Table A.1. Regression coefficient and odds ratio (95% confidence interval) between blood mercury levels (continuous) and birth weight and small-for-gestational-age.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Birth weight (g)a | Small-for-gestational-ageb | |
| Participants | Blood levels | β (95% CI) | nSGA | β (95% CI) |
| All (nall = 15,444) | Log10-transformed blood mercury levels (ng/g) | -23 (-47, 1) |  |  |
| Vaginal delivery (nall = 12,632) | Log10-transformend blood mercury levels (ng/g) | -19 (-44, 7) | 1,009 | 1.008 (0.750, 1.354) |

a Multiple linear regression models are adjusted for maternal age, body mass index before pregnancy, parity, smoking during pregnancy, drinking during pregnancy, education level, annual household income, pregnancy-induced hypertension, gestational diabetes mellitus, vaginal delivery/cesarean section, infant gender, gestational age, and selenium level.

b Logistic regression models are adjusted for maternal age, body mass index before pregnancy, smoking during pregnancy, drinking during pregnancy, education level, annual household income, pregnancy-induced hypertension, gestational diabetes mellitus, vaginal delivery/cesarean section, and selenium levels.

β (95% CI) represents the change (95% confidence interval) in birth weight (g) for each 10-fold increase of maternal blood mercury level, because of log10-transformed maternal blood mercury levels.

OR (95% CI) represents the odds ratio (95% confidence interval) for small-for-gestational-age for each 10-fold increase of maternal blood mercury level, because of log10-transformed maternal blood mercury level.

As the density of the mixture with a solution of 2% v/v butan-1-ol, 0.1% tetramethylammonium hydroxide, 0.05% w/v polyoxyethylene-octylphenylether, 0.05% w/v ethylenediaminetetraacetate, and a human blood sample is 0.999 g/mL, the unit of ng/g is almost equal to the unit of μg/L.

Table A.2. Regression coefficient and odds ratio (95% confidence interval) between blood mercury levels (continuous) and birth weight and small-for-gestational-age: subgroup analysis for quartiles of blood selenium levels.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Birth weight (g)a | | Small-for-gestational-ageb | |
| Participants | Blood selenium levels (ng/g) | Blood mercury levels (ng/g) | nall | β (95% CI) | nSGA | OR (95% CI) |
| All | Quartile 4 (183.0 to 371.0) | Log10-transformed blood mercury levels (ng/g) | 3,928 | 0 (-43, 43) |  |  |
|  | Quartile 3 (170.0 to <183.0) | Log10-transformed blood mercury levels (ng/g) | 3,795 | -28 (-77, 21) |  |  |
|  | Quartile 2 (158.0 to <170.0) | Log10-transformed blood mercury levels (ng/g) | 3,903 | -8 (-58, 42) |  |  |
|  | Quartile 1 (99.9 to <158.0) | Log10-transformed blood mercury levels (ng/g) | 3,818 | -67 (-119, -16) |  |  |
|  |  | Interaction termc |  | 2 (-6, 10) |  |  |
|  |  |  |  | *Pint* = 0.659 |  |  |
| Vaginal delivery | Quartile 4 (183.0 to 371.0) | Log10-transformed blood mercury levels (ng/g) | 3,216 | 8 (-38, 53) | 271 | 0.873 (0.519, 1.466) |
|  | Quartile 3 (170.0 to <183.0) | Log10-transformed blood mercury levels (ng/g) | 3,180 | -39 (-93, 15) | 242 | 1.665 (0.890, 3.116) |
|  | Quartile 2 (158.0 to <170.0) | Log10-transformed blood mercury levels (ng/g) | 3,079 | -8 (-63, 46) | 250 | 0.848 (0.598, 2.697) |
|  | Quartile 1 (99.9 to <158.0) | Log10-transformed blood mercury levels (ng/g) | 3,216 | -53 (-109, 3) | 246 | 0.925 (0.488, 1.752) |
|  |  | Interaction termc |  | 2 (-7, 10) |  | 0.955 (0.866, 1.054) |
|  |  |  |  | *Pint* = 0.687 |  | *Pint* = 0.359 |

a Multiple linear regression models are adjusted for maternal age, body mass index before pregnancy, parity, smoking during pregnancy, drinking during pregnancy, education level, annual household income, pregnancy-induced hypertension, gestational diabetes mellitus, vaginal delivery/cesarean section, infant gender, and gestational age.

b Logistic regression models are adjusted for maternal age, body mass index before pregnancy, smoking during pregnancy, drinking during pregnancy, education level, annual household income, pregnancy-induced hypertension, gestational diabetes mellitus, and vaginal delivery/cesarean section.

c Interaction term is defined as blood mercury levels (assigned as log10-transformed level: continuous) × blood selenium levels (assigned as quartile 4 = 0, quartile 3 = 1, quartile 2 = 2, and quartile 1 = 3).

β (95% CI) represents the change (95% confidence interval) in birth weight (g) for each 10-fold increase of maternal blood mercury level, because of log10-transformed maternal blood mercury levels.

OR (95% CI) represents the odds ratio (95% confidence interval) for small-for-gestational-age for each 10-fold increase of maternal blood mercury levels, because of log10-transformed maternal blood mercury levels.

*Pint* represents the *P* value of the interaction term.

As the density of the mixture with a solution of 2% v/v butan-1-ol, 0.1% tetramethylammonium hydroxide, 0.05% w/v polyoxyethylene-octylphenylether, 0.05% w/v ethylenediaminetetraacetate, and a human blood sample is 0.999 g/mL, the unit of ng/g is almost equal to the unit of μg/L.

Table A.3. Regression coefficient and odds ratio (95% confidence interval) between mercury levels (continuous) and birth length, birth head circumference, birth chest circumference, and birth Ponderal index.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Birth length (cm) | Birth head circumference (cm) | Birth chest circumference (cm) | Birth Ponderal index (g/cm3 × 100) |
| Participants | Blood levels | β (95% CI) | β (95% CI) | β (95% CI) | β (95% CI) |
| All (nall = 15,444) | Log10-transformed blood mercury levels (ng/g) | -0.092 (-0.224, 0.041) | -0.144 (-0.239, -0.048) | -0.070 (-0.179, 0.038) | -0.005 (-0.023, 0.014) |
| Vaginal delivery (nall = 12,632) | Log10-transformed blood mercury levels (ng/g) | -0.049 (-0.192, 0.093) | -0.141 (-0.244, -0.038) | -0.037 (-0.152, 0.079) | -0.007 (-0.027, 0.013) |

Multiple linear regression models are adjusted for maternal age, body mass index before pregnancy, parity, smoking during pregnancy, drinking during pregnancy, education level, annual household income, pregnancy-induced hypertension, gestational diabetes mellitus, vaginal delivery/cesarean section, infant gender, gestational age, mercury level, and selenium level.

β (95% CI) represents the change (95% confidence interval) in birth length (cm), birth head circumference (cm), birth chest circumference (cm), and birth Ponderal index (g/cm3 × 100) for each 10-fold increase of maternal blood mercury levels, because of log10-transformed maternal blood mercury levels.

As the density of the mixture with a solution of 2% v/v butan-1-ol, 0.1% tetramethylammonium hydroxide, 0.05% w/v polyoxyethylene-octylphenylether, 0.05% w/v ethylenediaminetetraacetate, and a human blood sample is 0.999 g/mL, the unit of ng/g is almost equal to the unit of μg/L.

Table A.4. Regression coefficient (95% confidence interval) between blood mercury levels (continuous) and birth length, birth head circumference, birth chest circumference, and birth Ponderal index: subgroup analysis for quartiles of blood selenium levels.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | Birth length (cm) | Birth head circumference (cm) | Birth chest circumference (cm) | Birth Ponderal index (g/cm3 × 100) |
| Participants | Blood selenium level (nmol/g) | Blood mercury levels (ng/g) | nall | β (95% CI) | β (95% CI) | β (95% CI) | β (95% CI) |
| All (n = 15,444) | Quartile 4 (183.0 to 371.0) | Log10-transformed blood mercury levels (ng/g) | 3,928 | 0.034 (-0.202, 0.270) | -0.168 (-0.331, -0.006) | -0.078 (-0.272, 0.115) | -0.009 (-0.041, 0.023) |
|  | Quartile 3 (170.0 to <183.0) | Log10-transformed blood mercury levels (ng/g) | 3,795 | -0.088 (-0.363, 0.187) | -0.060 (-0.255, 0.135) | 0.023 (-0.201, 0.248) | -0.010 (-0.047, 0.027) |
|  | Quartile 2 (158.0 to <170.0) | Log10-transformed blood mercury levels (ng/g) | 3,903 | -0.045 (-0.321, 0.230) | -0.049 (-0.257, 0.159) | -0.010 (-0.236, 0.216) | -0.001 (-0.038, 0.036) |
|  | Quartile 1 (99.9 to <158.0) | Log10-transformed blood mercury levels (ng/g) | 3,818 | -0.318 (-0.604, -0.031) | -0.317 (-0.520, -0.113) | -0.232 (-0.461, -0.002) | -0.001 (-0.046, 0.044) |
|  |  | Interaction terma |  | -0.014 (-0.058, 0.029) | -0.024 (-0.055, 0.007) | 0.003 (-0.033, 0.038) | 0.004 (-0.002, 0.011) |
|  |  |  |  | *Pint* = 0.523 | *Pint* = 0.136 | *Pint* = 0.878 | *Pint* = 0.158 |
| Vaginal delivery (n = 12,632) | Quartile 4 (183.0 to 371.0) | Log10-transformed blood mercury levels (ng/g) | 3,216 | 0.148 (-0.103, 0.400) | -0.141 (-0.315, 0.033) | -0.046 (-0.251, 0.159) | -0.021 (-0.055, 0.013) |
|  | Quartile 3 (170.0 to <183.0) | Log10-transformed blood mercury levels (ng/g) | 3,180 | -0.200 (-0.495, 0.096) | -0.060 (-0.273, 0.154) | 0.017 (-0.224, 0.258) | -0.005 (-0.045, 0.036) |
|  | Quartile 2 (158.0 to <170.0) | Log10-transformed blood mercury levels (ng/g) | 3,079 | 0.033 (-0.265, 0.331) | -0.098 (-0.324, 0.129) | 0.027 (-0.216, 0.271) | -0.014 (-0.053, 0.025) |
|  | Quartile 1 (99.9 to <158.0) | Log10-transformed blood mercury levels (ng/g) | 3,216 | -0.274 (-0.583, 0.035) | -0.307 (-0.526, -0.088) | -0.159 (-0.404, 0.086) | 0.015 (-0.035, 0.066) |
|  |  | Interaction termc |  | -0.012 (-0.059, 0.035) | -0.016 (-0.050, 0.018) | 0.004 (-0.034, 0.042) | 0.005 (-0.002, 0.011) |
|  |  |  |  | *Pint* = 0.631 | *Pint* = 0.356 | *Pint* = 0.830 | *Pint* = 0.165 |

Multiple linear regression models are adjusted for maternal age, body mass index before pregnancy, parity, smoking during pregnancy, drinking during pregnancy, education level, annual household income, pregnancy-induced hypertension, gestational diabetes mellitus, vaginal delivery/cesarean section, infant gender, and gestational age.

a Interaction term is defined as blood mercury levels (assigned as log10-transformed level: continuous) × blood selenium levels (assigned as quartile 4 = 0, quartile 3 = 1, quartile 2 = 2, and quartile 1 = 3).

β (95% CI) represents the change (95% confidence interval) in birth length (cm), birth head circumference (cm), birth chest circumference (cm), and birth Ponderal index (g/cm3 × 100), in comparison with the reference group.

*Pint* represents the *P* value of the interaction term.

As the density of the mixture with a solution of 2% v/v butan-1-ol, 0.1% tetramethylammonium hydroxide, 0.05% w/v polyoxyethylene-octylphenylether, 0.05% w/v ethylenediaminetetraacetate, and a human blood sample is 0.999 g/mL, the unit of ng/g is almost equal to the unit of μg/L.