



# Mercury - Emergency Spill & Release Facts

## Introduction

The United States Environmental Protection Agency (EPA) has prepared the following information for the benefit of communities affected by mercury spills or releases. Teachers, school administrators, parents, and other citizens will learn how to protect themselves from the hazards of mercury. Included are basic definitions, health concerns, routes of exposure, procedures EPA uses in responding to mercury spills and releases, and ways communities can avoid exposure to mercury contamination.

## What Is Mercury And How Is It Used?

Mercury is a naturally occurring element that exists in a variety of forms. It is found in soil, water, rocks, and living organisms, and it can exist as a gas, a liquid, or a solid.

The most common form of mercury is metallic, also known as quicksilver for its resemblance to liquid metal. At room temperature it is a shiny, silver-white, odorless liquid that gradually evaporates over time. This form of mercury occurs naturally in small amounts in the environment.

For many years, mercury was a component in many common household items, including thermometers, thermostats, light switches, lamps, batteries, paints, and cosmetics. Although the use of mercury has decreased in recent years, many older household items contain mercury.

## What Health Problems Are Associated With Exposure?

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*Mercury's most harmful threat to health is the breathing of mercury vapor because the vapor could potentially reach the brain.*

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Mercury exposure can potentially affect the eyes, skin, central nervous system, respiratory system, and kidneys. Brief contact with high levels of mercury can immediately cause headaches, loss of appetite, fatigue, insomnia, and changes in behavior or personality. The effects of mercury exposure depend upon several factors, primarily the quantity of mercury; the length of

time a person is exposed; how mercury enters the body; and how the body responds. Health effects are worsened by greater lengths of exposure to larger amounts of mercury.

The amount of mercury from a broken thermometer would be considered a small spill. If more mercury than this is spilled, it would be considered a large spill. Sampling in homes where small spills have taken place has not shown large amounts of mercury in the air. However, spills from breaking a blood pressure device can produce airborne levels high enough to cause serious poisoning.

## How Are People Exposed To Mercury?

Exposure to mercury can occur by breathing vapors, touching liquid mercury, or eating food or drinking water contaminated by mercury. The most serious threat comes from the vapors of liquid mercury, which are readily absorbed by the lungs and could potentially reach the brain. Mercury can also enter the body through the skin.

Levels of mercury can be measured in blood, urine, and scalp hair. Although it can take months for mercury to be eliminated from the system, tests may be helpful in predicting and treating potential health effects.

## How Does EPA Respond?

EPA responds to emergency spills and releases that threaten public health and the environment. Examples of such scenarios are: chemical fires or explosions; uncontrolled hazardous substance releases resulting from accidental spills; contamination of a water supply; or substance releases from abandoned industrial facilities.

The National Hazardous Substances and Oil Emergency Response Program consists of a network of federal, state, and local officials. It includes scientists, engineers, contractors, and other emergency response personnel trained to protect public health and the environment in a crisis situation. This team performs a broad range of protective response measures on emergencies ranging from large oil spills to chemical accidents in the home or school. The response process begins when a spill is discovered or the National Response Center (NRC) is

notified of a possible hazardous substance release. The NRC then notifies a Federal On-Scene Coordinator (OSC), who determines what level of response is necessary based on conditions at the emergency site. The OSC calls on a network of technical experts and coordinates closely with various state and local agencies and organizations.

At times, an OSC may determine that federal response assistance is not required. This can occur if the party responsible for the release is performing the necessary cleanup, or if the situation is being adequately addressed by state or local response personnel. The OSC may assign responsibility to state and local groups such as health and environmental officials, poison control centers, substance and disease specialists, or local fire departments.

### What Takes Place At A Mercury Spill Site?

Once EPA is contacted, the OSC and a team are sent to investigate and remedy the situation. Activities may include sealing off the spill site, blocking vapor release from ventilation systems into other areas of a building, covering floor drains, and heading off other potential threats of environmental release. The public is not allowed back in a contaminated area until the OSC determines that the contamination has been removed.

### What Precautions Can People Take To Avoid Mercury Contamination?

Here are some tips to avoid contamination in the event of a small mercury spill:

- Contact your local poison control center, fire department, or public health board for advice on cleanup
- Ask everyone to leave the area
- Open windows and doors in the area of the spill to ventilate the area during cleanup; otherwise, seal off the area as well as possible
- Do NOT use a vacuum cleaner to clean up a mercury spill. A vacuum cleaner will spread the mercury vapors throughout the area, thereby increasing the chance of exposure.

In the event of a large mercury spill (more than a broken thermometer's worth), immediately evacuate everyone from the area, seal off the area as well as possible, and call your local authorities for assistance.

### How Can People Help Prevent Mercury-Related Contamination?

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*EPA encourages public participation in preventing mercury-related emergencies. EPA conducts informational workshops and seminars, prepares written materials, and offers lectures and question and answer sessions to keep the public informed about protecting human health and the environment.*

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### What Other Information Is Available?

You can contact the following local authorities in your area:

- Poison Control Center
- Fire Department
- Public Health Department

### Other Resources

- EPA Superfund Hotline: (800) 424-9346
- Superfund Home Page ([www.epa.gov/superfund/](http://www.epa.gov/superfund/))

THIS SPACE RESERVED FOR LOCAL CONTACT INFORMATION