
ENVIRONMENTAL Fact Sheet



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Cleaning Up Household Spills of Elemental Mercury

Household Sources

It is common for households to have glass mercury fever thermometers in their medicine cabinets. When safely encased in thermometers, *elemental mercury*, a silver colored metal known to be toxic to humans, is not a threat. However, when mishandled, broken glass thermometers can become an important source of mercury in the home. Some other potential sources of household mercury are blood pressure cuffs, cooking thermometers, fluorescent bulbs, compact fluorescent bulbs, mercury switches in children's light-up sneakers, and home heating system thermostats. Fortunately, technological improvements have led to the replacement of the mercury in many of the above devices with electrical components.

Exposure Concerns

It is especially important to protect young children and pregnant women from the toxic effects of mercury. The two primary routes of exposure that pose the greatest personal risk are direct contact with skin and breathing in mercury vapors. Fetuses can be exposed because mercury can pass through the placenta. However, cleaning up a small mercury spill (less than ½ teaspoon) should not become a "crisis" for the homeowner. A careful and prompt cleanup of the spill by the homeowner will minimize exposure to the home's occupants and to the environment.

Recommendations in the Event of a Spill

- **Do not** use a household vacuum cleaner to pick up the mercury and mercury contaminated items. The mercury has a greater chance to volatilize and become airborne by way of the vacuum's exhaust. The vacuum cleaner will become contaminated and disposal of the vacuum may be necessary.
- **Do not** wash mercury contaminated clothing, rugs or other fabrics in the washing machine. The washing machine and wastewater may become contaminated.
- **Do not** use a broom to sweep up the mercury. It can break the mercury into smaller beads, spreading them.
- **Do not** pour mercury down the drain. You may contaminate your plumbing, septic system or your local sewage treatment plant.
- **Do not** spread mercury that has gotten onto your shoes. If possible, clean the shoes. If not, wrap them in a plastic bag and dispose of them as indicated below.

Recommended Mercury Spill Cleanup Equipment

To handle a typical small mercury spill cleanup, homeowners should have the following items available:

- Latex (or rubber) gloves
- Two pieces of stiff cardboard (or poster board/stiff paper) or a rubber squeegee
- Paper towels
- Airtight, sealable plastic bags or puncture resistant airtight containers(s)
- Garbage bags
- Flashlight
- Eyedropper
- Tweezers
- Wide tape such as duct tape

Commercial mercury spill cleanup kits are normally available from medical supply and environmental safety supply companies, but may take time to obtain unless ordered prior to a spill. When using a spill cleanup kit, follow the directions that come with it. Powdered sulfur can also be used to coat mercury. The sulfur keeps the mercury from volatilizing. Powdered sulfur may be purchased at garden supply houses or pharmacies. Please note that powdered sulfur may stain fabrics a dark color.

Typical Cleanup Procedure for Small Mercury Spills on Smooth, Hard Surfaces

1. Determine the limits of the mercury contaminated area(s). Avoid walking through a mercury contaminated area(s) so as to avoid contaminating other areas of your home. If you are using powdered sulfur, sprinkle it over the spill area at this time. Have all your supplies on hand and ready before you proceed to Step 2.
2. Use latex gloves while cleaning up the mercury. Use care not to touch uncontaminated items with the gloves once the gloves have come into contact with the mercury.
3. Pick up any broken glass, and place the pieces in the puncture resistant container. Tweezers may be required to safely pick up the broken glass. ***Label all containers with their contents.***
4. Use the cardboard or squeegee to gather the pieces of glass and beads of mercury into a smaller localized area.
5. Use the flashlight to help find tiny beads of mercury and glass left in the spill area. Light will reflect off the mercury beads and glass helping you to locate them. The mercury beads will reflect best when the flashlight beam is directed at an angle. Refer to the previous step, if necessary.
6. The eye dropper is used to draw up the mercury beads. Hold the eye dropper almost parallel with the floor. Pay close attention to any cracks in the area of the spill. The mercury drawn up into the dropper can then be gently squeezed onto a damp paper towel or directly into the container. If an eye dropper is not available, consider using a sheet of paper, and gently move the mercury onto the paper.
7. The tape can be used to pick up any remaining small pieces of glass and tiny beads of mercury still located on the spill surface. (Prepare strips of the tape ahead of time in order to avoid contaminating the roll.) Repeat this step as often as necessary. Place any contaminated tape into the container or sealable plastic bag.
8. After cleaning up the spill area, place the contaminated cleanup equipment into the container or sealable plastic bag.

9. Upon completion of the above, carefully remove your gloves by turning them inside out. Dispose of the gloves in the container or sealable plastic bag.
10. Dispose of any contaminated clothes, fabric or footwear by placing them in a plastic bag for disposal. Seal all containers at this time. Store the containers in a safe place, away from children while awaiting disposal. Take a shower or bath.
11. Let the area air dry, and, when possible, thoroughly **vent the spill area to the outside air**. A fan placed in a window or doorway may be used to increase the air flow out of the house. This may need to be repeated over several days to decrease the concentration of mercury which has become airborne.

Typical Cleanup Procedure for Small Mercury Spills on Rugs and Other Fabrics

1. If the mercury is spilled on a wall to wall rug, use a sharp knife to cut out the mercury contaminated section of carpet from the uncontaminated carpet.
2. For small rugs and other pieces of fabric, fold or roll the surface so that the mercury contaminated area is trapped inside of it.
3. Place the mercury contaminated material into plastic garbage bags.
4. Refer to the steps outlined in “Typical Cleanup Procedure for Small Mercury Spills on Smooth, Hard Surfaces” starting at Step 8, or earlier as necessary.

Disposal Options

State law (RSA 149-M:58) prohibits the disposal of mercury-containing products or wastes in household trash or at solid waste landfills, transfer stations or incinerators. These are the options for proper disposal of mercury-contaminated items:

- Bring the mercury contaminated wastes to a household hazardous waste collection day. Contact your local officials to find out when the next collection will take place, or call the DES Household Hazardous Waste Coordinator at 271-2047. *This is DES's preferred disposal option.*
- Call a hazardous waste disposal firm to handle the disposal of the mercury wastes. This is a safe, but more expensive, way to dispose of the waste.

Health Risks Associated with Mercury Spills

The health risks generally associated with small spills involving thermometers that are promptly and adequately cleaned up are not great. However, any homeowner who has health risk questions should contact their physician.

Disposal Questions

This fact sheet provides only recommendations for homeowners to follow; following these steps does not guarantee that all of the mercury will be removed from a spill area. Any other spill cleanup or disposal questions not answered in this fact sheet can be addressed through DES's Spill Response and Complaint Investigation Section at (603) 271-3899.