



MERCURY - ARE YOU AT RISK?



Mercury



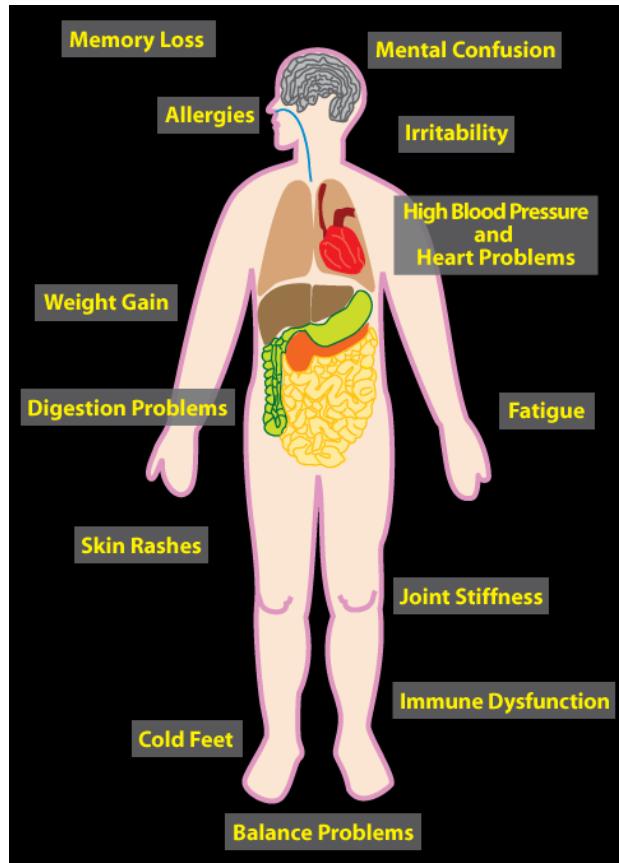
Mercury is a heavy metal as indicated above by showing a pool ball floating on top of a cup of Mercury



What is Mercury?

- A naturally occurring element that is found in air, water and soil.
- A liquid at room temperature
- Thicker and heavier than water
- Evaporates very easily
- Expands uniformly with higher temperature
- Rolls around in beads when spilled

Health Effects of Mercury



- Elemental mercury is a bioaccumulative neurotoxin that effects multiple neurological responses, particularly in the very young and the very old.
- Exposure at high levels can harm the brain, heart, kidneys, lungs, and immune systems regardless of age.
- Children and babies can develop severe learning disabilities

The Mad Hatter



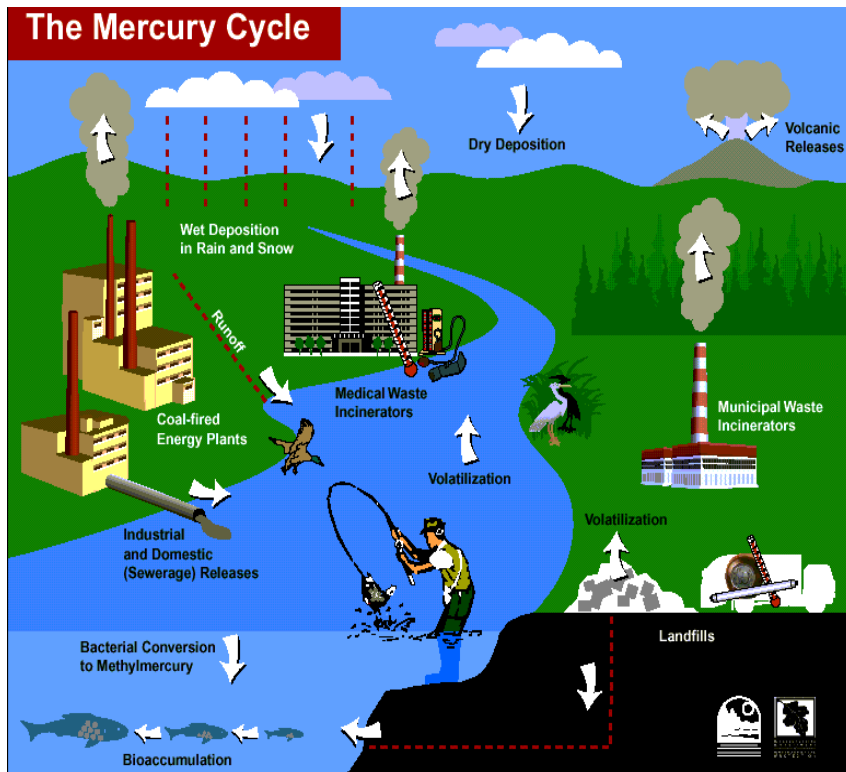
- Ever wonder why the Mad Hatter from Lewis Carroll's book Alice in Wonderland seemed a bit, well, mad? Once upon a time, hatters used mercury in the felting process. With so much exposure, neurological damage developed. According to the Illinois Department of Health, exposure to methylmercury can manifest symptoms in the central nervous system, which may include tremors, psychological changes, insomnia and short-term memory loss.

Types of Exposure

- Absorbed through skin through touching or handling
- Inhaled – Mercury evaporates at room temperature (most dangerous type of exposure)
- Ingested usually by consuming fish



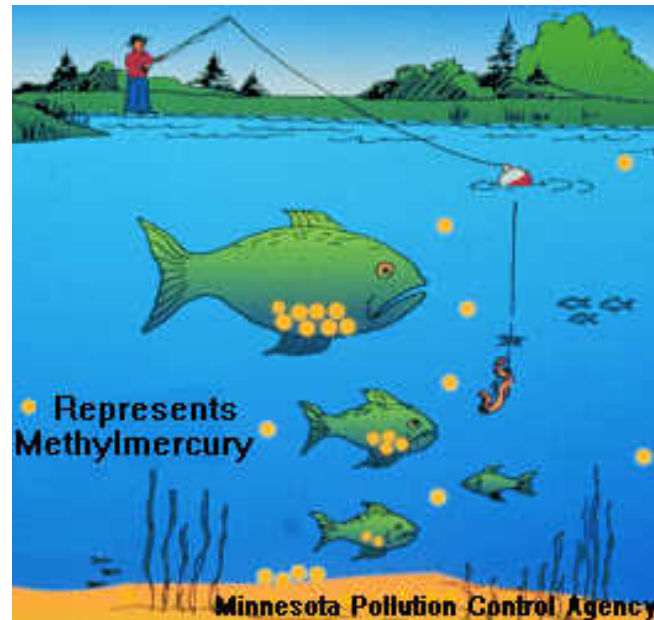
The Mercury Cycle



Mercury in the Environment:

Once mobilized in the environment, mercury can cycle through land, air, and water, undergoing a number of complex chemical and physical transformations. While it circulates in the environment and changes its form, mercury is persistent and not biodegradable. Typically, mercury is emitted to the atmosphere as a gas or as particulate matter; once released it may return to the earth's surface by either dry (e.g., gravitational settling) or wet (e.g., precipitation) deposition. Erosion, rainfall, and leaching transports the mercury from land surfaces into streams, lakes, and oceans where it accumulates in sediments. Once mercury is present in a biological system, it can "bioaccumulate" (increase its concentration) as it moves up the food chain. Mercury, once released, is thus hard to control.

Mercury and Methylmercury



Bioaccumulation Cartoon
from the Minnesota Pollution
Control Agency –
downloaded from –
pasture.ecn.purdue.edu/~mercury/src/kids.htm

Mercury is absorbed, usually as methylmercury, by algae at the start of the food chain. This algae is then eaten by fish and other organisms higher in the food chain. Because organisms tend to store mercury, not excrete it, concentrations of mercury get higher and higher as larger, longer-living creatures gobble up smaller ones. By the time you get to a top predator fish like a swordfish, albacore tuna, or shark, the concentrations are quite high. Fish can also absorb methylmercury directly from water as it passes over their gills, though this is a lesser avenue of accumulation.

Residential Mercury Collection Site



In 2007, the City of Lake Charles, Wastewater – Pretreatment Division united with Team Green of SWLA (City of Lake Charles Mayor's commission and an affiliate of Keep America Beautiful) to open a Residential Mercury Collection Site. Citizens can now safely dispose of mercury and items containing mercury and free of charge. We accept mercury and items containing mercury from anywhere within the following five-parish area: Calcasieu, Allen, Beauregard, Jefferson Davis and Cameron.

Residential Mercury Collection Site

Mercury Recyclers In Action!

1132 West 18th St., Lake Charles, LA 70601
Every Friday from 9:00 a.m. to 2:00 p.m.



We accept items such as thermometers, thermostats, fluorescent lights, old alkaline batteries, chemistry sets, and vials or jars of mercury. *See Residential Mercury Site locations.* The items are transported and recycled by a reputable business that specializes in this area. The company also provide the proper containers, labeling, etc. necessary to facilitate safe storage.



Fluorescent Lamps (all types) are also accepted at:

**Green Station No.1
RECYCLING DROP OFF CENTER
WOOD WASTE FACILITY
4331 E. BROAD STREET
8AM to 4PM
Monday thru Friday
(Closed on Saturdays &
Sundays)**

**Green Station No.2
RECYCLING DROP OFF
CENTER
Alma Lane - Nelson Ball Field
8AM to 3:45 PM,
Monday thru Saturday.
9am to 3:45PM on Friday.
(Closed on Sundays)**

Note: Fluorescent lamps are the only mercury items accepted at these sites. All other mercury items must be brought to W. 18th Street as indicated above. See Lake Charles Green Guide for other items accepted at Green Station No. 1 and 2



Mercury Handling and Storage

- For liquid mercury and mercury-containing items, it is important to store and handle them safely to avoid potentially harmful spills or releases.
- See Mercury Newsletter and Lake Charles Green Guide for guidance for handling mercury safely.

Elemental or Metallic Mercury



Received over 375.8 lbs of mercury at Residential Mercury Collection Site since 2007. Actual jar of mercury received at site.

Elemental or Metallic Mercury



Several residents have surrendered significant amounts of metallic mercury, sometimes weighing 8 to 12 pounds. The largest amount received at site weighed 21 pounds.



Fluorescent Lamps



Received over 54,221 linear feet of lamps, equivalent to 13,555 4 foot lamps. Lamps in the above pictures were received at a Trash Bash event.

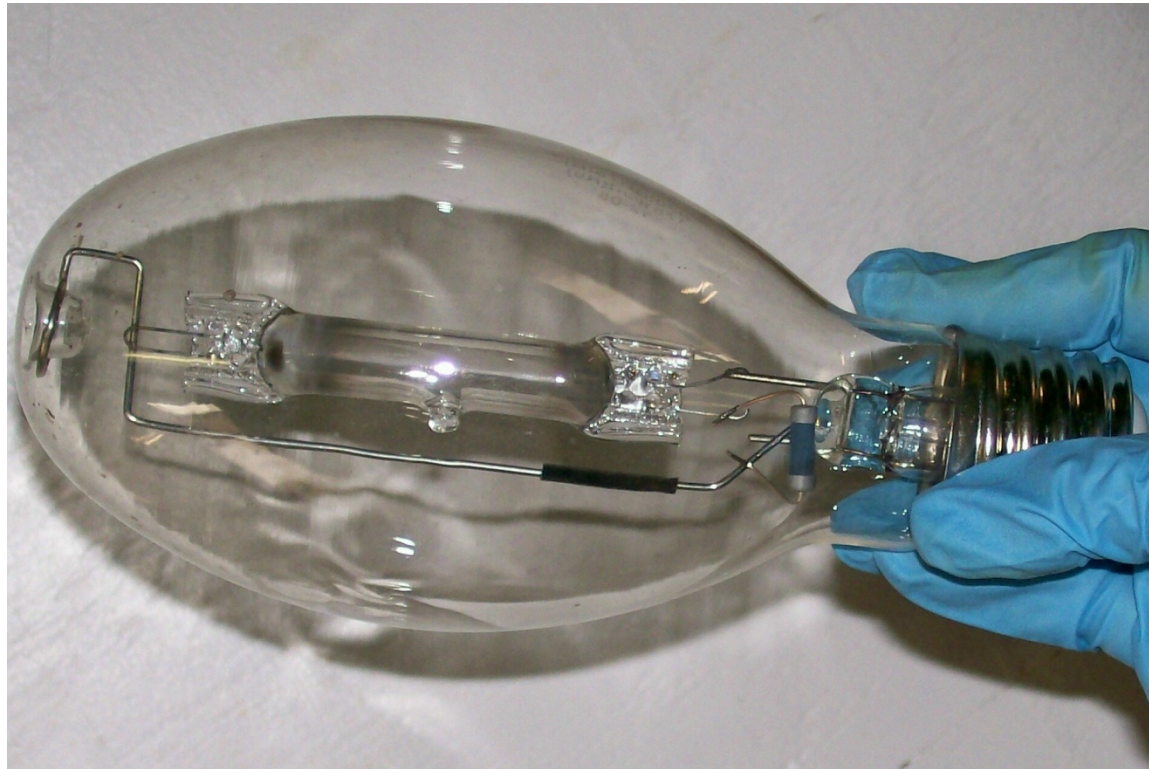
Note: Green tip lamps are lower in mercury concentration but should also be recycled.

Fluorescent Compact Lamps



**Fluorescent tubing in an assortment of shapes
--received over 3,056 individual compact lamps**

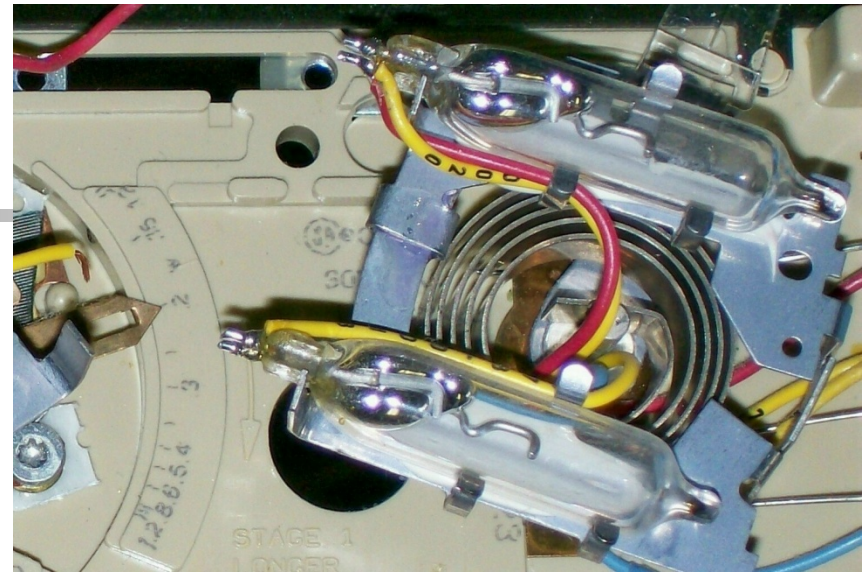
Mercury Vapor Lamp



Mercury Devices



Thermostat



Mercury ampoule in thermostat

In its elemental form, mercury is a very dense, shiny, silvery metal that is liquid at room temperature. Elemental mercury conducts electricity and expands and contracts in response to changes in temperature or pressure. These unique properties of mercury have made it useful in a variety of products (e.g., thermometers, barometers, switches, and lamps).

Mercury Devices



One standard mercury thermometer can pollute 5 million gallons of drinking water.

The City of Lake Charles produces about 10 million gallons a day.

This means that 2 mercury thermometers can pollute a whole day supply of drinking water.



Summary

Mercury is a naturally occurring element that is toxic to people and wildlife. When products containing mercury are broken or thrown in the trash, outdoors, or down the drain, mercury cycles through the environment, polluting air and water, and accumulating in fish. You and your family can be exposed to mercury by breathing its fumes, eating contaminated fish, or touching spilled mercury.



Contact Information

The threat of mercury is very real and we want people not to be fooled by mercury's appearance. Even though it is attractive and interesting, mercury is a very dangerous poison. If you have liquid mercury in your home, please take advantage of the Residential Mercury Collection Site. If you have any questions, please contact us at 337-491-9185.

