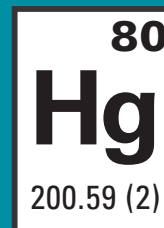


What's the big deal about mercury?



Even though mercury looks like something from outer space, it is a naturally occurring element that can be found on a periodic table.
(Periodic symbol: Hg)

Special Properties of Mercury	So What?
<ul style="list-style-type: none">• Only metal that is liquid at room temperature.	<ul style="list-style-type: none">• Holds fascination for people of all ages. Special uses in several different cultures.
<ul style="list-style-type: none">• Easily evaporates into the air.	<ul style="list-style-type: none">• A blob of mercury sitting on the table will eventually disappear. The mercury vapors can be extremely dangerous to breathe.
<ul style="list-style-type: none">• Very dense, yet fluid. Density = 13.546 g/cm³ (Density of water = 1.00 g/cm³)	<ul style="list-style-type: none">• Just a little bit weighs a lot, yet moves around easily. This is useful in certain medical procedures.
<ul style="list-style-type: none">• Good conductor of electricity.	<ul style="list-style-type: none">• Used in electrical “tilt” switches and other electrical devices.
<ul style="list-style-type: none">• Expands or contracts uniformly with changes in temperature.	<ul style="list-style-type: none">• Used in thermometers and thermostats.
<ul style="list-style-type: none">• Readily combines (amalgamates) with other metals.	<ul style="list-style-type: none">• Dentists use a combination of mercury and silver, called “amalgam,” which is used to fill cavities in teeth.
<ul style="list-style-type: none">• Kills bacteria and fungi.	<ul style="list-style-type: none">• Previously used in pesticides, paints and on people to kill germs!

Mercury's Role in History

- Miners used mercury to recover gold throughout the western United States at both placer and hardrock mines.
- Total mercury production in California between 1850 and 1981 was more than 220 million pounds. About 12 percent, or 26 million pounds was used for gold recovery in California.
- From the 1860s through the early 1900s, hundreds of hydraulic placer-gold mines operated in the Sierra Nevada. The total amount of mercury lost to the environment from these operations may have been 3-8 million pounds or more.
- Today, elevated mercury concentrations in mine waters and sediments indicate that hundreds to thousands of pounds of mercury remain at each of the many sites affected by hydraulic mining. High mercury levels in fish, amphibians, and invertebrates downstream of the hydraulic mines are a consequence of historic mercury use.

Mercury Can Be Harmful

Rachel & Eric find out glass thermometers are delicate instruments that break easily if dropped.

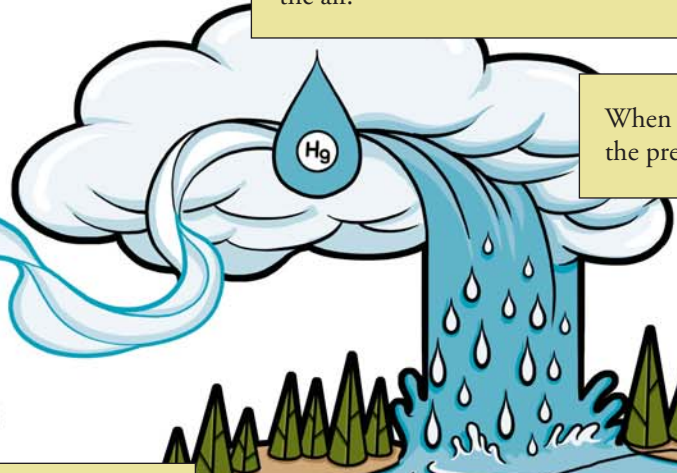


When Rachel & Eric's mercury thermometer breaks, some mercury enters the sewer system and mercury vapors are released into the air.

The vapors travel outside where they combine with moisture particles in the air.



When it rains, this mercury travels with the precipitation into local waterways.



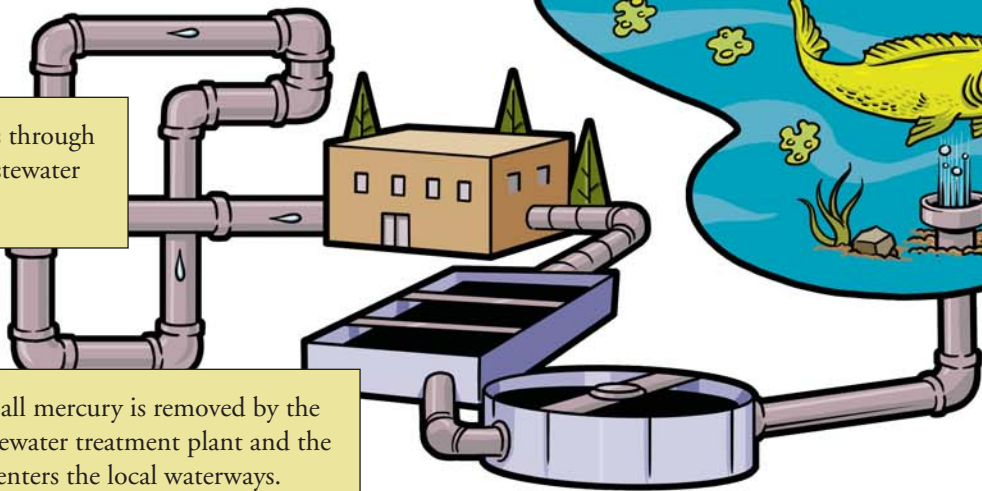
Later, the fish from the contaminated river are caught and consumed by people, which can be harmful.



The mercury travels through the sewer to the wastewater treatment plant.

Not all mercury is removed by the wastewater treatment plant and the rest enters the local waterways.

Mercury in the waterways gets converted to methylmercury by bacteria. Methylmercury builds up in the tissue of fish and wildlife as it moves up the food chain.



be mercury free

A Regional Partnership for Mercury Pollution Reduction