

## Mercury in nonclinical healthcare areas

This fact sheet outlines the potential sources of mercury in the nonclinical areas of health care facilities.

Mercury is present in many of the nonclinical areas of health care facilities. Changing to nonmercury thermometers eliminates only one of the sources of mercury from health care settings. Mercury is present in many types of equipment and chemicals. This fact sheet outlines the potential sources of mercury in the nonclinical areas of health care facilities.

Many health care facilities are working to eliminate mercury. It is a toxin associated with nervous system disorders and is especially toxic to newborn babies, children, and pregnant women. Mercury can also have an adverse effect on wildlife.

In addition to health impacts, hospitals have many reasons to reduce their use of mercury. New federal air and water regulations greatly reduce the amount of mercury allowed to be discharged from a municipal wastewater system or an incinerator. Mercury can now be measured at lower levels, making it easier for regulatory agencies to identify facilities that are not in compliance.

The U.S. Environmental Protection Agency (EPA) and the American Hospital Association (AHA) have committed to a voluntary agreement to virtually eliminate mercury waste in hospitals and health systems.

Reducing mercury in the nonclinical areas of your health care facility can reduce the level of mercury in the environment and help your facility avoid the need to increase its investment in pollution controls and waste disposal.

### Steps to Identify Mercury

Examine your chemicals and equipment. Read container labels, Material Safety Data Sheets (MSDSs) and inserts that come with the chemicals. MSDSs will generally not identify mercury levels below 1%, as manufacturers are not required to list hazardous components of a product below this level.

Contact your sales representatives and product manufacturers to ask about mercury in their products. Request a certificate of analysis (COA) or other data on the mercury concentration in chemical products.

When setting up purchase contracts, require disclosure of all hazardous materials in the products as part of the contract. Choose mercury-free products, if possible. If there are no mercury-free products that meet the needs of the health care facility, choose those that are the lowest in mercury concentration.

Plumbing systems can be contaminated with mercury because of past spills or mercury disposal. Mercury can accumulate in pipes and fittings, especially at elbows, traps, and low points.

MnTAP maintains the following list of potential mercury-containing chemicals and equipment solely as a service to Minnesota health care facilities. This is not a complete list.

### Engineering and Maintenance

- Antifouling agents
- Anti-tamper devices on pay phones
- Barometers
- DC watt-hour meters
- Float switches in bilge pumps, septic tanks and sump pumps
- Fluorescent lamps
- Hydrometers (used to measure specific gravity)
- Plunger/displacement relays in lighting, and power supply and resistance heating switches
- Pyrometers
- Steam recorders in boiler panel
- Thermometers in air/water heating and cooling systems

- Thermostat probes in clothes dryers, electric/gas stoves, furnaces, hot water heaters and space heaters
- Thermostats
- Tilt switches in airflow/fan limit control, clothes irons, fluid level/pressure/temperature control devices, laptop computer screen shutoff, silent light switches, switches in patient beds and space heaters

## Housekeeping

Mercury is used in some industrial processes to manufacture common ingredients in cleaners and degreasers, including chlorine, hydrochloric acid (muriatic acid), potassium hydroxide, and sodium hydroxide (caustic soda). As a result, trace amounts of mercury end up in the cleaners and degreasers. Cleaners and degreasers containing mercury include:

- 7x-o-matic dish soap, Ajax Oxygen Bleach Powder Cleanser, Alconox Powdered Precision Cleaner, CIDEX, Clorox Bleach, Comet Cleaner, Derma Scrub, Dove soap, ENZOL Enzymatic Detergent, Ivory Dishwashing Liquid, Lysol Disinfectant Direct MultiPurpose Cleaner, Murphy Oil Soap, Soft Cide Soap, Soft Scrub, Sparkleen and Sunlight Dishwashing Detergent

## Safety and Security

Safety managers should be aware of all the sources of mercury in their health care facilities. The following are specific to the safety and security department:

- G-sensor security systems, in some applications
- Mercuric oxide batteries in pagers and temperature alarms
- Products containing the preservatives Mercurochrome, Mercurothiolate, Merthiolate, Mertorgan, Merzonin, thimerosal and thimerosalate
- Tilt switches in building security systems

## Resources for Mercury Data

Several online databases list products containing mercury. Products become listed either by their manufacturers submitting information or by being tested. Additional products, that are not included in the databases, may contain mercury. Links to databases from the following organizations are found at <[mntap.umn.edu/health/mercury.htm](http://mntap.umn.edu/health/mercury.htm)>.

- Medical Academic and Scientific Community Organization
- Northeast Waste Management Officials' Association
- Premier, a health care group purchasing organization
- Sustainable Hospitals Project, University of Massachusetts Lowell

## For More Information

The Sustainable Hospitals Project <[www.sustainablehospitals.org](http://www.sustainablehospitals.org)> offers information on selecting health care products that offer greater occupational safety and less environmental impact than some of the traditional products used. These products include mercury-free alternatives. Also, see its fact sheet *Removing Mercury from Hospital Labs* <[www.sustainablehospitals.org/HTMLSrc/IP\\_mercury\\_removeLABS.html](http://www.sustainablehospitals.org/HTMLSrc/IP_mercury_removeLABS.html)>.

Hospitals for a Healthy Environment (H2E) <[www.h2e-online.org](http://www.h2e-online.org)> and MnTAP have information about mercury and how to eliminate its use in your facility. H2E is a partnership of the AHA, the U.S. EPA, the American Nurses Association and Health Care Without Harm to improve environmental performance in health care.

H2E sponsors the Making Medicine Mercury-Free Award—a one-time award given to facilities that have essentially eliminated mercury and developed policies to sustain the elimination.



## For More Information

MnTAP has a variety of technical assistance services available to help Minnesota businesses implement industry-tailored solutions that maximize resource efficiency, prevent pollution and reduce costs. Our information resources are available online at <[mntap.umn.edu](http://mntap.umn.edu)>. For personal assistance call MnTAP at 612.624.1300 or 800.247.0015