

“Saddam Hussein has weapons of mass destruction.” “Global warming is not occurring.” “Mercury in vaccines is a proven health hazard.”

Legitimizing extreme points of view, without critical evaluation, is not only wrong, but can lead to flawed, and sometimes deadly, personal and policy decisions. The recent Milwaukee Journal Sentinel report, “Most flu shots contain mercury, but few know it,” aired such an alarmist viewpoint. The tag line implied that an influenza shot contains a “hefty and dangerous dose of mercury.” This is false.

Furthermore, a statement regarding the “growing number of doctors, scientists and citizen organizations saying mercury in flu shots can be linked to neurological disorders” is not substantiated and runs counter to current medical evidence.

Such significant content flaws beg for clarification. As a state and national leader on vaccine-related issues, let me suggest how future reports on this topic could be improved:

**(1) Make numbers understandable.** The “Fact Box” described the mercury content of a variety of substances using a mixture of parts per billion (ppb) and microgram amounts (mcg) of mercury, and thereby encouraged readers to equate influenza vaccines with hazardous waste. In reality, it is the *amount* of mercury that an individual is exposed to that is the pertinent factor. Using the published numbers, a more balanced article would have pointed out that the mercury content in one thimerosal-containing influenza shot is equivalent to drinking as little as 1.25 liters of “safe” drinking water or eating 1½ cans of chunk light tuna. Furthermore, a flu vaccine is a once-a-year event; contaminated food and water are continuous sources of exposure. Mercury is out there. It is in all of us. The source, however, is not vaccines.

**(2) Make chemistry understandable.** Two forms of mercury often are confused. Thimerosal, the preservative in a limited number of vaccines, contains *ethyl* mercury. Exposure warnings, however, are based on *methyl* mercury. There is a slight, but crucial difference between these two forms. Methyl mercury accumulates in animals, but ethyl mercury tends to be excreted. For this reason, predatory fish (such as tuna) have some of the highest levels of methyl mercury. Studies of humans receiving multiple doses of thimerosal-containing vaccines fail to show this accumulation.

**(3) Make sources of information understandable.** The article’s author, Ms. Rutledge, quoted Dr. Ayoub regarding use of influenza vaccine during pregnancy and listed his publication in the Journal of American Physicians and Surgeons. What the article failed to point out is that this journal is not included in the 5,146 medical journals listed by the National Library of Medicine. Moreover, the Association of American Physicians and Surgeons is best described as a small, fringe group of physicians dedicated to support the principles of free market in medical practice. This organization opposes mandatory vaccination programs and views the use of evidence-based medical practice as a threat to physician autonomy.

Respected medical organizations, on the other hand, have more credible positions on this topic. In a letter, dated April 3, 2006 and sent to all members of Congress, a broad-based coalition of 22 medical organizations, including the American Academy of Family Physicians, the American College of Preventive Medicine, the Infectious Disease Society of America, the Pediatric Infectious Disease Society, and the Society for Adolescent Medicine, stated their opposition to restricting access to vaccines containing thimerosal, because, among other effects, such efforts would “perpetuate false and misleading information that vaccines are not safe.”

As a physician in the modern era, I live with the luxury of rarely seeing a truly sick child with an infectious disease. To some extent, vaccines have become victims of their overwhelming effectiveness. We have simply lost touch with what were common scenarios not that long ago: children dying of measles, becoming disabled due to polio or suffering permanent neurological damage from *hemophilus influenzae* meningitis. But those terrible scenarios could recur if vaccination programs become substantially weakened.

Application of vaccines to widespread populations—starting with the Polio vaccine in 1955—has had profoundly positive effects on health in our city, our state, our nation, and around the world. Immunization continues as one of the most beneficial and cost-effective medical gifts to society. Information on effective and lifesaving medical interventions is always welcome in the media. Caution is urged, however, when the content may lead to false and misleading conclusions.

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