



Massachusetts
Department
of
ENVIRONMENTAL
PROTECTION

f a c t s h e e t :

Mercury in Common Household Products

Mercury pollution is a serious problem in Massachusetts and across the Northeast. Fish from many bodies of water throughout New England have levels of mercury high enough to render them unsafe to eat. The mercury in these fish comes from a number of sources, including a wide array of products and processes. When these products are thrown away, mercury can be released to the environment. This can occur in a variety of ways during the transport of the trash, its incineration, and the post incineration disposal of residuals such as ash. Throughout the 1990's, municipal solid waste combustion was the largest source of mercury pollution in Massachusetts.

Although all forms of mercury are toxic, some are worse than others. Once released to the environment, all types of mercury pollution can lead to the formation of extremely toxic methyl mercury. In this form, mercury can harm humans and wildlife by damaging the brain and nervous system. Children and developing fetuses are particularly sensitive to these effects. Mercury also concentrates, or bioaccumulates, in fish. Mercury levels in some types of fish can be 100,000 times higher than the water the fish live in. Because it is so toxic, just one pound of mercury is enough to render almost 2 million pounds of fish unsafe to eat. The Massachusetts Department of Public Health has issued a statewide fish consumption advisory recommending that pregnant women avoid eating native freshwater fish caught anywhere in the Commonwealth. In addition, over 80 water bodies in Massachusetts have fish mercury levels high enough to be dangerous to the general public.

What are the sources of mercury in the home?

Thermometers (fever, candy, deep fry, oven, indoor and outdoor with a silvery temperature indicator)

Thermometers are one of the largest sources of mercury discarded in municipal solid waste. Many communities, including Boston, are now banning the sale of mercury fever thermometers and offering exchanges by giving out mercury-free alternatives such as digital thermometers. Health Care Without Harm has produced a resource guide entitled "How to Plan and Hold a Mercury Thermometer Exchange." To obtain a copy, go to www.noharm.org.

If you break a thermometer, do not vacuum the mercury up as this will spread it throughout the house. Instead, put on rubber or disposable gloves (not leather work gloves!) and scoop up the silvery liquid with an appropriate implement. Handle the liquid carefully and capture it in a firm container with a tight cover. This container should not be reused. Contact your local board of health for additional suggestions on collection and disposal. The collected mercury should be recycled whenever possible.

Barometers and Manometers

Many barometers and vacuum gauges found in machinery contain mercury. Liquid mercury in the gauges responds to air pressure in a precise way that can be read on a calibrated scale. Several mercury-free alternatives are available.

Thermostats

Mercury-containing tilt switches have been used in thermostats for more than 40 years. Each switch contains approximately 3 grams of mercury. Electronic thermostats provide many enhanced features and are mercury-free. The manufacturers of thermostats have established a take back program. For information contact the Thermostat Recycling Corporation at 1-800-238-8192 or check www.nema.org/government/environment.

Lighting and Electrical Applications

Fluorescent lamps are commonly found in garages and home workshop areas.

Fluorescent and high intensity discharge (HID) lamps are an excellent choice because they can use up to 50% less electricity than incandescent lighting. Spent lamps must be managed properly because they contain mercury. A number of communities have begun to collect lamps from residents and from their municipal buildings. Careful handling and storage is necessary so that mercury is not released through breakage.

Major Appliances

Mercury-containing thermostat probes may be found in several types of gas-fired appliances that have pilot lights, including ranges, ovens, clothes dryers, water heaters, furnaces and space heaters. The metal probe consists of a metal bulb and thin tube attached to a gas-control valve. Also known as a flame sensor or gas safety valve, it prevents gas flow if the pilot light is not lit. Although non-mercury thermostat probes are also used in these appliances, treat all probes as though they contain mercury, unless you know that they do not. If one of these appliances is discarded, the probe should be removed and stored in a covered container until it can be taken to a consolidation site.

Pharmaceuticals and Pesticides

Mercury can be found in some topical disinfectants, such as Mercurochrome, Tincture of Merthiolate and older medications for psoriasis and eczema. It is also found in some over-the-counter nasal sprays, hemorrhoidal ointments and eye and contact lens products. Mercury has also been used as a fungicide in pesticides and older paints. Before you buy, read the product label and consider purchasing products that do not contain mercury.

Ritual use

In some Caribbean cultures, mercury is used in spiritual or religious rituals. There is little information on the potential extent of such practices in Massachusetts, but significant levels of use have been documented in other urban areas including New York City and Chicago. Outreach with the intent of reducing use and removing mercury from homes with this tradition will require a sensitive educational effort.

Other sources of mercury in homes:

- Weight/counterweight in grandfather clocks
- Jewelry with a glass ampoule containing mercury
- Elemental mercury saved from an industrial application, laboratory or prior activity
- Many button batteries in particular from older hearing aids
- Lights in some older model children's tennis shoes
- Old batteries of any type (pre-1990)
- Irons with tilt safety switches
- Automotive trunk light switches, high intensity headlights and ABS braking systems
- Some gas flow meters

What can communities do to help reduce mercury pollution?

Massachusetts is now a national leader in taking aggressive action to eliminate mercury pollution. One of the ways in which the state is addressing this problem is to require Municipal Waste Combustion facilities to work with the communities they service to reduce mercury from many sources before it enters the waste stream. For more information about this assistance, contact the facility which serves your area:

American Ref-fuel/Semass
Ogden Martin
Wheelabrator Technologies
(RESCO, Millbury, NESWC)

Cidi Mateo (508) 291-4427
Steve Parker (978) 372-6288
Pat Scanlon (978) 475-1776

For communities setting up their own collection programs, the state has established a mercury collection contract and provides equipment for collection of mercury products.

Contact the Department of Environmental Protection at 617-292-5861 for details.

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