eTable 1. Adjusteda associations between Perfluorooctanoate (PFOA) exposure and IQ among children 6 to 12 years of age with PFOA exposure below the population median, C8 Health Project Follow-up Study, Mid-Ohio Valley, 2009 – 2010

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PFOA exposure | Full Scale IQ | | Verbal IQ | | Performance IQ | |
| Adjusteda β (95% CI) | | Adjusteda β (95% CI) | | Adjusteda β (95% CI) | |
|  |  |  |  |  |  |  |
| Estimated in utero | (n=143) | | (n=143) | | (n=143) | |
| 1 LN unit increase | 1.09 | (-1.82, 4.00) | 0.74 | (-2.57, 4.05) | 1.38 | (-1.71, 4.48) |
|  |  |  |  |  |  |  |
| Quartiles, ng/mL |  |  |  |  |  |  |
| 1: 4.5 – <7.0 | 0 |  | 0 |  | 0 |  |
| 2: 7.0 – <11.7 | -1.60 | (-6.66, 3.46) | -0.03 | (-5.80, 5.74) | -2.91 | (-8.26, 2.44) |
| 3: 11.7 – <21.8 | 0.88 | (-4.39, 6.16) | 0.86 | (-5.16, 6.88) | 1.15 | (-4.43, 6.72) |
| 4: 21.8 – 43.7 | 0.95 | (-4.34, 6.24) | 0.41 | (-5.63, 6.45) | 1.63 | (-3.96, 7.23) |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Measured childhood | (n=160) | | (n=160) | | (n=160) | |
| 1 LN unit increase | 1.03 | (-1.75, 3.81) | 1.12 | (-2.08, 4.31) | 0.85 | (-2.11, 3.81) |
|  |  |  |  |  |  |  |
| Quartiles, ng/mL |  |  |  |  |  |  |
| 1: 0.7 – <10.1 | 0 |  | 0 |  | 0 |  |
| 2: 10.1 – <15.3 | 2.13 | (-2.36, 6.63) | 1.79 | (-3.38, 6.96) | 2.45 | (-2.36, 7.26) |
| 3: 15.3 – <22.7 | -0.91 | (-5.40, 3.57) | -1.38 | (-6.53, 3.78) | 0.02 | (-4.78, 4.81) |
| 4: 22.7 – 34.9 | 2.66 | (-1.88, 7.20) | 3.08 | (-2.14, 8.30) | 1.86 | (-2.99, 6.72) |
|  |  |  |  |  |  |  |

aAll analyses adjusted for child age at neuropsychological assessment, child sex, test examiner, Home Observation for Measurement of the Environment score, maternal Full Scale IQ; measured childhood analyses additionally adjusted for child BMI at neuropsychological assessment

eTable 2. Adjusteda associations between Perfluorooctanoate (PFOA) exposure and academic skills among children 6 to 12 years of age with PFOA exposure below the population median, C8 Health Project Follow-up Study, Mid-Ohio Valley, 2009 – 2010

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PFOA exposure | Word Reading /Pseudoword Decoding standard score mean | | Numerical Operations standard score | |
| Adjusteda β (95% CI) | | Adjusteda β (95% CI) | |
|  |  |  |  |  |
| Estimated in utero | (n=134) | | (n=143) | |
| 1 LN unit increase | 1.11 | (-1.74, 3.96) | 3.15 | (-0.59, 6.88) |
|  |  |  |  |  |
| Quartiles, ng/mL |  |  |  |  |
| 1: 4.5 – <7.0 | 0 |  | 0 |  |
| 2: 7.0 – <11.7 | -2.35 | (-7.15, 2.45) | -3.58 | (-10.02, 2.87) |
| 3: 11.7 – <21.8 | 2.96 | (-2.27, 8.20) | 3.71 | (-3.01, 10.43) |
| 4: 21.8 – 43.7 | -0.48 | (-5.54, 4.57) | 3.52 | (-3.23, 10.26) |
|  |  |  |  |  |
|  |  |  |  |  |
| Measured childhood | (n=149) | | (n=160) | |
| 1 LN unit increase | 0.31 | (-2.45, 3.06) | 2.82 | (-1.08, 6.72) |
|  |  |  |  |  |
| Quartiles, ng/mL |  |  |  |  |
| 1: 0.7 – <10.1 | 0 |  | 0 |  |
| 2: 10.1 – <15.3 | 2.34 | (-1.96, 6.64) | 5.89 | (-0.41, 12.20) |
| 3: 15.3 – <22.7 | -0.12 | (-4.39, 4.16) | 2.31 | (-3.98, 8.59) |
| 4: 22.7 – 34.9 | 0.56 | (-3.89, 5.01) | 6.39 | (0.02, 12.76) |
|  |  |  |  |  |

aAll analyses adjusted for child age at neuropsychological assessment, child sex, test examiner, Home Observation for Measurement of the Environment score, maternal Full Scale IQ; measured childhood analyses additionally adjusted for child BMI at neuropsychological assessment

eTable 3. Adjusteda associations between Perfluorooctanoate (PFOA) exposure and attention among children 6 to 12 years of age with PFOA exposure below the population median, C8 Health Project Follow-up Study, Mid-Ohio Valley, 2009 – 2010

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PFOA exposure | Clinical Confidence Index | | Omissions T-score | | Commissions T-score | | Hit Reaction Time T-score | |
| Adjusteda β (95% CI) | | Adjusteda β (95% CI) | | Adjusteda β (95% CI) | | Adjusteda β (95% CI) | |
|  |  |  |  |  |  |  |  |  |
| Estimated in utero | (n=135) | | (n=135) | | (n=135) | | (n=135) | |
| 1 LN unit increase | -1.07 | (-6.73, 4.60) | 0.41 | (-2.56, 3.38) | -0.13 | (-2.31, 2.05) | -0.98 | (-3.80, 1.84) |
|  |  |  |  |  |  |  |  |  |
| Quartiles, ng/mL |  |  |  |  |  |  |  |  |
| 1: 4.5 – <7.0 | 0 |  | 0 |  | 0 |  | 0 |  |
| 2: 7.0 – <11.7 | -1.72 | (-11.61, 8.18) | -0.81 | (-6.00, 4.37) | -3.15 | (-6.90, 0.61) | 2.24 | (-2.66, 7.15) |
| 3: 11.7 – <21.8 | -3.31 | (-13.91, 7.30) | -0.18 | (-5.74, 5.38) | 0.43 | (-3.60, 4.45) | -0.65 | (-5.91, 4.61) |
| 4: 21.8 – 43.7 | -2.53 | (-12.99, 7.92) | 0.65 | (-4.84, 6.13) | -0.73 | (-4.70, 3.24) | -0.71 | (-5.89, 4.48) |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Measured childhood | (n=153) | | (n=153) | | (n=153) | | (n=153) | |
| 1 LN unit increase | -6.70 | (-12.71, -0.69) | -1.81 | (-4.62, 1.00) | -0.05 | (-2.16, 2.05) | -2.54 | (-5.22, 0.15) |
|  |  |  |  |  |  |  |  |  |
| Quartiles, ng/mL |  |  |  |  |  |  |  |  |
| 1: 0.7 – <10.1 | 0 |  | 0 |  | 0 |  | 0 |  |
| 2: 10.1 – <15.3 | -8.92 | (-18.65, 0.81) | -5.19 | (-9.73, -0.66) | -2.18 | (-5.61, 1.25) | -3.70 | (-8.09, 0.69) |
| 3: 15.3 – <22.7 | -5.53 | (-15.23, 4.17) | -3.91 | (-8.43, 0.61) | 0.61 | (-2.81, 4.03) | -2.50 | (-6.88, 1.87) |
| 4: 22.7 – 34.9 | -15.12 | (-24.86, -5.39) | -5.35 | (-9.89, -0.81) | -0.59 | (-4.02, 2.84) | -4.92 | (-9.32, -0.53) |
|  |  |  |  |  |  |  |  |  |

aAll analyses adjusted for child age at neuropsychological assessment, child sex, test examiner, Home Observation for Measurement of the Environment score, maternal Full Scale IQ; measured childhood analyses additionally adjusted for child BMI at neuropsychological assessment

eTable 4. Adjusteda associations between Perfluorooctanoate (PFOA) exposure and IQ among children 6 to 12 years of age, C8 Health Project Follow-up Study, Mid-Ohio Valley, 2009 – 2010

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PFOA exposure | Full Scale IQ (n=318) | | Verbal IQ (n=318) | | Performance IQ (n=318) | |
| Adjusteda β (95% CI) | | Adjusteda β (95% CI) | | Adjusteda β (95% CI) | |
|  |  |  |  |  |  |  |
| Measured childhood |  |  |  |  |  |  |
| 1 LN unit increase | 0.90 | (-0.19, 1.99) | 0.15 | (-1.01, 1.31) | 0.89 | (-0.22, 2.01) |
|  |  |  |  |  |  |  |
| Quartiles, ng/mL |  |  |  |  |  |  |
| 1: 0.7 – <15.3 | 0 |  | 0 |  | 0 |  |
| 2: 15.3 – <35.0 | -1.08 | (-4.79, 2.63) | -1.67 | (-5.61, 2.26) | -0.45 | (-4.25, 3.36) |
| 3: 35.0 – <93.2 | -1.47 | (-5.36, 2.42) | -3.94 | (-8.07, 0.18) | 0.83 | (-3.16, 4.82) |
| 4: 93.2 – 838.6 | 1.95 | (-1.89, 5.79) | -0.90 | (-4.97, 3.18) | 2.48 | (-1.47, 6.42) |
|  |  |  |  |  |  |  |

aAdjusted for child age at neuropsychological assessment, child sex, test examiner, Home Observation for Measurement of the Environment score, maternal Full Scale IQ, child BMI at neuropsychological assessment, measured childhood perfluorooctane sulfonate (PFOS), measured childhood perfluorohexane sulfonate (PFHxS), measured childhood perfluorononanoate (PFNA)

eTable 5. Adjusteda associations between Perfluorooctanoate (PFOA) exposure and attention among children 6 to 12 years of age, C8 Health Project Follow-up Study, Mid-Ohio Valley, 2009 – 2010

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PFOA exposure | Clinical Confidence Index (n=302) | | Omissions T-score (n=302) | | Commissions T-score (n=302) | | Hit Reaction Time T-score (n=302) | |
| Adjusteda β (95% CI) | | Adjusteda β (95% CI) | | Adjusteda β (95% CI) | | Adjusteda β (95% CI) | |
|  |  |  |  |  |  |  |  |  |
| Measured childhood |  |  |  |  |  |  |  |  |
| 1 LN unit increase | -1.27 | (-3.38, 0.83) | 0.21 | (-0.94, 1.37) | 0.09 | (-0.73, 0.91) | -0.38 | (-1.35, 0.59) |
|  |  |  |  |  |  |  |  |  |
| Quartiles, ng/mL |  |  |  |  |  |  |  |  |
| 1: 0.7 – <15.3 | 0 |  | 0 |  | 0 |  | 0 |  |
| 2: 15.3 – <35.0 | -2.82 | (-9.92, 4.28) | -1.08 | (-4.96, 2.80) | 1.02 | (-1.74, 3.78) | -0.85 | (-4.13, 2.43) |
| 3: 35.0 – <93.2 | 0.23 | (-7.33, 7.80) | 1.86 | (-2.27, 6.00) | -0.19 | (-3.14, 2.75) | -0.67 | (-4.16, 2.83) |
| 4: 93.2 – 838.6 | -3.52 | (-10.92, 3.89) | 0.82 | (-3.23, 4.87) | 0.61 | (-2.27, 3.49) | -0.68 | (-4.10, 2.74) |
|  |  |  |  |  |  |  |  |  |

aAdjusted for child age at neuropsychological assessment, child sex, test examiner, Home Observation for Measurement of the Environment score, maternal Full Scale IQ, child BMI at neuropsychological assessment, measured childhood perfluorooctane sulfonate (PFOS), measured childhood perfluorohexane sulfonate (PFHxS), measured childhood perfluorononanoate (PFNA)