

Supplementary Materials: Ethnic Kawasaki Disease Risk Associated with Blood Mercury and Cadmium in U.S. Children

Deniz Yeter, Michael A. Portman, Michael Aschner, Marcelo Farina, Wen-Ching Chan, Kai-Sheng Hsieh and Ho-Chang Kuo

Table S1. Average, minimum, and maximum values for blood cadmium, mercury, manganese, lead, and selenium in US children aged 1 to 5 years by biological sex.

Sex	Cd $\mu\text{g/L}^1$ [min–max]	Hg $\mu\text{g/L}^1$ [min–max]	Mn $\mu\text{g/L}^2$ [min–max]	Pb $\mu\text{g/dL}^3$ [min–max]	Se $\mu\text{g/L}^4$ [min–max]
Female	0.13 [0.11–0.43]	0.44 [0.11–4.00]	11.25 * [4.83–25.54]	1.22 [0.18–5.98]	165.63 [102.34–217.25]
Male	0.13 [0.11–0.34]	0.46 [0.11–18.89]	10.63 * [3.97–21.94]	1.44 [0.18–27.88]	166.66 [96.25–241.38]
TOTAL⁵ (n = 713)	0.13 [0.11–0.43]	0.45 [0.11–18.89]	10.93 * [3.97–25.54]	1.33 [0.18–27.88]	166.16 [96.24–241.38]

Notes: ¹ Lower limit: 0.12 $\mu\text{g/L}$; ² Lower limit: 1.62 $\mu\text{g/L}$; ³ Lower limit: 0.19 $\mu\text{g/dL}$; ⁴ Lower limit: 96.25 $\mu\text{g/L}$; ⁵ ANOVA testing for statistical significance by biological sex, age, or ethnicity; Statistical significance: * p -value ≤ 0.050 .

Table S2. Average, minimum, and maximum values for blood cadmium, mercury, manganese, lead, and selenium in US children aged 1 to 5 years by age.

Age	Cd $\mu\text{g/L}^1$ [min–max]	Hg $\mu\text{g/L}^1$ [min–max]	Mn $\mu\text{g/L}^2$ [min–max]	Pb $\mu\text{g/dL}^3$ [min–max]	Se $\mu\text{g/L}^4$ [min–max]
1 Year	0.12 ** [0.11–0.28]	0.40 [0.11–4.57]	11.90 ** [6.08–24.49]	1.42 [0.18–6.43]	159.98 ** [110.24–209.96]
2 Years	0.13 [0.11–0.43]	0.50 [0.11–18.89]	10.73 [4.83–25.42]	1.58 [0.27–27.88]	162.24 ** [96.24–215.84]
3 Years	0.13 [0.11–0.32]	0.44 [0.11–4.00]	11.24 [3.97–21.94]	1.31 [0.28–15.58]	166.33 [114.58–209.31]
4 Years	0.13 [0.11–0.39]	0.49 [0.11–5.18]	10.44 * [4.84–25.54]	1.20 [0.26–5.02]	170.98 ** [129.71–241.38]
5 Years	0.13 [0.11–0.34]	0.40 [0.11–2.44]	10.58 [4.89–20.35]	1.09 [0.18–5.88]	171.69 ** [127.34–221.36]
TOTAL⁵	0.13 [0.11–0.43]	0.45 [0.11–18.89]	10.93 ** [3.97–25.54]	1.33 [0.18–27.88]	166.16 ** [96.24–241.38]

Notes: ¹ Lower limit: 0.12 $\mu\text{g/L}$; ² Lower limit: 1.62 $\mu\text{g/L}$; ³ Lower limit: 0.19 $\mu\text{g/dL}$; ⁴ Lower limit: 96.25 $\mu\text{g/L}$; ⁵ ANOVA testing for statistical significance by biological sex, age, or ethnicity; Statistical significance: * p -value ≤ 0.050 ; ** p -value ≤ 0.010 .

Table S3. Detection rates for blood cadmium, mercury, manganese, lead, and selenium in US children aged 1 to 5 years by biological sex.

Sex	Detectable Blood Cd ¹	Detectable Blood Hg ¹	Detectable Blood Mn ²	Detectable Blood Pb ³	Detectable Blood Se ⁴
Female	19.4%	80.9%	100%	99.7%	100%
Male	22.3%	80.7%	100%	99.7%	100%
TOTAL⁵	20.9%	80.8%	100%	99.7%	100%

Notes: ¹ Lower limit: 0.12 $\mu\text{g/L}$; ² Lower limit: 1.62 $\mu\text{g/L}$; ³ Lower limit: 0.19 $\mu\text{g/dL}$; ⁴ Lower limit: 96.25 $\mu\text{g/L}$; ⁵ ANOVA testing for statistical significance by biological sex, age, or ethnicity.

Table S4. Detection rates for blood cadmium, mercury, manganese, lead, and selenium in US children aged 1 to 5 years by age.

Age	Detectable Blood Cd ¹	Detectable Blood Hg ¹	Detectable Blood Mn ²	Detectable Blood Pb ³	Detectable Blood Se ⁴
1 Year	13.0% **	78.3%	100%	99.1%	100%
2 Years	21.2%	79.9%	100%	100%	100%
3 Years	22.7%	80.9%	100%	100%	100%
4 Years	25.4%	81.5%	100%	100%	100%
5 Years	20.5%	83.5%	100%	99.2%	100%
TOTAL ⁵	20.9%	80.8%	100%	99.7%	100%

Notes: ¹ Lower limit: 0.12 µg/L; ² Lower limit: 1.62 µg/L; ³ Lower limit: 0.19 µg/dL; ⁴ Lower limit: 96.25 µg/L; ⁵ ANOVA testing for statistical significance by biological sex, age, or ethnicity; Statistical significance: * *p*-value ≤ 0.050; ** *p*-value ≤ 0.010.

Table S5. Bottom and top percentiles for blood cadmium, mercury, manganese, lead, and selenium in US children aged 1 to 5 years.

Ethnicity	Cd µg/L ²	Hg µg/L ²	Mn µg/L ³	Pb µg/dL ⁴	Se µg/L ⁵
	Bottom ⁶ (OR) Top ⁷ (OR)	Bottom ⁶ (OR) Top ⁷ (OR)	Bottom ⁶ (OR) Top ⁷ (OR)	Bottom ⁶ (OR) Top ⁸ (OR)	Bottom ⁶ (OR) Top ⁷ (OR)
African	0.11 (1.00)	0.11 (1.00)	5.42 (0.81)	0.58 (1.38)	137.77 (1.01)
	0.23 (1.10)	1.23 (1.21)	13.83 (0.79)	5.40 (1.04)	198.59 (0.99)
Asian	0.11 (1.00)	0.18 (1.64)	6.79 (1.02)	0.38 (0.90)	134.55 (0.99)
	0.32 (1.53)	3.72 (3.65)	20.21 (1.15)	2.75 (0.53)	196.74 (0.98)
Caucasian	0.11 (1.00)	0.11 (1.00)	6.98 (1.04)	0.38 (0.90)	137.00 (1.01)
	0.20 (0.95)	0.54 (0.53)	17.65 (1.00)	6.43 (1.24)	202.92 (1.01)
Hispanic	0.11 (1.00)	0.11 (1.00)	6.92 (1.04)	0.39 (0.93)	133.96 (0.99)
	0.21 (1.00)	1.19 (1.17)	18.36 (1.04)	3.21 (0.62)	198.27 (0.99)
Other ¹	0.11 (1.00)	0.11 (1.00)	5.63 (0.84)	0.49 (1.17)	127.83 (0.94)
	0.21 (1.00)	2.10 (2.06)	21.26 (1.21)	3.12 (0.60)	195.31 (0.97)
TOTAL	0.11 (1.00)	0.11 (1.00)	6.17 (0.92)	0.42 (1.00)	136.00 (1.00)
	0.23 (1.10)	1.27 (1.25)	17.20 (0.98)	4.08 (0.79)	199.85 (1.00)
Weighted	0.11	0.11	6.68	0.42	135.83
	0.21	1.02	17.58	5.18	200.56

Notes: ¹ Excluded from analyses as a result of low KD reporting; ² Lower limit: 0.12 µg/L; ³ Lower limit: 1.62 µg/L; ⁴ Lower limit: 0.19 µg/dL; ⁵ Lower limit: 96.25 µg/L; ⁶ 5th percentile; ⁷ 95th percentile; ⁸ 97.5th percentile.



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