PHYSICIANS FOR SOCIAL RESPONSIBILITY

Sources of Mercury

MERCURY FACTSHEET #2

ENVIRONMENT AND HEALTH PROGRAM

Natural Sources

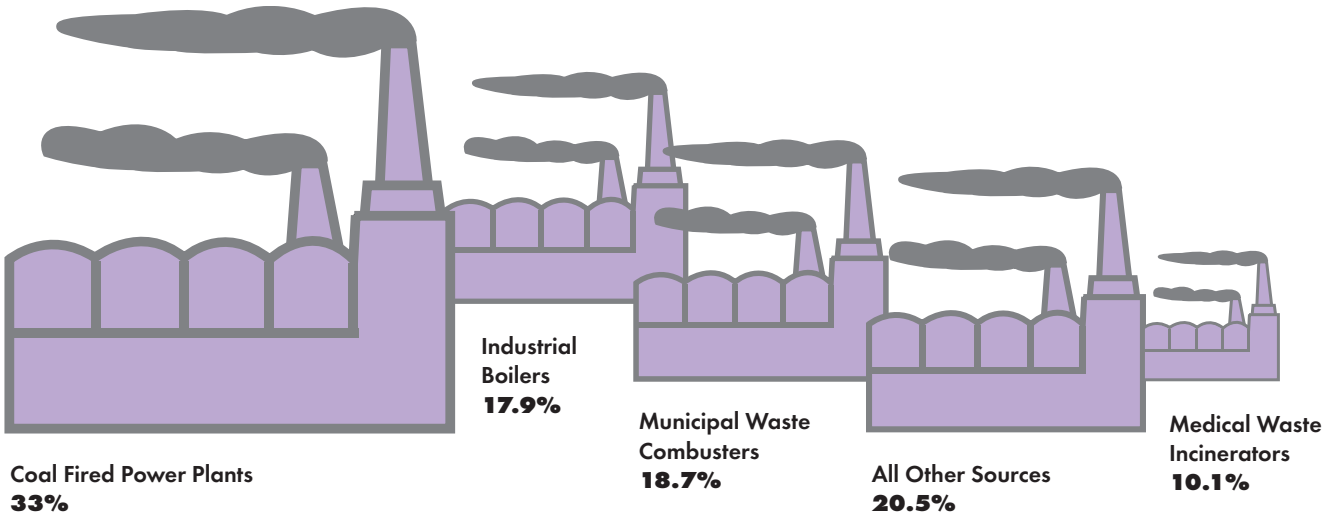
Mercury is a naturally occurring element that is present in trace amounts throughout the environment. Much of it is locked away in coal and other geological deposits, where it does not pose a danger to living organisms. A large portion of the mercury present in the atmosphere today is the result of many years of anthropogenic emissions. The natural component of the total atmospheric burden is difficult to estimate, although available data suggest anthropogenic activities have increased levels of mercury in the atmosphere by roughly a factor of 3, average deposition rates by a factor of 1.5 to 3, and deposition near industrial areas by a factor of 2 to 10.[1]

Pollution

Human activities can release mercury from these natural sources into the air, water, and soil. Major sources of mercury pollution in the U.S. include coal-fired power plants, industrial boilers, waste combustors, medical waste, and incinerators. Power plants are the largest industrial emitters of mercury, producing one-third of all mercury pollution in the U.S.[2] Not only are they the nation's largest mercury source, they are also the only major mercury polluters still unregulated under federal clean air standards.

Once released to the environment, mercury contaminates the food chain and poses a danger to wildlife and human health. Airborne mercury, for example, eventually deposits in water bodies, where it is converted to methylmercury. Highly toxic methylmercury accumulates in many edible fish species, which are a major source of human mercury exposure in the U.S. Exposures to pregnant women are of particular concern because methylmercury can cross the placenta and enter the fetal brain. Children exposed to even low levels of mercury before birth can experience serious neurological and development deficits.

Sources of Man Made Mercury Pollution in the Environment



SOURCE: 1997 EPA Report to Congress: http://www.nih.gov/od/ors/ds/nomercury/environment.htm

Mercury in Products

Mercury is used to make a variety of chemicals, industrial equipment, and consumer products. In addition to mercury fever thermometers, mercury is found in batteries, blood pressure gauges, dental amalgams, laboratory chemicals, fluorescent light tubes, switches, and other electrical devices.

References

1. UNEP Global Assessment of Mercury, 2003. Geneva:United Nations Environment Programme. Available: http://www.chem.unep.ch/mercury/Report/Key-findings.htm.
2. U.S. EPA, 1997. Mercury Study Report to Congress, Volume II: An Inventory of Anthropogenic Mercury Emissions in the United States. EPA-452/R-97-004. Washington, DC:U.S. Environmental Protection Agency.

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