Help stop mercury from rising

Almost all lamps used by businesses, schools, municipalities and institutions – including overhead fluorescents, heat lamps, tanning lamps and high-density discharge (HID) bulbs – contain mercury. In almost all cases, disposing of these lamps in the trash is prohibited by state and federal regulations (310 CMR 30), and enforced by Massachusetts Department of Environmental Protection (DEP). Boards of Health and health agents can help keep spent bulbs out of the trash and thus protect the public’s health.

Mercury is a heavy metal with many unique properties, which make it useful in a variety of industrial processes. It is also a potent neurotoxin, which makes handling and disposal an important public health concern. Pre-natal exposure to mercury can cause children to have lifelong language, attention and memory impairments, even though their mothers may not show any symptoms of mercury poisoning. Because their nervous systems are still developing, fetuses, babies and young children are at the greatest risk of serious health problems from mercury exposure. Mercury exposure has been linked to visual impairment, learning disabilities, attention deficit, and motor dysfunction in children. Higher levels of exposure to mercury can cause a child to have a smaller brain size, cellular distortions in the brain, and mental retardation.

In 2000, the Centers for Disease Control tested blood samples from women of child bearing age and found that one in ten had mercury levels high enough, were they to become pregnant, to cause their child to suffer developmental delays. Follow up studies have shown that the numbers in the 2000 CDC study were accurate and that mercury levels are higher in fetal blood samples than in the mothers’ blood.

Recycling bulbs that contain mercury can make a real difference in Massachusetts. The recycling process contains and re-uses the mercury in the bulb instead of releasing it into the environment. When a used bulb goes into a trash dumpster or compactor, it is likely to break. The broken bulb releases mercury vapors that can stay in a waste container for hours or even days. The vapors release mercury into the air and ultimately into water. Eventually, all mercury that is not recycled ends up in lakes and streams. Once in our waterways, mercury starts the journey into the food chain where it will accumulate in the flesh of fish. The most common form of human exposure comes from eating contaminated fish.

Nationally, 24% of mercury-containing lamps are recycled. Each year, about 500 million bulbs get thrown out instead of recycled. In addition, bulbs used in tanning beds contain four to eight times more mercury than the straight fluorescent tubes used in businesses and schools. An average tanning bed uses over 40 six-foot lamps that are changed every six months. One tanning bed can generate 6,400 milligrams of mercury waste per year. Recycling these lamps keeps a lot of mercury from going in the trash and eventually into our environment and food supply.
With funding from the U.S. Environmental Protection Agency (EPA), the Center for Ecological Technology (CET) is working with businesses, towns, Boards of Health and institutions to increase lamp-recycling rates in western Massachusetts. CET has helped hundreds of businesses in Springfield, Pittsfield, Northampton and Amherst with lamp recycling.

Now, Boards of Health are starting to take steps to increase recycling rates in local communities. The Board of Health of the Town of Granby recently received its first application to add a tanning salon to an existing facility. They needed to adapt regulations for the tanning salon and have proposed to add language to the tanning salon regulations to require lamp recycling. Just this month, they posted a public notice about the change.

CET worked with the Town of Amherst Health Department to encourage the town’s four tanning salons to recycle lamps. CET prepared a letter that was sent on Health Department letterhead to the local tanning salons. CET then helped each salon owner establish a recycling program. CET supplied salon owners with a poster that reminds employees about proper handling for spent bulbs. CET also provided a list of area recyclers and a bid sheet to use to evaluate costs for recycling. In just one year, these few salons will collectively keep 17,000 feet of tanning lamps out of the trash.

**How health agents can help keep mercury out of the trash**

- Health Agents conducting inspections can easily learn to ask: What are you doing with old lamps? Do you know that lamps containing mercury need to be recycled? It’s easy to start recycling. For more information on how you can work with businesses in your community, visit: [www.cetonline.org/FarmBusiness/fluor_bulbrecycling.htm](http://www.cetonline.org/FarmBusiness/fluor_bulbrecycling.htm) or call Lorenzo Macaluso at 413-218-1543.

- Invite CET to speak to a regional meeting of Boards of Health or Health Agents. Our services are free. Contact Lorenzo Macaluso at lorenzom@cetonline.org or call 413-218-1543.

- Boards of Health can amend the bylaws that regulate facilities with tanning booths to require recycling of tanning bed lamps. Find out how more by contacting Lorenzo Macaluso at lorenzom@cetonline.org or call 413-218-1543.

- To receive templates of letters you can send to businesses explaining the importance of lamp recycling, contact Lorenzo Macaluso at lorenzom@cetonline.org or call 413-218-1543.