

Submitted by
Al Smith,
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Deadly Immunity

When a study revealed that mercury in childhood vaccines may have caused autism in thousands of kids, the government rushed to conceal the data -- and to prevent parents from suing drug companies for their role in the epidemic.

by Robert F. Kennedy Jr.

In June 2000, a group of top government scientists and health officials gathered for a meeting at the isolated Simpsonwood conference center in Norcross, Ga. Convened by the Centers for Disease Control and Prevention, the meeting was held at this Methodist retreat center, nestled in wooded farmland next to the Chattahoochee River, to ensure complete secrecy. The agency had issued no public announcement of the session -- only private invitations to 52 attendees. There were high-level officials from the CDC and the Food and Drug Administration, the top vaccine specialist from the World Health Organization in Geneva, and representatives of every major vaccine manufacturer, including GlaxoSmithKline, Merck, Wyeth and Aventis Pasteur. All of the scientific data under discussion, CDC officials repeatedly reminded the participants, was strictly "embargoed." There would be no making photocopies of documents, no taking papers with them when they left.

The federal officials and industry representatives had assembled to discuss a disturbing new study that raised alarming questions about the safety of a host of common childhood vaccines administered to infants and young children. According to a CDC epidemiologist named Tom Verstraeten, who had analyzed the agency's massive database containing the medical records of 100,000 children, a mercury-based preservative in the vaccines -- thimerosal -- appeared to be responsible for a dramatic increase in autism and a host of other neurological disorders among children. "I was actually stunned by what I saw," Verstraeten told those assembled at Simpsonwood, citing the staggering number of earlier studies that indicate a link between thimerosal and speech delays, attention-deficit disorder, hyperactivity and autism. Since 1991, when the CDC and the FDA had recommended that three additional vaccines laced with the preservative be given to extremely young infants -- in one case, within hours of birth -- the estimated number of cases of autism had increased fifteenfold, from one in every 2,500 children to one in 166 children.

Even for scientists and doctors accustomed to confronting issues of life and death, the findings were frightening. "You can play with this all you want," Dr. Bill Weil, a consultant for the American Academy of Pediatrics, told the group. The results "are statistically significant." Dr. Richard Johnston, an immunologist and pediatrician from the University of Colorado whose grandson had been born early on the morning of the meeting's first day, was even more alarmed. "My gut feeling?" he said. "Forgive this personal comment -- I do not want my grandson to get a thimerosal-containing vaccine until we know better what is going on."

But instead of taking immediate steps to alert the public and rid the vaccine supply of thimerosal, the officials and executives at Simpsonwood spent most of the next two days discussing how to cover up the damaging data. According to transcripts obtained under the Freedom of Information Act, many at the meeting were concerned about how the damaging revelations about thimerosal would affect the vaccine industry's bottom line.

"We are in a bad position from the standpoint of defending any lawsuits," said Dr. Robert Brent, a pediatrician at the Alfred I. duPont Hospital for Children in Delaware. "This will be a resource to our very busy plaintiff attorneys in this country." Dr. Bob Chen, head of vaccine safety for the CDC, expressed relief that "given the sensitivity of the information, we have been able to keep it out of the hands of, let's say, less responsible hands." Dr. John Clements, vaccines advisor at the World Health Organization, declared flatly that the study "should not have been done at all" and warned that the results "will be taken by others and will be used in ways beyond the control of this group. The research results have to be handled."

In fact, the government has proved to be far more adept at handling the damage than at protecting children's health. The CDC paid the Institute of Medicine to conduct a new study to whitewash the risks of thimerosal, ordering researchers to "rule out" the chemical's link to autism. It withheld Verstraeten's findings, even though they had been slated for immediate publication, and told other scientists that his original data had been "lost" and could not be replicated. And to thwart the Freedom of Information Act, it handed its giant database of vaccine records over to a private company, declaring it off-limits to researchers. By the time Verstraeten finally published his study in 2003, he had gone to work for GlaxoSmithKline

and reworked his data to bury the link between thimerosal and autism.

Vaccine manufacturers had already begun to phase thimerosal out of injections given to American infants -- but they continued to sell off their mercury-based supplies of vaccines until last year. The CDC and FDA gave them a hand, buying up the tainted vaccines for export to developing countries and allowing drug companies to continue using the preservative in some American vaccines -- including several pediatric flu shots as well as tetanus boosters routinely given to 11-year-olds.

The drug companies are also getting help from powerful lawmakers in Washington. Senate Majority Leader Bill Frist, who has received \$873,000 in contributions from the pharmaceutical industry, has been working to immunize vaccine makers from liability in 4,200 lawsuits that have been filed by the parents of injured children. On five separate occasions, Frist has tried to seal all of the government's vaccine-related documents -- including the Simpsonwood transcripts -- and shield Eli Lilly, the developer of thimerosal, from subpoenas. In 2002, the day after Frist quietly slipped a rider known as the "Eli Lilly Protection Act" into a homeland security bill, the company contributed \$10,000 to his campaign and bought 5,000 copies of his book on bioterrorism. Congress repealed the measure in 2003 -- but earlier this year, Frist slipped another provision into an anti-terrorism bill that would deny compensation to children suffering from vaccine-related brain disorders. "The lawsuits are of such magnitude that they could put vaccine producers out of business and limit our capacity to deal with a biological attack by terrorists," says Andy Olsen, a legislative assistant to Frist.

Even many conservatives are shocked by the government's effort to cover up the dangers of thimerosal. Rep. Dan Burton, a Republican from Indiana, oversaw a three-year investigation of thimerosal after his grandson was diagnosed with autism. "Thimerosal used as a preservative in vaccines is directly related to the autism epidemic," his House Government Reform Committee concluded in its final report. "This epidemic in all probability may have been prevented or curtailed had the FDA not been asleep at the switch regarding a lack of safety data regarding injected thimerosal, a known neurotoxin." The FDA and other public-health agencies failed to act, the committee added, out of "institutional malfeasance for self protection" and "misplaced protectionism of the pharmaceutical industry."

The story of how government health agencies colluded with Big Pharma to hide the risks of thimerosal from the public is a chilling case study of institutional arrogance, power and greed. I was drawn into the controversy only reluctantly. As an attorney and environmentalist who has spent years working on issues of mercury toxicity, I frequently met mothers of autistic children who were absolutely convinced that their kids had been injured by vaccines. Privately, I was skeptical. I doubted that autism could be blamed on a single source, and I certainly understood the government's need to reassure parents that vaccinations are safe; the eradication of deadly childhood diseases depends on it. I tended to agree with skeptics like Rep. Henry Waxman, a Democrat from California, who criticized his colleagues on the House Government Reform Committee for leaping to conclusions about autism and vaccinations. "Why should we scare people about immunization," Waxman pointed out at one hearing, "until we know the facts?"

It was only after reading the Simpsonwood transcripts, studying the leading scientific research and talking with many of the nation's preeminent authorities on mercury that I became convinced that the link between thimerosal and the epidemic of childhood neurological disorders is real. Five of my own children are members of the Thimerosal Generation -- those born between 1989 and 2003 -- who received heavy doses of mercury from vaccines. "The elementary grades are overwhelmed with children who have symptoms of neurological or immune-system damage," Patti White, a school nurse, told the House Government Reform Committee in 1999. "Vaccines are supposed to be making us healthier; however, in 25 years of nursing I have never seen so many damaged, sick kids. Something very, very wrong is happening to our children." More than 500,000 kids currently suffer from autism, and pediatricians diagnose more than 40,000 new cases every year. The disease was unknown until 1943, when it was identified and diagnosed among 11 children born in the months after thimerosal was first added to baby vaccines in 1931.

Some skeptics dispute that the rise in autism is caused by thimerosal-tainted vaccinations. They argue that the increase is a result of better diagnosis -- a theory that seems questionable at best, given that most of the new cases of autism are clustered within a single generation of children. "If the epidemic is truly an artifact of poor diagnosis," scoffs Dr. Boyd Haley, one of the world's authorities on mercury toxicity, "then where are all the 20-year-old autistics?" Other researchers point out that Americans are exposed to a greater cumulative "load" of mercury than ever before, from contaminated fish to dental fillings, and suggest that thimerosal in vaccines may be only part of a much larger problem. It's a concern that certainly deserves far more attention than it has received -- but it overlooks the fact that the mercury concentrations in vaccines dwarf other sources of exposure to our children.

What is most striking is the lengths to which many of the leading detectives have gone to ignore -- and cover up -- the evidence against thimerosal. From the very beginning, the scientific case against the mercury additive has been overwhelming. The preservative, which is used to stem fungi and bacterial growth in vaccines, contains ethylmercury, a potent neurotoxin. Truckloads of studies have shown that mercury tends to accumulate in the brains of primates and other animals after they are injected with vaccines -- and that the developing brains of infants are particularly susceptible. In

1977, a Russian study found that adults exposed to much lower concentrations of ethylmercury than those given to American children still suffered brain damage years later. Russia banned thimerosal from children's vaccines 20 years ago, and Denmark, Austria, Japan, Great Britain and all the Scandinavian countries have since followed suit.

"You couldn't even construct a study that shows thimerosal is safe," says Haley, who heads the chemistry department at the University of Kentucky. "It's just too darn toxic. If you inject thimerosal into an animal, its brain will sicken. If you apply it to living tissue, the cells die. If you put it in a petri dish, the culture dies. Knowing these things, it would be shocking if one could inject it into an infant without causing damage."

Internal documents reveal that Eli Lilly, which first developed thimerosal, knew from the start that its product could cause damage -- and even death -- in both animals and humans. In 1930, the company tested thimerosal by administering it to 22 patients with terminal meningitis, all of whom died within weeks of being injected -- a fact Lilly didn't bother to report in its study declaring thimerosal safe. In 1935, researchers at another vaccine manufacturer, Pittman-Moore, warned Lilly that its claims about thimerosal's safety "did not check with ours." Half the dogs Pittman injected with thimerosal-based vaccines became sick, leading researchers there to declare the preservative "unsatisfactory as a serum intended for use on dogs."

In the decades that followed, the evidence against thimerosal continued to mount. During the Second World War, when the Department of Defense used the preservative in vaccines on soldiers, it required Lilly to label it "poison." In 1967, a study in *Applied Microbiology* found that thimerosal killed mice when added to injected vaccines. Four years later, Lilly's own studies discerned that thimerosal was "toxic to tissue cells" in concentrations as low as one part per million -- 100 times weaker than the concentration in a typical vaccine. Even so, the company continued to promote thimerosal as "nontoxic" and also incorporated it into topical disinfectants. In 1977, 10 babies at a Toronto hospital died when an antiseptic preserved with thimerosal was dabbed onto their umbilical cords.

In 1982, the FDA proposed a ban on over-the-counter products that contained thimerosal, and in 1991 the agency considered banning it from animal vaccines. But tragically, that same year, the CDC recommended that infants be injected with a series of mercury-laced vaccines. Newborns would be vaccinated for hepatitis B within 24 hours of birth, and 2-month-old infants would be immunized for haemophilus influenzae B and diphtheria-tetanus-pertussis.

The drug industry knew the additional vaccines posed a danger. The same year that the CDC approved the new vaccines, Dr. Maurice Hilleman, one of the fathers of Merck's vaccine programs, warned the company that 6-month-olds who were administered the shots would suffer dangerous exposure to mercury. He recommended that thimerosal be discontinued, "especially when used on infants and children," noting that the industry knew of nontoxic alternatives. "The best way to go," he added, "is to switch to dispensing the actual vaccines without adding preservatives."

For Merck and other drug companies, however, the obstacle was money. Thimerosal enables the pharmaceutical industry to package vaccines in vials that contain multiple doses, which require additional protection because they are more easily contaminated by multiple needle entries. The larger vials cost half as much to produce as smaller, single-dose vials, making it cheaper for international agencies to distribute them to impoverished regions at risk of epidemics. Faced with this "cost consideration," Merck ignored Hilleman's warnings, and government officials continued to push more and more thimerosal-based vaccines for children. Before 1989, American preschoolers received only three vaccinations -- for polio, diphtheria-tetanus-pertussis and measles-mumps-rubella. A decade later, thanks to federal recommendations, children were receiving a total of 22 immunizations by the time they reached first grade.

As the number of vaccines increased, the rate of autism among children exploded. During the 1990s, 40 million children were injected with thimerosal-based vaccines, receiving unprecedented levels of mercury during a period critical for brain development. Despite the well-documented dangers of thimerosal, it appears that no one bothered to add up the cumulative dose of mercury that children would receive from the mandated vaccines. "What took the FDA so long to do the calculations?" Peter Patriarca, director of viral products for the agency, asked in an e-mail to the CDC in 1999. "Why didn't CDC and the advisory bodies do these calculations when they rapidly expanded the childhood immunization schedule?"

But by that time, the damage was done. Infants who received all their vaccines, plus boosters, by the age of 6 months were being injected with levels of ethylmercury 187 times greater than the EPA's limit for daily exposure to methylmercury, a related neurotoxin. Although the vaccine industry insists that ethylmercury poses little danger because it breaks down rapidly and is removed by the body, several studies -- including one published in April by the National Institutes of Health -- suggest that ethylmercury is actually more toxic to developing brains and stays in the brain longer than methylmercury.

Officials responsible for childhood immunizations insist that the additional vaccines were necessary to protect infants from

disease and that thimerosal is still essential in developing nations, which, they often claim, cannot afford the single-dose vials that don't require a preservative. Dr. Paul Offit, one of CDC's top vaccine advisors, told me, "I think if we really have an influenza pandemic -- and certainly we will in the next 20 years, because we always do -- there's no way on God's earth that we immunize 280 million people with single-dose vials. There has to be multidose vials."

But while public-health officials may have been well-intentioned, many of those on the CDC advisory committee who backed the additional vaccines had close ties to the industry. Dr. Sam Katz, the committee's chair, was a paid consultant for most of the major vaccine makers and shares a patent on a measles vaccine with Merck, which also manufactures the hepatitis B vaccine. Dr. Neal Halsey, another committee member, worked as a researcher for the vaccine companies and received honoraria from Abbott Labs for his research on the hepatitis B vaccine.

Indeed, in the tight circle of scientists who work on vaccines, such conflicts of interest are common. Rep. Burton says that the CDC "routinely allows scientists with blatant conflicts of interest to serve on intellectual advisory committees that make recommendations on new vaccines," even though they have "interests in the products and companies for which they are supposed to be providing unbiased oversight." The House Government Reform Committee discovered that four of the eight CDC advisors who approved guidelines for a rotavirus vaccine laced with thimerosal "had financial ties to the pharmaceutical companies that were developing different versions of the vaccine."

Offit, who shares a patent on the vaccine, acknowledged to me that he "would make money" if his vote to approve it eventually leads to a marketable product. But he dismissed my suggestion that a scientist's direct financial stake in CDC approval might bias his judgment. "It provides no conflict for me," he insists. "I have simply been informed by the process, not corrupted by it. When I sat around that table, my sole intent was trying to make recommendations that best benefited the children in this country. It's offensive to say that physicians and public-health people are in the pocket of industry and thus are making decisions that they know are unsafe for children. It's just not the way it works."

Other vaccine scientists and regulators gave me similar assurances. Like Offit, they view themselves as enlightened guardians of children's health, proud of their "partnerships" with pharmaceutical companies, immune to the seductions of personal profit, besieged by irrational activists whose anti-vaccine campaigns are endangering children's health. They are often resentful of questioning. "Science," says Offit, "is best left to scientists."

Still, some government officials were alarmed by the apparent conflicts of interest. In his e-mail to CDC administrators in 1999, Paul Patriarca of the FDA blasted federal regulators for failing to adequately scrutinize the danger posed by the added baby vaccines. "I'm not sure there will be an easy way out of the potential perception that the FDA, CDC and immunization-policy bodies may have been asleep at the switch re: thimerosal until now," Patriarca wrote. The close ties between regulatory officials and the pharmaceutical industry, he added, "will also raise questions about various advisory bodies regarding aggressive recommendations for use" of thimerosal in child vaccines.

If federal regulators and government scientists failed to grasp the potential risks of thimerosal over the years, no one could claim ignorance after the secret meeting at Simpsonwood. But rather than conduct more studies to test the link to autism and other forms of brain damage, the CDC placed politics over science. The agency turned its database on childhood vaccines -- which had been developed largely at taxpayer expense -- over to a private agency, America's Health Insurance Plans, ensuring that it could not be used for additional research. It also instructed the Institute of Medicine, an advisory organization that is part of the National Academy of Sciences, to produce a study debunking the link between thimerosal and brain disorders. The CDC "wants us to declare, well, that these things are pretty safe," Dr. Marie McCormick, who chaired the IOM's Immunization Safety Review Committee, told her fellow researchers when they first met in January 2001. "We are not ever going to come down that [autism] is a true side effect" of thimerosal exposure. According to transcripts of the meeting, the committee's chief staffer, Kathleen Stratton, predicted that the IOM would conclude that the evidence was "inadequate to accept or reject a causal relation" between thimerosal and autism. That, she added, was the result "Walt wants" -- a reference to Dr. Walter Orenstein, director of the National Immunization Program for the CDC.

For those who had devoted their lives to promoting vaccination, the revelations about thimerosal threatened to undermine everything they had worked for. "We've got a dragon by the tail here," said Dr. Michael Kaback, another committee member. "The more negative that [our] presentation is, the less likely people are to use vaccination, immunization -- and we know what the results of that will be. We are kind of caught in a trap. How we work our way out of the trap, I think is the charge."

Even in public, federal officials made it clear that their primary goal in studying thimerosal was to dispel doubts about vaccines. "Four current studies are taking place to rule out the proposed link between autism and thimerosal," Dr. Gordon Douglas, then-director of strategic planning for vaccine research at the National Institutes of Health, assured a Princeton University gathering in May 2001. "In order to undo the harmful effects of research claiming to link the [measles] vaccine to an elevated risk of autism, we need to conduct and publicize additional studies to assure parents of safety." Douglas

formerly served as president of vaccinations for Merck, where he ignored warnings about thimerosal's risks.

In May of last year, the Institute of Medicine issued its final report. Its conclusion: There is no proven link between autism and thimerosal in vaccines. Rather than reviewing the large body of literature describing the toxicity of thimerosal, the report relied on four disastrously flawed epidemiological studies examining European countries, where children received much smaller doses of thimerosal than American kids. It also cited a new version of the Verstraeten study, published in the journal *Pediatrics*, that had been reworked to reduce the link between thimerosal and autism. The new study included children too young to have been diagnosed with autism and overlooked others who showed signs of the disease. The IOM declared the case closed and -- in a startling position for a scientific body -- recommended that no further research be conducted.

The report may have satisfied the CDC, but it convinced no one. Rep. David Weldon, a Republican physician from Florida who serves on the House Government Reform Committee, attacked the Institute of Medicine, saying it relied on a handful of studies that were "fatally flawed" by "poor design" and failed to represent "all the available scientific and medical research." CDC officials are not interested in an honest search for the truth, Weldon told me, because "an association between vaccines and autism would force them to admit that their policies irreparably damaged thousands of children. Who would want to make that conclusion about themselves?"

Under pressure from Congress, parents and a few of its own panel members, the Institute of Medicine reluctantly convened a second panel to review the findings of the first. In February, the new panel, composed of different scientists, criticized the earlier panel for its lack of transparency and urged the CDC to make its vaccine database available to the public.

So far, though, only two scientists have managed to gain access. Dr. Mark Geier, president of the Genetics Center of America, and his son, David, spent a year battling to obtain the medical records from the CDC. Since August 2002, when members of Congress pressured the agency to turn over the data, the Geiers have completed six studies that demonstrate a powerful correlation between thimerosal and neurological damage in children. One study, which compares the cumulative dose of mercury received by children born between 1981 and 1985 with those born between 1990 and 1996, found a "very significant relationship" between autism and vaccines. Another study of educational performance found that kids who received higher doses of thimerosal in vaccines were nearly three times as likely to be diagnosed with autism and more than three times as likely to suffer from speech disorders and mental retardation. Another soon-to-be-published study shows that autism rates are in decline following the recent elimination of thimerosal from most vaccines.

As the federal government worked to prevent scientists from studying vaccines, others have stepped in to study the link to autism. In April, reporter Dan Olmsted of UPI undertook one of the more interesting studies himself. Searching for children who had not been exposed to mercury in vaccines -- the kind of population that scientists typically use as a "control" in experiments -- Olmsted scoured the Amish of Lancaster County, Penn., who refuse to immunize their infants. Given the national rate of autism, Olmsted calculated that there should be 130 autistics among the Amish. He found only four. One had been exposed to high levels of mercury from a power plant. The other three -- including one child adopted from outside the Amish community -- had received their vaccines.

At the state level, many officials have also conducted in-depth reviews of thimerosal. While the Institute of Medicine was busy whitewashing the risks, the Iowa Legislature was carefully combing through all of the available scientific and biological data. "After three years of review, I became convinced there was sufficient credible research to show a link between mercury and the increased incidences in autism," says state Sen. Ken Veenstra, a Republican who oversaw the investigation. "The fact that Iowa's 700 percent increase in autism began in the 1990s, right after more and more vaccines were added to the children's vaccine schedules, is solid evidence alone." Last year, Iowa became the first state to ban mercury in vaccines, followed by California. Similar bans are now under consideration in 32 other states.

But instead of following suit, the FDA continues to allow manufacturers to include thimerosal in scores of over-the-counter medications as well as steroids and injected collagen. Even more alarming, the government continues to ship vaccines preserved with thimerosal to developing countries -- some of which are now experiencing a sudden explosion in autism rates. In China, where the disease was virtually unknown prior to the introduction of thimerosal by U.S. drug manufacturers in 1999, news reports indicate that there are now more than 1.8 million autistics. Although reliable numbers are hard to come by, autistic disorders also appear to be soaring in India, Argentina, Nicaragua and other developing countries that are now using thimerosal-laced vaccines. The World Health Organization continues to insist thimerosal is safe, but it promises to keep the possibility that it is linked to neurological disorders "under review."

I devoted time to study this issue because I believe that this is a moral crisis that must be addressed. If, as the evidence suggests, our public-health authorities knowingly allowed the pharmaceutical industry to poison an entire generation of American children, their actions arguably constitute one of the biggest scandals in the annals of American medicine. "The CDC is guilty of incompetence and gross negligence," says Mark Blaxill, vice president of Safe Minds, a nonprofit

organization concerned about the role of mercury in medicines. "The damage caused by vaccine exposure is massive. It's bigger than asbestos, bigger than tobacco, bigger than anything you've ever seen." It's hard to calculate the damage to our country -- and to the international efforts to eradicate epidemic diseases -- if Third World nations come to believe that America's most heralded foreign-aid initiative is poisoning their children. It's not difficult to predict how this scenario will be interpreted by America's enemies abroad. The scientists and researchers -- many of them sincere, even idealistic -- who are participating in efforts to hide the science on thimerosal claim that they are trying to advance the lofty goal of protecting children in developing nations from disease pandemics. They are badly misguided. Their failure to come clean on thimerosal will come back horribly to haunt our country and the world's poorest populations.

Robert F. Kennedy Jr. is senior attorney for the Natural Resources Defense Council, chief prosecuting attorney for Riverkeeper and president of Waterkeeper Alliance. He is the co-author of "[The Riverkeepers](#)."

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Submitted by Al Smith,
MTLA 439-3124

Autism and vaccines: making a connection
By LARRY ANDERSON

Since 1991, the estimated number of cases of autism has increased fifteen fold, from one in every 2,500 children to one in 166 children.

The dramatic increase was first raised in government circles at a private meeting convened by the Centers for Disease Control and Prevention and the Food and Drug Administration in June 2000. Attending were corporate vaccine makers, excluded were members of the public.

A CDC epidemiologist analyzed its massive database — medical records of 100,000 children. He concluded a mercury-based preservative in vaccines, thimerosal, appeared to be responsible for the dramatic increase among children with autism and other neurological disorders such as speech delays, attention-deficit disorder, and hyperactivity.

Thimerosal is used as a preservative to stem fungal and bacterial growth in vaccines. It contains ethylmercury, a potent neurotoxin. The National Institute of Occupational Safety and Health labels Thimerosal under its "very toxic criteria." NIOSH warns that thimerosal should be "away from food, drink, and animal feeding stuffs." After contact with skin, wash immediately with plenty of water... Yet, it was allowed as a preservative in vaccines.

Ely Lilly first developed thimerosal in 1930. Its own studies showed that thimerosal could cause damage, and death, in both animals and humans. Yet, Lilly failed to report these results when it declared thimerosal safe. In 1935 another vaccine manufacturer, Pittman-Moore, warned Lilly that its claims about thimerosal's safety "did not check with ours."

Since the 1930s the evidence against thimerosal continued to mount. In 1967, a study published in the journal, Applied Microbiology, found that thimerosal killed mice when added to injected vaccines. In 1971, Lilly's own studies discerned that thimerosal was "toxic to tissue cells" in concentrations as low as one part per million, 100 times weaker than the concentration in a typical vaccine. Nevertheless, the company continued to claim thimerosal is "nontoxic."

Other countries recognized the toxic nature of thimerosal. Twenty years ago Russia banned thimerosal from its vaccines; and thereafter, Denmark, Japan, and Great Britain, among others, followed suit.

Government policies have a lot to do with children's increased exposure to thimerosal. Before 1989, American preschoolers only received three vaccines — polio, diphtheria-tetanus-pertussis and measles-mumps-rubella.

In 1991, the CDC recommended that newborns and infants be vaccinated for diphtheria-tetanus-pertussis. A decade later, children were receiving a total of 22 containing thimerosal by the time they reached first grade — getting ethylmercury times the EPA limit for daily exposure to methylmercury, a related neurotoxin.

The government never bothered to measure the cumulative dose of thimerosal that children would receive from the newly mandated vaccines. The director of viral prion diseases at the CDC asked in an e-mail, "Why didn't CDC and these advisory bodies do these rapidly expanded the childhood immunization schedule?"

submitted by Al Smith, MTHA



If the federal government ignored the risks of thimerosal over the years, it certainly could not claim ignorance after its secret meeting in 2000. But, instead of discussing immediate steps to alert the public and to rid the vaccine supply of thimerosal, transcripts of the meeting obtained under the Freedom of Information Act (FOIA) show that most of the time at the conference was devoted to discussing how to cover up the damaging data. At the meeting, the head of vaccine safety for the CDC said "the research results have to be handled."

The government has certainly "handled" these research results. To thwart FOIA requests, the CDC handed over the database of vaccine records to a private company, declaring it off limits to researchers.

Studies were conducted to whitewash the risks of thimerosal — researchers were directed to rule out thimerosal's link to autism. Vaccine manufacturers phased thimerosal out of vaccines given to American infants by 2005. The government bought the thimerosal-laced vaccines — only to export them to developing countries.

The pharmaceutical industry has powerful members of Congress to protect it from accountability and responsibility for using thimerosal in vaccines. Sen. Bill Frist has received \$873,000 in contributions from the industry, and he has been working to shield companies from liability.

On five occasions, Frist tried to seal all of the government's vaccine-related documents, including the transcripts of the 2000 meeting. He tried to shield Lilly from subpoenas regarding thimerosal. In 2002, he quietly slipped into a homeland security bill a measure to give Lilly immunity from liability for thimerosal. The day after Frist slipped this measure into the bill, Lilly contributed \$10,000 to his campaign and bought 5,000 copies of his bioterrorism book.

Congress repealed the measure in 2003. Nevertheless, Frist continues to work for the drug industry. Late in the night of Dec. 18, 2005, Frist slipped into a "must pass" Defense Appropriations bill a measure giving drug companies immunity from liability for putting dangerous drugs and vaccines on the market — after committee members were assured that it did not contain this provision.

Frist wants to prohibit families with autistic children from holding drug companies accountable for placing thimerosal in vaccines, even though these drug companies knew how toxic thimerosal is to human tissue.

Who will be responsible for the cost of this health care crisis imposed on us by the drug industry? If Frist has his way — no accountability or responsibility for the drug industry — it will be deceived and devastated families, and the American taxpayer.

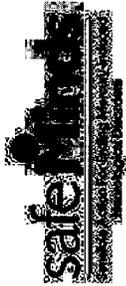
For more information parents can contact SafeMinds at 404-934-0777 or www.safeminds.org.

Great Falls attorney Larry Anderson is immediate past president of the Montana Trial Lawyers Association. Originally Published, September 13, 2006, Great Falls Tribune.

Submitted by

Know the Facts

- One in every six women of childbearing age already has blood levels of mercury high enough to cause harm to her unborn children from environmental exposure.
- It is inconsistent and unwise to counsel pregnant women to avoid seafood which contains mercury while recommending vaccines which contain mercury.
- Mercury rapidly crosses the placenta and into the fetus where the fetus actually accumulates mercury at a much higher rate than the mother and typically has blood levels 70% higher than those found in the mother at the time of birth.
- Study after study has provided irrefutable evidence that ethylmercury compounds such as thimerosal enter into the fetal brain and interrupt critical stages of development.
- Techniques such as avoiding those with flu-like illnesses and good hand washing techniques can prevent many cases of the flu.



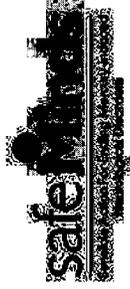
About SafeMinds

The Coalition for SafeMinds (Sensible Action for Ending Mercury-Induced Neurological Disorders) is a private nonprofit organization founded to investigate and raise awareness of the risks to infants and children of exposure to mercury from medical products, including thimerosal in vaccines.

Since its inception in 2000, SafeMinds has sponsored over one half million dollars in research related specifically to mercury and adverse neurological outcomes, including autism. This level of financial commitment establishes SafeMinds as the largest private non-profit organization funding mercury and autism related research. For more information please visit www.safeminds.org.

SafeMinds

254 Trickum Creek Road
Tyrone, GA 30290
Phone: (404) 934-0777
www.safeminds.org



Flu Vaccines

What You Need to Know



You want to do everything right for your child . . .

You would never knowingly allow someone to inject a neurotoxin into your infant.

Before getting a flu shot, you need to know this:

MERCURY is a neurotoxin.

Submitted by Al Smith, MTLA, 439-31211, 1/26/07 SB236

SafeMinds Alert: Flu Vaccines What You Need to Know

In March 2001, the Food & Drug Administration (FDA) issued a statement warning pregnant women and young children not to eat fish containing high levels of mercury because it causes neurological problems in children. Yet, the Centers for Disease Control and Prevention (CDC) now recommends that these same women and young children (ages 6 to 24 months) should get flu shots.

Despite what you may have heard, flu shots still contain mercury in the form of the preservative thimerosal. In fact, some flu shots contain more mercury than the EPA recommended safe level for seafood.

SafeMinds is deeply concerned that the risks of mercury-containing flu shots outweigh the benefits for pregnant women, infants and children. Our belief is based on a large-scale scientific study in approximately 50,000 pregnant women and their infants over five flu seasons that found no difference in the risk for developing flu-like illness among those who received the flu vaccine during pregnancy and those who did not receive the vaccine. Reviews in the medical journal *The Lancet* found a lack of health benefit of influenza vaccine for children under 2 and significantly increased rates of adverse events in children given the influenza vaccine.

In addition, a recent NIH-funded study showed that the type of mercury found in flu shots crosses into the brain of infant primates and results in appreciable levels of mercury being trapped in the brain. Mercury is highly toxic to the brain and can interrupt critical stages of brain development.

What Should You Do?

If You are Pregnant or Have Small Children . . .

- **Look at the evidence** and decide if you consider the influenza virus a threat to your family.
- If you decide to vaccinate, **demand mercury-free flu shots** for yourself and your children.
- **Do not combine** the flu vaccine with other vaccines.
- If you are not able to get mercury-free flu vaccines, **reconsider your choice.**

What is Thimerosal?

Thimerosal is a mercury-based preservative developed in the 1930s that has been used in as many as 50 vaccines. In the 1982 Federal Register, an expert panel at the FDA reviewed thimerosal and found that it was toxic, caused cell death and called for its removal in over the counter products.

In 1999, the FDA stated that mercury exposure from vaccines exceeded Federal Safety Guidelines. Government officials admitted they were "asleep at the switch" when they failed to add up the cumulative exposure levels when new vaccines were added to the early infant vaccination schedule in the early 1990's.

Thimerosal-Free or Reduced Thimerosal Influenza Vaccines

You can request thimerosal-free vaccines from your healthcare provider. SafeMinds recommends contacting your health care provider well in advance to ask specifically which brand of vaccine the office ordered, and in which formulation.

The following products are available for the 2006-2007 influenza season. Make sure any vaccine you receive is the mercury-free or reduced mercury version:

Fluzone by Sanofi Pasteur: Available in three forms: a 10-dose vial that contains thimerosal; single dose vials without thimerosal; and pre-filled syringes without thimerosal.

Fluvirin by Chiron: Available for ages 4 years and older in two forms: a 10-dose vial that contains thimerosal and a single-dose prefilled syringe that contains reduced amounts.

Fluviral by GlaxoSmithKline (license pending): Only available with full-dose thimerosal.

Fluarix by GlaxoSmithKline: Available for adults 18 years and older with reduced mercury content.

FluMist by MedImmune: Available for ages 5 to 49 in a single-dose nasal sprayer. Contains no thimerosal.



To the Editor:

On behalf of SafeMinds, the largest non-profit organization supporting research into mercury and neurological outcomes, we applaud the authors for investigating thimerosal-containing vaccines (TCVs). We agree that, "inaccurate information has been promulgated to the general population and clinicians alike." Unfortunately, the article contains errors which are addressed in this correspondence and have been grouped into the following categories: effectiveness and safety, comparative toxicity, exposure guidelines, past and current exposures, and Institute of Medicine (IOM) concerns. (Our original unabridged response with full citations is available at www.safeminds.org.)

Thimerosal Effectiveness and Safety. The authors erroneously stated, "thimerosal kills bacteria and effectively prevents bacterial contamination" and "before thimerosal was introduced as a vaccine preservative, data were available providing evidence that it is both safe and effective." A 1975 FDA panel reviewed evidence dating back to 1928 and issued reports in 1980 and 1982 concluding, "thimerosal was no better than water in protecting mice from potential fatal streptococcal infections."¹ In 1948, it was found to be ineffective as a "disinfectant, germicide and antiseptic."² In 1981, its use in TCVs resulted in clusters of *Group A streptococcus* infections.³ In 2004, Chiron, the manufacturer of Fluvirin, a TCV, was forced to close one of its plants because it was contaminated with *Serratia marcescens*.⁴ Moreover, because "no clinical studies were found that formally evaluated the safety of thimerosal prior to its initial marketing", the FDA nominated thimerosal for evaluation by the National Toxicology Program.⁵ Demonstrating FDA concerns regarding a lack of safety data, a 1935 study found that thimerosal was "35.3 times more toxic for embryonic chick heart tissue than for *Staphylococcus aureus*".⁶

Comparative Toxicities. The authors also err in stating, "data indicate that methylmercury is more toxic than ethylmercury." Only one relevant side-by-side comparison of ethyl and methylmercury exists and ethylmercury was found to be more harmful. The 2005 NIH-funded study compared brain mercury levels in infant primates exposed to equal parts of: 1) injected thimerosal and 2) ingested methylmercury.⁷ The thimerosal metabolite, ethylmercury, rapidly converted to inorganic mercury (the toxic form). Ethylmercury-exposed primate brains contained twice as much inorganic mercury compared to methylmercury-exposed primates. Microgliosis and neuroinflammation was observed in primate brain tissue⁸ and in tissue of autistic brains.⁹ Additionally, thimerosal has more potent immune-altering properties than methylmercury.¹⁰

Mercury Exposure Guidelines. The Environmental Protection Agency (EPA) guideline does not "recommend that no more than of 0.1 mcg/kg of methylmercury be injected daily in special population groups including neonates, infants, children, and pregnant women." The EPA guideline suggests that, on average, it is probably safe for an *adult* to *ingest* up to 0.1 mcg/kg/day of methylmercury in food. The 10-fold safety factor in the guideline is because of uncertainty in the assumptions about inter-individual variability and fetal brain sensitivity.¹¹ A few large bolus exposures administered to infants has a different physiological effect than many small doses administered daily. Intermittent large exposures of mercury, a cumulative neurotoxin, are more likely to put children at risk for deficits in language, attention, and

254 Trickum Creek Road • Tyrone, GA 30290 • 404 932-1786
sbernard@safeminds.org • www.safeminds.org

Submitted by Al Smith, M.T.A., 439-3124, 1/26/07
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memory.¹² There are no guidelines issued by any entity that identify a safe bolus dose of mercury by any route of administration for a fetus, neonate, infant or child.

Past and Current Mercury Exposures. At least two studies documented blood mercury levels in infants following administration of TCVs that exceed the CDC adult toxic exposure limits of >10mcg/L (50 nmol/L).¹³ A mercury blood level of 20.55 nmol/L was observed *five days* after a 37.5 mcg exposure from two TCVs.¹⁴ Another study observed a level of 23.6 mcg/L after a 12.5 mcg exposure from one TCV.¹⁵ Infants may have routinely experienced peak blood mercury levels of 48.3 nmol/L;¹⁶ well above the presumed safety threshold of 29.0 nmol/L. Throughout 1990's and beyond, most infants had 62.5 mcg exposures from three TCVs at the two-month visit.

Depending on the manufacturer, the influenza TCV given to infants and pregnant women contains either 2,000 or 50,000 parts per billion (ppb) of mercury. EPA requires liquid waste exceeding 250 ppb to be sent to a special hazardous waste landfill. Drinking water cannot exceed 2 ppb.

Institute of Medicine. In 2001, the IOM concluded that *the evidence was inadequate to accept or reject a causal relationship between thimerosal exposure from childhood vaccines and neurodevelopmental disorders* and found the *hypothesis to be biologically plausible*. It also recommended using thimerosal-free vaccines.¹⁷

In 2004, the IOM panel focused solely on autism, leaving the 2001 conclusions on neurodevelopmental effects intact. The 2004 autism review ignored pre-publication data from clinical studies and instead relied on published epidemiological studies; in particular, the Hviid Denmark study.¹⁸ Many methodological flaws have been cited in that Denmark and the U.S. had different vaccine schedules and thimerosal exposure levels, and many children in one age cohort were "lost" between observation periods impairing use of trend analysis techniques and introducing bias.¹⁹ The study also claimed that Danish autism rates *increased* after TCVs were discontinued in 1992 but simultaneously, official autism counts shifted from only including hospital cases to also including outpatient cases. The authors conceded that the association may be spurious. A study of this caliber is unsuited for formulating national public health policy or sufficient to exonerate a potent neurotoxin.

* * *

Much of the rest of the developed world has discontinued use of TCVs. Russia banned it 20 years ago and now, Denmark, Sweden, Norway, Austria, Netherlands, Japan and the United Kingdom have followed suit. Earlier this year, the European Parliament passed a resolution calling for an investigation of the health impact of ethylmercury in vaccines "with a view to restriction of such use and a total ban." In the U.S., a 1999 Joint Statement issued by leading health organizations stated, "thimerosal-containing vaccines should be removed as soon as possible." Seven years later, thimerosal is still in U.S. vaccines and with the new influenza recommendations, the cumulative dose per body weight to the fetus and to children is approaching maximum 1990's exposure levels.

SafeMinds seeks to end the adverse health effects caused by the unnecessary use of mercury in medicines. Failure to discontinue prescribing TCVs to infants and pregnant women here and



in the developing world exposes the most vulnerable among us to needless risk for neurological damage. We encourage the AAPA to communicate new scientific findings on behalf of its members and their patients.

Respectfully,

A handwritten signature in black ink that reads "Vicky Debold".

Vicky Debold, RN, PhD
SafeMinds
Research Committee



Lyn Redwood, RN, MSN
SafeMinds
President



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