Sherborn Recycling Committee
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Mercury 101

As of May 1, 2008, disposal of mercury-containing products in the trash is prohibited.

Mercury is a neurotoxin that attacks the central nervous system and can impair the way humans see, hear, think, and function. A mercury thermometer contains a little less than 1 gram, which is said to be enough to contaminate all the fish in a lake with a surface area of 20 acres. Mercury thermometers are the largest single source of mercury discarded annually in the United States municipal solid waste stream, estimated at 17 tons of mercury per year.

When a mercury thermometer breaks in the home and the consumer fails to properly clean it up, it will slowly evaporate and can reach dangerous levels in indoor air, especially in a poorly ventilated room. The risks increase if the consumer attempts to clean up a mercury spill with a vacuum cleaner or a broom. If the mercury waste is thrown into the trash and the trash is burned in an incinerator (as Sherborn's trash is), the risks are increased again because it is dispersed into the air as mercury vapor and spreads throughout the atmosphere, eventually making its way into the food chain by being directly deposited into lakes or as run-off from soil after rain. When mercury seeps into the waterways, a natural chemical process converts it into methylmercury, which is more deadly to humans because it builds up in the muscle tissue of living beings.

Mercury: Path from Your Thermometer to the Food You Eat

- When a mercury thermometer is broken, liquid mercury begins to turn into a gas. The gas can reach dangerous levels, especially in a poorly ventilated room
- If the spill is not cleaned up properly, the gas will contaminate the home. Do not use a vacuum cleaner or a broom.
- If mercury is thrown in the trash and taken to the curb, it will eventually be burned with the rest of the trash and go into the air.
- Rain carries mercury from the air to the ground where it flows to a body of water.
- Bacteria in the water absorb the mercury and turn it into a more dangerous organic type of mercury, methyl mercury.
- Fish eat the bacteria, and it accumulates in their flesh. This is called bioaccumulation.
- Accumulation of mercury is dangerous because mercury is more concentrated at the top of the food chain. The larger and older the fish, the more mercury it is likely to have. In the early 1990's, mercury pollution in local bodies of water was so severe that citizens - especially those who were pregnant or were children - were warned not to eat fish from the Charles River. Adult men were warned not to eat more than one fish per month from the Charles and to avoid the bigger, older predatory fish (trout, bass, walleye, pike and pickerel) that store methyl mercury. Other nearby waters showing high fish methyl

mercury levels included the Concord and Sudbury Rivers, Walden Pond, the Quabbin and Wachusett Reservoirs. Warnings against eating large predatory fish such as swordfish were also published in newspapers. Jean Mayer, head of the Tufts Department of Nutrition, suggested eating no more than one serving of tuna per week. Efforts to reduce mercury releases into the environment have improved fish contamination somewhat, but more needs to be done.

- For this reason, it is unhealthy to eat some types of fish more than once a week.
- Exposure to mercury can cause birth defects and nervous system damage, including hand tremors, deafness, digestive disorders, irreversible brain and kidney damage, learning problems, personality disorders, hallucinations and death.

When shopping, look for the mercury symbol, Hg, which must be marked on devices that contain it. For information on other mercury products found in the home and how to recycle them, visit the Massachusetts Department of Environmental Protection or call the Mercury Hotline at (866) 9-MERCURY.

Mercury Resources:

- Mercury: Path From Your Thermometer to the Food you Eat
- What to Do if a Mercury Thermometer Breaks
- Environmental Protection Agency

Scan the QR code to visit the Sherborn Recycling Committee Website for more information: