

# What is Mercury?

- Mercury is a naturally occurring metal and is commonly known as quicksilver with the chemical symbol Hg
- Mercury has three forms: elemental (liquid mercury), inorganic mercury, and organic mercury (methylmercury)
- A single drop of mercury can contaminate the soil, air and water, posing hazards on the environment, humans, and fauna and flora

## DID YOU KNOW?

Once mercury is released into the atmosphere, mercury can travel hundreds of miles with the wind before being deposited on the earth's surface. Mercury has a long-range atmospheric transport, and is persistent in the environment. Mercury has the ability to bio-accumulate in the ecosystem and up along the food chain.

## Mercury exposure route



### Inhalation

Inhalation of mercury vapor is the primary route of exposure to elemental mercury. Inhaled vapor is almost completely absorbed by the lungs about up to 80%. Neither liquid mercury nor mercury vapor has an odor and thus, chemical odor provides no warning of hazardous concentrations. Mercury vapor is heavier than air and may therefore accumulate in poorly ventilated or low-lying areas.



### Ingestion

Elemental mercury, a liquid at room temperature, is essentially nontoxic when ingested because virtually none (less than 0.1%) is absorbed. Anatomic gastrointestinal abnormalities such as enteric fistulas or intestinal perforation can sequester sufficient quantities of ingested elemental mercury to allow significant oxidation and subsequent absorption.



### Dermal/skin absorption

Elemental mercury vapor is very slowly absorbed through the skin in high concentrations, but causes irritation of skin and may produce contact dermatitis.

The most common risk of mercury poisoning for humans comes from the consumption of fish and shellfish contaminated with mercury, although exposure to mercury also occurs through industrial processes (mining, burning of fossil fuels, burning of waste, breakage of medical equipment containing mercury) and even some cultural practices (swallowing mercury).

# Mercury pollution

The largest source of emissions to the atmosphere is currently coal fired power stations. However, the widespread use of mercury in dental amalgam means that in the future, crematoria could become the most significant source. Hospitals with medical waste incinerators are also a major contributor to the mercury problem, and although emissions are decreasing as the number of medical waste incinerators is reduced, there is concern within the health community that the use of mercury in healthcare products is exposing patients and other vulnerable groups

## DID YOU KNOW?

Approximately 70% of environmental mercury now comes from human activities including a variety of industrial processes; coal burning, incineration or disposal of mercury-containing products, the use of mercury for chlorine production in the chlor-alkali industry, production of zinc, steel and other metals; cement production, mining and product recycling.

## Products that contain mercury



Mercury thermometers



Fluorescent light bulbs containing mercury



Skin-lightening cosmetics with inorganic mercury



Mercury-containing batteries

# What you can I do reduce mercury pollution at home?

- Substitution (or elimination) of products, processes and practices containing or using mercury with non-mercury alternatives
- Mercury waste management - separate mercury waste from household waste
- Stop burning waste
- Stop swallowing mercury
- Stop using mercury for cultural beliefs and rituals

## Limit the amount of mercury and prevent mercury pollution!



## DID YOU KNOW?



Mercury has been used for hundreds of years for cultural and religious reasons and has, on occasion, had mythological associations.

Exposures resulting from cultural uses depend to a large extent on the nature of the practice:

swallowing elemental mercury capsules and inhalation of mercury vapour are the most common exposure routes.