For anyone that cherishes good health and values straight facts, the oft-cited statistics of 630,000 American babies born every year with elevated levels of mercury in their blood and potentially damaged brains, if true, ought to be mind-boggling. These American babies are said to have been poisoned before birth when their pregnant mothers consumed fish with trace levels of mercury, and after birth when they were breastfeeding.

The most disturbing aspect of this dangerous environmental mythmaking is that fish is known to be good not only for developing brains but also pregnant women. Scary news is turning women and children away from nutritious fish meals. [Editor's note: Fish has several apparent health benefits that easily outweigh any risks from mercury in fish; the American Heart Association, for example, has concluded that the benefits of eating fish far outweighs the risks for middle-aged men and post-menopausal women and suggests that people consume two servings of fish weekly given the proven benefits.]

In 2003, a study found that 8% of women ages 16-49 in a CDC nutrition and health survey during 1999-2000 had blood mercury levels above the so-called "safe" mercury reference dose established by the U.S. EPA. Since there are over 4 million births in the U.S. annually, the environmentalists and several government scientists were quick to conclude that at least 320,000 babies born in the U.S. each year are in harm's way because of "unsafe" mercury levels in their mothers' blood. Then, in a January 2004 conference presentation, a senior EPA scientist went further, suggesting that there may instead be about 630,000 American babies at risk of brain damage and learning disabilities because earlier estimates neglected to take into account that mercury concentration in cord blood is about twice that measured in body blood by the CDC survey.

In the latest survey of over 5,900 Japanese, 87% of the sample, including 74% of the women of childbearing age, had mercury concentrations above EPA's "safe" level. Another new survey found 56% of Inuit cord blood samples exceeded the EPA's safety standard. Logically, one must either conclude generations of Japanese and Inuits are "brain-damaged" victims suffering from severe and permanent learning deficits or that EPA's "safe" mercury dose is simply arbitrary and extreme.
There are other reasons why mercury alarmists' emotive cries are neither justified nor credible. For example, children in fourth and eighth grade in Hong Kong outperformed U.S. students on international math and science tests despite having mercury levels in their blood some ten times higher. Postpartum depression rates are known to be low in pregnant mothers eating a lot of fish in Japan, Singapore, Malaysia, Hong Kong, and Chile. The latest controlled trial of dietary supplementation with nutritious fish oils for school children of ages five to twelve in Durham, UK, also found significant improvements in reading, spelling, and behavior.

The "safe" level of mercury set by EPA is recognized to be the most stringent in the world and is known to be at least ten times higher than any actual levels of concern or harm established by other medical experts. No women in the CDC 1999-2000 survey had blood mercury above actual levels of harm, not by a very wide margin. Furthermore, while in the process of deciding upon a "safe" mercury exposure level in 2001, the EPA had already accounted for the difference in mercury concentrations in cord versus body blood.

Every concerned citizen must also be informed that the "safe" mercury level decided by the EPA was based on a controversial study that would be applicable only to someone who consumes whale meat and blubber with a high concentration not only of mercury but also a host of other toxic chemicals like PCBs. The chief physician of the Faroese Hospital System, Dr. Pal Weihe commented in a 2004 letter to the Boston Herald that:

The Faroese children are not exposed to [mercury] by eating fish. They are exposed to mercury by the traditional consumption of pilot whale meat. Fish normally consumed in the Faroes, e.g. cod and haddock, are low in mercury and do not, in my opinion, constitute any threat to the health of the Faroese children. On the contrary, the fish consumption most likely is beneficial to their health.

In sharp contrast, no adverse neurodevelopmental problems were found in a more appropriate study of infants and children in a population -- with consumption rates as high as twelve to fourteen meals per week -- that ate a wide variety of ocean fish as Americans do.

Indeed, numerous benefits have been reported, such as superior eyesight, higher child mental development scores, less hyperactivity, good heart and brain function, and improved intelligence at four years of age.

The warnings by Dr. Robert Goyer, chair of the 2000 U.S. National Research Council's Committee on the Toxicological Effects of Methylmercury, were largely ignored until now but deserve a more careful reading:

The offspring of those mothers are exposed to mercury levels that are not considered safe, and, therefore, the committee considered them to be "at risk." [However,] the number should not be interpreted as an estimate of the annual
number of cases of adverse neurodevelopmental effects. The committee does not believe it is possible to estimate a meaningful number of children that might be affected within the 'at risk' population.

The point is that the EPA's mercury safety factor is stringently derived to protect people on the grounds of extreme precautions, and one cannot simply argue that someone is being harmed by mercury when the exposure levels are above that hypothetical "safety" level. In other words, while mercury exposure at or below the EPA limit is unlikely to pose a risk given built-in safety factors, it is not accurate to say that absolutely any exposure above the EPA limit is likely to pose a risk.

There is perhaps even more "bad" news for the mercury scaremongers. The CDC has just recently released its 2001-2002 health survey results. Instead of showing 8% of the 1,709 women surveyed in 1999-2000 to be above EPA's "safe" mercury level, the latest CDC result reports only 4% of the 1,928 women surveyed in 2001-2002 to be "at risk." One can hardly find any media outlets rushing to report these important updates; instead, there was more hasty extrapolation, for example by Sen. Susan Collins, who said that "600,000-plus American children are born each year" at risk of "birth defects, including mental retardation and problems with motor skills." [1]

What about the children? The CDC survey actually carried out blood mercury measurements for young children ages one to five. The 1999-2000 survey documented seven out of 705 (or 1% of) children with blood mercury above the EPA's "safe" mercury dose, while the 2001-2002 survey found only four out of 872 (or 0.5% of) children above it. More importantly, even the highest mercury level measured in this four-year survey still has a safety cushion of more than 500% of the lowest exposure level of concern. Since EPA's "safe" mercury dose is far removed from levels where actual harm could occur, no U.S. children are being dangerously exposed to mercury that could lead to brain or developmental damage.

This article is a more in-depth look at issues raised in the piece "Eat More Fish!" which appeared in the August 15 Wall Street Journal. Willie Soon (who co-wrote that piece) is chief science researcher at the Center for Science and Public Policy. More information on the science of mercury and public health is available at http://www.scienceandpolicy.org [2].

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