

Concentrations of metals in whole blood samples collected from 77 pregnant women in 2010 - 2011 for the [Maternal and Infant Environmental Exposure Project \(MIEEP\)](#)

Blood Metals ^a	Geometric Mean (95% Confidence Interval)	Selected Percentiles				Limit of Detection (LOD) ^b
		25 th	50 th	75 th	90 th	
Cadmium (µg/L)	0.22 (0.19 – 0.24)	0.16	0.22	0.31	0.38	0.14 and 0.15
Lead (µg/dL)	0.65 (0.57 – 0.75)	0.45	0.60	0.84	1.6	0.064 and 0.067
Mercury (µg/L)	0.45 (0.37 – 0.54)	0.26	0.46	0.76	1.1	0.037 and 0.027

- a. See page two for [explanation of terms](#).
- b. LOD changed during the time that samples were analyzed for this project.

Explanation of Terms

Geometric mean

The geometric mean is an estimated middle value of a set of numbers. This is different than the average, also called the "arithmetic mean". A geometric mean is sometimes calculated when the set of numbers contains some extreme values. For example, the geometric mean of the set of numbers "1, 2, 2, 3, 4, 5, 5, 6, 10, 100" is calculated by *multiplying* all ten numbers together and then *raising to the 1/10th power*, giving 4.8. To compare, the arithmetic mean is calculated by *adding* all ten numbers and *dividing by 10*, giving 14.

95% confidence interval

A *sample* is a subset of a larger *population*. A confidence interval for a statistical measure is a range of values estimated from *sample* data. This interval is likely to include the true value of the statistical measure, such as a geometric mean, for the larger *population*. A 95% confidence interval for a statistical measure implies that we are 95% confident that the range includes the true *population* value for this measure.

Percentiles

Percentiles are best explained by an example: if the 75th percentile is 1.5 µg/L, this means that 75% of participants had levels less than or equal to 1.5 µg/L.

Limit of detection (LOD)

The LOD is the lowest level of a chemical that the laboratory can measure in blood or urine.

µg/L

Micrograms of the chemical per liter of whole blood.

µg/dL

Micrograms of the chemical per deciliter of whole blood.
