



MERCURY

What is mercury?

Elemental mercury or “quick-silver” is a shiny, silver-white, odorless liquid that slowly forms an odorless, colorless gas at room temperature. It is a natural element.

Where is mercury found and how is it used?

Mercury occurs naturally in the environment in volcanoes, natural mercury compounds, and the ocean. Mercury enters the air from sources such as coal combustion, chlorine alkali processing, waste incineration, and industrial processes. When mercury is deposited on land or water, microbes convert it to an organic form in sediments and water. The organic form, called methylmercury, can be found in fish swimming in mercury-contaminated waters.

How is mercury released into the atmosphere?

Man-made and natural sources release mercury into the atmosphere as a gas or as small particles. Mercury remains in the atmosphere for up to one year. It can be transported anywhere in the world before falling back to earth.

Most mercury emissions travel far from the source before being deposited. According to the U.S. Environmental Protection Agency (EPA), less than 50 percent of the mercury deposited in the United States is from national sources.

How can people be exposed to mercury?

People are usually exposed to mercury by eating fish contaminated with methylmercury. Larger fish tend to have the highest concentrations.

It is unlikely for people to be exposed to harmful levels of mercury by inhaling vapors in outside air, since the airborne concentration of mercury around typical industrial and power plant sites is not high enough to produce health effects.

People can be exposed to mercury and methylmercury through:

- **Breathing** air containing mercury vapors.
- **Drinking** water contaminated with mercury.
- **Touching** liquid mercury in the event of a spill.
- **Eating** fish and shellfish contaminated with mercury.

Poison Control Center 24/7 Emergency Contact Number: 1-800-222-1222
DPH 24/7 Contact Number: 1-888-295-5156



Frequently Asked Questions

How can mercury affect my health?

Mercury poisoning mostly affects the nervous system. Effects on the brain include irritability, shyness, tremors, changes in vision or hearing, and memory problems. Short-term exposures to high levels of mercury may cause lung damage, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, eye irritation, and kidney damage.

Anyone exposed to elemental mercury or methylmercury may experience adverse health effects. Children are especially sensitive to mercury poisoning because their organs and tissues are still developing. If pregnant women ingest methylmercury in fish, there is a danger to the developing nervous systems of their unborn children. Exposure to mercury affects the kidneys in pregnant women.

How is mercury poisoning treated?

If you believe you were exposed to mercury other than by consuming fish or shellfish, contact your doctor for treatment advice.

What should I do if exposed to mercury?

- **If you breathe mercury**, remove the person from the source of exposure and seek medical attention.
- **If you get mercury on your skin**, wash the area thoroughly and seek medical attention.
- **If you eat or drink mercury**, consult with your doctor. The amount of mercury typically found in food and water is not high enough to warrant concern. The exception is fish and shellfish, where guidelines exist for limiting consumption.

What factors limit use or exposure to mercury?

The most common route of exposure to mercury is eating fish or shellfish contaminated with mercury. Limit exposure and the potential for ill health effects by following federal and state fish consumption advisories.

Mercury is commonly used in a variety of products in the home, including thermometers and thermostats. Carefully use products containing mercury to limit exposure. If you spill mercury in your home, contact the Division of Public Health's Environmental Health Evaluation Branch at 1-888-295-5156 for assistance. **DO NOT USE A VACUUM TO CLEAN UP A MERCURY SPILL!**

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Is there a medical test to show whether I was exposed to mercury?

Medical tests can determine levels of mercury in hair, blood, and urine. However, due to extensive use and prevalence of mercury in the environment (such as fish consumption and dental fillings), most people have some amount of measurable mercury in their bodies. Contact your physician if you are worried that you were exposed to mercury.

Technical information for mercury:

CAS Number: 7439-97-6

Formula: Hg

Carcinogenicity (EPA): Classification D - not classified as to human carcinogenicity.

MCL (Drinking Water): 2 ppb

OSHA Standards: 0.1 mg/m³; ceiling

NIOSH Standards: 0.05 mg/m³; TWA Vapor

ATSDR (Indoor Air): < 1.0 µg/m³; ATSDR (Indoor Air Relocation): 10.0 µg/m³

FDA Standards: 1 part of methylmercury in a million parts of seafood (1 ppm).

Resources

Agency for Toxic Substances and Disease Registry, *Toxicology Profile for Mercury*, Department of Health and Human Services, 2022, Atlanta, GA.

<https://www.atsdr.cdc.gov/ToxProfiles/tp46.pdf>

Health Consultation – Residential Mercury Spills from Gas Regulators, Mt. Prospect, IL, 2009. Agency for Toxic Substances and Disease Registry.

Cleaning up Mercury Spills in Your House

http://www.atsdr.cdc.gov/mercury/docs/11-229617C-508_Cleanup_Residential.pdf

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