

Action Steps for Health and Safety Committees

- Support the school administration in the establishment of a mercury policy for your school. Encourage changes to school purchasing policies to ensure that mercury-free products are purchased whenever possible. As schools replace mercury-containing equipment or purchase products that contain less mercury, they reduce the chances of a spill and its consequences.
- Be part of a team to conduct an inventory of mercury sources in the school. A school-based team might include representatives from the school's health and safety committee, buildings and grounds, the school nurse's office, science classrooms, Board of Cooperative Educational Services (BOCES), and your school's Parent Teacher Association (PTA).
- An inventory tool has been developed for your use. (See "Facility-Wide Inventory of Mercury and Mercury-Containing Devices".) When conducting an inventory, make a special effort to search for containers of liquid mercury. They may have been used for demonstrations and might be found in science classrooms or storerooms.
- Use the results of the inventory to set priorities for proper disposal/recycling and replacement of mercury items most vulnerable to breaking or spilling. Assist the superintendent in developing policies to ensure that mercury does not get reintroduced into the school.
- Support the development of a mercury spill response plan. While not required, a spill response plan might fit well as an appendix to your school's building-level emergency plan. Make sure school staff know their role and whom to contact in the event of a spill. Your response plan should include elements that deal with roles and responsibilities, staff training, personal protective equipment, evacuation, ventilation, ways to prevent tracking, contamination, decontamination, spill reporting, disposal/recycling and parental notification. Even a few drops of mercury need to be cleaned up properly.
- Never use a vacuum cleaner, mop or broom to clean up a mercury spill!** Heat from the vacuum's motor will increase the amount of mercury vapor in the air. Mops and brooms will spread the mercury, making proper cleanup more difficult and costly. The vacuum cleaner, mop or broom will become contaminated and require disposal as hazardous waste. If you do not know the cleanup protocols, do not attempt to clean up a mercury spill because you might spread the contamination.
- Make sure mercury-containing products are well protected against breakage. Place guards over gymnasium lights. Protect mercury-containing devices (for instance, check wall mounts on a mercury sphygmomanometer to be sure they are secure) until a mercury-free replacement can be installed. Double bag any item containing liquid mercury by placing it in two plastic bags, one inside the other. Securely tape each plastic bag closed and place the item in a covered, non-breakable container such as a plastic bucket. Label the container "Mercury-Containing Devices" and store the container in a locked cabinet or room until it can be properly disposed of or recycled.
- Learn about proper disposal/recycling of mercury-containing products and cost-effective options. (Schools should NOT throw them out in the trash!) Clothing and other items directly contaminated by mercury must be disposed of as hazardous waste. (Refer to "Disposal and Recycling Options for Mercury and Mercury-Containing Devices" for more information.)
- Help raise awareness about mercury safety. Teach your students in science class or in an assembly about the importance of mercury safety. Consider a mercury awareness program for your next annual Right-to-Know session. Include mercury safety as a discussion topic at a PTA meeting.



Contact names and numbers

For health questions or to get more brochures:

New York State Department of Health (NYSDOH)
(800) 458-1158 or e-mail at ceheduc@health.state.ny.us
<http://www.health.state.ny.us/nysdoh/environ/hsees/mercury/index.htm>

For questions about recycling and disposal:

New York State Department of Environmental Conservation (NYSDEC)
Division of Solid and Hazardous Materials
(518) 402-8633
NYSDEC Small Quantity Generator Helpline
(800) 462-6553
www.dec.ny.gov

To report a spill:

NYSDEC Spill Cleanup and Reporting Hotline
(800) 457-7362

For additional information:

NYSDEC Division of Environmental Permits, Pollution Prevention Unit
(518) 402-9469
www.dec.ny.gov

In New York City:

To report a mercury spill in a NYC Public School or to get more information about mercury, call the Department of Education Office of Environmental Health and Safety at (718) 361-3808.

To report a mercury spill in a private NYC school call 3-1-1 and ask to be connected to the Department of Environmental Protection (DEP) HazMat.

Acknowledgements:

Materials development supported by grants from the US Environmental Protection Agency (EPA) and the ATSDR, specifically the Hazardous Substances Emergency Events Surveillance program. Developed in cooperation with the Partnership to Reduce Mercury in Schools – a collaboration of representatives from state and federal agencies, local school districts, statewide associations, school and environmental organizations. Reviewers included Partnership members as well as project partners on the NYSDEC grant "Reducing Mercury in New York State Schools."

NOTE:

These brochures are intended to provide information and lessons learned. They are not intended to replace school district requirements for training and personal protective equipment.



This is a true story. It could happen in your school or your community.

A science teacher arrived at middle school to prepare for the coming school year. She noticed that a bottle of mercury had spilled in the chemical storage closet. The spill had apparently happened some time before but was not reported...



...School staff attempted to clean the spill with a mercury spill kit but found more beads. Contractors came in and identified mercury in several areas using air measurements. Access was restricted for months until cleanup efforts were completed. Cleanup costs exceeded \$22,000. Parents and others expressed health concerns, which were addressed by the State Health Department.

In another New York State school, two students broke a blood pressure machine in the nurse's office, spilling mercury on a shelf and on themselves. Proper cleanup was not simple. School staff restricted access to the room and called in a hazardous material response team (HAZMAT) and the local health department. Air measurements near the students' clothing indicated the presence of mercury. The students had to be decontaminated and their clothing was sealed in plastic bags for proper disposal by a hazardous waste contractor. The nurse's office also required decontamination. Air sampling was conducted in the nearby cafeteria to check for the spread of mercury vapors.

New York State Hazardous Substances Emergency Events Surveillance (HSEES) database, US Agency for Toxic Substances and Disease Registry (ATSDR).

Reducing mercury in schools is an important goal for health and safety committees, science teachers, buildings and grounds personnel, school superintendents, principals, school boards, school nurses, parents and students. This brochure will help you find mercury sources in your school and avoid potential spills.

What is Mercury?

Mercury is an element that occurs naturally in the earth's surface. The form of mercury that poses an exposure concern in schools is known as elemental mercury, or simply, mercury. Mercury is a silvery, liquid metal that releases mercury vapor into the indoor air at room temperature. It is fascinating to children because it easily breaks up into many smaller droplets.

Mercury is a concern for human health and for the environment. It does not degrade and is not destroyed by burning, which is why proper disposal and recycling are essential.

Mercury Exposure is a Health Concern

Spilled liquid mercury is a health concern. The central nervous system is probably the most sensitive target organ for mercury vapor exposure. Mercury vapors can affect different areas of the brain, resulting in a variety of symptoms. Some symptoms from exposure to high levels of mercury vapor, or from long-term exposure to low levels, can include memory loss, headache, sleeplessness, irritability and tremors. Short-term exposure to high levels can also cause coughing, shortness of breath, chest pain, nausea, vomiting, diarrhea, fever, high blood pressure and skin rashes. Young children's exposure to mercury is of particular concern because their nervous systems are still developing.

Exposure to elemental mercury can occur by breathing mercury vapors, eating or swallowing contaminated food or drinks, or having skin contact with liquid mercury. After a spill, the primary health concern is from breathing in mercury vapors. Since mercury vapor is colorless and odorless, people are not aware that the indoor air contains mercury or that they are breathing mercury vapor. The exposure can last a long time if the spill is not properly cleaned up. Just a few drops of mercury can produce harmful vapor levels in enclosed spaces such as rooms or vehicles.

Mercury Sources in Schools

Instruments containing mercury can be found virtually anywhere on school property – in the nurse's office, science rooms, gymnasiums, art rooms and boiler rooms. Liquid mercury is used in instruments that measure temperature (thermometers), pressure (barometers or sphygmomanometers), humidity (hygrometers), vacuum (laboratory manometers), flow (water meters) and air speed (anemometers). Mercury can also be found in lights (particularly gymnasium and fluorescent lights), thermostats, heating/ventilation and air conditioning (HVAC) systems, plumbing systems, cafeteria equipment, medical devices, regulators, gauges and science room equipment.



Sometimes children or adults who are unaware of the hazard bring mercury into schools as a novelty, for demonstrations or as part of cultural rituals. Contractors, guest speakers, parents, staff or students might bring mercury-containing devices into the school.

The State Health Department recommends that containers of elemental mercury identified by staff or found during an inventory be given the highest priority for removal. Should a spill occur, many individuals could be exposed resulting in health effects, significant cleanup costs and widespread environmental contamination. Legislation banning the purchase or use of elemental mercury in primary and secondary schools in New York State became effective September 4, 2004. Check with the Office of Facilities Planning in the State Education Department (518-474-3906) or, in NYC, the Office of Environmental Health and Safety in the Department of Education (718-361-3808) for the latest information about this and other initiatives for removing mercury from schools.

Brochures in this series

- Mercury and Schools: A Risky Combination
- Reducing Mercury in Schools: Superintendents, Principals, and School Boards
- Reducing Mercury in Schools: Science Teachers
- Reducing Mercury in Schools: Buildings and Grounds Superintendents
- Reducing Mercury in Schools: Health and Safety Committees
- Reducing Mercury in Schools: School Nurses
- Facility-Wide Inventory of Mercury and Mercury-Containing Devices
- Guidelines for Cleanup of Mercury Spills
- Disposal and Recycling Options for Mercury and Mercury-Containing Devices