Protecting Public Health from Toxic Mercury

Toxic mercury is still used unnecessarily in many products, while non-mercury alternatives are readily available and cost-effective.

Mercury released from products contributes to 28 percent of Minnesota's total mercury emissions.[1] These mercury releases are leaving a lasting toxic legacy in the environment and in people. The state of Minnesota should take immediate action to protect public health and the environment.

WHAT'S THE PROBLEM WITH MERCURY?

Mercury is a neurotoxin that causes serious adverse health effects from exposure to either the inorganic or organic forms.[2] In 2006, Minnesota acted to clean up mercury emissions from coal-burning power plants, but mercury intentionally used in products remains the second largest contributor to toxic mercury emissions in the state.

Mercury is still used unnecessarily in many products such as measuring instruments like thermostats and sphygmomanometers (blood pressure cuffs), switches and relays used in appliances and some cosmetics.

Wiring devices, switches, and measuring and control instruments accounted for 70 percent of the 245 metric tons of mercury found in products in the U.S. in 2001.[3]

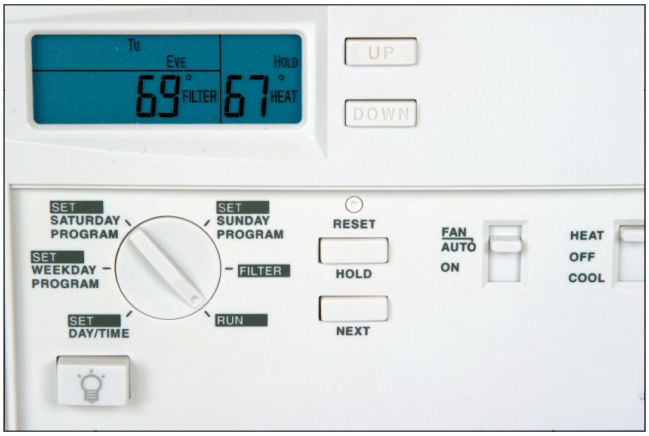
MINNESOTA LEVELS

Mercury has been detected in all of Minnesota's waterways. The Environmental Protection Agency estimates that between 6-12 percent of U.S. women of childbearing age have mercury in their bodies at levels that may adversely affect their unborn child.[4]

HEALTH IMPACTS

Mercury is a potent neurotoxin that causes developmental and learning disabilities in children. Short-term high exposures can cause poisoning, respiratory problems, nerve damage, and memory loss. Even low-level exposure over time, such as from maternal fish consumption, can affect a child's learning and abilities, including reduced intelligence, impaired hearing and memory, poor coordination or delayed motor and verbal skills.[5]

SAFER ALTERNATIVES ARE AVAILABLE



Alternatives to toxic mercury in products are readily available and cost effective. Some alternatives include: electronic thermostats, aneroid or electronic sphygmomanometers, electric ignition rings, digital thermometers, and various mercury-free preservatives for cosmetics. Many hospitals are taking the lead in eliminating their use of mercury by using safer alternatives, including the Mayo Clinic and a number of other Minnesota hospitals. Minnesota's own Honeywell is also phasing out its use of mercury in thermostats.

MINNESOTA'S MERCURY PRODUCT BILL

Minnesota's 2007 Mercury Product Bill proposes to:

- Expand existing labeling requirements for products containing mercury.
- Provide notice of mercury content and require recycling for all lamps containing mercury.
- Ban the use and sale of mercury-containing measuring devices and other products such as blood pressure devices (sphygmomanometers) gastrointestinal devices, thermostats, switches and relays, diostats, barometers, manometers, and pyrometers.
- Ban mercury in over-the-counter pharmaceuticals, cosmetics, toiletries, and fragrances.
- Ban the use of elemental mercury in K-12 schools.
- Require crematoria to extract dental amalgam fillings before cremation, or provide scrubbers to capture the mercury releases.

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CREMATORIES CAN BE A PART OF THE SOLUTION

The Minnesota Pollution Control Agency estimates that mercury emissions from crematoria in Minnesota are a significant source of mercury to the environment and our fish. Mercury emissions from crematoria have been increasing since 1990 and are projected to rise.[6]

Minnesota state law already requires that pacemakers, which contain plutonium, and other mechanical devices containing toxic substances must be removed prior to cremation. Minnesota's proposed mercury product bill would require the removal of dental amalgam fillings, which contain mercury, so they are not volatized upon cremation and released into Minnesota's air and water.

THE COST OF INACTION

On December 5, 2006 students and staff at the Eden Valley Secondary School were directly exposed to toxic mercury when a barometer containing more than a quarter of a cup of mercury was accidentally dropped and broken in a hallway. The school was closed for three days while special crews cleaned and replaced carpets and vacuums. The clean-up costs for this toxic spill are estimated to be greater than $133,000, not to mention the lost classroom time and health risk associated with children's direct exposure to the mercury.

Just two months later on February 6, 2007, New Brighton's St. John the Baptist Catholic School was closed due to a mercury leak in at least one science lab. Mercury was found on the shoes and backpacks of a number of students.

Organizations supporting a Mercury Phase-out

Arc Greater Twin Cities
Clean Water Action Alliance
Environmental Association for Great Lakes Education
Environmental Justice Advocates of Minnesota
Eureka Recycling
Harbor Friends of Grand Marais
Indigenous Environmental Network
Institute for Agriculture and Trade Policy
Learning Disability Association of Minnesota
Mankato Area Environmentalists
Minnesota Nurses Association
Minnesota Ornithologists' Union
Minnesota Public Health Association
Minnesota Waters
Mississippi Corridor Neighborhood Coalition
Saint Paul Audubon Society
Sierra Club North Star Chapter
Voyageurs National Park Association
Women's Environmental Institute

References

1. Minnesota Pollution Control Agency. *Sources of mercury pollution and the methylmercury contamination of fish in Minnesota*. St. Paul, MN. 2005.
2. National Academy of Sciences, National Research Council. *Toxicological effects of methylmercury*, Washington D.C. 2000.
3. U.S. EPA, EPA's Roadmap for Mercury. July 2006. www.epa.gov/mercury/roadmap/htm
4. Centers for Disease Control and Prevention. Blood mercury levels in young children and childbearing-aged women--United States, 1999-2002. MMWR 53(43): 1018-20. 2004
   Mahaffey, Kathryn R. Mercury Exposure: Medical and Public Health Issues. Transactions of the American Clinical and Climatological Association 116: 127-154. 2005
5. National Academy of Science, *op cit*.
6. Minnesota Pollution Control Agency. 2005 Mercury Reduction Progress Report to the Minnesota Legislature. St. Paul, MN. 2005.

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