



THE MERCURY-AUTISM CONNECTION:

Have the Vaccine Manufacturers Poisoned Our Children?

By



James L. Ferraro, Esq.

and L.H. Steven Savola, Esq.

See author bios on page 63

Mercury poisoning has afflicted mankind at least since Roman times. As depicted by the Mad Hatter in Louis Carroll's *Alice's Adventures in Wonderland*, persons in the felt hat industry in the 1800s who experienced prolonged exposure to fumes from the mercury nitrate used in the felting process often suffered from a variety of neurological and psychiatric disorders. Since then, high-dose poisoning episodes in Miamata, Japan, and Iraq caused numerous victims to suffer mental retardation, a condition resembling cerebral palsy and other severe adverse effects. The federal government has banned mercury additives in food, over-the-counter drugs, and even in paint and pesticides¹

Thimerosal, an antibacterial preservative, is composed of thiosalicylic acid and ethylmercury, an organic form of mercury. Despite the obvious dangers of mercury, thimerosal, which is 49.6 percent ethylmercury by weight, has been added to multi-dose vials of vaccines routinely administered to children for many years; and its use grew exponentially in the 1990s with the introduction of the HIB and Hepatitis B vaccines. Shockingly, until recently, little scientific work was performed on its potential toxicity after its introduction in the 1930s.² In fact, in a case filed in Texas,³ discovery obtained from Defendant Eli Lilly & Company shows that Lilly used questionable research in 1930 as the basis for its claim that thimerosal was harmless and maintained that position for the next 60 years despite receiving reports from independent researchers warning of its dangers. There is ample reason to believe that the thimerosal contained in these vaccines has resulted in or contributed to thousands of cases of autistic spectrum disorders (ASD), often referred to as autism, resulting in serious developmental problems in children. These disorders are usually incurable and permanent.

Epidemiological and animal studies have demonstrated that the developing nervous system is a sensitive target organ for low-dose exposure to methylmercury.⁴ Recent studies have shown that intermittent larger doses of mercury may pose more risk than smaller daily doses.⁵ Nonetheless, children today will receive

20 injections containing 30 constituent vaccines before they are 18 months old.⁶ An expert testified before Congress that following the introduction of the HIB and Hepatitis B vaccines in the early 1990s, a two-month-old child would be exposed through vaccines to at least 30 times the recommended daily maximum exposure to mercury set by the EPA.⁷ As Representative Dan Burton (R-Ind.), chairman of the Government Reform Committee, stated in 2000, "how is it that mercury is not safe for food additives and over-the-counter drug products, but...is considered safe in our vaccines...?"⁸

Small wonder then, that according to the National Institutes of Health, the rate of autism in the United States is now 1 in 500,⁹ a four-fold increase since the 1960's.¹⁰ And in recent testimony before Congress, Stephen Foote, the director of the Division of Neuroscience and Basic Behavioral Science of the National Institute of Mental Health, estimated the rate at 1 in 250.¹¹ Today, nearly half a million Americans suffer from autism. This disease has devastated untold numbers of families.

There is ample evidence linking mercury exposure to autism. For genetic and other reasons, certain children are more susceptible to mercury poisoning than others. The prevalence of thimerosal hypersensitivity ranges up to 18 percent and even higher.¹² The most noticeable symptoms of autism emerge mostly between 12 and 18 months, and "the manner in which symptoms emerge in many cases of autism is consistent with a multiple low-dose vaccinal exposure model of mercury poisoning."¹³ Retrospective case studies have demonstrated the presence of a "considerable" amount of mercury in autistic children.¹⁴

Further, the documented symptoms of mercury poisoning, such as those suffered by hatters in Britain in the 1800s, are very similar to ASD. These can include: Psychiatric problems, such as anxiety, depression, hyperactivity and social withdrawal, impaired mental function; Physical problems including hearing loss, speech deficits, gait impairment, jerking, seizures and tactile hypersensitivity.¹⁵

The government has been slow to investigate the vaccine-ASD link. Only in the last few years have federal agencies, joined by medical societies, begun to appreciate the existence of this connection and to take steps to correct the problem. An initial investigation by the Centers for Disease Control, using its Vaccine Safety Datalink project, found statistically significant associations between thimerosal and several neurodevelopmental disorders. Subsequent analysis of this data did not confirm all aspects of this association, however, and additional epidemiological studies are underway. In 1999, the FDA determined that some children had received cumulative amounts of ethylmercury that exceeded the EPA guidelines established for methylmercury. In July 1999, the American Academy of Pediatrics and the Public Health Service recommended elimination of thimerosal from vaccines.¹⁶ The American Academy of Family Physicians issued a similar statement.¹⁷

In response, the vaccine manufacturers claimed that the link between thimerosal and ASD was unproven, that thimerosal was the best available antibacterial preservative, and that eliminating it from vaccines would take time. At the Workshop on Thimerosal in Vaccines, held at the National Institutes of Health in August 1999, the manufacturers claimed that thimerosal-free vaccines would cost more.¹⁸

Nonetheless, within two years, vaccine manufacturers eliminated thimerosal from all routinely recommended pediatric vaccines in the United States, except for some trace amounts. Indeed, Merck's single-vial thimerosal-free Hepatitis B Vaccine was licensed within 60 days of the American Society of Pediatrics recommendation. Other manufacturers, including GlaxoSmithKline, Aventis Pasteur and Wyeth-Lederle, soon followed with thimerosal-free vaccines. The mercury load due to vaccines in the first six months of life has now been reduced from 187.5 micrograms to less than 3 micrograms.¹⁹ The ability of the vaccine manufacturers to quickly find alternatives

to thimerosal when pushed to do so raises significant questions about their failure to use such alternatives earlier. Did the vaccine manufacturers knowingly or carelessly risk our children's welfare because it was more profitable to use thimerosal?

More recently, the Institute of Medicine published an extensive report in 2001. The IOM's Immunization Safety Review Committee concluded that the hypothesized link between

“Thimerosal litigation, like many toxic tort matters, is complicated, and plaintiffs will have to overcome a number of major hurdles.”

thimerosal and ASD was biologically plausible.²⁰ The Committee concluded, however, that the existing evidence was “inadequate to either accept or reject a causal relationship between exposure to thimerosal from vaccines and the neurodevelopmental disorders of autism, ADHD, and speech or language delay.”²¹ This latter conclusion is questionable for a number of reasons.

First, the Committee, which relied in part upon information obtained from the CDC, was unaware of a confidential, unpublished report from the CDC finding a 2.48 times increased risk of autism in children exposed to more than 62.5 micrograms of thimerosal in the first three months of life.^{22, 23}

Second, the IOM's reliance on the distinction between the “extensive toxicological and epidemiological literature establish[ing] methylmercury, a close chemical relative, as a toxicant to the developing nervous system,” and the relative paucity of scientific literature regarding ethylmercury,²⁴ is undercut by stud-

ies that have concluded that methylmercury and ethylmercury are equally neurotoxic.²⁵

Lawyers across the country have begun to bring claims against the manufacturers of thimerosal and the vaccines containing thimerosal. None has yet gone to trial.

Here in Florida, we represent a large number of families whose children suffer from ASD as a result of thimerosal exposure from vaccinations. We have brought actions for personal injury based upon the manufacturers' strict liability, negligence and breach of implied warranty.

We have also joined electric utilities as defendants in these actions because their operation of coal-burning electric generating plants contributed to the amount of mercury inhaled and ingested by these children. Power companies have been sued for damages arising from mercury poisoning in other states as well, including Georgia and Louisiana. According

to the EPA, power plants account for one-third of the mercury emitted into the atmosphere; more than 40 tons annually.²⁶

Power plants in Pennsylvania, Texas and Ohio are the worst polluters, with Florida in 13th place.²⁷ Additionally, airborne mercury is transformed into methylmercury when it reaches our oceans, rivers and lakes, and accumulates in predator fish. The EPA, which only recently began to require coal-fired power plants to measure and report mercury emissions, estimates that seven million women and children regularly consume more mercury than it considers safe.²⁸

Additionally, claims are being filed in the United States Court of Federal Claims where children have developed ASD after being injected with the Measles, Mumps, Rubella Vaccine (MMR). This vaccine, which contains no thimerosal, also has been linked to autism. In 2001, the Institute of Medicine concluded that the “evidence favors rejection of a causal