



Guidelines for the Safe Clean-up of Mercury Spilled in the Home

Division of Environmental and Occupational Health

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1. Sources of Mercury in the Home

Mercury metal is a dense silver-gray liquid which may be found in the home in such items as:

- * some thermometers, thermostats, barometers, electrical switches,
- * “silver” dental fillings and some medical equipment,
- * some light bulbs, including fluorescent, high intensity, mercury vapor, high-pressure sodium, and metal halides,
- * some clock pendulums,
- * some athletic shoes, toys, and cards that light up or make noise,
- * mercury metal sold in gel capsules in botanicas for use in folk magic, sometimes under the Spanish name “azogue”,
- * mercury metal brought home from work as a novelty.

2. Importance of Safe Clean-up

When liquid mercury is spilled, it forms droplets that can accumulate in the tiniest of spaces and in small pools and droplets and then emit vapors into the air. Mercury vapor in the air is odorless, colorless, and very toxic. Whole families have been poisoned from mercury spills in the home which have not been cleaned up or were cleaned up improperly, especially by using an ordinary vacuum cleaner. Children are at highest risk. Pets are at risk, also. **The small amount of mercury in a fever thermometer or fluorescent bulb is not likely to cause a problem *but should still be cleaned up.***

For additional information about mercury, including health effects, see the NJDHSS publication:

■ *Your Mercury Exposure*

3. What NEVER To Do About A Mercury Spill

Never use an ordinary vacuum cleaner to clean up mercury. The vacuum will put mercury vapor into the air and increase exposure. The vacuum cleaner will be contaminated and have to be thrown away.

Never use a broom to clean up mercury. It will break the mercury into smaller droplets and spread them.

Never pour mercury down a drain. It may lodge in the plumbing and cause future problems during plumbing repairs. If discharged, it can cause pollution of the septic tank or sewage treatment plant.

Never wash mercury-contaminated items in a washing machine. Mercury may contaminate the machine and/or pollute sewage.

Never walk around if your shoes might be contaminated with mercury. Contaminated clothing can also spread mercury around.

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

4. Isolate the Spill and Ventilate

Keep all people and pets from the area of the spill.

Close all doors between the spill and the rest of the house.

To minimize vaporization, turn down any heaters, turn-up air conditioners, and turn off fans in the area of the spill. Fans that vent air directly outdoors are all right to use.

Open windows to the outdoors.

5. Remove Any Mercury From Your Shoes, Clothing, or Skin

If mercury comes in contact with your skin, shoes, or clothing during the spill, stay still and have someone bring you a plastic trash bag and wet paper towels. Wipe off visible mercury beads with the paper towels and put into the trash bag. Remove your shoes and clothing and place in the trash bag. Seal the bag with tape and discard in the regular household trash. Shower well.

6. Change Into Old Shoes and Clothing

Before beginning to clean up a mercury spill, put on old clothing and shoes that can be thrown away if they get contaminated. Remove all jewelry because the mercury may combine with the metal in it. Put on gloves, preferably rubber ones, to keep the mercury from getting under your fingernails.

7. Look Around and Decide If You Can Clean Up By Yourself

You can probably clean up by yourself if:

- * the spill is a small amount, less than one or two tablespoons or ounces.
- * the spill is limited to a small area,
- * the mercury has not been spread around,
- * the spill is on a hard surface such as tile, linoleum, or wood,
- * the spill is on a small porous item which can be thrown away, such as an area rug, blanket, clothing, etc.

If the spill involves a large area, has been spread around, is in cracks and crevices or other difficult to clean places, or is on a non-disposable porous item such as wall to wall carpeting or upholstery, we recommend that you consider hiring a contractor skilled in mercury clean-up. However, such contractors are expensive. Check with your homeowners insurance to see if clean-up costs are covered. *See the last page for a list of mercury clean-up contractors in the New Jersey area.*

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. It can then be tested by a clean-up contractor with a mercury vapor meter to see if all the mercury has vaporized.

8. Assemble Your Clean-Up Supplies

Everything, even the flashlight, will need to be thrown away if it gets contaminated with mercury.

- * gloves, preferably rubber
- * large trash bags (4)
- * small plastic bags, preferably the types that zip shut (4)
- * paper towels (or napkins, tissues, or toilet paper)
- * tape, preferably wide duct, packing, or masking tape
- * two pieces of stiff paper, cardboard or a rubber squeegee
- * dust pan
- * large tray or box
- * a wide mouth container, preferably with a tight-fitting lid
- * a flashlight
- * an eyedropper (optional)

9. Perform the Clean Up

A. If the Spill is on Small Disposable Porous Items Such As Rug or Clothing

- i. If necessary, use a sharp knife to cut the contaminated areas away from the uncontaminated area.
- ii. Carefully fold the contaminated item so that the mercury is trapped inside it. Place it in a large trash bag and seal with tape.
- iii. Throw away the knife, your gloves and, if they got contaminated, your clothes and shoes by placing in another large trash bag and sealing with tape. Do not touch the fingertips of the gloves or anything that may have contacted the mercury.

B. If the Spill is on Hard Surfaces

- i. Carefully pick up pieces of broken glass, if any. Working over the tray or box, place the pieces on a paper towel, fold, place in plastic bag, seal with tape or zipper.
- ii. Gather the beads of mercury using the stiff paper, cardboard, or squeegee. Use the flashlight to look all around on the floor, into crevices, etc. for more mercury. The flashlight will reflect off the shiny silver mercury beads and make it easier to see them.
- iii. Pick up the droplets of mercury by pushing them into a dust pan or onto a stiff sheet of paper or cardboard. Or suck the droplets into an eye dropper.
- iv. **Very slowly and carefully**, working over the tray or box, pour the mercury into the wide mouth container. Put on the lid, if available, and tape the lid shut.
- v. Place the wide mouth container, dust pan, eyedropper, and/or the cardboard inside a plastic bag, seal, then place inside a second plastic bag and seal again.
- vi. Use the sticky side of the tape to pick up any glass and mercury beads that you couldn't pick up with the cardboard. Again use the flashlight to look around. Double check everywhere. Working in the tray or box, place the tape on a paper towel, fold, place in plastic bag, and seal with tape or zipper.
- vii. Throw away everything you think may be contaminated with mercury, including the tray or box, the flashlight, the roll of tape, your clothes, shoes, and gloves by placing in another large trash bag and seal with tape. Do not touch glove fingertips or anything else that may have contacted the mercury.
- viii. Wash your hands. Take a shower or sponge bath if you feel that other parts of your body may have contacted mercury.
- ix. Dispose of all of the bags with the regular household trash.
- x. Continue to air out the room with outside air for a minimum of two days, preferably longer. Some homes heavily contaminated with a large mercury spill have required ventilation for three months after clean-up.
- xi. For extra safety, purchase powdered sulfur, available at many garden supply stores, to sprinkle around the spill area. This will help to suppress the vaporization of any remaining mercury.

10. Do Tests To Make Sure No Mercury Exposure Is Occurring

If the mercury was spilled in an area which is used regularly, you should discuss with your family doctor whether **urine mercury tests** should be conducted for the people who use the area the most. Results should not be elevated above 20 micrograms per liter of urine (20ug/L).

Mercury vapor badges are sold in packages of five and can be used to measure how much mercury is in the air. They can either be worn by the people who use the area or hung at the breathing level of five feet for adults and two feet for children. The badges are exposed to the air for eight hours then mailed away for analysis.

Results should not be elevated above the detection limit of 0.005 milligrams per cubic meter of air (0.005 mg/m³). Contact one of the following companies for information about purchasing badges; Advanced Chemical Sensors Co., 407-338-3116; 3M Occ. H&S Products, 1-800-243-4630; K&M Gillian Envir., 804-431-2260; Lab Safety Supply, 1-800-356-0783; SKC, Inc., 1-800-SKC-84PA.

If either urine levels or air levels of mercury are elevated, this indicates that mercury is still present and further clean-up is needed.

MERCURY CLEAN-UP CONTRACTORS IN THE NEW JERSEY AREA*

Absolute Environmental Services
3705 Trindle Road
Camp Hill, PA 17011
717-730-8400

Acton Associates
P.O. Box 726
101 Thompson Street
Pittstown, PA 18640
717-654-0612

Advanced Environmental Technical Services
3100 Hedley Street
Philadelphia, PA 19137
215-289-3700
and
One Eden Lane
Flanders, NJ 07836
201-347-7111
1-800-426-2382

Clean Harbors
2301 Pennsylvania Avenue
Deptford, NJ 08096
1-800-544-3128
609-589-5000
and
3 Sutton Place
Edison, NJ 08817
1-800-782-8805
732-248-1997

Guardian Environmental Services
1280 Porter Road
Bear, DE 19701-1347
302-834-1000
1-800-345-4395

Inland Pollution Services
935--939 Fairmont Avenue
Elizabeth, NJ 07201
908-353-5544

Recon Environmental
5 Johnson Drive
P.O. Box 130
Raritan, NJ 08869
908-526-1000

United States Environmental Services
16 W. Indiana Lane
Morristown, PA 19403
610-539-3233

Clean Venture
Route 322, R.D. 1, Box 202-B
Swedesboro, NJ 08085
609-467-4488
and
201 South First Street
Elizabeth, NJ 07206
908-355-5800

***Disclaimer:** No assessment of quality of services has been made. The New Jersey Department of Health and Senior Services neither recommends nor endorses these or any other providers of mercury clean-up services.