

Revisiting the Vaccine-Autism Debate

by M. Nathaniel Mead, MS

On February 12, 2009, the Associated Press released an article titled “Officials say 'bad science' links vaccines, autism.” The article, which was picked up by newspapers across the country, trumpeted the news that the U.S. Court of Claims found little if any evidence to support a connection between vaccine use and autism risk, and that overall the evidence was evidence “weak, contradictory and unpersuasive.” The ruling was in response to some 5,500 claims filed by families who were seeking compensation through the government’s Vaccine Injury Compensation Program.

In 1998, considerable media attention in the United States and Europe followed the publication of a controversial report on autism in the esteemed British medical journal, *The Lancet*. The report focused on a series of case studies that documented the emergence of autistic behaviors and intestinal problems, which in several cases closely followed vaccination for measles, mumps and rubella (MMR). *The Lancet’s* publication of this issue garnered considerable attention because of the fact that thimerosal, an antiseptic containing ethyl mercury, was being used as a preservative of vaccines distributed and administered worldwide.

In 1999, the United States and the European Union countries took major steps to reduce and even eliminate thimerosal from most vaccines. Nevertheless, all U.S. pregnant women, infants, and children (until 18 years old) are still advised to receive an annual influenza vaccination, of which more than 90% still contain thimerosal. In addition, thimerosal is still found in the hepatitis B vaccine.

Should we be concerned? As documented in the 12 March 2009 issue of the *American Journal of Perinatology*, “There are studies that point to a significant link between exposure to TCVs [thimerosal-containing vaccines] and neurodevelopmental delays.” Direct intramuscular injection of thimerosal results in the rapid release of mercury into the blood stream, and this mercury can eventually accumulate in the tissues of the brain. In animal experiments, vaccination was shown to result in autistic symptoms.

These adverse effects are really nothing new. Prior to the hubbub over vaccines and autism, there was a history of toxic effects associated with the use of thimerosal in topical medicines, such as contact lens solution, eye drops, and other products. Indeed, it was due to this history of documented toxic effects that the Food and Drug Administration instituted restrictions on the use of thimerosal in these medical products in the late 1990s.

What concerns many physicians and environmental medicine experts is that any mercury at all—whether from vaccines, the diet (including formula milk and mother’s milk, and most of all mother’s diet during pregnancy), or from the silver fillings used in dental work—can be a threat to the young brain. “The brain of an infant or young child is still undergoing many changes in the early years,” says physician John Pittman, who directs the Carolina Center for Integrative Medicine and was originally trained in pediatrics. “At this stage in life, the brain is uniquely vulnerable to the effects of even small amounts of mercury and other neurotoxins.”

Some evidence has begun to link thimerosal-containing vaccines to the onset of autistic behaviors. In 2001, researchers at the Institute of Medicine published an analysis of autism rates and mercury exposure and found an association between rising autism rates in California and mercury exposure in childhood vaccines.

Though the report was criticized because of poor research quality, it was followed by a much more rigorous report in August 2006, when researchers at The Institute for Chronic Illnesses, Inc, in Silver Spring, MD, published a meta-analysis of autism and other neurodevelopmental disorders following vaccines administered in the United States from 1994 through 2000. Pooling together data from many studies at once, the study concluded that there was a statistically significant association between the development of autism and early exposure to thimerosal-containing vaccines. Whether or not the concern over the mercury content of vaccines is justified, it would not seem to be very good policy to have a potentially harmful toxin packaged into something that's supposed to be safeguarding public health.

The same research team then reported in October 2007 *Journal of Toxicology and Environmental Health* that individuals with severe Autistic Spectrum Disorders (ASDs) had significantly increased levels of various indicators of mercury exposure in their urine. These indicators, called “porphyrins”, were much higher in people with severe ASDs compared to those with mild ASDs, whereas other urinary porphyrins—those not linked with mercury exposure—were similar in both groups. At the same time, the individuals with severe ASDs had much lower levels of glutathione and other factors that are associated with protection against mercury toxicity.

Pittman says the issue requires a more dynamic perspective, and that thimerosal may only be a problem when combined with other toxins as well as genetic and physiological factors, such as intestinal problems. “I don’t think anybody in any area of research believes there’s one single cause for autistic spectrum disorders,” he says. “When we treat autistic kids, we see the best outcomes when many factors are addressed at once, beginning with their digestive health and the elimination of intestinal infections.” Pittman notes that the mother’s mercury burden from her diet and from dental amalgams could also contribute to the higher mercury levels that are often seen in autistic children. Ridding the body of mercury and other toxins is most likely to be therapeutically successful in the context of this more comprehensive approach, he adds.

“The issue with vaccines isn’t that these children have so much more mercury in their systems, it’s that they are so much more unable to process the toxic metal and get it out of their body due to glutathione deficiencies,” Pittman says. “Even without mercury in the vaccines, I still see children who were fine one day and then the day after they get vaccinated, they quit talking or behaving normally, regressing by about six months.”

For more information on the integrative medical approach to autism, contact the Carolina Center for Integrative Medicine (919-571-4391).