**Supplementary Table 1. Sample characteristics for mothers of girls and girls with maternal**

**organochlorine pesticide exposure and daughters’ communication data**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **N** | **Median** | **IQR\*** |
| Maternal Pesticide Exposure Lipid Adjusted |  |  |  |
|  p,p’-DDE(ng/g lipid) | 400 | 309.5 | (192.5, 496.0) |
|  p,p’-DDT (ng/g lipid) | 387 | 11.4 | (8.1, 16.5) |
|  HCB (ng/g lipid) | 399 | 50.2 | (37.8, 63.5) |
|  -HCH (ng/g lipid) | 400 | 47.2 | (34.6, 62.5) |
|  |  |  |  |
| Adapted MCDI Scores at 15 months |  |  |  |
|  Nonverbal communication | 399 | 15.0 | (13.0, 17.0) |
|  Social development | 400 | 18.0 | (14.5, 22.0) |
|  Verbal comprehension | 399 | 10.0 | (8.0, 12.0) |
|  Vocabulary comprehension | 399 | 88.0 | (63.0, 125.0) |
|  |  |  |  |
| Adapted MCDI scores at 38 months |  |  |  |
|  Communicative ability | 372 | 5.0 | (4.0, 6.0) |
|  Intelligibility | 373 | 6.0 | (6.0, 6.0) |
|  Language | 370 | 314 | (298.0, 322.0) |
|  |  |  |  |
| Important Covariates |  |  |  |
|  Gestational age at blood collection (wks.) | 400 | 15.0 | (10.0, 28.0) |
|  Maternal EPDS (depression) score at 32 weeks | 384 | 6.0 | (2.0, 10.0) |
|  HOME Score at 6 months | 390 | 8.0 | (7.0, 10.0) |
|  HOME Score at 18 months | 377 | 11.0 | (9.0, 12.0) |

\* IQR=interquartile range

|  |
| --- |
| **Supplementary Table 2. Limit of detection (LOD) and recovery of 13C-labeled internal standards for measured organochlorine pesticides**  |
|
| **Compound** | **Abbreviation** | **LOD** | **Recovery (%)** |
| **ng/g lipid** | **Mean (SD)** |
| hexachlorobenzene | HCB | 5.9 | 46 (12) |
| -Hexachlorocyclohexane | -HCH | 5.9 | 65 (15) |
| 2,2-Bis(4-chlorophenyl)-1,1-dichloroethene  | p,p’-DDE | 5.9 | 66 (12) |
| 2,2-Bis(4-chlorophenyl-1,1,1-trichloroethan  | p,p’-DDT | 5.8 | 82 (22) |

**Supplemental Table 3. Regression coefficients (**β) **for the association between maternal organochlorine pesticide exposure and communication development scores in daughters at 15 months\***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Nonverbal Communication** |  | **Social****Development** |  | **Verbal****Comprehension** |  | **Vocabulary****Comprehension****& Production** |  |
| Analyte (ng/g lipid) | β(95% CI) | P | β(95% CI) | P | β(95% CI) | P | β(95% CI) | P |
|  p,p’-DDE (n=375) | -0.0008(-0.0018, 0.0003) | 0.16 | -0.0016(-0.0034, 0.0003) | 0.09 | 0.0002(-0.0005, 0.0010) | 0.54 | -0.0099(-0.0245, 0.0047) | 0.18 |
| p,p’-DDT (n=363) | 0.0101(-0.0166, 0.0368) | 0.46 | 0.0123(-0.0355, 0.0602) | 0.61 | 0.0228(0.0034, 0.0422) | 0.02 | 0.1480(-0.3153, 0.6113) | 0.53 |
| HCB (n=375) | -0.0011(-0.0092, 0.0070) | 0.79 | -0.0042(0.0185, 0.0101) | 0.57 | 0.0005(-0.0053, 0.0064) | 0.85 | -0.0444(-0.1559, 0.0671) | 0.44 |
| β-HCH (n=374) | -0.0059(-0.0178, 0.0060) | 0.33 | -0.0068(-0.0278, 0.0141) | 0.52 | -0.0002(-0.0087, 0.0084) | 0.97 | -0.1207(-0.2839, 0.0424) | 0.15 |

\* Adjusted for home score at six months, smoking status, maternal age and parity. Pesticides lipid-adjusted with units ng/g lipid.

**Supplemental Table 4. Regression coefficients (**β) **for the association between maternal organochlorine pesticide exposure and communication development scores in daughters at 15 months by strata of parity\***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Nonverbal Communication** |  | **Social****Development** |  | **Verbal Comprehension** |  | **Vocabulary****Comprehension & Production** |  |
| Analyte (ng/g lipid) | β (95% CI) | P\*\*\* | β (95% CI) | P | β (95% CI) | P | β (95% CI) | P |
|  | **Nulliparous women** |
| HCB (n=189) | -0.0022(-0.0257, 0.0214) | 0.86 | -0.0166(-0.0647, 0.0314) | 0.50 | -0.0162(-0.0349, 0.0025) | 0.09 | -0.5198(-0.8981, -0.1415) | 007 |
|  | **Parous women** |
| HCB (n=187) | -0.0025(-0.0122, 0.0072) | 0.61 | -0.0055(-0.0210, 0.0100) | 0.49 | 0.0012(-0.0054, 0.0078) | 0.72 | -0.0032(-0.1226, 0.1161) | 0.96 |

\* Adjusted for home score at six months, smoking status, and maternal age. Pesticides lipid-adjusted with units ng/g lipid.

Significant interactions (p-int<0.05) for parity and HCB for verbal comprehension (p-int=0.01) and vocabulary comprehension & production (p-int<0.001).

**Supplemental Table 5. Regression coefficients (**β) **for the association between maternal organochlorine pesticide exposure and communication development scores in daughters at 38 months\***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Communicative** |  | **Intelligibility** |  | **Language** |  |
| Analyte(ng/g lipid) | β(95% CI) | P | β(95% CI) | P | Β(95% CI) | P |
| p,p’-DDE (n=339) | 0.0001(-0.0002, 0.0005) | 0.40 | -0.0002(-0.0004, -0.0001) | 0.02 | -0.0100(-0.0181, -0.0020) | 0.01 |
| p,p’-DDT (n=331) | 0.0070(-0.0036, 0.0175) | 0.20 | -0.0101(-0.0156, -0.0045 | 0.001 | -0.5457(-0.7916, -0.2998) | 0.001 |
| HCB (n=338) | 0.004(-0.0021, 0.0029) | 0.74 | -0.0014(-0.0028, -0.0001) | 0.03 | -0.0522(-0.1135, 0.0091) | 0.10 |
| -HCH (n=339) | 0.0028(-0.0010, 0.0064) | 0.15 | -0.0034(-0.0053, -0.0015) | 0.001 | -0.1414(-0.2305, -0.0523) | 0.002 |

\* Adjusted for home score at 18 months, parity, maternal age and maternal education. Pesticides are lipid-adjusted with all in units ng/g lipid.

**Supplemental Table 6. Regression coefficients (**β) **for the association between maternal organochlorine pesticide exposure and communication development scores in daughters at 38 months by strata of maternal depression score\***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Communicative** |  | **Intelligibility** |  | **Language** |  |
| Analyte (ng/g lipid) | β (95% CI) | P | β (95% CI) | P | β (95% CI) | P |
|  | **EPDS<6** |
| p,p’-DDT (n=179) | -0.0110(-0.0281, 0.0061) | 0.21 | 0.0058(-0.0008, 0.0125) | 0.09 | -0.0588(-0.4996, 0.3820) | 0.79 |
|  | **EPDS>6** |
| p,p’-DDT(n=146) | 0.0114(-0.0031, 0.0259) | 0.12 | -0.0146(-0.0231, -0.0060) | 0.001 | -0.7108(-1.0094, -0.4122) | 0.001 |

\* Adjusted for home score at 18 months, maternal education, maternal age and parity. Pesticides are lipid-adjusted with all in units ng/g lipid. EPDS ranges 0-30 with 30 indicative of more depressed.

Significant interactions (p<0.05) for EPDS depression score and p,p’-DDT for communicative (p-int=0.007), intelligibility (p-int<0.0001), and language (p-int=0.003).