



Let's Clear the Air About Mercury

As Wisconsin and the federal government consider new rules to control the emission of mercury, the level of rhetoric from politicians, radical environmentalists and pseudo-scientists has reached new heights. Rarely a day goes by without some hysterical public figure making a statement with little or no factual information to back it up. For example, a recent ad in USA Today claimed, "Your kids are being poisoned by deadly mercury from power plants." Those of us who rolled mercury around in our bare hands as children or rubbed it onto coins now know that this wasn't such a good idea. But what are the real facts?

- 1. Where does mercury come from?** Mercury is a naturally occurring element coming from many sources. About one-half of the mercury on earth comes from natural sources. It vaporizes from rocks and soil, with volcanoes producing the single largest natural amount. Of the rest, about one-quarter comes from forest fires and about one-half from Asian industrial emissions. Mercury in the air circulates globally, riding on air currents until it settles onto the earth's surface. Only about 1 percent of the earth's mercury comes from utilities in the United States. Wisconsin's utilities' share is .025 percent (or $2\frac{1}{2}$ percent of the 1 percent). These are numbers accepted by the Environmental Protection Agency. Mercury deposited in Wisconsin could come from anywhere in the world, fires in California, foundries in China, or a volcano in the Philippines. One further point: to reach the food chain, mercury from power plants must go through many natural steps to be converted into a toxic form - methyl mercury - and at each step of this conversion process, the amounts are greatly reduced.
- 2. How harmful is mercury to humans?** Mercury in fish is generally cited as the main risk. Much research has been done showing that the risks of exposure to mercury are extremely low. An exhaustive study, published in 2003, of a large group of children from birth to age 9, whose mothers ate twelve meals of fish a week (about 10 times the average U.S. consumption), showed no detectable harmful effects. It would appear that the fish advisories issued by the Wisconsin DNR may not be based upon defensible scientific evidence. Further, the fish and seafood in American diets comes primarily from ocean sources. Studies show that nine of the top ten types of fish/shellfish consumed in the U.S. are from saltwater. The second largest source is freshwater farm-raised fish. These fish are fed an artificial diet virtually free of mercury. Less than ten percent of fish consumed in the U.S. are of the wild freshwater variety.
- 3. What will the effects be of mercury rules now being proposed by the Wisconsin Department of Natural Resources (DNR)?** The DNR is proposing that 75 percent of the mercury released by Wisconsin power plants be eliminated by the year 2015. Since studies have shown that only a tiny fraction of the world's mercury comes

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from Wisconsin, even completely shutting down all of the state's coal fired power plants would result in an improvement so small that DNR officials have admitted it could probably not be measured. They also admit that it would be unlikely to eliminate any of the fish advisories now in place for the state's lakes. Yet, to achieve even this diminimus improvement, utilities have estimated that the costs could increase utility bills to customers by as much as 25 percent.

4. What are the real answers to mercury concerns? Wisconsin's utilities have already done much to remove mercury from the air. By switching to low-sulfur coal, mercury emissions in the state have already been greatly reduced. An agreement by one utility will result in a 50 percent reduction by 2013. As newer plants are brought online using new technologies, further reductions will come. It makes little sense to punish the state's ratepayers by forcing them to pay billions of dollars for efforts that will have an almost imperceptible impact on the amount of mercury deposited on the state. Further complicating these efforts is the fact that there is presently no commercially available technology with which to make the demanded reductions. Pending federal rules will ensure that the issue is dealt with on a national basis, since air currents do not respect state or national boundaries. Any real long-term solution, however, must be international in scope. That is a much more difficult problem.

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