of one or more of the five inflammatory markers examined

³ Low nutrient intake category variables are binary: operationalized as one or more deficiencies within nutrient category (at least one nutrient with value < 33rd percentile) versus no deficiencies (reference, no values less than 33rd percentile) within nutrient category

⁴ Water-soluble vitamins include all Bs and C; Fat-soluble vitamins include A, D, and E

*Statistically significant odds ratios (p < 0.05) are bolded