Mercury in your home

Spilled mercury, even small quantities, should be cleaned up quickly and properly so that people don't come in contact with it or breathe its vapors. Some ordinary cleanup measures such as sweeping and vacuuming can actually increase the risks.

Mercury vapor is odorless, colorless, and extremely toxic. Even though liquid mercury evaporates slowly, a significant amount of mercury vapor can build up indoors after spillage. The vapor will form faster if exposed to heat.

Elemental mercury has been used in a wide variety of equipment and consumer products, such as thermometers, blood pressure cuffs, and certain types of light bulbs. Mercury compounds have been used in products such as fungicides, antiseptics, and disinfectants. Some traditional medicines and skin lighteners can contain high levels of mercury. Mercury is now banned for use in most consumer products, but mercury-containing light bulbs are still available.

Get rid of your mercury-containing items

The best way to protect your family from mercury is to remove mercury-containing products from your home. They must be treated as household hazardous waste. It is unlawful to place these items in ordinary household garbage and they should never be put in recycling bins. It's also illegal to sell mercury or mercury-containing devices. Mercury-containing household products can include:

- Fever and cooking thermometers — those with blue or red liquid do not contain mercury
- Some skin-lightening creams — If the label lists “calomel,” “mercuric,” “mercurous,” or “mercurio" as ingredients, or no ingredients are listed, you should get rid of it.
- Barometers
- Blood pressure cuffs
- Thermostats
- All types of fluorescent lights, including compact fluorescents, high-pressure sodium, and metal halide lights.
- Learn more: Mercury in consumer products (EPA)

Carefully collect all the mercury-containing items in your house and put them in a plastic bag or plastic screw-top container. Put the bag or container in a second bag, seal it with tape, and label “Mercury waste — do not open.” Carefully transport the material to your county's household hazardous waste site.

Be careful as you collect, package, and transport mercury products to your collection site! It's not unusual for thermometers or other items to break during handling or in transit. Use packing material to pad breakable items. Haul items in your trunk or truck bed and secure the containers to avoid shifting while you drive.

Reduce mercury in the environment

Avoid buying products containing mercury and help reduce its use:

- Purchase LED lamps instead of fluorescent lamps when possible.
- Don't use skin lightening creams that contain mercury.
    - Skin lightening products found to contain mercury (MDH)
- Conserve energy and buy green power, to help limit the need for utilities to burn coal. Coal contains trace amounts of mercury which is released into the atmosphere when it's burned. About half the mercury in Minnesota comes from coal-burning power plants.

Immediately after a mercury spill

Take these four steps as soon as you discover that mercury has been spilled in your home.

1. Isolate the spill and ventilate the area

- Keep all people and pets away from the spill area.
- Immediately open windows in the room where the spill occurred.
- Close all doors between the room with the spill and the rest of the house. Use fans to blow mercury-contaminated air outside.
- Close or cover all heat vents and cold air returns. Turn off fans that don't vent outside.
- Turn off any space heaters and central heating to cool the room and keep mercury from circulating inside the house. Leave air conditioner vents open if you are running your AC.
- Do not walk around the house in shoes or clothes contaminated with mercury.

2. Remove mercury from shoes, clothing, and skin.

- If mercury has touched your skin, shoes, or clothing, stay still and have someone bring you a plastic trash bag and wet paper towels.
- Wipe off or collect visible beads of mercury with wet paper towels and put them a trash bag.

- Double bag clothing and shoes contaminated with visible mercury. Seal the bag and label it “Mercury waste — do not open.”
- Shower well.

3. Call the Poison Control Center at 800-222-1222

If someone has inhaled mercury vapors, call the Poison Control Center for advice. (If you suspect a pet has been exposed to mercury, call your veterinarian.)

4. Call the Minnesota Duty Officer (651-649-5451, 800-422-079), day or night

If you are concerned that you can’t clean up the spill yourself using the directions below, contact the Duty Officer to connect with MPCA emergency response staff, who will guide you through the cleanup or determine if additional cleanup is warranted.

Health Effects

Breathing: The greatest danger from elemental mercury is through breathing in mercury vapor. When elemental mercury is spilled or exposed to the air, it vaporizes slowly. Mercury vapor breathed into a person’s lungs quickly enters blood and is carried to the brain. If a person is exposed for a long enough time period, even a small amount in the air can affect his or her health.

Eating: People are exposed to methylmercury most often through eating fish and seafood. If someone eats fish with higher methylmercury on a regular basis, mercury concentrations can be high enough to pose a risk to their health. If someone swallows the elemental form of mercury, very little is absorbed through the stomach and intestines into the bloodstream.

Skin contact: Exposure to mercury through skin contact can occur when using products such as skin-lightening creams that are made with mercury compounds. However, if someone comes in contact with elemental mercury, very little is absorbed through skin.

Health effects from exposure

Exposure to mercury through the pathways above can damage the central nervous system, kidneys, and liver. Factors that determine how mercury affects a person's health include:

- how much mercury gets into the body,
- how often they are exposed to mercury,
- what other chemicals they are also exposed to, and
- their overall health.

The effects of mercury exposure can range from none to severe. High-level, short-term exposure can cause skin rashes, diarrhea, and respiratory distress. Low-level, long-term exposure can cause muscle tremors, irritability, personality changes, or rashes. Nerve damage from mercury may start with a loss of sensitivity in hands and feet, difficulty in walking, or slurred speech. In rare cases, it has caused paralysis and even death.

Young children (under 15 years old) and fetuses are more sensitive to mercury. Too much mercury can cause lasting problems with understanding and learning. For that reason, pregnant women and women of child-bearing age should learn ways to avoid mercury exposure.

Cleaning up home mercury spills

Mercury is a dangerous toxin and in-home spills should be handled quickly and carefully to protect people and pets from harm.

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- Close or cover all heat vents and cold air returns. Turn off fans that don't vent outside.
- Turn off any space heaters and central heating to cool the room and keep mercury from circulating inside the house. Leave air conditioner vents open if you are running your AC.
- Do not walk around the house in shoes or clothes contaminated with mercury.

2. Remove mercury from shoes, clothing, and skin

- If mercury has touched your skin, shoes, or clothing, stay still and have someone bring you a plastic trash bag and wet paper towels.
- Wipe off or collect visible beads of mercury with wet paper towels and put them in a trash bag.
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4. Call the Minnesota Duty Officer (651-649-5451, 800-422-079), day or night

If you are concerned that you can't clean up the spill yourself using the directions below, contact the Duty Officer to connect with MPCA emergency response staff, who will guide you through the cleanup, or determine if additional cleanup is warranted.

What NOT to do after a spill

- **Never** allow people who are wearing mercury contaminated shoes or clothing to walk around the house.
- **Never** use an ordinary vacuum cleaner or a shop vacuum to clean up mercury. The vacuum cleaner can heat up mercury and cause it to vaporize. In addition, the vacuum cleaner will be contaminated and may continue to release mercury vapor for a long time. If you've already vacuumed up spilled mercury, bag your machine and dispose of it at a household hazardous waste (HHW) facility. You may ask the MPCA emergency response staff to assess the vacuum; call the Minnesota Duty Officer and request to speak to MPCA emergency response.
- **Never** use a broom to clean up mercury; it will break the mercury into smaller drops and spread it around more. The small droplets evaporate faster and are more difficult to clean up.
- **Never** pour mercury down a drain. The mercury can become lodged in pipes and release vapor into homes. It can pollute septic tanks or wastewater treatment plants.
- **Never** launder mercury-contaminated clothing in a washing machine; it can contaminate the washer.

Can you clean up the spill yourself?

You should be able to safely clean up a mercury spill yourself *if it is a small amount*, such as from a thermometer or a few broken fluorescent light bulbs, and is:

- In a small area and has been contained
- On a smooth, hard, surface, such as tile, linoleum or wood
- On a small, porous item, such as an area rug, that can be thrown away

Please read the spill cleanup instruction below thoroughly before you begin.

1. Protect yourself

- Change into old clothing and shoes that you can dispose of if they become contaminated.
- Remove all jewelry because mercury strongly adheres to metal, especially gold.

2. Assemble your cleanup supplies

Everything used to clean up a spill is considered contaminated with mercury and must be disposed of at a HHW facility.

- Gloves, preferably latex, nitrile, or rubber
- Containers: plastic bags to fit the items to be disposed of and one or more non-glass wide-mouth containers, such as a plastic peanut butter jar or butter tub
- Disposable tray or box
- Index cards or stiff paper, cardboard, paper towels or napkins, single-edge razor blades, eye dropper or a rubber squeegee, dust pan
- Duct tape, packing tape, or masking tape
- Flashlight

3. Clean up the mercury

Choose from these methods, based on where the spill occurred.

On hard surfaces (countertops, linoleum, tile, or wood)

- **Collect any glass:** With gloves on, collect any broken glass using stiff paper and place it on a paper towel in your box or tray. Fold the paper towel, enclosing the glass and any mercury, and put it in a wide-mouth container.

- **Collect beads of mercury:** Push beads of mercury together using two razor blades, stiff paper, or cardboard. Avoid pushing mercury over cracks in surfaces; it will slip into them. Use the flashlight to search for glass and mercury – the light will reflect off both. Push the beads of mercury into a dustpan or onto paper/cardboard. Working over the tray or box, carefully transfer the beads of mercury into the wide-mouth container.
- **Collect remaining mercury:** Any remaining mercury can be picked up with cotton balls, moist paper towels, or an eyedropper. Use a flashlight to find mercury in crevices. Working over the tray or box, transfer the cotton balls/paper towels/etc. into the wide-mouth container. Seal the lid with tape and write "Mercury waste — do not open" on the container.

On carpet

- **Cut the contaminated area out of the carpet and pad:** Fold the contaminated piece so mercury is trapped inside. Place it in a plastic bag.
- **Collect remaining mercury:** Mercury can work itself down through carpets and pads. Pick up any remaining mercury with cotton balls, moist paper towels, or an eyedropper. Use a flashlight to find mercury in crevices.
- **If you're unwilling to cut the carpet:** Use cotton balls, moist paper towels, or an eyedropper to pick up the spilled mercury. Request that the MPCA assess how safe it is to leave the carpet in place; call the Minnesota Duty Officer and request to speak to MPCA emergency response.
- **Contain the mercury waste:** Place all items used for cleanup in the plastic bag, including the tool used to cut the carpet. Place the bag in a second plastic bag and seal it with tape, and write "Mercury waste – do not open" on it.

On porous items (e.g., rugs or clothing)

- **Cut out the contaminated area:** Fold the contaminated piece so mercury is trapped inside.
- **Contain the mercury waste:** Place contaminated items and all things used for cleanup in a plastic bag. Place the bag in a second plastic bag and seal it with tape, and write "Mercury waste – do not open" on it.

On large or valuable porous items (e.g., sofa or heirloom quilt)

- **Clean up the mercury:** Use cotton balls, moist paper towels, or an eyedropper to pick up the spilled mercury.
- **Contain the mercury waste:** Place contaminated items and all things used for cleanup in a plastic bag. Place the bag in a second plastic bag and seal it with tape, and write "Mercury waste – do not open" on it.
- **Store the item elsewhere**: Remove the item from the home and store it in an unoccupied, warm, ventilated place for several months to allow the mercury to vaporize. Do not put the item in an attached garage. You may request that the MPCA assess when it is safe to bring the item back in your house.

For broken compact fluorescent bulbs

Broken compact fluorescent lamps don't usually pose health risks but must be cleaned up properly to limit any mercury exposure.

- **Pick up broken pieces and vacuum:** Open windows to dilute any mercury vapor in the room. Use stiff paper or cardboard to collect larger pieces and duct tape to collect smaller pieces. Then wipe with a damp cloth. Once you've picked up visible pieces and wiped the area, you can vacuum with the windows open. Afterward, go outside to change the vacuum bag or empty the canister. Wipe out canisters with wet paper towels.

- **Contain the waste:** Place fragments, damp cloth, wet paper towels, tape, and vacuum cleaner bag in a sealed plastic bag and store outside in a safe place away from children until your next trip to the household hazardous waste center. Be sure to wash your hands after clean up.

4. Contain all your cleanup supplies

Place **all items** used for the cleanup (tray or box, dustpan, paper, cardboard, tape, cotton balls, paper towels, razor blades, eyedropper, contaminated shoes and clothing) into a plastic bag. Carefully remove your gloves by turning them inside out as you take them off, and put them in the bag with the other cleanup supplies. Place the bag in a second plastic bag and seal it with tape, and write "Mercury waste – do not open" on it.

5. Immediately after the cleanup, wash your hands thoroughly and take a shower

6. Ventilate the spill area to the outdoors for two days after the cleanup

Open windows and exterior doors, and use fans to push contaminated air out. In winter, close the door to the room and seal any cracks around it to keep it separate from the rest of the house.

7. Disposal: take any containers or bags of mercury waste to your county HHW center

Find your local household hazardous waste program on the MPCA website. If you can't take them to the HHW center immediately, store them properly, out of the reach of children and pets, preferably in a garage. Store away from heat and flames. If a facility isn't available in your county, contact the staff person listed to find one.