

straight answers

about the Toxics Release Inventory

Your right to know

Frequently Asked Questions About

MERCURY

What is mercury?

Mercury (Hg) is a silver-colored metal that is liquid at room temperature. Small amounts of mercury are naturally present in soil and water.

Where can mercury be found in the environment?

Mercury enters the environment through natural processes and as a result of human activity. Levels in soil average less than one part mercury per million parts (ppm) of soil. Approximately 58 percent of mercury releases can be attributed to natural sources such as volcanoes, the ocean, and soils.

Mercury is released into the environment through:

- weathering of rocks containing mercury,
- mining of gold and ores that contain mercury,
- volcanic eruptions,
- burning of municipal and medical waste,
- fossil fuel combustion,
- cement production,
- manufacturing, and
- water treatment facilities.

Mercury releases from human activities in the U.S. peaked about 1960 and are now declining.

How is mercury used?

Mercury historically has been used in thermometers, blood pressure gauges, fluorescent lights, batteries, and dental fillings. Many of those uses are being discontinued due to health concerns.

Do electric utilities release mercury into the environment?

Yes. Mercury is naturally present in coal and oil, which are used to generate electricity. When coal and oil are burned, ash is formed which contains most of this naturally occurring mercury. Most of the ash is captured for disposal or for recycling into commercial products. Ash disposed in a landfill or otherwise deposited on land is considered waste management and must be reported under TRI reporting requirements.

MERCURY

continued

The reporting threshold for mercury and mercury compounds was decreased to 10 pounds beginning with reporting year 2000. Coal- and oil-based power plants, according to the Environmental Protection Agency (EPA), released 74.7 tons of mercury into the environment in 2006. This represents three percent of all industrial releases. Other industries reporting to EPA released 2,569 tons of mercury into the environment in 2006. Electric utilities decreased air emissions of mercury and mercury compounds more than three percent from 2005 to 2006. Mercury from U.S. power plants is less than one percent of all the mercury released into the air each year around the globe.

How could I be exposed to mercury? Will exposure affect me?

Since mercury occurs naturally in the environment, everyone is exposed to very low background levels that are not harmful to human health. The body naturally eliminates mercury, so background exposure is not considered harmful.

It is very rare for humans to inhale high concentrations of mercury vapor or to swallow large amounts of mercury, but such occurrences can be fatal. Breathing metallic mercury vapor can cause chest pains, coughs, reduced lung capacity, or high blood pressure. Swallowing mercury can cause mercury-induced toxicity, which has a detrimental effect on kidneys.

What do EPA and other experts say about mercury?

Late in 2000, EPA issued a regulatory determination that aimed to reduce electric utility mercury emissions. EPA finalized the Clean Air Mercury Rule (CAMR) on March 15, 2005, which established standards of performance for new and existing coal-fired electric utility steam generating units. The rule capped and reduced mercury emissions in two phases. In February 2008, a U.S. appeals court vacated CAMR, and sent the rule back to EPA for reconsideration. A new rulemaking could take several years to finalize.

Mercury is considered a high priority for studies on human exposure through food and skin contact. Current information does not indicate a direct link between electric utility mercury emissions and public health concerns. Experts agree that further research and monitoring should be conducted.

Questions remain, including:

- What exposure levels are likely to cause adverse health effects?
- How much mercury is emitted from natural sources?
- How much would reductions in power plant mercury emissions decrease levels of mercury in the environment?

Because of these and other unanswered questions, EPA is unable to estimate the health risk posed by mercury emissions to the air.

Where can I get more information?

- Electric Power Research Institute, 3412 Hillview Ave., P.O. Box 10412, Palo Alto, CA 94303
(800) 313-EPRI; <http://www.epri.com>
- U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, 200 Independence Ave., S.W., Washington, D.C. 20201;
(877) 696-6775; <http://www.atsdr.cdc.gov/>
- U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., Washington, D.C. 20460;



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