

What you can do:

To further minimize mercury exposure

- Recycle compact fluorescent light bulbs (CFL or curly bulbs)
If a CFL breaks:
- Do not vacuum or sweep.
- Open a window and leave room for 15 minutes.
- Clean with damp paper towels & dispose of bulb & towels in a sealed jar or sealed bag.
- Recycle CFL's at Home Depot or at the Eureka Transfer Station.

What is YTEP doing?

YTEP is currently testing numerous aquatic species such as sturgeon, salmon, eels and many others on the Yurok Indian Reservation for numerous toxins including mercury and methyl mercury with funding from YTEP's EPA STAR grant. Results of this testing will be shared with the tribal membership once the results are collected & finalized.

WHERE TO GET MORE INFORMATION:

Yurok Tribe Environmental Program (YTEP)
(707) 482-1822
www.yuroktribe.org/departments/ytpe

Office of Environmental Health Hazard Assessment (OEHHA)

Safe eating guidelines: local advisories & fish consumption benefits
www.oehha.ca.gov/fish.html

U.S. Environmental Protection Agency (EPA)

National store-bought fish consumption advice
www.epa.gov/waterscience/fish/advisory.html

Environmental Health Investigations Branch Ca. Dept. of Health Services

www.ehib.org

WHERE TO GET MORE INFORMATION:

Cal EPA Dept. of Toxics Substances Control

<http://dtsc.ca.gov/HazardousWaste/Mercury/index.cfm>

Got Mercury?

Mercury Calculator
www.gotmercury.org

If you find toxins in your home contact:

1-800-CLEANUP (1-800-253-2687)
<http://ccelearn.csus.edu/mercurylamp/content/resources5.htm>
or www.earth911.org

Some Information used:

California Indian Environmental Alliance (CIEA) www.cieaweb.org

University of Wisconsin Extensions
www.mercuryinschools.uwex.edu/curriculum/hg_in_env.htm

USGS Mercury Contamination from Historical Gold Mining in California

<http://pubs.usgs.gov/fs/2005/3014/>

Got Mercury?

Mercury Calculator
www.gotmercury.org

California is haunted by Gold Rush legacy of toxic mercury

<http://forests.org/>
Environmental News Network
August 16, 2002 John Krist

Humboldt State University Library

<http://content.cdlib.org/ark:/13030/ft038n96s5/?brand=calisphere>

Historic Gold Mining on the Yurok Indian Reservation



WHAT TRIBAL MEMBERS NEED TO KNOW TO PROTECT THEIR HEALTH AND THE ENVIRONMENT

Gold mining was once prevalent on the Yurok Indian Reservation. (as seen in the photo above.) The picture above is "Lord's Hydraulic Mine" on Weitchpec bar. Although gold mining stopped decades ago, some environmental contamination still exists.



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What is the environmental threat from Historic Gold Mining?

Gold mining was once widespread throughout the Klamath-Trinity Mountains from the mid-1800's up to the 1950's. Gold was extracted using mercury (quick silver). A typical hydraulic mine used hundreds of pounds of mercury (Hg) per month, and it's estimated that 10-30% of mercury used was deposited in nearby gravels and waterways. Mercury is a very heavy metal that sinks in water and takes a very long time to break down. Mercury was also mined in the Klamath River Basin above Trinity Reservoir. Mined mercury was also called cinnabar.

What is Methyl Mercury ?

Two types of mercury from gold mining:

- Elemental mercury which was heavily used in gold mining and can also be found in older thermometers.
- Methyl mercury is created when elemental mercury is converted by bacteria into organic mercury. Methyl mercury can be eaten or absorbed by bacteria & other organisms; then magnify up the food chain

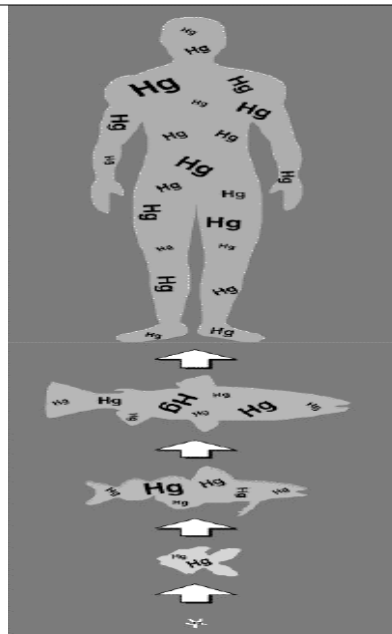
Why you should care about Mercury and Methyl-Mercury.

- At low levels mercury can damage the brain, central nervous system, immune system, kidneys, and heart.
- In pregnant women, mercury can cause permanent learning disabilities in the developing fetus, even at very low levels.
- Children are particularly vulnerable.
- High levels of mercury are very rare, but at high levels, it can cause severe birth defects, neurological damage and death.

What is Bioaccumulation?

Bioaccumulation occurs when small sized contaminants such as methyl mercury are ingested by small plants or animals. These small plants or animals are then eaten by a larger animal such as a small fish. This small fish then absorbs all the mercury that was taken up by the plant over it's entire life. A larger fish can then eat the smaller fish and absorb the methyl mercury from the smaller fish and the plant too. This process continues up the food chain and can result in an organism such as a large fish like a tuna having a higher concentration of the contaminant than the surrounding water.

Mercury (Hg) Bioaccumulation in Humans
The diagram below illustrates how mercury (Hg) concentration increases up the food chain.



From the University of Wisconsin Extension

What you can do:

Eat fish safely

Avoid large predatory fish such as Tuna. Fortunately, studies have shown that wild caught salmon has very low levels of mercury contamination and is a healthy traditional food.

- Mercury is stored in the entire fish. You cannot clean the head guts, fat and skin to get rid of it. Other toxins, like PCBs may be stored there so trimming these off is recommended.
- Check fish you plan to eat at the EPA and OEHHA websites. You can also visit a mercury calculator website such as the one at www.gotmercury.org.
- Do not eat fish caught from Trinity Lake. California has issued a mercury warning for Trinity Lake fish.



Photo by Matt Mais

What is a serving size?

- A serving is 6 ounces of cooked fish, or about the size and thickness of the palm of your hand.
- Most Yurok People eat much more than 6 ounces per serving. For reference a pint is about 18.6 dry ounces.
- www.gotmercury.org calculator estimates a 150lb person can eat 120 ounces of fresh wild salmon in a week. 120 oz = 20 six ounce servings.
- With these estimates, adjust salmon consumption according to body weight.

