Table S1. Associations between maternal prenatal dietary DHA and child cognitive test scores.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Maternal DHA Intake1 | |
|  |  | 16 wk | 36 wk |
| PPVT | Rho  *P*  n | -0.071  0.501  93 | -0.021  0.841  93 |
| Beery | Rho  *P*  n | 0.140  0.178  94 | 0.061  0.561  94 |
| KABC |  |  |  |
| Sequential | Rho  *P*  n | 0.065  0.536  93 | 0.121  0.248  93 |
| Learning | Rho  *P*  n | 0.003  0.978  90 | -0.043  0.690  90 |
| Simultaneous | Rho  *P*  n | -0.103  0.325  93 | -0.028  0.793  93 |
| MPI | Rho  *P*  n | -0.016  0.881  90 | -0.018  0.869  90 |
| Delayed Recall | Rho  *P*  n | -0.011  0.913  93 | -0.019  0.856  93 |
| TOVA |  |  |  |
| Response Time | Rho  *P*  n | -0.017  0.875  86 | -0.070  0.522  86 |
| Response Time Variability | Rho  *P*  n | 0.039  0.724  86 | -0.019  0.862  86 |
| Commission Errors | Rho  *P*  n | 0.125  0.250  86 | 0.158  0.145  86 |
| Omission Errors | Rho  *P*  n | 0.030  0.785  86 | -0.016  0.883  86 |

DHA, docosahexaenoic acid; PPVT, Peabody Picture Vocabulary Test; Beery VMI, Beery-Buktenica Developmental Test of Visual-Motor Integration; KABC, Kaufman Assessment Battery for Children, 2nd edition; MPI, Mental Performance Index; TOVA, Test of Variables of Attention

1Data compared with Spearman’s rank correlation coefficient

Table S2. Associations between maternal prenatal fatty acid status and child cognitive test scores1.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | KABC |  |  |
|  |  | PPVT | Beery |  | Sequential | Learning | Simultaneous | MPI | Delayed Recall |
| **16 wk gestation** |  |  |  |  |  |  |  |  |  |
| PC 22:4n6 | Rho  *P*  n | 0.154  0.140  93 | -0.332  0.001  94 |  | -0.011  0.913  93 | 0.116  0.277  90 | -0.071  0.496  93 | -0.005  0.960  90 | 0.208  0.046  93 |
| PC 22:5n6 | Rho  *P*  n | 0.201  0.053  93 | -0.264  0.010  94 |  | 0.014  0.894  93 | 0.171  0.108  90 | 0.004  0.973  93 | 0.061  0.565  90 | 0.154  0.141  93 |
| PC 22:6n3 | Rho  *P*  n | 0.140  0.180  93 | -0.038  0.714  94 |  | 0.063  0.546  93 | 0.007  0.948  90 | 0.049  0.643  93 | 0.011  0.915  90 | 0.037  0.724  93 |
| PC DHA/ 22:4n6+ 22:5n6 | Rho  *P*  n | -0.023  0.825  93 | 0.275  0.007  94 |  | 0.055  0.604  93 | -0.087  0.415  90 | 0.094  0.369  93 | 0.044  0.680  90 | -0.145  0.166  93 |
| PE 22:4n6 | Rho  *P*  n | 0.136  0.192  93 | -0.183  0.077  94 |  | -0.092  0.382  93 | 0.173  0.103  90 | -0.032  0.763  93 | 0.047  0.663  90 | 0.072  0.494  93 |
| PE 22:5n6 | Rho  *P*  n | 0.084  0.423  93 | -0.194  0.062  94 |  | -0.088  0.401  93 | 0.195  0.065  90 | -0.035  0.743  93 | 0.082  0.440  90 | 0.122  0.243  93 |
| PE 22:6n3 | Rho  *P*  n | -0.013  0.899  93 | 0.161  0.122  94 |  | -0.007  0.944  93 | 0.002  0.984  90 | 0.072  0.495  93 | 0.062  0.563  90 | 0.016  0.878  93 |
| PE DHA/ 22:4n6+ 22:5n6 | Rho  *P*  n | -0.075  0.474  93 | 0.247  0.016  94 |  | 0.057  0.588  93 | -0.114  0.286  90 | 0.087  0.409  93 | 0.013  0.907  90 | -0.061  0.563  93 |
| **36 wk gestation** |  |  |  |  |  |  |  |  |  |
| PC 22:4n6 | Rho  *P*  n | -0.092  0.378  94 | -0.139  0.180  95 |  | 0.030  0.775  93 | -0.079  0.459  91 | -0.043  0.683  94 | -0.045  0.674  90 | -0.058  0.581  94 |
| PC 22:5n6 | Rho  *P*  n | -0.085  0.416  94 | -0.148  0.152  95 |  | 0.036  0.733  93 | -0.094  0.374  91 | 0.017  0.870  94 | -0.006  0.954  90 | -0.137  0.188  94 |
| PC 22:6n3 | Rho  *P*  n | 0.083  0.428  94 | 0.089  0.393  95 |  | 0.116  0.270  93 | -0.110  0.297  91 | 0.124  0.234  94 | 0.022  0.834  90 | -0.198  0.056  94 |
| PC DHA/ 22:4n6 + 22:5n6 | Rho  *P*  n | 0.110  0.293  94 | 0.146  0.158  95 |  | 0.059  0.572  93 | -0.015  0.891  91 | 0.094  0.367  94 | 0.065  0.543  90 | -0.089  0.394  94 |
| PE 22:4n6 | Rho  *P*  n | 0.003  0.977  93 | -0.247  0.016  94 |  | 0.034  0.743  93 | 0.048  0.655  90 | -0.073  0.489  93 | -0.030  0.777  90 | 0.065  0.535  93 |
| PE 22:5n6 | Rho  *P*  n | -0.040  0.701  93 | -0.184  0.076  94 |  | -0.030  0.777  93 | 0.037  0.733  90 | -0.059  0.574  93 | -0.041  0.700  90 | 0.093  0.376  93 |
| PE 22:6n3 | Rho  *P*  n | 0.173  0.097  93 | 0.152  0.142  94 |  | 0.155  0.139  93 | -0.020  0.855  90 | 0.198  0.057  93 | 0.160  0.132  90 | -0.108  0.302  93 |
| PE DHA/ 22:4n6 + 22:5n6 | Rho  *P*  n | 0.110  0.295  93 | 0.221  0.032  94 |  | 0.038  0.717  93 | -0.061  0.570  90 | 0.179  0.086  93 | 0.101  0.342  90 | -0.153  0.144  93 |

KABC, Kaufman Assessment Battery for Children, 2nd edition; PPVT, Peabody Picture Vocabulary Test; Beery VMI, Beery-Buktenica Developmental Test of Visual-Motor Integration; MPI, Mental Performance Index; PC, phosphatidylcholine; PE, phosphatidylethanolamine; DHA, docosahexaenoic acid;

1Data compared with Spearman’s rank correlation coefficient

Table S3.Associations between maternal prenatal fatty acid status and child TOVA test scores1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Response Time | Response Time Variability | Commission Errors | Omission Errors |
| **16 wk gestation** |  |  |  |  |  |
| PC 22:4n6 | Rho  *P*  n | -0.007  0.946  86 | -0.115  0.291  86 | -0.106  0.332  86 | -0.168  0.122  86 |
| PC 22:5n6 | Rho  *P*  n | 0.082  0.454  86 | 0.009  0.935  86 | -0.178  0.101  86 | -0.120  0.272  86 |
| PC 22:6n3 | Rho  *P*  n | -0.057  0.601  86 | 0.074  0.496  86 | 0.078  0.475  86 | 0.060  0.585  86 |
| PC DHA/ 22:4n6+ 22:5n6 | Rho  *P*  n | -0.018  0.868  86 | 0.102  0.351  86 | 0.161  0.139  86 | 0.131  0.228  86 |
| PE 22:4n6 | Rho  *P*  n | 0.034  0.755  86 | -0.012  0.912  86 | -0.113  0.302  86 | -0.040  0.716  86 |
| PE 22:5n6 | Rho  *P*  n | 0.043  0.696  86 | 0.028  0.801  86 | -0.155  0.155  86 | -0.053  0.628  86 |
| PE 22:6n3 | Rho  *P*  n | 0.030  0.783  86 | 0.081  0.459  86 | 0.121  0.266  86 | 0.095  0.383  86 |
| PE DHA/ 22:4n6+ 22:5n6 | Rho  *P*  n | 0.026  0.814  86 | 0.089  0.417  86 | 0.125  0.253  86 | 0.080  0.466  86 |
| **36 wk gestation** |  |  |  |  |  |
| PC 22:4n6 | Rho  *P*  n | 0.098  0.367  87 | 0.119  0.273  87 | -0.068  0.533  87 | -0.038  0.726  87 |
| PC 22:5n6 | Rho  *P*  n | 0.120  0.268  87 | 0.161  0.136  87 | -0.192  0.075  87 | 0.133  0.218  87 |
| PC 22:6n3 | Rho  *P*  n | 0.040  0.713  87 | 0.205  0.057  87 | 0.003  0.977  87 | 0.038  0.730  87 |
| PC DHA/ 22:4n6 + 22:5n6 | Rho  *P*  n | -0.050  0.645  87 | 0.001  0.991  87 | 0.085  0.434  87 | -0.002  0.986  87 |
| PE 22:4n6 | Rho  *P*  n | 0.050  0.645  86 | -0.011  0.921  86 | -0.118  0.278  86 | 0.067  0.539  86 |
| PE 22:5n6 | Rho  *P*  n | 0.068  0.535  86 | 0.020  0.845  86 | -0.151  0.165  86 | 0.075  0.494  86 |
| PE 22:6n3 | Rho  *P*  n | -0.061  0.579  86 | 0.049  0.652  86 | 0.052  0.633  86 | -0.011  0.919  86 |
| PE DHA/ 22:4n6 + 22:5n6 | Rho  *P*  n | -0.051  0.640  86 | 0.047  0.665  86 | 0.089  0.414  86 | -0.041  0.706  86 |

TOVA, Test of Variables of Attention; PC, phosphatidylcholine; PE, phosphatidylethanolamine; DHA, docosahexaenoic acid

1Data compared with Spearman’s rank correlation coefficient

Table S4. Dietary intake of all children, estimated by food frequency questionnaire

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Mean** | **SD** | **Median** | **IQR** | **2.5 – 97.5 (%)** |
| **Intake (n = 98)** |  |  |  |  |  |
| Energy, Kcal | 1890 | 524 | 1827 | 1531-2185 | 1020 – 3331 |
| Protein, g | 75.3 | 24.8 | 69.9 | 58.2-88.2 | 40.6 – 141 |
| Carbohydrate, g | 255 | 65.1 | 251 | 209-297 | 134 – 406 |
| Total Fat, g | 69.3 | 23.9 | 65.1 | 53.3-83.5 | 33.8 – 134 |
| Saturated, g | 26.5 | 9.95 | 24.4 | 19.3 – 31.6 | 12.1 – 53.8 |
| Monounsaturated, g | 24.6 | 8.87 | 22.4 | 19.2 – 29.0 | 11.7 – 52.5 |
| Polyunsaturated, g | 11.2 | 4.53 | 10.5 | 8.01 – 13.8 | 4.75 – 23.8 |
| ω-3 fatty acids |  |  |  |  |  |
| ALA, g | 1.26 | 0.61 | 1.17 | 0.87-1.47 | 0.49 – 2.59 |
| EPA, mg | 38.4 | 46.1 | 18.4 | 5.48-61.1 | 0.00 – 180 |
| DHA, mg | 66.7 | 70.2 | 43.2 | 17.4-97.4 | 0.00 –300 |
| ω-6 fatty acids |  |  |  |  |  |
| LA, g | 9.71 | 4.26 | 8.86 | 7.06-11.4 | 3.64 – 22.3 |
| ARA, mg | 73.4 | 44.2 | 63.0 | 45.8-89.2 | 10.0 – 220 |

ALA, α-linolenic acid; EPA, eicosapentaenoic acid; DHA, docosahexaenoic acid LA, linoleic acid; ARA, arachidonic acid