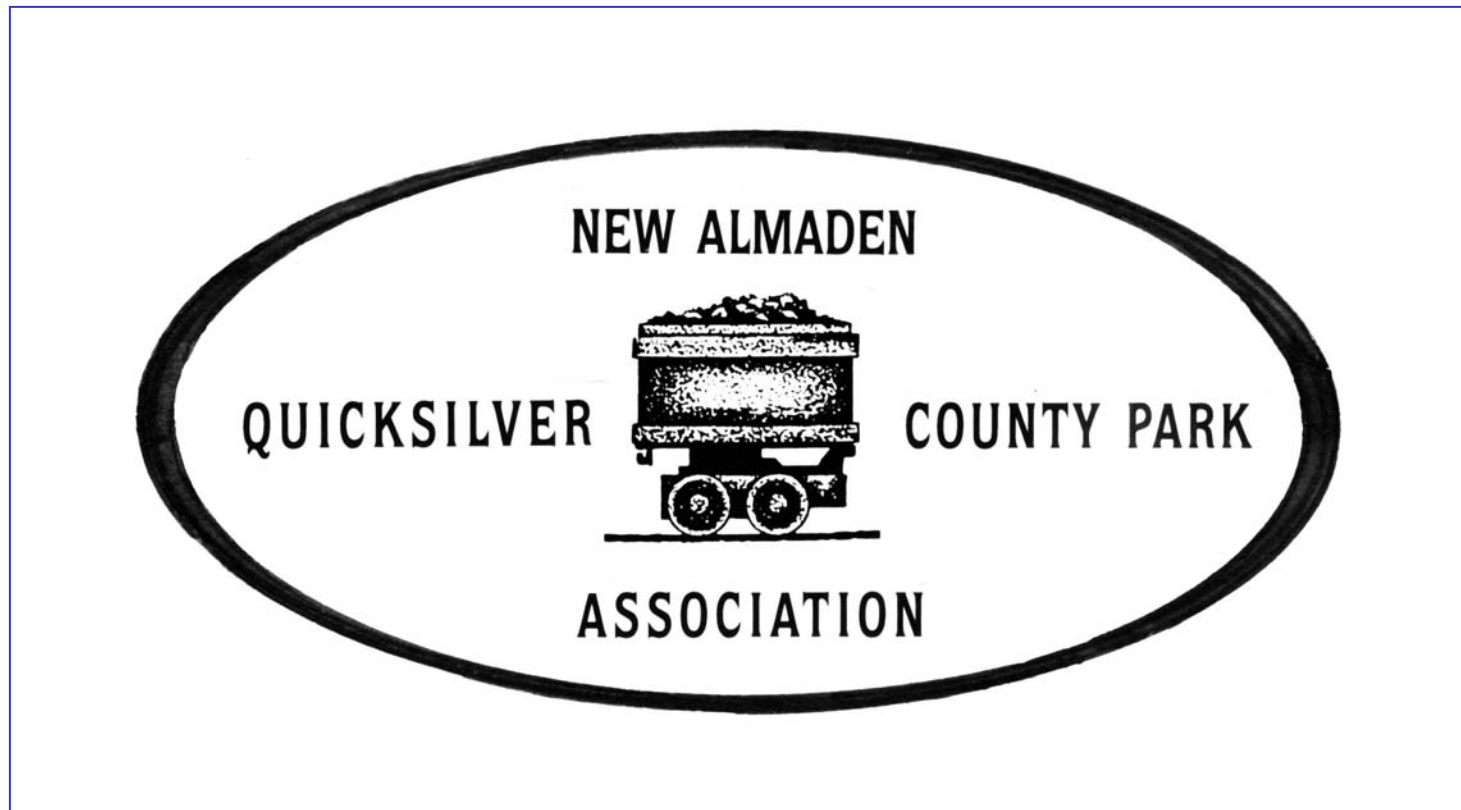


Sponsored By



Uses of Mercury

- **Munitions**
- **Barometer, Thermometer**
- **Computer memory**
- **Conductor**
- **Amalgamation with Gold and Silver**
- **Germicide, Pesticide**
- **Paint**
- **Street Lamp, Fluorescent lamp**

- Photo Courtesy National Geographic 1973



Health Uses of Mercury

- Salve to kill germs
- Pill to cure melancholy
- Mercurochrome to treat wounds
- Tooth Filling
- Preservative in Vaccines



Health Issues with Mercury



- Miners didn't die of mercury poisoning.
- Salivation caused by absorption through the pores or by breathing the fumes. (Half life of 5 days)
- Cure – Wear clothes when mining. Careful sealing of openings in furnaces and retorts.
- Fully reversible when worker takes on other jobs

Methyl Mercury

- An organic compound when anaerobic bacteria interacts with mercury and is absorbed by plants.
- Plants are eaten by little fish.



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METALLIC SPREAD: Distinct environmental conditions help to amplify local concentrations of methyl mercury, leading to health warnings such as this one in the Florida Everglades.

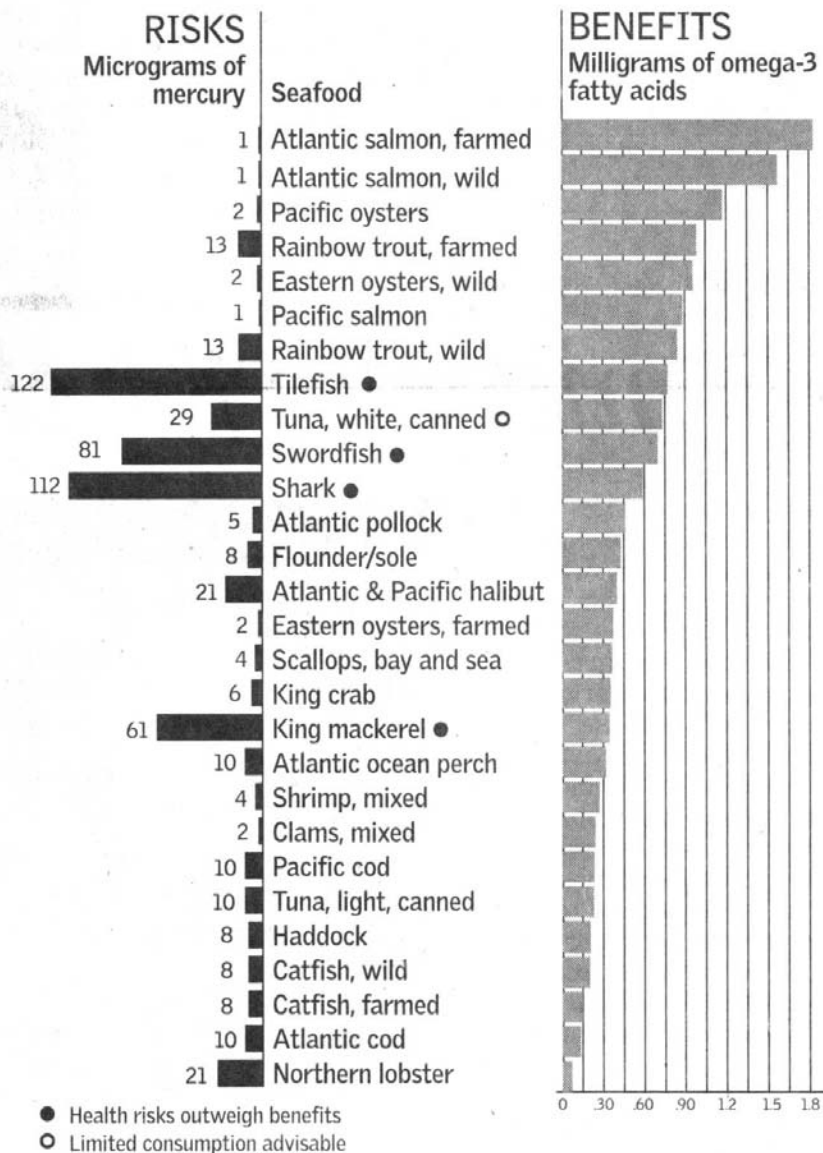
Fishing in Alamitos Creek



- **Big Fish** eat Little Fish.
- **Difficult for human, animal and fish organs to remove from body. (Half life of fifty days.)**
- **Usually not found in sufficient concentrations to adversely affect humans**

A guide to informed seafood choices

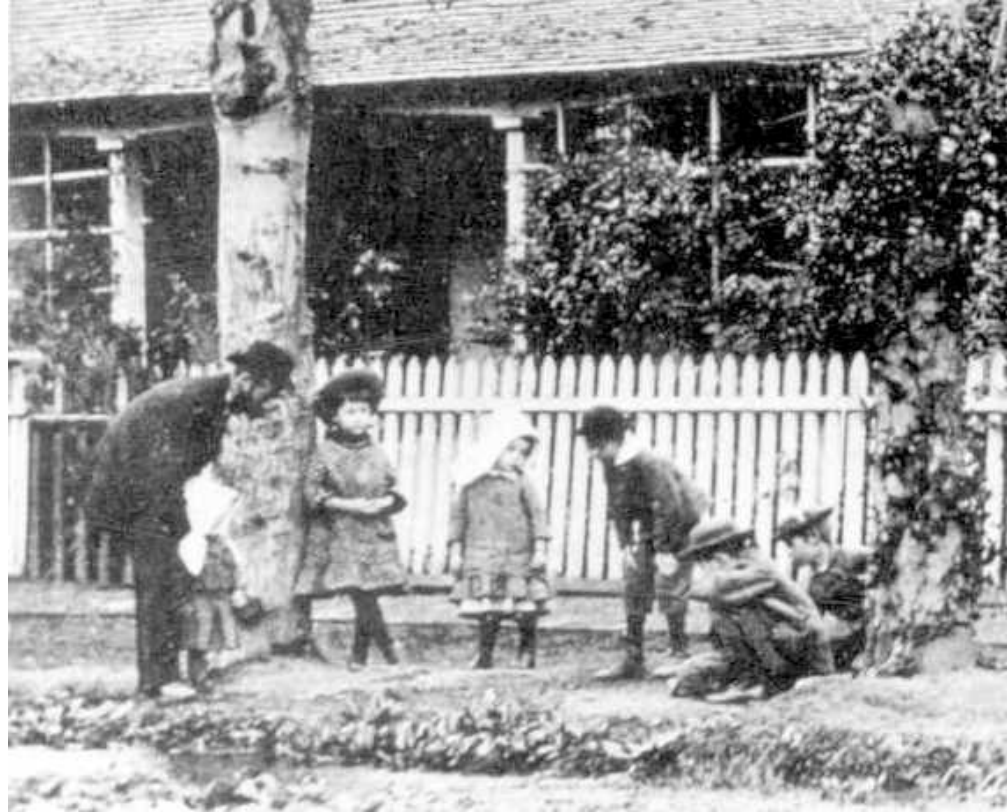
Although mercury can harm developing fetuses and infants, a new report says pregnant women and children can safely eat limited amounts of fish that have low levels of contamination. On the plus side, omega-3 fatty acids in seafood protect against heart disease.



Risk Vs. Reward

- **Big fish** are Tilefish, Shark, Swordfish and King Mackerel
- **Little Fish** are salmon, pollock, flounder, sole, perch, cod, oysters, crab, shrimp, clams and catfish

Mercury and Autism

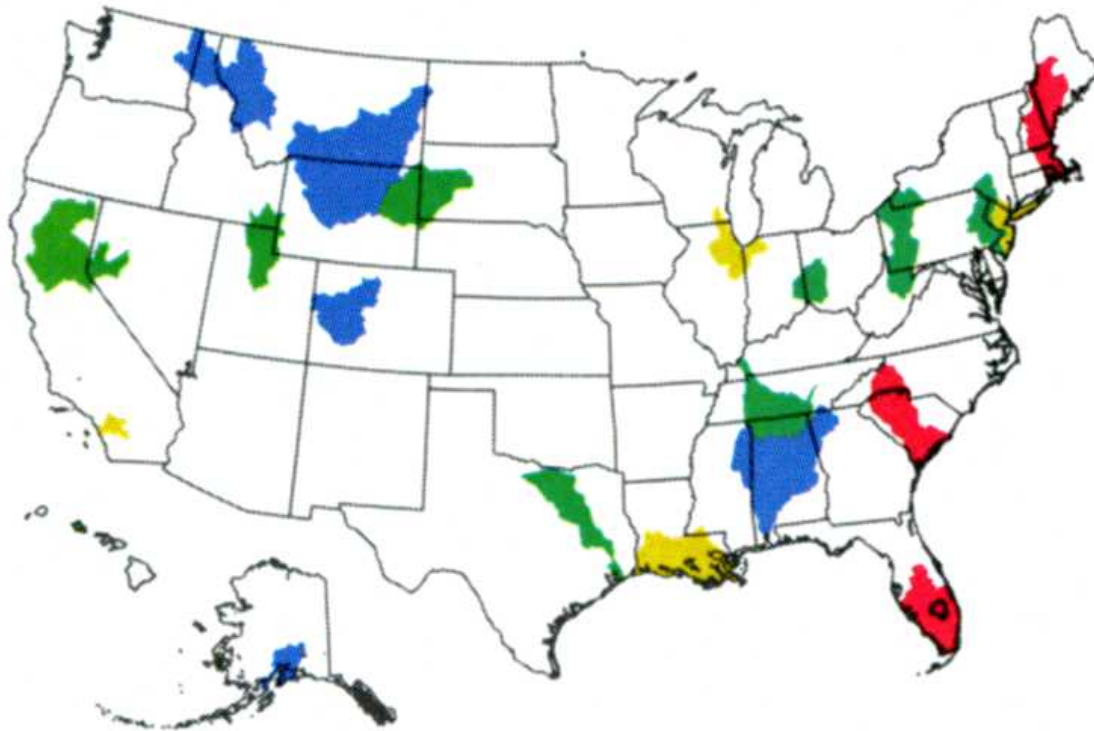


- Thimerasol TM no longer used in children's vaccines
Autism Rates continue to rise
- In 2005, National Institute of Health reports no link
between mercury and autism

Sources of Mercury Pollution

Percent of Total Mercury as Methyl Mercury

- Greater than 8
- Less than 8 but greater than 4
- Less than 4 but greater than 2
- Less than 2



- Volcanoes
- Coal deposits
- Natural deposits along the San Andreas Fault

HOT SPOTTING: Measurements reveal areas that readily convert mercury to methyl mercury.

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The End