

# PRACTICE PREVENTION

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## “There’s Something Fishy about Mercury...”

Why have 19 states now put all their lakes and rivers under a statewide advisory for fish consumption?

Why have New York, Iowa, and California recently passed laws banning mercury from some products for children?

Substantial research shows that  
**MERCURY CAN CAUSE BRAIN AND NERVOUS SYSTEM DAMAGE IN CHILDREN.**

### What is mercury?

Mercury is a naturally occurring metal which is a persistent, bioaccumulative and toxic (PBT) pollutant. It cannot be degraded and accumulates in soil, water and living organisms. Mercury has several forms, combining with other elements to make both organic and inorganic compounds. The most common compound, methylmercury, is produced mainly by bacteria in water and soil.

### How does mercury affect children’s nervous systems?

The developing nervous system and brain of fetuses and young children are highly sensitive to mercury in any form, but particularly to methylmercury and mercury vapors.<sup>1</sup> Children who are exposed to relatively high doses of mercury before birth may develop mental retardation, cerebral palsy, deafness, blindness, speech difficulties <sup>2</sup> or seizures <sup>3</sup> Chronic low-dose exposure before birth from the mother’s fish consumption can lead to poor performance on neurobehavioral tests, particularly on tests of attention, fine-motor function, language, visual-spatial abilities such as drawing, and verbal memory.<sup>2</sup> Because a child’s brain continues to develop well after birth, exposure to mercury in childhood can also affect brain functions.<sup>4</sup>

Research indicates that there are differences in how easily some children eliminate or shed mercury from their bodies.<sup>5</sup> These differences may be genetic. The failure to shed mercury allows it to build up in body tissues so that

even very small exposures over a period can be harmful to these children.<sup>6</sup>

## How are children exposed to mercury?

Mercury enters a child's environment from several sources – the most common being mercury pollution in the air. "Mercury pollution comes from power plant smokestacks, mining, and other industrial activities. When mercury lands in bodies of water, it moves up the food chain from the tiniest fish to the bigger ones that eat them. The older and larger these fish get, the more mercury collects in their flesh."<sup>7</sup> Large fish that eat smaller fish, such as tuna, sharks, or swordfish, tend to be more contaminated.

When children eat mercury-tainted fish, their brains are being exposed to mercury – during digestion, mercury is rapidly absorbed into the blood and enters and accumulates in the brain.<sup>2</sup> Because of the danger mercury may pose to fetuses and children, advisories have been issued throughout much of the United States recommending that women of childbearing age and children avoid eating fish high in mercury. In fact, every state but Alaska and Wyoming issued fish consumption advisories in 2003, according to the US Environmental Protection Agency.<sup>8</sup>

There are other ways that mercury pollutes soil and water and finds its way into fish:

§ waste from metallic dental cavity-filling material (amalgam) that is disposed of in wastewater or municipal waste

§ improper disposal (such as incinerating or sending to a landfill or into wastewater) of items containing mercury, including medical waste, batteries, fluorescent lights, some light switches, old paint, and old thermometers

§ accidental mercury spills

In addition to exposure through fish, children can be exposed to mercury through these