don't mess with MERCURY

Mercury in Your School

Why should you be concerned about mercury in your school?

1. **Mercury is dangerous.**

   Mercury poisoning can affect the nervous system, lungs, and kidneys.

2. **There are still many sources of mercury in schools today.**

   You may think that mercury is no longer a problem, **but it's still around**. Some of the most common sources are:

   - Glass thermometers
   - Compact fluorescent light (CFL) bulbs
   - Medical equipment
   - Gauges and other science equipment
   - Thermostats, switches, and other electrical devices

3. **If mercury spills, you will have a serious problem on your hands.**

   Mercury spills are dangerous — and they can be very difficult to clean up.

   - Most people get mercury poisoning by breathing in vapors.
   - It's expensive to clean up a mercury spill. Costs of clean-up have run as high as $750,000.
   - Cleanup efforts can disrupt your school's schedule; you could lose valuable classroom time.

That's why prevention is so important.

Does your school have a mercury policy? To keep your school safe from the dangers of mercury, it's important to have a policy in place that covers mercury in your school district.

Use the checklist to find out if there's mercury in your school. If you don't know where mercury could be found in your school, you aren't alone. Learn about common sources of mercury — including products that you and your students use every day.

Learn about safe alternatives for products that contain mercury. One of the best ways to prevent mercury poisoning in your school is to learn about safe alternatives for products you use that contain mercury. Make your school safer by making some very simple changes.

Get rid of mercury safely.
When mercury is found in your school, there are things you need to do to get rid of it safely. Find out how to get mercury out of your school the right way — and keep everyone safe in the process.

Make sure you know who to call. Complete the contact sheet and hang it in the main office near a phone. Also post a copy in every science lab. To get the contact information for your state's health and environmental agencies, check: http://www.epa.gov/epahome/state.htm

Does your school have a mercury policy?

To keep your school safe from the dangers of mercury, it's important to have a policy in place that covers mercury in your school district.

Keep in mind that your school district may already have a policy for dealing with chemicals or other environmental dangers. But a policy specifically designed for handling mercury will go beyond these general safety steps — and help you protect your staff and students from mercury exposure and poisoning.

Make sure your school has a policy that includes:

- Identifying sources of mercury
- Labeling sources of mercury clearly and consistently
- Disposing of mercury safely
- Responding to a mercury spill
- Purchasing mercury-free products

When you are developing your school's policy, there are many important questions that you may want to consider. For example:

- Is your staff educated about the dangers of mercury?
- Do you understand how to store mercury safely before disposal?
- Does the policy identify how to dispose of mercury?
- Are there local resources (like a hazmat team or environmental consultants) available to help with cleanup?
- What disciplinary action will be taken if a person brings mercury to school?

And if there's a spill at your school:

- Are roles and responsibilities of staff clearly defined?
- Are there mercury spill kits available at your school?
- Does the policy identify the right professionals to contact?
- How will you notify parents about the potential dangers of the spill?
- Do staff members understand how to protect children's health?

Mercury Audit and Follow-Up Checklist

Find possible sources of mercury in your school and decide how to manage them safely.

School Name: _____

Auditor Name: _____ **Audit Date:** _____

★ Instructions

Walk through your school to identify sources of mercury.

1. If you find sources of mercury, write down the location, the number of items, and if they are in use.
2. Label sources of mercury with a tag that says **"Danger: Do Not Touch."** If you think an item has mercury in it but you aren't sure, treat it like a source of mercury.
3. Contact your local health department to learn how to get rid of products that contain mercury safely. Specific steps must be followed to ensure safe disposal of mercury, and they vary depending on the source. If you don't follow them, you risk doing more harm than good.

Make your audit easier:

Before your walk-through, ask school nurses, janitors, and science teachers about possible sources of mercury.

Science Rooms and Labs, Home Economics, and Art Classrooms				
Items to look for	*Location(s)*	*Number*	*In use (Yes/No)*	*Labeled*
Example item	*Top shelf of back closet, Room 302*	*8*	*No*	✓
Barometers				
Elemental mercury				
Hydrometer				
Hygrometer				
Inorganic Mercury Compounds: • Mercury chloride • Mercury iodine • Mercury nitrate • Mercury oxide • Mercury sulfate • Millon's solution • Nessler's reagent • Zenker's solution				

Mercury Audit and Follow-Up Checklist

Science Rooms and Labs, Home Economics, and Art Classrooms				
Items to look for	*Location(s)*	*Number*	*In use (Yes/No)*	*Labeled*
Mercury molecular motion device				
Mercury spectral tubes				
Sling psychrometer				
Thermometers				
Vacuum gauges				
Vermilion paint				

School Nurse's Office and Medical Supply Storage				
Items to look for	*Location(s)*	*Number*	*In use (Yes/No)*	*Labeled*
Blood pressure meters				
Thermometers				

Electrical and Heating Equipment, Lighting, and Facility Supply Storage Areas				
Items to look for	*Location(s)*	*Number*	*In use (Yes/No)*	*Labeled*
Float control switches				
Flow meters with mercury switches				
Fluorescent, vapor, metal halide, and high-pressure sodium lamps				
Fluorescent light bulbs				
Fungicides and pesticides (If the product was made before 1994, check the label for mercury.)				
Latex or marine paint and floor varnishes (If the product was made before 1992, check the label for mercury.)				
Mercury gauges				
Mercury oxide or mercury zinc batteries				
Older model microwave ovens				
Other equipment with mercury switches (e.g., flame sensors, fire alarms, safety valves)				
"Silent" light switches				

Mercury Audit and Follow-Up Checklist

Electrical and Heating Equipment, Lighting, and Facility Supply Storage Areas				
Items to look for	*Location(s)*	*Number*	*In use (Yes/No)*	*Labeled*
Thermometers in freezers and refrigerators				
Thermostats				
Other:				

Notes:

Safe Alternatives to Products That Contain Mercury

One of the best ways to prevent mercury poisoning in your school is to replace products that contain mercury with safer alternatives. Find out how to make the switch to safer products today.

Always Buy Safe Products for Your School

- Make sure newly purchased products are mercury-free.
- Share this list of safe alternatives with anyone who buys products for your school.
- If you must buy products that contain mercury, only buy what you need to get through the school year (or the shelf life of the product).
- Don't allow staff to bring in their own products to school. Be cautious when accepting donations — people might not know that some products contain mercury.

Science Rooms and Labs, Home Economics, and Art Classrooms	
Items that may contain mercury	**Mercury-free alternative(s)**
Barometers	Aneroid, digital, or liquid barometers
Elemental mercury	None, use only when needed *
Hydrometers	Lead ballast hydrometers
Hygrometers	Spirit-filled glass bulb or digital hygrometers
Inorganic Mercury Compounds:	
• Mercury chloride	Magnesium chloride/sulfuric acid or zinc
• Mercury iodine	Formalin
• Mercury nitrate	Ammonia/copper sulfate
• Mercury oxide	Phenate method
• Mercury sulfate	- Ammonia/copper sulfate - Copper catalyst silver - Nitrate/potassium/chromium sulfate
• Millon's solution	None, use only when needed *
• Nessler's reagent	None, use only when needed *
• Zenker's solution	Zinc formalin
Mercury molecular motion device	Molecular motion simulator that uses balls on a glass plate
Mercury spectral tubes	16 alternative gases are available (contact your science supplies distributor for more information)
Sling psychrometers	Mineral spirits glass bulb thermometers (can sometimes fit in old psychrometer frame) or digital sling psychrometers
Thermometers	Alcohol and mineral spirits glass bulb thermometers or digital thermometers
Vacuum gauges	Needle or digital gauges
Vermilion paint	Mercury-free paint

Safe Alternatives to Products That Contain Mercury

School Nurse's Office and Medical Supply Storage	
Items that may contain mercury	**Mercury-free alternative(s)**
Blood pressure meters	Digital or aneroid devices
Thermometers	Digital, gallium-indium-tin thermometers, dot matrix thermometers, or alcohol thermometers
Electrical and Heating Equipment, Lighting, and Facility Supply Storage Areas	
Items that may contain mercury	**Mercury-free alternative(s)**
Float control switches	Magnetic dry reed switches, optic sensors, and mechanical switches
Flow meters with mercury switches	Digital, optical, and ball-actuated flow meters
Fluorescent, vapor, metal halide, and high-pressure sodium lamps	None (recycle old bulbs safely)
Fluorescent light bulbs	None (recycle old bulbs safely)
Fungicides and pesticides	New fungicides and pesticides don't contain mercury (get rid of old fungicides and pesticides safely). Products made before 1994 may contain mercury — check the label!
Latex or marine paint and floor varnishes	New paint and varnishes don't contain mercury (get rid of old paint and varnishes safely). Products made before 1992 may contain mercury — check the label!
Mercury gauges	Electronic or aneroid gauges
Mercury oxide or mercury zinc batteries	Zinc-air or silver oxide batteries
Older model microwave ovens	New microwave ovens don't contain mercury vapor bulbs (follow local procedures for recycling mercury vapor bulbs)
Other equipment with mercury switches (e.g., flame sensors, fire alarms, safety valves)	Non-mercury thermocouples, electronic ignition systems, fire alarms with a snap-action, or push-button switch
"Silent" light switches	New light switches don't contain mercury (get rid of old light switches safely)
Thermometers in freezers and refrigerators	Digital or other mercury-free thermometers
Thermostats	Air-controlled, reed switch, vapor-filled diaphragm, snap-switch, or programmable digital thermostats

Notes: _____

_____

***You don't have to use mercury in science class.**
You can use other materials in place of mercury during some experiments. If you must use mercury in class, try making the experiment smaller so that you use less mercury — and make sure there's a spill kit in the room.

Mercury Contact Sheet

★ Instructions

Complete this contact sheet and hang it in the main office near a phone.
Put a copy in every science lab and in your spill kit.

Call 911 in a serious emergency

For a mercury spill:

Poison Control Center: 1-800-222-1222

Local Public Health Department or Board of Health

Name: _____

Phone Number: _____

Address: _____

Closest Hospital

Name: _____

Phone Number: _____

Address: _____

State Environmental Agency

Name: _____

Phone Number: _____

Address: _____

State Public Health Department

Name: _____

Phone Number: _____

Address: _____

https://www.epa.gov/home/health-and-environmental-agencies-us-states-and-territories

National Response Center (NRC)
(Contact NRC if more mercury spilled than what's in a small thermometer.)
1-800-424-8802 http://www.nrc.uscg.mil/ContactUs.aspx

For a mercury removal and disposal:

Local (or State) Hazardous Waste Collection Agency

Name: _____

Phone Number: _____

Address: _____

Contact your local household hazardous waste facility to learn how to dispose of mercury.

Locate a facility at https://earth911.com/

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

CS-296111-C September 2018