

# MERCURY & HEALTH



## The Problem: Mercury

Mercury is a natural heavy metal found in the earth's crust. It is used for a variety of industrial purposes and is found in many items that we use every day, such as batteries, fluorescent light bulbs and paints. In the medical field, mercury is used in thermometers, blood pressure devices, dilation and feeding tubes, batteries and fluorescent lamps. Because of the significant use of these items, medical waste may account for 20 percent of the mercury in the solid waste stream.

Mercury cannot be destroyed through incineration. Following release through a smokestack, mercury is deposited back to land or to surface waters where it will essentially remain indefinitely. It exists in both an inorganic form (elemental mercury) and in an organic form called methyl mercury. Methyl mercury is more biologically available, meaning that it can more easily interact with human cells and damage them.

Mercury pollution exists widely in the environment and concentrates in animals and ultimately in the human body. According to the US Environmental Protection Agency, 39 states in the US have determined that all or some of their lakes, streams and rivers are too contaminated with mercury to allow people to eat the fish and seafood from those bodies of water.

## Health Effects

Mercury is a potent neurotoxin, which means it attacks the body's central nervous system. It can also harm the brain, kidneys and lungs. It can cross the blood-brain barrier as well as the placenta. Methyl mercury from contaminated fish easily crosses the placenta and enters the brain of the developing fetus. Studies done on women who ate methyl mercury contaminated fish or grain showed that even when the mothers show few effects of exposure, their infants demonstrated nervous-system damage.

## Some Sources of Mercury in Health Care & and Their Alternatives

As noted, mercury is used in a number of medical products. The good news is that there are alternatives for those items. The following is a list of some mercury-containing medical products and their safer counterparts:

MERCURY-CONTAINING PRODUCT	REPLACEMENT
Thermometers	Geratherm, electronic battery-operated, range, infrared aural [ear], Enviro-safe Immersion
Weighted esophageal dilator	Tungsten-weighted dilator
Feeding tubes	All plastic, tungsten-weighted
Mercurochrome	Neosporin, Mycin
Thimerosal	Thimerosal-free bactericides
Dental Amalgams	Non-mercury amalgams
Batteries (for pagers, mobiles, equipment, etc.)	Nickel-cadmium, other rechargeable batteries

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