

Cleaning up Small Mercury Spills

Introduction

Humans can be exposed to mercury through a variety of household items, such as major and minor appliances (i.e., refrigerators and irons), thermometers, thermostats, fluorescent light bulbs, clothing (i.e., shoes that light up), cosmetics (as a preservative), and some toys when they are mishandled, broken, or disposed of improperly.

Mercury affects the brain and central nervous system with symptoms ranging from muscle tremors, irritability, and immune system dysfunction to vision, speech, and hearing impairment, and respiratory problems. Death can occur if a person is exposed to high concentrations of mercury. Children and fetuses are at the highest risk because their nervous systems are still developing.

Spilled mercury forms droplets that can accumulate in the tiniest places. These droplets produce vapors that we cannot see or smell but are very toxic. Even small spills should be taken seriously and properly cleaned up using the following guidelines.

Equipment needed

- duct tape
- squeegee
- plastic dust pan
- plastic trash bag
- zipper shut plastic bags
- flashlight
- eye dropper
- large tray
- plastic wrap
- index cards, playing cards, or other disposable heavy paper
- sulfur powder (available at select pharmacies, see "Retailers" for a listing)
- zinc or copper flakes (available at lawn and garden stores)

Things you should NEVER do with a mercury spill

NEVER vacuum up a mercury spill.

Using a vacuum can spread contamination throughout your home, increasing the likelihood of exposing your family to mercury vapors.

NEVER use a broom to clean up mercury.

Using a broom will cause the mercury to break up into smaller droplets and spread them.

NEVER pour mercury down a drain.

Mercury can sit in the trap of the plumbing fixture and slowly release vapors into your home. It can also cause pollution of the septic tank or sewage treatment plant.

NEVER wash mercury-contaminated clothing in your washing machine.

NEVER walk around in shoes that may have been contaminated with mercury.

For spills less than or equal to the amount in a thermometer

- **Confine spill** and prevent spreading. Prevent mercury from entering drains and cracks.
- **Isolate room** – close doors to other indoor areas. Keep children and pets away from spill area to prevent spread of contamination.
- **Ventilate room** - turn off heat, air conditioning, or other systems that circulate air from the spill area to other rooms in the house. High temperatures will cause more mercury vapor to be released. Open window and keep air flowing through room.
- **Remove all jewelry** – mercury adheres to other metals such as gold and silver.
- **Put on rubber gloves** and keep hands away from your face.
- **Pick up and place any broken glass in a plastic bag.** Use duct tape or wide masking tape to pick up any remaining glass and mercury droplets. Place in plastic bag.
- **On a hard surface**, work from the outside of the spill area toward the center. Push small mercury beads together with a card, stiff paper, or squeegee to form larger droplets. Push droplets into a plastic dust pan or use an eye dropper to pick up. Place in a leak-tight plastic bag.
- **On carpet**, cut out the section impacted by the spill and place in a plastic bag.
- **In a drain**, remove sink trap and pour contents into plastic bag.
- **Use a flashlight to look for any additional mercury beads.** The light will reflect off the shiny mercury beads and make it easier to see them. Use an eyedropper to draw up the mercury beads and carefully squeeze into a sealable plastic bag.
- **Sprinkle sulfur powder** on the spill area after clean up; a color change from yellow to brown indicates that mercury is still present and more cleanup is needed. Please note that sulfur can stain fabrics.
- **Sprinkle zinc flakes or copper flakes** to bring together small amounts of mercury you may have missed.
- **Continue to air out the room** with outside air for at least 24 hours if weather permits. Continue to keep children and pets out of the spill area.

Retailers

The following retailers offer specialty items that are not widely available in the Treasure Valley.

Sulfur Powder

Customedica Pharmacy
700 E. State Street
Eagle, Idaho 208-939-8008

Orville Jackson Drug
Company
50 E. State Street
Eagle, Idaho 208-939-6511

Hills ValuRite Pharmacy
1221 Broadway
Boise, Idaho 208-344-8428

NOTE: These guidelines are based on good industrial hygiene practices. No assessment of the effectiveness of the clean-up methods described has been made.

If the spill impacted a valuable, porous item like a sofa, oriental rug, or heirloom quilt, 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. The item would have to be tested by a consulting firm with a mercury vapor meter to determine if the mercury has completely vaporized.

Spills on cracked or porous surfaces

- **Isolate room** – close doors to other indoor areas. Keep children and pets away from spill area to prevent spread of contamination.
- **Ventilate room** - turn off heat, air conditioning, or other systems that circulate air from the spill area to other rooms in the house. High temperatures will cause more mercury vapor to be released. Open window and keep air flowing through room.
- **CALL 911 and request Fire Department assistance.**

Spills larger than the amount in a thermometer

- **Confine spill** and prevent spreading. Prevent mercury from entering drains and cracks.
- **Isolate room** – close doors to other indoor areas. Keep children and pets away from spill area to prevent spread of contamination.
- **Ventilate room** - turn off heat, air conditioning, or other systems that circulate air from the spill area to other rooms in the house. High temperatures will cause more mercury vapor to be released. Open window and keep air flowing through room.
- **CALL 911 and request Fire Department assistance.**

Proper Disposal

WARNING: Anything that comes in contact with mercury should be disposed of properly! This includes any carpeting involved in the mercury spill.

Wash your hands thoroughly with soap and warm water. Shower or bathe if other parts of your body may have contacted mercury.

Links

You can find additional information at the following websites

<http://www.p2pays.org/mercury/house.asp>

<http://www.epa.gov/epaoswer/hazwaste/mercury/spills.htm>

<http://www.nih.gov/od/ors/ds/nomercury/helpers.htm>

If mercury is spilled in a regularly used area, you should consult your family doctor or local health department regarding mercury testing for your family.

Take all elemental mercury, mercury devices, and mercury-contaminated items from spills to any Household Hazardous Materials Collection Site. For the site nearest you, call Boise Public Works Department at 384-3901

REMEMBER: Get an experienced professional to clean up large spills