

Safe Clean Up of Mercury Spills

What is mercury?

Mercury is a silvery-white liquid metal found in a number of household items, most commonly in fever thermometers, cooking thermometers, barometers, thermostats, fluorescent tubes and globes.

When liquid mercury is spilled it forms beads or droplets that accumulate in cracks and small spaces and soaks into fabrics. These droplets then vaporise at room temperature. Mercury vapours are invisible and odourless. Breathing mercury vapours can be hazardous.

How much mercury is in a thermometer?

- Fluorescent light globe: 0.01-0.04 grams
- Thermometer/barometer: 0.5 – 0.7 grams
- Thermostat: 3 grams

The small amount of mercury in these items is unlikely to pose a serious health risk if it is immediately cleaned up.

Most small spills can be cleaned up easily, particularly if they are on wooden, tiled, vinyl or stone flooring.

What are the health effects of mercury?

The most important route of exposure is breathing in mercury vapour. Swallowing it or having it touch the skin are not considered to be important routes of exposure.

Short-term inhalation of mercury vapour causes coughing, breathlessness and chest tightness within a few hours of exposure.

Short-term exposure of the eyes to the vapour may cause inflammation and eyelid tremor.

Long-term inhalation of mercury vapour may lead to damage to the central nervous system,

the kidneys and oral cavity, including mouth inflammation, mouth ulcers and sore gums.

How do I safely clean up a small mercury spill? (such as a fever thermometer or barometer).

1. Clear the room

Clear the area of people and pets to prevent exposure.

2. Ventilate

Open all windows and close internal doors of the room for 15 minutes before you attempt to clean up. Turn off heating to reduce vapours. Turn off ducted heating or cooling to prevent circulating vapours to other parts of the house.

3. Never vacuum or sweep

You will generate more vapours and beads of mercury; you will also contaminate the vacuum cleaner and risk being exposed to mercury every time you use it.

4. Clean up carefully

- Take off your watch and any jewellery. Put on gloves to protect your skin and wear old clothes that you can throw away.
- Shine a torch on the area to find the mercury drops.
- Use an eyedropper or syringe to pick up droplets. Use a pen or card to guide the droplets onto a piece of card.
- Use sticky tape to pick up smaller droplets.
- Carefully place the droplets into a strong plastic container with a lid.

5. Afterwards

- Keep windows open and ventilate the room for a further 24 hours. Air all rugs or mats outside for at least a week.
- Dispose of items that have come into contact with the mercury (gloves, eyedropper, pen, card, broken glass and clothing) into a plastic bag and place in your rubbish bin.
- Don't wash contaminated clothing in your washing machine. It will contaminate the washing machine.
- Don't pour mercury down the sink. It will remain in the water trap and continue to release vapours.
- If a spill occurs on carpet, curtains, upholstery or other absorbent surfaces, these contaminated items should be thrown away, or in the case of carpet, the affected portion of the carpet should be cut out. As the items are porous they can not be decontaminated properly and you can liberate mercury in the air every time you use them.

Clean up of a broken fluorescent light globe or tube (CFL)

Breaking a fluorescent light globe or tube is different to breaking a thermometer because the mercury is not as obvious. The bulbs contain a very small amount of mercury (about the size of a ball point) sealed within the glass tubing.

1. 1 Ventilate the room
2. Scoop up all the glass fragments and powder. Use gloves to protect against cuts.
3. Put all the pieces of broken globe or tube into a rigid sealed container.
4. Use sticky tape to pick up any remaining small glass fragments and powder.
5. Wipe the area clean with damp paper towels or disposable wet wipes and place them in a glass jar or plastic bag.
6. Continue to ventilate the room for 12-24 hours.
7. Dispose of the mercury and any contaminated items in the rubbish. Don't put them in the recycling.

Can I safely clean up a large mercury spill? (ie greater than 2 tablespoons)

No.

Due to the large amount of mercury, there is the potential for greater exposure to mercury vapour during clean up. We recommend that in these cases you consider engaging professional services to conduct the clean up.

1. Evacuate

Clear the area of people and pets to prevent exposure.

2. Ventilate

Open all windows and close internal doors of the room. Turn off heating to reduce vapours. Turn off ducted heating or air conditioning to prevent spreading mercury vapours to other parts of the house.

More information

Regarding health effects of mercury: Poisons Information on 13 11 26 or your doctor

Regarding clean up of mercury in the home: the Department of Human Services Environmental Health Unit on 1300 761 874

For mercury recycling (eg spent fluorescent lamps or large quantities of mercury) contact Sustainability Victoria on 03 8626 8700: <http://www.sustainability.vic.gov.au/www/html/2057-detox-your-home-timetable.asp>

References

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3. Mercury Spills in residential settings: Background information. UK Health Protection Agency http://www.hpa.org.uk/chemicals/incident_management/incident_management_factsheets/mercury_spills_background.htm
4. Mercury in residential settings: step by step guide to cleaning up thermometer spills. UK Health Protection Agency http://www.hpa.org.uk/chemicals/incident_management/incident_management_factsheets/mercury_spills_cleanup.htm
5. Fact sheet on mercury and compact fluorescent lamps http://www.hpa.org.uk/chemicals/incident_management/incident_management_factsheets/mercury_cfls.htm
6. Mercury Spills, Disposal and Site Cleanup. US EPA. <http://www.epa.gov/mercury/spills/index.htm>