Supplementary Material

Table S1. Association of maternal dietary composition during pregnancy (not adjusted for energy intake) with child cognition outcomes up to age 4-years (*n*=58).

Variables[1]	**Beta-coefficient**	**95% Confidence interval**	**P-value**[2]	**R-value**
Full scale IQ				
Energy	−1.12	−9.45 to 7.21	0.79	0.15
Protein (% E)	6.85	−16.49 to 30.20	0.56	0.15
Total fat (% E)	5.34	−13.82 to 24.49	0.58	0.15
PUFA (% E)	0.32	−7.73 to 8.37	0.94	0.15
CHO (% E)	−12.65	−35.10 to 9.80	0.26	0.17
P:C ratio	−0.83	−6.75 to 5.10	0.78	0.15
Protein (g)	−0.23	−8.20 to 7.74	0.95	0.15
PUFA (g)	−0.41	−6.49 to 5.66	0.89	0.15
Total sugars (g)	−0.27	−7.53 to 6.99	0.94	0.15
Starch (g)	−4.69	−12.42 to 3.04	0.23	0.17
Verbal IQ				
Energy	1.28	−9.72 to 12.29	0.82	0.04
Protein (% E)	0.49	−30.44 to 31.42	0.98	0.04
Total fat (% E)	11.21	−13.88 to 36.30	0.38	0.06
PUFA (% E)	−0.40	−10.91 to 10.11	0.94	0.04
CHO (% E)	−13.10	−42.79 to 16.59	0.38	0.06
P:C ratio	−2.87	−10.66 to 4.92	0.46	0.05
Protein (g)	1.23	−9.29 to 11.75	0.82	0.04
PUFA (g)	0.45	−7.53 to 8.42	0.91	0.04
Total sugars (g)	1.32	−8.27 to 10.91	0.78	0.04
Starch (g)	−2.50	−12.81 to 7.81	0.63	0.05
Performance IQ				
Energy	−4.52	−13.93 to 4.88	0.34	0.20
Protein (% E)	14.96	−11.36 to 41.28	0.26	0.20
Total fat (% E)	2.26	−19.60 to 24.10	0.84	0.18
PUFA (% E)	−1.82	−10.94 to 7.31	0.69	0.18
CHO (% E)	−14.59	−40.13 to 10.96	0.26	0.20
P:C ratio	1.21	−5.52 to 7.95	0.72	0.18
Protein (g)	−2.40	−11.43 to 6.64	0.60	0.19
PUFA (g)	−3.44	−10.29 to 3.41	0.32	0.20
Total sugars (g)	−2.98	−11.18 to 5.22	0.47	0.19
Starch (g)	**−8.06**	**−16.70 to 0.57**	**0.07**	**0.23**
Processing speed composite				
Energy	−0.01	−9.06 to 9.03	0.99	0.18
Protein (% E)	6.37	−16.25 to 28.99	0.57	0.19

Total fat (% E)	1.03	−17.69 to 19.74	0.91	0.18
PUFA (% E)	−1.01	−8.66 to 6.64	0.79	0.18
CHO (% E)	−8.33	−30.26 to 13.61	0.45	0.19
P:C ratio	3.60	−2.01 to 9.21	0.20	0.21
PUFA (g)	−0.67	−6.89 to 5.54	0.82	0.18
Protein (g)	0.82	−7.40 to 9.05	0.84	0.18
Total sugars (g)	0.50	−6.89 to 7.89	0.89	0.18
Starch (g)	−3.78	−12.99 to 5.43	0.41	0.19

Table S1. *(Continued)*

Variable[1]	**Beta-coefficient**	**95% Confidence interval**	**P-value**[2]	**R- value**
General language composite				
Energy	2.36	−10.55 to 15.26	0.72	0.06
Protein (%E)	8.40	−27.84 to 44.63	0.64	0.06
Total fat (% E)	14.82	−14.57 to 44.22	0.32	0.07
PUFA (% E)	2.78	−9.54 to 15.10	0.65	0.06
CHO (% E)	−19.55	−54.25 to 15.15	0.26	0.08
P:C ratio	−0.69	−9.88 to 8.49	0.88	0.06
Protein (g)	3.13	−9.19 to 15.45	0.61	0.06
PUFA (g)	2.84	−6.49 to 12.17	0.55	0.06
Total sugars (g)	2.44	−8.80 to 13.68	0.67	0.06
Starch (g)	−3.62	−15.71 to 8.47	0.55	0.06

CHO, carbohydrates, P:C, protein to carbohydrate, PUFA, polyunsaturated fatty acids, % E, percentage of energy. Analysis models were adjusted for maternal age, education, pre-pregnancy BMI and birthweight. [1] The natural logarithm transformation of the nutrient variable was used for the linear regression models to meet normality assumptions. [2] P-values were derived by linear regression models.

Table S2. Association of maternal dietary composition during pregnancy (not adjusted for energy intake) with child behaviour outcomes up to age 4-years (*n*=51)

Variables[1]	**Beta-coefficient**	**95% Confidence interval**	**P-value**[2]	**R-value**
Total problems score				
Energy	13.94	−11.82 to 39.70	0.28	0.22
Protein (% E)	0.71	−72.44 to 73.87	0.98	0.20
PUFA (% E)	−13.21	−40.05 to 13.64	0.33	0.21
Total fat (% E)	3.36	−61.98 to 68.70	0.92	0.20
CHO (% E)	14.06	−62.11 to 90.23	0.71	0.21
P:C ratio	7.46	−11.49 to 26.42	0.43	0.21
Protein (g)	12.65	−11.84 to 37.14	0.30	0.21
PUFA (g)	0.94	−18.28 to 20.15	0.92	0.20
Total sugars (g)	0.35	−19.27 to 53.27	0.35	0.21
Starch (g)	9.62	−15.72 to 34.97	0.45	0.21
Internalising broad band score				
Energy	3.12	−22.54 to 28.78	0.81	0.27
Protein (% E)	−6.20	−78.23 to 65.84	0.86	0.27
Total fat (% E)	14.03	−50.20 to 78.27	0.66	0.27
PUFA (% E)	−13.55	−39.96 to 12.87	0.31	0.28
CHO (% E)	1.69	−73.42 to 76.82	0.96	0.27
P:C ratio	9.23	−9.37 to 27.83	0.32	0.28
Protein (g)	2.10	−22.27 to 26.48	0.86	0.27
PUFA (g)	−5.11	−23.98 to 13.76	0.59	0.27
Total sugars (g)	5.52	−17.28 to 28.33	0.63	0.27
Starch (g)	1.58	−23.52 to 26.69	0.90	0.27

Externalising broad band score				
Energy	20.03	−5.35 to 45.42	0.12	0.19
Protein (% E)	1.28	−71.75 to 74.31	0.97	0.15
Total fat (% E)	14.04	−51.07 to 79.15	0.67	0.15
PUFA (% E)	−12.04	−38.88 to 14.80	0.37	0.16
CHO (% E)	−2.44	−79.96 to 75.07	0.95	0.10
P:C ratio	5.83	−13.14 to 24.80	0.54	0.15
Protein (g)	18.21	−5.95 to 42.36	0.14	0.19
PUFA (g)	4.83	−14.30 to 23.96	0.61	0.15
Total sugars (g)	21.41	−0.93 to 43.75	0.06	0.21
Starch (g)	13.75	−11.39 to 38.89	0.28	0.17

CHO, carbohydrates, P:C, protein to carbohydrate, PUFA, polyunsaturated fatty acids, % E, percentage of energy. Analysis models were adjusted for maternal age, education, pre-pregnancy BMI, birthweight and breastfeeding duration (weeks). [1] The natural logarithm transformation of the nutrient variable was used for the linear regression models to meet normality assumptions. [2] P-values were derived by linear regression models.

Table S3. Association of maternal dietary composition during pregnancy with child cognition outcomes up to age 4-years (*n*=58) without adjustment for covariates

Variables[1]	Beta-coefficient	95% Confidence interval	P-value[2]	R-value
Full scale IQ				
Energy	−3.49	−13.63 to 6.65	0.49	0.01
Protein (% E)	6.23	−17.52 to 29.98	0.60	0.00
Total fat (% E)	−0.01	−21.96 to 21.92	1.00	0.00
PUFA (% E)	0.32	−8.08 to 8.72	0.94	0.00
CHO (% E)	−5.10	−29.78 to 19.57	0.68	0.00
P:C ratio	−1.99	−8.16 to 4.18	0.52	0.01
Protein (g)	−2.06	−11.56 to 7.45	0.67	0.00
PUFA (g)	−1.49	−8.63 to 5.65	0.68	0.00
Total sugars (g)	−0.48	−8.44 to 7.49	0.91	0.00
Starch (g)	−6.47	−15.61 to 2.67	0.16	0.03
Verbal IQ				
Energy	1.81	−10.73 to 14.35	0.77	0.00
Protein (% E)	1.84	−9.90 to 13.57	0.76	0.00
Total fat (% E)	10.20	−16.32 to 36.72	0.77	0.01
PUFA (% E)	1.11	−9.17 to 11.40	0.83	0.00
CHO (% E)	−11.00	−41.04 to 19.02	0.47	0.00
P:C ratio	−2.73	−10.34 to 4.88	0.48	0.01
Protein (g)	1.84	−9.90 to 13.57	0.76	0.00
PUFA (g)	1.71	−7.08 to 10.50	0.70	0.00
Total sugars (g)	2.05	−7.77 to 11.87	0.68	0.00
Starch (g)	−2.98	−14.43 to 8.47	0.60	0.00
Performance IQ				
Energy	−7.22	−18.82 to 4.39	0.22	0.03
Protein (% E)	9.12	−18.27 to 36.51	0.51	0.01
Total fat (% E)	−1.14	−26.43 to 24.15	0.93	0.00
PUFA (% E)	−2.86	−12.50 to 6.77	0.55	0.01
CHO (% E)	−6.82	−35.28 to 21.64	0.63	0.00
P:C ratio	−1.16	−8.31 to 5.98	0.75	0.00
Protein (g)	−4.85	−15.80 to 6.07	0.38	0.01
PUFA (g)	−5.62	−13.73 to 2.48	0.17	0.03
Total sugars (g)	−3.55	−12.71 to 5.60	0.44	0.01
Starch (g)	−9.06	−19.49 to 1.38	0.09	0.05
Processing speed composite				
Energy	−0.17	−11.30 to 10.95	0.98	0.00
Protein (% E)	6.26	−17.74 to 30.26	0.60	0.00
Total fat (% E)	−3.63	−25.45 to 18.19	0.74	0.00
PUFA (% E)	−0.62	−7.95 to 6.71	0.87	0.00

CHO (% E)	−2.96	−27.33 to 21.40	0.81	0.00
P:C ratio	1.47	−4.57 to 7.50	0.63	0.00
PUFA (g)	−0.62	−7.95 to 6.71	0.87	0.00
Protein (g)	0.87	−8.77 to 10.51	0.86	0.00
Total sugars (g)	0.91	−7.05 to 8.86	0.82	0.00
Starch (g)	5.66	−14.88 to 7.83	0.54	0.01

Table S3. *(Continued)*

Variable[1]	**Beta-coefficient**	**95% Confidence interval**	**P-value**[2]	**R- value**
General language composite				
Energy	0.78	−13.78 to 15.34	0.92	0.00
Protein (%E)	10.48	−23.49 to 44.47	0.54	0.00
Total fat (% E)	8.45	−22.41 to 39.30	0.59	0.00
PUFA (% E)	4.19	−7.70 to 16.08	0.48	0.00
CHO (% E)	−12.59	−47.45 to 22.26	0.47	0.01
P:C ratio	−1.29	−10.15 to 7.58	0.78	0.00
Protein (g)	2.36	−11.25 to 15.97	0.73	0.00
PUFA (g)	3.45	−6.73 to 13.62	0.50	0.00
Total sugars (g)	2.98	−8.41 to 14.37	0.60	0.00
Starch (g)	−6.72	−19.92 to 6.48	0.31	0.00

CHO, carbohydrates, P:C, protein to carbohydrate, PUFA, polyunsaturated fatty acids, % E, percentage of energy. Analysis models were adjusted for maternal age, education, pre-pregnancy BMI and birthweight. [1] The natural logarithm transformation of the nutrient variable was used for the linear regression models to meet normality assumptions. [2] P-values were derived by linear regression models.

Table S4. Association of maternal dietary composition during pregnancy with child behaviour outcomes up to age 4-years (*n*=51) without adjustment for covariates

Variables[1]	**Beta-coefficient**	**95% Confidence interval**	**P-value**[2]	**R-value**
Total problems score				
Energy	20.86	−10.58 to 52.31	0.19	0.03
Protein (% E)	−23.42	−95.72 to 48.87	0.52	0.01
PUFA (% E)	−15.24	−42.48 to 12.01	0.27	0.02
Total fat (% E)	31.91	−41.01 to 104.83	0.38	0.02
CHO (% E)	−2.01	−86.73 to 82.71	0.96	0.00
P:C ratio	2.91	−17.15 to 22.97	0.77	0.00
Protein (g)	13.95	−15.37 to 43.27	0.34	0.02
PUFA (g)	0.18	−22.23 to 22.58	0.99	0.00
Total sugars (g)	16.41	−8.26 to 41.09	0.19	0.03
Starch (g)	16.87	−14.33 to 48.07	0.28	0.02
Internalising broad band score				
Energy	5.50	−26.67 to 37.68	0.73	0.00
Protein (% E)	−37.40	−109.71 to 34.91	0.30	0.02
Total fat (% E)	−12.17	−39.72 to 15.38	0.40	0.02
PUFA (% E)	43.58	−29.35 to 116.51	0.24	0.03
CHO (% E)	−12.86	−98.07 to 72.35	0.76	0.00
P:C ratio	2.31	−17.88 to 22.51	0.82	0.00
Protein (g)	10.32	−31.29 to 28.28	0.92	0.00
PUFA (g)	11.20	−27.83 to 17.17	0.64	0.00
Total sugars (g)	3.56	−21.70 to 28.82	0.78	0.00
Starch (g)	4.91	−26.83 to 36.66	0.76	0.00

Externalising broad band score				
Energy	28.23	−2.30 to 58.76	0.07	0.06
Protein (% E)	−15.05	−86.55 to 56.45	0.67	0.00
Total fat (% E)	32.06	−39.86 to 103.99	0.38	0.02
PUFA (% E)	−17.72	−44.46 to 9.03	0.19	0.19
CHO (% E)	−7.26	−90.83 to 76.30	0.87	0.00
P:C ratio	2.17	−17.62 to 21.97	0.83	0.00
Protein (g)	21.64	−6.90 to 50.18	0.13	0.04
PUFA (g)	−17.72	−44.46 to 9.03	0.19	0.03
Total sugars (g)	20.77	−3.29 to 44.84	0.09	0.06
Starch (g)	21.95	−8.56 to 52.46	0.16	0.04

CHO, carbohydrates, P:C, protein to carbohydrate, PUFA, polyunsaturated fatty acids, % E, percentage of energy. Analysis models were adjusted for maternal age, education, pre-pregnancy BMI, birthweight and breastfeeding duration (weeks). [1] The natural logarithm transformation of the nutrient variable was used for the linear regression models to meet normality assumptions. [2] P-values were derived by linear regression models.