

US EPA ARCHIVE DOCUMENT

Consumer Factsheet on: MERCURY

[List of Contaminants](#)

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:
National Primary Drinking Water Regulations

This is a factsheet about a chemical that may be found in some public or private drinking water supplies. It may cause health problems if found in amounts greater than the health standard set by the United States Environmental Protection Agency (EPA).

What is Mercury and how is it used?

Mercury is a liquid metal found in natural deposits as ores containing other elements. Electrical products such as dry-cell batteries, fluorescent light bulbs, switches, and other control equipment account for 50% of mercury used.

Why is Mercury being regulated?

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine safe levels of chemicals in drinking water which do or may cause health problems. These non-enforceable levels, based solely on possible health risks and exposure, are called Maximum Contaminant Level Goals.

The MCLG for mercury has been set at 2 parts per billion (ppb) because EPA believes this level of protection would not cause any of the potential health problems described below.

Based on this MCLG, EPA has set an enforceable standard called a Maximum Contaminant Level (MCL). MCLs are set as close to the MCLGs as possible, considering the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

The MCL has also been set at 2 ppb because EPA believes, given present technology and resources, this is the lowest level to which water systems can reasonably be required to remove this contaminant should it occur in drinking water.

These drinking water standards and the regulations for ensuring these standards are met, are called National Primary Drinking Water Regulations. All public water supplies must abide by these regulations.

What are the health effects?

Short- or Long-term: EPA has found mercury to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: kidney damage.

How much Mercury is produced and released to the environment?

Large amounts of mercury are released naturally from the earth's crust. Combustion of fossil fuels, metal smelters, cement manufacture, municipal landfills, sewage, metal refining operations, and most notably, from chloralkali plants are important sources of mercury release. Nearly 8 million lbs. of mercury were produced in the U.S. in 1986.

From 1987 to 1993, according to EPA's Toxic Chemical Release Inventory, mercury releases to land and water totaled nearly 68,000 lbs. These releases were primarily from chemical and allied industries. The largest releases occurred in Tennessee and Louisiana. The largest direct releases to water occurred in West Virginia and Alabama.

What happens to Mercury when it is released to the environment?

Mercury is unique among metals in that it can evaporate when released to water or soil. Also, microbes can convert inorganic forms of mercury to organic forms which can be accumulated by aquatic life.

How will Mercury be detected in and removed from my drinking water?

The regulation for mercury became effective in 1992. Between 1993 and 1995, EPA required your water supplier to collect water samples once and analyze them to find out if mercury is present above 2 ppb. If it is present above this level, the system must continue to monitor this contaminant every 3 months.

If contaminant levels are found to be consistently above the MCL, your water supplier must take steps to reduce the amount of mercury so that it is consistently below that level. The following treatment methods have been approved by EPA for removing mercury: Coagulation/Filtration; Granular Activated Carbon; Lime softening; Reverse osmosis.

How will I know if Mercury is in my drinking water?

If the levels of mercury exceed the MCL, the system must notify the public via newspapers, radio, TV and other means. Additional actions, such as providing alternative drinking water supplies, may be required to prevent serious risks to public health.

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Drinking Water Standards:

MCLG: 2 ppb

MCL: 2 ppb

Mercury Releases to Water and Land, 1987 to 1993 (in pounds):

	Water	Land
TOTALS	6,971	60,877

	Top Six States	
TN	164	29,161
LA	431	21,829

DE	117	3,860	
OH	29	2,760	
AL	1,462	4,001	
WV	1,657	454	

Major Industries*		
Chemical, allied products	12,269	74,720
Electric lamps	0	2,750
Paper mills	2,500	0

Learn more about your drinking water!

EPA strongly encourages people to learn more about their drinking water, and to support local efforts to protect and upgrade the supply of safe drinking water. Your water bill or telephone books government listings are a good starting point.

Your local water supplier can give you a list of the chemicals they test for in your water, as well as how your water is treated.

Your state Department of Health/Environment is also a valuable source of information.

For help in locating these agencies or for information on drinking water in general, call: EPAs Safe Drinking Water Hotline: (800) 426-4791.

For additional information on the uses and releases of chemicals in your state, contact the: Community Right-to-Know Hotline: (800) 424-9346.