

Mercury Reduction in Healthcare Facilities

Safe, effective alternatives do exist!

MERCURY IS A NEUROTOXIC HEAVY METAL THAT HAS BEEN COMMONLY USED in construction products and health care equipment for centuries. Like other persistent, bioaccumulative toxins, mercury does not break down in the environment. Instead it combines with carbon and creates an organic mercury compound known as methylmercury. Improper disposal of products containing mercury has led to contamination of waterways and subsequently wildlife, especially fish. Ingestion of contaminated fish and direct exposure through inhalation of mercury vapor has led to increased mercury levels in humans, posing numerous health risks.

The most serious risks are damage to a fetus' nervous system and neurological problems in children. Currently the FDA has consumption advisories for fish, and legislation is being enacted to ban the sale of products containing mercury.

The most common forms of mercury pollutants in the healthcare industry include the following:

- Medical devices, including thermometers, manometers, sphygmomanometers, barometers, dilation and feeding tubes
- Fluorescent lamps, HID and ultraviolet lamps
- Thermostats, pressure switches, aquastats, float switches
- Button cell batteries
- Dental amalgam
- Lab chemicals
- Pharmaceutical supplies
- Cleaning solutions
- Demolition waste from older controls, HVAC, security, water treatment and fire suppression systems

Mercury is also released from coal-burning power plants, waste incinerators and Portland cement kilns. Some chlorinated products, including bleach and vinyl, contain mercury because a number of chlorine production facilities use it as a catalyst.

WHAT CAN BE DONE?

1. Preferable purchasing practices – medical devices: Safe effective alternatives exist for all traditional healthcare uses of mercury. Any increase in cost is minimal compared to the cost of cleaning a hazardous mercury spill or the liability risk of poisoning clients and staff.

2. Preferable purchasing practices – building systems and materials: Low-mercury fluorescent lamping is available from all major manufacturers. New/renovated mechanical systems should utilize mercury-free thermostats and switches. Gas appliances and equipment should have electronic ignitions in lieu of

pilot lights with mercury flame sensors. Applications that typically require float switches can be changed to mercury free alternatives like “bubble troll” or “float tilt” type switches.

3. Disposal: Items containing mercury should be considered hazardous waste and kept out of the waste stream. All lamps containing mercury need to be recycled properly. Hazardous components of construction and demolition waste should be removed and disposed of appropriately. Mercury-containing medical waste should be separated and not incinerated.

Reinforcing their commitment to health and the community, Denver Health Hospital Authority (DHHA) successfully reduced the quantity of mercury across their campus through implementation of a low-mercury lamp purchasing policy in 2007. This policy resulted in less than 75 picograms per lumen hour of mercury in the lamps for the new LEED-NC Silver Denver Health Pavilion for Women and Children.

Many other healthcare facilities are working toward eliminating mercury. In most instances you can ask for mercury-free alternatives and manufacturers will point you to their products that meet your needs. Make mercury elimination a priority!

MAKING MEDICINE MERCURY-FREE

Practice Greenhealth is addressing the mercury problem with the program “Making Medicine Mercury-Free”. The program asks hospitals and healthcare providers to pledge to phase out mercury-containing products in their facilities. They provide educational and technical resources to facilities implementing mercury elimination programs. To take the mercury-free pledge, please visit this Practice Greenhealth web page: practicegreenhealth.org/pubs/mercfree.pdf and gain recognition for your commitment to improving environmental health.