

MERCURY DISPOSAL & CLEANUP PROCEDURES

What is MERCURY?

Mercury is a heavy, shiny, silvery-white poisonous metal that is liquid at room temperature. Mercury can be found in thermometers, barometers, thermostats, dental offices, blood-pressure devices, fluorescent light bulbs and even in some tennis shoes that light up. Liquid mercury evaporates at room temperature and gives off harmful, invisible, odorless vapors. Mercury is a fast-moving liquid and spreads quickly, so promptly containing and controlling both the liquid and its vapors are very important!

Why are Mercury fever thermometers an issue?

Mercury is a toxic substance that can harm both humans and wildlife. When products such as thermometers break, the mercury can evaporate, creating a risk of dangerous exposures to mercury vapor in indoor air. Moreover, mercury that volatilizes when products break in the home or in waste disposal system enters the environment and can be deposited in lakes and rivers, where it can be transformed into highly toxic methylmercury.

Does a broken fever thermometer really pose a health risk to the consumer?

Breaking one fever thermometer is unlikely to threaten the health of the consumer. Proper cleanup of spilled mercury and adequate ventilation can minimize the risk even further. **However**, if the consumer fails to clean up the mercury either because he or she is unaware that it has been broken or because it is difficult to gain access to the mercury (for instance because it has seeped through a carpet). Then the mercury will eventually volatilize and might reach dangerous levels in indoor air. The risks increase if the consumer attempts to clean up a mercury spill with a vacuum cleaner, or if the mercury is heated for some reason. The danger of significant mercury exposure is greatest in a small poorly ventilated room.

The medical literature contains some cases of serious illness and even death resulting from exposure to mercury from fever thermometers. Most, but not all, of these cases involve young children, who are known to be most susceptible to the effects of mercury.

It is also common for children to break fever thermometers in their mouths. Mercury that is swallowed in such cases poses low risk in comparison with the risk of breathing mercury vapor. The mercury passes through the body without being absorbed, but then it enters the waste water system and can reach the environment.

What should you do with a broken mercury thermometer?

Even small mercury spills must be cleaned up properly. Monmouth County's Health Department is providing the following recommendations for questions regarding the clean up of a broken thermometer. It is strongly recommended to follow steps 1-3 & 8-10 as you will see below.

Call the following for assistance:

- **Monmouth County Health Department (MCHD) (732-431-7456) or the Health Department in your particular area. The MCHD can assist in steps 4, 5 & 7.**
- **Poison Control Center (800-815-8855)**
- **Contact Your Primary Physician or The Nearest Hospital's Emergency Room.**

1. Keep uninvolved **people** and **pets** away until the spill is completely cleaned up.
2. Minimize tracking by removing shoes and clothing. Assume that the clothes of a child who played with mercury are contaminated. Place the clothes in a sealed plastic bag and put them outside in a safe place until the household trash can be picked up. Plastic can be placed on the floors to minimize tracking.
3. Increase ventilation in the room with outside air and close the room off from the rest of the house. If available, use fans for a minimum of one hour to help ventilate the room.

4. Put on disposable gloves, then pick up the mercury with an eyedropper, adhesive tape, or scoop up beads with a piece of heavy paper (e.g., playing cards, index cards, greeting cards).
5. Place the mercury, contaminated instruments (dropper/heavy paper) and any broken glass in a plastic zipper bag. Place this zipper bag into a second zipper bag and then a third zipper bag (triple bag), tightly sealing each bag. Place the bags in a wide-mouth, sealable plastic container. Remove the gloves and wash your hands with copious amounts of soap and water.
6. If mercury has been spilled on a valuable, porous item like a sofa, oriental rug, heirloom quilt, etc. it may be possible to clean the item as much as possible. Then remove it from the home and store it in a warm, ventilated, unoccupied place for several months to allow the mercury to vaporize. A contractor can then test the item with a mercury vapor meter to see if all the mercury has vaporized.
7. **Contaminated carpeting** should be removed, placed into plastic trash bags and discarded, starting with the spill room.
8. Call the Monmouth County Health Department's **Household Hazardous Waste Facility (HHW)** located in Tinton Falls, NJ. Phone **732-683-8686** for an appointment to properly dispose of any mercury.
9. If weather permits, leave windows open for approximately two days to assure the area is completely ventilated.
10. When cleaning up a mercury spill **ALWAYS** wear protective gloves, clothing if possible, eye protection and a form of respiration (filtered dust mask etc.) and after you have finished, remove all contaminated clothing and protective gear and follow step 2. Shower and dress in clean, uncontaminated clothing:
 - DO **NOT** use household cleaning products to clean the spill, particularly products that contain *ammonia* or *chlorine*. These chemicals will react violently with mercury, releasing a toxic gas.
 - DO **NOT** use a broom or paint brush to clean up mercury. It will break the mercury into smaller beads and spread them around.
 - DO **NOT** use an ordinary vacuum or shop vacuum. The vacuum will put mercury vapor into the air and increase the likelihood of human exposure. In the case that a vacuum has *already* been used, the vacuum will be contaminated and must be disposed of. Further use will send harmful, odorless vapors into the air.
 - **NEVER** pour any mercury down any drain. It may lodge in the plumbing and cause future problems. If discharged, it can cause pollution of the septic tank or sewage treatment plant.

What are the alternatives to mercury thermometers?

To eliminate the need for such cleanups in the future, the consumer can replace the broken mercury thermometer with a non-mercury alternative. Such as *digital electronic thermometers*, *glass alcohol thermometers* and *glass gallium-indium-tin (galinstan) thermometers*.

The consumer can choose the ear-canal thermometer. Flexible “forehead thermometers” as well.

What are the risks that an alternative thermometer could poison the user?

There is no known or anticipated risk.

MERCURY CLEAN-UP CONTRACTORS IN THE NEW JERSEY AREA*

Advanced Environmental Technical Services

2301 Pennsylvania Ave.
Deptford, NJ 08096
1-800-544-3128
(609) 589-5000

&

3 Sutton Pl.
Edison, NJ 08817
1-800-782-8805
(732) 248-1997

Clean Harbors

3100 Hedley St.
Philadelphia, PA 19137
(215) 289-3700

Clean Harbors

One Eden Ln.
Flanders, NJ 07836
1-800-782-8805
(201) 347-7111

Clean Venture

Route 322, R.D. 1, Box 202-B
Sweedsboro, NJ 08085
(908) 354-0210

and

201 South First St.
Elizabeth, NJ 07206
(908) 355-5800

Insurance Restoration Specialist

26 Kennedy Blvd.
East Brunswick, NJ 08816
1-800-634-0261

NOTE: the United States Federal Environmental Protection Agency (EPA) and Environment Canada have provided the information above.

Web-sites for more information: www.epa.gov/glnpo/bnsdocs/hg/thermfaq.html
www.state.nj.us/health/eoh/survweb/merchome.pdf

