



# Broken Thermometer Cleanup Guidance for Households

Mercury spills can be very hazardous and should be cleaned up as soon as possible. Mercury will vaporize slowly over time and can expose your family to toxic fumes for a very long time if not thoroughly cleaned up.

## Applies to all Mercury Spills

- If a mercury fever thermometer gets broken in your home, keep your children, pets and other persons out of the room where the spill occurred.
- The affected room should be isolated from other rooms in the house by closing connecting doors.
- Turn off the heat and any circulation systems in the house and open all windows in the affected room to ventilate it to the outdoors.
- **Never** use a household vacuum cleaner (even one with a HEPA filter), broom or any type of towel to try to wipe or blot up the spill since it will only scatter and spread the mercury.
- **Never** 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.
- Remove all jewelry before beginning cleanup as the mercury will bind to gold and silver.
- Prior to cleaning up the spill, put on old clothes or disposable coveralls, old shoes or disposable booties, and disposable rubber, latex or nitrile gloves. These items may need to be disposed of after you have completed cleanup of the spill. Place clean clothes, shoes and a trash bag just outside the room where the mercury spill occurred.
- After cleaning up the spill, carefully remove your gloves by grasping them at the wrist and pulling them off inside-out. Place the gloves in the trash bag for disposal.
- If you were wearing disposable coveralls and booties, carefully remove these items and place them in the trash bag for disposal.
- Any clothing or shoes that came in direct contact with the mercury should be placed in the trash bag. Clothing and shoes that did not come into direct contact with the mercury should be placed outdoors to air out. Once thoroughly aired out, they can be laundered as normal.
- The tools used to clean up the spill (index cards, tape, eyedropper) should also be placed in the trash bag and the trash bag double wrapped in another trash bag.

## Spills on Hard Surfaces

If the spill occurred on a hard surface, such as a counter or non-carpeted floor, the mercury probably shattered into tiny beads and spread in many directions.

- Hold a flashlight at an angle to the surface to determine the extent of the spill. The beads will reflect light from the flashlight. Check a large area around the spill and pay special attention to surface cracks, crevices and other hard to reach areas.
- While minimizing contact with the spill area, pick up any large pieces of glass from the broken thermometer and place them on a paper towel. Carefully fold the paper towel around the broken glass and put it in a zip-top bag.
- Use index cards or other stiff paper to gather the mercury beads and smaller glass fragments together. Start at the outer edges of the spill and push all of the material toward the center of the spill area. Scoop the mercury and glass fragments up using the index cards like a broom and dustpan. Place the recovered mercury into a second zip-top bag and put the index cards into the first zip-top bag.
- An eyedropper can be used to pick up any remaining mercury beads that are visible. Use your flashlight to locate remaining mercury beads and tilt the eyedropper at an angle to the surface to collect the mercury. Once all of the visible beads have been collected, put the recovered mercury into the second zip-top bag and the empty eyedropper in the first zip-top bag.
- To pick up very tiny beads of mercury, wrap a piece of masking tape or scotch tape around your finger, sticky side out, and gently dab at the contaminated area. Place the tape in the first zip-top bag when finished.
- If possible, sprinkle the contaminated area with sulfur or zinc powder. Use enough to cover the area with a fine layer, but don't over-apply. Moisten the powder with water after you sprinkle it on the contaminated area. If you use zinc powder, you'll have to moisten the powder prior to applying it also. Rub the powder into any surface cracks and crevices with a damp paper towel. Use index cards to pick up the powder-mercury mixture and put all material into the first zip-top bag. Then rub the area with additional damp paper towels until all residues are gone. (Sulfur and zinc powders bind with mercury to form a safer amalgam and help ensure that you get as much mercury as possible. These powders can be obtained at many garden centers, pharmacies, agriculture supply stores and safety equipment suppliers. You may also use a commercially available mercury spill powder containing sodium thiosulfate and finely powdered EDTA (ethylenediaminetetraacetic acid). If you use a commercial powder, follow the instructions provided on the container.)
- You may turn the heat or circulation systems back on but keep the door to this room closed and the window open for at least a few hours, 24 - 48 hours would be best.

## Spills on Carpeted Surfaces

If the spill occurred on a carpeted surface, the contaminated section of carpet should be carefully removed and disposed of since it is almost impossible to effectively pick up mercury spilled onto porous surfaces.

- While minimizing contact with the spill area, pick up any large pieces of glass from the broken thermometer and place them on a paper towel. Carefully fold the paper towel around the broken glass and put it in a zip-top bag.
- Hold a flashlight at an angle to the surface to try to determine the extent of the spill. The beads will reflect light from the flashlight. Check a large area around the spill.
- Carefully cut out the contaminated section of carpet using a utility knife. Take care not to tilt or shake the carpet any more than necessary to minimize the spread of mercury. Gently place the contaminated carpet into a trash bag.
- Use your flashlight to check for any remaining mercury beads in the adjacent carpet and the bare sub-floor. If necessary, clean this area following the instructions above.
- Once you no longer see visible mercury on the carpet, you may turn the heat or circulation systems back on but keep the door to this room closed and the window open for at least a few hours, 24 - 48 hours would be best.

## Spills Down a Drain

If the spill occurred near an open drain, it will likely get caught in the sink trap. The slow dissolution of the mercury in a sink trap can release mercury into the air and wastewater system for many years.

- Working over a tray or bucket, carefully remove the sink trap and pour the contents into the tray or bucket.
- After allowing it to settle, gently remove as much water as possible without disturbing the mercury. Use an eyedropper to recover all of the mercury. Place the recovered mercury into a zip-top bag and the empty eyedropper into a second zip-top bag.
- Replace the sink trap and dispose of the remaining water.
- You may turn the heat or circulation systems back on but keep the door to this room closed and the window open for at least a few hours, 24 - 48 hours would be best.

## Disposal

The preferred method of disposal for unbroken mercury thermometers and the mercury from broken thermometers is to take them to a local household hazardous waste collection facility or thermometer collection site if one is available in your area.

In the above instructions, you were asked to separate as much of the liquid mercury as possible from the rest of the cleanup tools and contaminated material. If a collection program is available in your area, the zip-top bag of recovered mercury should be taken to the collection site. The rest of the cleanup tools and mercury-contaminated material should be double-bagged in trash bags and can be disposed of in your regular household trash.

If a collection program is not available in your area, you may put the zip-top bag of mercury in with the cleanup materials and double-bag it all for disposal in your regular household trash.

Your local public health agency may be aware of other recycling or disposal options in your area.

*For information on household hazardous waste collection programs that accept mercury and household thermometer collection sites, visit the Mercury-free Colorado website at [www.cdphe.state.co.us/hm/mercury](http://www.cdphe.state.co.us/hm/mercury)*



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