

Action Steps

- 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.
- Where possible, replace mercury-containing devices with mercury-free alternatives. (Refer to "Facility-Wide Inventory of Mercury and Mercury-Containing Devices," for suggestions.)
- Work with your team to develop a comprehensive 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. 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.
- Make sure mercury-containing products are well protected against breakage. 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 it 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. (Refer to "Disposal and Recycling Options for Mercury and Mercury-Containing Devices" for more information.) Schools should NOT throw them out in the trash!
- Teach your students in science class or in an assembly about the importance of mercury safety.



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.

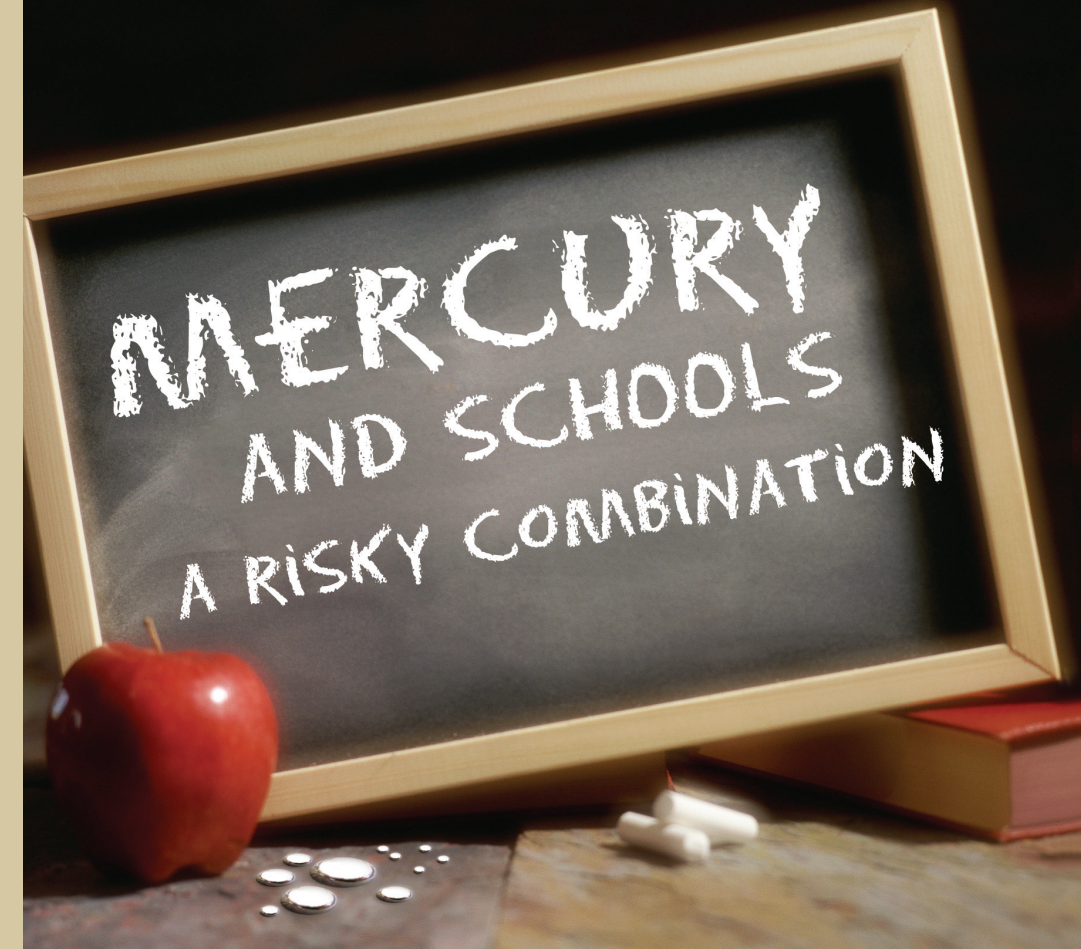
To report a mercury spill in a private NYC school call 3-1-1 and ask to be connected to the Department of Environmental Protection (DEP) HazMat.

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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 14-year-old student was intrigued by a mercury demonstration during science class. Without the teacher's knowledge, she took the jar of silvery liquid and shared it with her friends, who played with the mercury in school hallways and classrooms...



...During a field trip, they also took the mercury to a bowling alley, poured it into bowling ball finger holes and rolled the balls down the alley. The students took the mercury home, put it in various containers, then brought it back to school and continued to play with it. In the end, 88 people had to be decontaminated, as well as the bowling alley, the school, a school bus and a home. School was closed for three days. Several students were hospitalized for medical monitoring. Contaminated furniture, electronics, clothing and shoes were discarded as hazardous waste. Six agencies were involved in the cleanup that cost in excess of \$223,000.

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

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

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. Mercury-containing devices might be brought into the school by contractors, guest speakers, parents, staff or students.

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.