
MERCURY FAQ SHEET

Mercury in our Environment

Mercury is a naturally occurring element that is present throughout the environment. Human activity can release some of that mercury into the air, water, and soil. Many of today's health problems are caused by mercury. For example, when liquid mercury is spilled, it forms droplets that can accumulate in the tiniest of spaces and then emit vapors into the air. Health problems caused by mercury depend on how much has entered your body, how it entered your body, how long you have been exposed to it, and how your body responds to the mercury. All mercury spills and products, regardless of quantity, should be treated seriously. The Santa Clara County Household Hazardous Waste program is working to reduce the amount of mercury in households and landfills.

FREQUENTLY ASKED QUESTION

- 1 How does mercury occur in the environment?
- 2 What are the biggest sources of mercury air emissions?
- 3 How does mercury from power plants affect people and the environment?
- 4 How does mercury affect health?
- 5 Do some fish contain more mercury than others?
- 6 How will EPA reduce mercury emissions from power plants?
- 7 What else is EPA doing to reduce mercury emissions?
- 8 How do I dispose of mercury products?

Our *Frequent* Answers to your *Frequently* Asked Questions

1 Mercury is a naturally occurring element that can be found throughout the environment, often in plants and animals. Human activities have increased the amount of mercury that is currently cycling in the atmosphere, in soils, and in lakes, streams and the oceans. Mercury in these locations increases risks to people and wildlife.

2 According to EPA's 1997 *Mercury Study Report to Congress*, coal-fired electric power plants are the largest source of human-caused mercury air emissions in the U.S. Accounting for about one-third of total U.S. manmade mercury emissions; power plants are followed by:

1. Municipal waste combustors (19%).
2. Medical waste incinerators (10%).
3. Hazardous waste combustors (4%).

3 Mercury, which occurs naturally in coal, is released in smoke when coal is burned to fire steam generators. Once mercury leaves the power plant smokestack, the mercury falls to the ground either very close to the stack or many miles away. When mercury is deposited into the water, or runs off the ground into the water, microorganisms convert it to methylmercury, a highly toxic form of mercury.

Small organisms take this up as they feed. As animals higher up the food chain eat those small organisms, they also take in methylmercury. The process, known as bioaccumulation, continues with levels of mercury increasing as it moves up the food chain. Fish that are higher in the food chain, such as sharks and swordfish, have a much higher mercury concentration than fish that are lower on the food chain. Humans become exposed when they eat fish that are contaminated with mercury.

4 Methylmercury is highly toxic. The developing fetus is the most sensitive to the effects of mercury, and so women of childbearing age are the population at the greatest risk. Children of women exposed to relatively high levels of mercury during pregnancy have exhibited a variety of abnormalities, including delayed onset of walking and talking, reduced neurological test scores, and delays and deficits in learning ability. Twelve percent of the women of childbearing age have levels of mercury in their blood that exceeds the level EPA considers safe. In addition, there is growing evidence that methylmercury exposure can have adverse cardiovascular effects for adults, resulting in elevated blood pressure and incidence of heart attack.

Symptoms of Mercury Poisoning are as follows: Impairment of the peripheral vision, disturbances in sensations, lack of coordination of movements, muscle weakness, skin rashes, mood swings, memory loss, and mental disturbance.

5 Yes. Predator fish that eat smaller fish tend to have higher methylmercury concentrations than other fish. The Food and Drug Administration has issued advise to pregnant women regarding consumption of certain types of fish. States issue fish advisories that inform consumers of the extent to which they need to limit their consumption of locally caught fish. Certain species of commercially available saltwater fish, such as shark and swordfish, kingfish, tilefish, tuna, and halibut can also contain high levels of mercury.

6 The EPA is currently developing a standard to limit emissions from coal-fired power plants. A standard will be proposed for public comment on or before December 15, 2003. The Administration's proposed Clear Skies legislation would cap emissions of mercury at 26 tons in 2010 and 15 tons in 2018, down from a current total of 48 tons

7 The EPA has taken a number of recent actions to reduce mercury pollution, include issuing stringent regulations for industries that significantly contribute to mercury pollution. These actions, once fully implemented, will reduce nationwide mercury emissions significantly. In addition the EPA has several regulations that have been proposed that will reduce emission of mercury including standards for: chlor-alkalai plants, industrial boilers and foundries. In addition, other factor that have influenced mercury emissions include:

Federal bans on mercury additives in paint and pesticides; Industry efforts to reduce mercury in batteries; increasing state regulation of mercury emissions and mercury in products; State-mandated recycling programs; and Voluntary actions by industry.

8 New legislation passed making it illegal for mercury related products to be thrown in the trash. The Santa Clara County Household Hazardous waste department as well as other hazardous waste programs will accept mercury items.

- If you have any questions about properly disposing of mercury and hazardous waste, feel free to call hazardous waste hotlines.

Santa Clara County HHW (408) 299-7300

For more information please contact the Santa Clara Valley Urban Runoff Pollution Prevention Program (408) 720-8833 Fax (408) 720-8812 Hotline: (800) 794-2482 www.scvurppp.org

Products and Items containing Mercury

Mercury is a commonly used metal for many products today. Products range from:

Fluorescent Tubes and Bulbs

Thermostats

Thermometers

Mercury Switches

Mercury Vapor Lamps

Thermostat Probes

Metal Halide Lamps

Relays

High Pressure Sodium Lamps

Neon Lamps

Dental Amalgam

Manometers

Gauges

Laboratory Solutions

Chemistry Sets



Information courtesy of U.S. Environmental Protection Agency

(www.epa.gov/mercury) Last updated October 8, 2003.