

## **GOVERNOR CORZINE SIGNS TWO BILLS INTO LAW, RIGHT BEFORE CHRISTMAS 2007**

**ONE LAW ELIMINATES THE DEATH PENALTY IN NEW JERSEY,  
THE OTHER IS A POTENTIAL LIFE SENTENCE FOR ALL  
UNWITTING PARENTS**

**By Steve Markus, DMD FACE**

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### ***Abstract: Vaccines and Thimerosal***

The death penalty is off the table. The worst you can get is life in prison without parole now in New Jersey. State Health and Senior Services Commissioner Fred Jacobs, New Jersey Department of Health has promoted, and had signed into law four additional vaccinations for pre-school and school age children. Because there are known links between autism and thimerosal (a derivative of mercury, used as a preservative in vaccines) this law potentially imposes a life sentence on the parents of inoculated children. Dr. Mark Geier, a Maryland geneticist and vaccinologist, and his research partner and son, David Geier, estimate the lifetime cost of caring for an autistic person at between \$5 million and \$10 million. ( 28 )<sup>1</sup> It also affects the quality of life of the child. But it doesn't stop there. Because adults can be affected as well (MS-like symptoms and Alzheimer's Disease have been linked to mercury), this document is intended to educate the public (especially the parents and grandparents living here in New Jersey) about what they need to know about to make an educated decision about what is right for them. Your pediatrician will belittle your concerns. Become an educated parent, before you are spending too much of your time trying to learn how to deal with a normal child who, because of vaccination, has become autistic. It can happen, at the drop of a hat, to anyone.

### **Background – The Chemistry**

Thimerosal, a preservative developed by Eli Lilly, was once widely used in vaccines. That was until it was identified as the source of the largest exposure to mercury in the United States in children under 18 months of age and mandated to be removed from vaccines. However, amazingly, despite its well-documented potential toxic effects, this harmful preservative remains present in the flu vaccine, which is given to pregnant women, the elderly and children. (17)

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<sup>1</sup> Numbers in parentheses, in blue refer to the page of this text with documentation of the information provided.

Before 2001, many childhood vaccines contained mercury in the form of thimerosal, a preservative used to inhibit germ growth. (9) The heavy metal mercury is a neurotoxin, and pre-2001 vaccines remain at the crest of controversy. Many parents believe they are linked to the development of autism and other childhood neurodevelopmental disorders. Some children may have an inborn vulnerability to mercury toxicity (see the section on the Genetics of mercury toxicity). (50)

### **Background – The Chinese and the Amish**

There was never a pictographic symbol in Chinese for autism, that is until vaccination was introduced there. Amish parents don't know about autism because their religion shuns vaccination. (14)

### **Background – The Soaring Autism Epidemic**

In the state of Missouri there has been an 850% increase in reported cases. (47) It is widely known that American children are the most heavily inoculated in the world. By the Food and Drug Administration's own standards, by the time they are five years old, the average American child receives enough mercury to be toxic to a 175 pound male.

### **Background – The Rationale**

This is being done to prevent the transmission of influenza virus by young children. As the husband of a teacher, I fully understand the dilemma. Kids come to school with runny noses, they touch everything. The classroom and facilities at schools are rife with infected surfaces the children repeatedly touch. So many generations that came before today's' kids survived without the added burden of inoculation. The medical profession certainly has a very cavalier attitude about the thimerosal in vaccines.

Fact: Last year, I observed a flu vaccine program at a local facility. On the questionnaire for each individual was the question: "Are you allergic to thimerosal?" Certainly there are many who are reading this document, and learning about thimerosal for the first time. So how could you possibly be allergic to something you'd never heard of before? I called the supervisor to task for this misleading question, because one is not allergic to thimerosal. The reactions one has to it are toxic reactions. Some individuals are more susceptible to it than others (see the section on genetics (51)).

Commissioner Jacobs alludes to the need to protect the majority, and it's unfortunate if any of the minority (those with the APO E-4 gene) (50) are stricken. There is no conversation about testing the susceptibility, nor is there any question about measuring the accumulated dose of thimerosal. Genetic testing is indeed possible.

Pediatricians belittle the chances of their injections causing autism. Here is an interchange I had with one of my colleagues:

My niece had to argue with her pediatrician who wanted to give her baby the thimerosal free vaccine but give her 3-year old the Thimerosal. She asked why and the Pediatrician

said it was cheaper. She asked "Do I look poor to you?" and insisted on the thimerosal free vaccine for both. She still believes in vaccinations, at least for now, but not in injecting ethyl mercury-containing preservatives.

The medical establishment just doesn't get it. I recommend that you get a stack of Thimerosal DVDs by the International Academy of Oral Medicine and Toxicology and give them out as Christmas presents to all the nonbelievers in your family.

## **Background – The Dental Connection**

My background, as a dentist, has been to educate the public about the connection between the mercury in dental fillings and their health. Mercury fillings are 50% mercury, the most toxic naturally-occurring substance on the planet. Mercury fillings have been banned by many governments, or excluded from the mouths of pregnant women and children. I have [addressed the FDA](#) on these issues, and there is a plethora of material on the [mercury links page](#) of my website ([www.cent4dent.com](http://www.cent4dent.com)). The removal of mercury has to be handled very scrupulously because the drilled out slurry of mercury can lay in the floor of the mouth and enter the bloodstream through the thin mucosa there. It also vaporizes at room temperature and can be inhaled. The floor of the brain is indeed very close to the mouth. You are free to draw your own conclusions.

## **Autism – Definition**

The word autism is derived from the Greek word "autos," which means self. It was first defined as a specific condition in 1943.

Originally, the medical community believed autism to be a psychological disturbance caused by uncaring, detached mothers. Those suffering from it often were institutionalized. In the 1960s, a new theory developed that labeled autism as a biological problem. Recent research classifies it as a genetic disorder.

Autism is referred to as a spectrum disorder because of the wide range of characteristics and effects it can have on people. Signs usually appear by age 3. It's more prevalent in boys than girls.

Although diagnoses and definitions may vary from one physician to another, the autism spectrum is generally broken down into five different categories, which all fall under the general term **pervasive developmental disorder: ( 48 )**

autism

Asperger's syndrome

childhood disintegrative disorder

Rett's disorder

pervasive developmental disorder -- not otherwise specified

The "not otherwise specified" category includes those with autism symptoms that do not fall clearly into the other four categories.

Autism's only predictable symptom is unpredictability. Symptoms are different with every child.

Autistic children often have a high tolerance for pain but can be overly sensitive to certain lights, odors, sounds and textures. These sensitivities have been a big adjustment for Karen Manning of Perryville, Mo., whose son, Darin, was diagnosed as autistic at age 4. . ( 49 )

The Mannings no longer take family photos. To Darin, the camera's flash looks more like the first daylight after a long stay in a black room.

Karen Manning no longer dresses her son in blue jeans. To Darin, the denim feels like coarse sandpaper, causing him to curl up and cry.

"It's a feeling like you've been burglarized, like somebody came in and stole my son's mind," Manning said.

In addition to sensory sensitivity, autistic children may not have a sense of danger or feel pain. They may have a hard time staying focused and may flap their hands or engage in other repetitive movements. ( 49 )

## Autism – The Epidemic

The greatest of medical detectives, the most loving of parents and the most genius of scientists can't seem to unravel the world of autism and the mystery of what may cause it. Now growing numbers of parents and doctors are declaring war to help find answers for the millions not yet touched by it.

As we searched for answers, we met some young warriors in the fight to defy science and stereotypes: Students of Miami's pioneering Victory School. Some of their parents share the nightmare Rick Blackburn lives. His son showed common symptoms of the onset of autism **within days of getting vaccinated** and was near death at only 18 months.

"We immediately took him to the emergency room and they couldn't do anything about the high fever, listlessness and the vomiting so they admitted him. Doctors couldn't figure out what was wrong with him and they were warning us that he may perish. That he was not going to make it," said Blackburn.

What followed was chilling.

**"What really was amazing was that we started running across parents in large numbers with the same exact story," said Blackburn**

That's no surprise says, pediatrician, Dr. Eric Ryndland who is considered one of the nations foremost experts on autism and controversial in his public concerns over what he considers a potential safety risk of vaccines for some children and the urgent need he says for all parents to take charge of the decision to vaccinate or not.

When asked if **the decision to vaccinate or not could put a child in danger**, Ryndland responded, "Absolutely. **The vaccines sometimes are the straw that breaks the camel's back.** The question is if the immune system is overloaded with too many vaccines over too short a period of time, or sometimes, in some cases where children are very susceptible, even one vaccine might cause a problem."

Ryndland says there are many theories of why the mercury based preservative thimerosal captured headlines and was, according to the CDC, removed at their request from most childhood vaccines. **Ryndland says it might not be the mercury but injections of multiple viruses into young children who may have compromised immune systems that could present a possible risk of triggering a variety of neurological problems.**

*The CDC reports that no link has been found between the common measles, mumps and rubella Vaccines and neurological disorders.*

**Frank Maye treats hundreds of autistic children and says he is haunted by the faces of parents struggling with the horror of the so-called lost children.** As a former Miami-Dade detective turned holistic clinician, he is in the investigation of his life, trying to determine if there is a link between children getting vaccinated and autism, which he says is presenting in high numbers at the 18-month mark. **"To me there are too many kids that have come in that have regressed at 18 months for it not to be something for us to look at,"** said Maye.

**He confirmed that 80% of children diagnosed with autism develop problems at 18 months of age, and not at birth--**a percentile he found shocking. "Absolutely shocking. We need to do something that is going to investigate that 18-month aspect and come up with an answer. I've looked all over the country. The pattern seems to be that the children that have a problem around 18-months have reacted to every vaccination whether they have had a 101 fever for about 24 hours and it has gone away," said Maye.  
( 11)

The link between autism and vaccines is certainly not a new idea. In fact, suggestions of this link have been in the national news for [at least six years now](#). Just last year a study, that reviewed data from the Centers for Disease Control and Prevention's (CDC) Vaccine Data Link, concluded that [children who receive thimerosal-containing vaccinations](#) are 27 times more likely to develop autism than children who do not.

That's a **2,700 percent increase**. The numbers just don't lie.

Considering how important this issue is for nearly everyone you know, it might be a good one to forward to your friends and relatives ( 15 )

## Autism – Insurance Coverage

Given the estimated expense of raising an autistic child, placed at between \$5 and \$10 million, one would expect that there would be a lot of insurance dollars going out to help care for these children, but that is not the case ( 28 ) .

You cannot sue the drug manufacturer because the Federal Government, in its infinite wisdom has protected them. You have to sue them in **Vaccine Court ( 51 )**. Personal conversations with parents of children who became autistic after vaccination indicate that this is an expensive, time consuming process that is full of obstacles. Add to that the need to care for an autistic child while the legal battles proceed do not make this situation an easy one. **Given the amount of time, money and energy this demands, do not allow your pediatrician to give your child vaccines containing thimerosal, and make sure your friends are aware of this as well.**

## Autism – How do I know the vaccines being given to my child are thimerosal-free?

You tell the pediatrician, from the first visit you have with them that you do not want them to have any thimerosal, and you let them know that you demand to see the syringe and packaging thereof. Unit dose syringes do not contain the same level of thimerosal that multi-dose vials contain. Insist, no matter what the cost, that no thimerosal ever enter your child's body, and insist on reading the packaging of everything they transfer into your child's body. If the State Department of Health, The FDA and the CDC are not going to protect your child, you had better be ever-vigilant.

When looking at flu vaccines, they come in two dosages: adult, and child. They also come in single use syringes, and multiple dose vials. An adult dose from a multiple dose vial carries 25 micrograms of thimerosal in it, a pediatric dose, half that. By contrast a single dose, pre-filled syringe contains only trace amounts (less than 1 microgram per adult dose).

Parents who wish to avoid mercury in their children's flu shot should specifically request the mercury-free Fluzone pediatric dose pre-filled syringe. It has a pink plunger rod. If you see the dose being drawn out of a glass bottle, it does contain thimerosal. ( 9 )

It is also important to note that influenza vaccines are given based on a "best guess" by the CDC as to which viruses are going to be rampant in the following flu season. I am around people all day long, and since the Swine Flu Vaccine debacle of 1976. ( 51 )

I have never trusted the government to put a vaccine in my body. I take anti-oxidants (CoEnzyme Q10 and Proflavinol) daily, and wash my hands repeatedly after having touched foreign objects and others, and have not missed more than 5 days of work due to influenza over the past 30 plus years.

Children need to be indoctrinated into similar health habits of washing their hands, using tissues to wipe their noses, not drinking from water fountains (the most vile infective place in the school). Parents need to eradicate the disgusting habit (perhaps copied from professional athletes) of spitting.

## **Autism – Chelation Therapy**

Once mercury has entered the system, it is very difficult to remove it. There are many resources on the web, to learn more about chelation therapy for the treatment of autism caused by mercury toxicity. I have met Dr. Buttar in my travels, and have a link to his excellent website, from mine. A quote from it ([www.drbuttar.com](http://www.drbuttar.com)) “Exposure to heavy metals, such as the mercury preservative that was (is??) commonly used in children’s vaccines until recently, has long been suspected as a trigger for autism in genetically susceptible children. Most research, however, has failed to confirm this link, and in 2004, the Institute of Medicine issued a report stating that it did not believe that vaccines contributed to the development of autism.

Not everyone agreed with that conclusion, however. Laura Bono, chairwoman of the National Autism Association, and the parent of an autistic child, believes vaccines play some sort of role in the development of autism and said the new study’s findings would seem to support a link.” <http://www.drbuttar.com/upload/GSH%20in%20Autism.pdf>

You might also be interested in viewing the video on <http://www.drbuttar.com/autism.asp>

A study of the web will give you a tremendous amount of information. I googled “autism and chelation” and one of the sites I got to told me “Metals like mercury, lead and iron can sometimes enter the body and become embedded in tissues. Once they are in our body, these particles have the potential to cause serious health problems. Some doctors believe that the chelation therapy rids the body of these dangerous toxins. “

I urge you to [read this article](#) and the one immediately after it on that page talked about a child’s death from chelation.

**Wouldn’t it be better not to have to even think in those terms?  
Nobody would if pediatricians’ cavalier attitudes about  
thimerosal were not so pervasive.**

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- Sent by David Kennedy, founder of IAOMT

Quoting Richard Harkness, a consultant pharmacist, natural medicine specialist and author of eight books ([rharkn@aol.com](mailto:rharkn@aol.com)):

- Before 2001, many childhood vaccines contained mercury in the form of thimerosal, a preservative used to inhibit germ growth. The heavy metal mercury is a neurotoxin, and pre-2001 vaccines remain at the crest of controversy. Many parents believe they are linked to the development of autism and other childhood neurodevelopmental disorders. Some children may have an inborn vulnerability to mercury toxicity (see the section on the Genetics of mercury toxicity).
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One of my colleagues from the IAOMT wrote the following:

My niece had to argue with her pediatrician who wanted to give her baby the thimerosal free vaccine but give her 3-year old the Thimerosal. She asked why and the Pediatrician said it was cheaper. She asked "Do I look poor to you?" and insisted on the thimerosal free vaccine for both. She still believes in vaccinations, at least for now, but not in injecting ethyl mercury.

The medical establishment just doesn't get it. I recommend that you get a stack of Thimerosal DVDs by the International Academy of Oral Medicine and Toxicology and give them out as Christmas presents to all the nonbelievers in your family.

From the Courier Post, **Official OK's new vaccine mandates – Friday Dec 14<sup>th</sup> , 2007**

Despite vocal protests from several statewide parents' organizations, [New Jersey](#) became the first state in the country Friday to require annual flu shots for preschoolers.

Along with the [flu vaccine](#), State Health and Senior Services Commissioner Fred Jacobs signed off on adding three other required vaccinations. Preschoolers will be required to receive immunizations for pneumonia and the flu, while sixth-graders will get shots for meningitis and a booster for tetanus and whooping cough.

State Epidemiologist Eddy Bresnitz said the vaccines will be able to protect "not just the child, but anybody the child may transmit the infection to."

"Like all vaccines, they are likely to reduce the incidence of disease, hospitalizations, complications from illness and death," Bresnitz said.

The shots -- recommended by the federal [Centers for Disease Control and Prevention](#) and the American Academy of Pediatrics -- will be required beginning in September.

The new vaccinations were approved Monday by the state Public Health Council, over the wishes of a number of parents who say the mandate impedes on their rights as parents.

Sue Collins, co-founder of the New Jersey Alliance for Informed Choice in Vaccination, said that by mandating the vaccines, the state thinks "the government knows New Jersey's children better than their parents do."

"Parents no longer seem to have a say what medical procedures their children get," said Collins.

Children in the state already are required to receive vaccinations for nine diseases by the age of 2, and some of those require multiple doses. Exemptions can only be given for medical reasons or religious objections.

In addition, some parents protested the flu shots because some brands still contain the mercury-based preservative thimerosal, which has been suggested as a possible cause for the rise in autism cases in the country, although no direct link has been found.

Reach Michael Rispoli at [mrispol@gannett.com](mailto:mrispol@gannett.com)

## [Vaccines Damage: The Answer No One is Looking For](#)

### [Autism and Vaccines](#)

The greatest of medical detectives, the most loving of parents and the most genius of scientists can't seem to unravel the world of autism and the mystery of what may cause it. Now growing numbers of parents and doctors are declaring war to help find answers for the millions not yet touched by it.

As we searched for answers, we met some young warriors in the fight to defy science and stereotypes: Students of Miami's pioneering Victory School. Some of their parents share the nightmare Rick Blackburn lives. His son showed common symptoms of the onset of autism within days of getting vaccinated and was near death at only 18 months.

"We immediately took him to the emergency room and they couldn't do anything about the high fever, listlessness and the vomiting so they admitted him. Doctors couldn't figure out what was wrong with him and they were warning us that he may perish. That he was not going to make it," said Blackburn.

What followed was chilling.

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That's no surprise says, pediatrician, Dr. Eric Ryndland who is considered one of the nations foremost experts on autism and controversial in his public concerns over what he considers a potential safety risk of vaccines for some children and the urgent need he says for all parents to take charge of the decision to vaccinate or not.

When asked if the decision to vaccinate or not could put a child in danger, Ryndland responded, "Absolutely. **The vaccines sometimes are the straw that breaks the camel's back.** The question is if the immune system is overloaded with too many vaccines over too short a period of time, or sometimes, in some cases where children are very susceptible, even one vaccine might cause a problem."

Ryndland says there are many theories of why the mercury based preservative thimerosal captured headlines and was, according to the CDC, removed at their request from most childhood vaccines. Ryndland says it might not be the mercury but injections of multiple viruses into young children who may have compromised immune systems that could present a possible risk of triggering a variety of neurological problems.

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**Frank Maye treats hundreds of autistic children and says he is haunted by the faces of parents struggling with the horror of the so-called lost children.** As a former Miami-Dade detective turned holistic clinician, he is in the investigation of his life, trying to determine if there is a link between children getting vaccinated and autism, which he says is presenting in high numbers at the 18-month mark. **"To me there are too many kids that have come in that have regressed at 18 months for it not to be something for us to look at,"** said Maye.

**He confirmed that 80% of children diagnosed with autism develop problems at 18 months of age, and not at birth--**a percentile he found shocking. "Absolutely shocking. We need to do something that is going to investigate that 18-month aspect and come up with an answer. I've looked all over the country. The pattern seems to be that the children that have a problem around 18-months have reacted to every vaccination whether they have had a 101 fever for about 24 hours and it has gone away," said Maye.

*Again, the CDC reports there is no link between autism and vaccines but that its major study into this is due out next year.*

**COMMENT:** If it was negligence or ignorance, the CDC, the FDA, the IOM, and American Academy of Pediatrics (AAP) would at least occasionally err on the side of parents and admit that *at least some* children become autistic after vaccination.

But the stanch, uniform and steel-hard agreement that there is NO POSSIBLE LINK between vaccines and autism increases the suspicion about a cover-up and lessens the trust in those persons who make the decisions. Remember that humans make those decisions, not institutions.

How can those humans remain so completely disconnected from the rest of our society? Is it arrogance? Is it to protect their reputations? Is it that they simply do not want to admit that they have been wrong? Or, is it like most areas of concern in this country...is it really about money?

Nearly 32% of the CDC's annual \$8.2billion budget is allocated to vaccines....and CDC members, such as [Dr. Walter Oreinstein and the Advisory Committee of Immunization Practices \(ACIP\)](#) are complaining that it isn't enough and many more billions are needed to ensure that we are all vaccinated.

If you think that you are past having to worry about vaccines because your children are already in school, think again. In May, 2007, the CDC announced its new initiative called "**The Promise and Challenge of Adolescent Immunization.**" Your teens are now in the cross-hairs of the vaccine manufacturers and considered "untapped market share."

For example, Menactra, the college meningitis vaccine, focused on specific risk groups. The new recommendation will be routine vaccination of all adolescents 11 through 18 years of age, even though [FDA has issued a warning](#) that this vaccine can cause Guillian-Barre syndrome. All teens will now be at risk of contracting this deadly complication.


Here's a sampling of what is under development for [Teen Vaccines](#):

1. Modifications in the adolescent health care infrastructure to support the additional needs generated by new vaccines. *[fabricating need is implied~ST]*
2. Standardization and clarification of consent laws for the administration of vaccinations to minors. *[Changing laws to enforce vaccination ~ST]*
3. Creation of novel communication strategies to facilitate information dissemination to the parents, guardians and the adolescents themselves on the importance of immunization. *[Develop propaganda pieces to scare parents into vaccinating ~ST]*

4. Generation of financial strategies for the public and private sector to make administration of immunizations to adolescents financially viable to patients and providers. *[New vaccines are going to be more than \$100 per dose, the CDC is calling for more government funding and more insurances to pay for vaccines.~ST]*
5. Development of long-term surveillance strategies to assess vaccination coverage, and vaccine impact among adolescents.

Ready to revolt?

[Join the Coalition Against Mandatory Vaccination.](#) We need a million voices by June 1, 2008 to push back against the plans of these bureaucrats.

Posted by Dr Sherri Tenpenny at [10:45 AM](#) [0 comments](#)  

## Why Don't the Amish Have Autistic Children?

Autism is a difficult disorder to miss, as it is characterized by noticeably abnormal or impaired development in social interaction and communication and a markedly restricted array of activities and interests. And while scientific consensus claims autism has been around for millennia at generally the same prevalence, that prevalence is now considered to be **one in every 166 children born in the United States.**



Therefore, with this devastating statistic in mind, one reporter set out to analyze the autism rates among Amish communities. Why? Because perhaps searching for autistic Amish children would reveal clues to the cause of autism ... and it did.

### The Clues Come Together

**Since they have been cut off for hundreds of years from American culture and scientific progress, the Amish may have had less exposure to some new factor triggering autism in the rest of population. The likely culprit: vaccines.**

Traveling to the heart of Pennsylvania Dutch country in search of autistic Amish children, the reporter, based on national statistics, should have found as many as 200 children with autism in the community -- instead, he found only three, the oldest age 9 or 10:

- The first autistic Amish child was a girl who had been brought over from China, adopted by one family only to be given up after becoming overwhelmed by her autism, and then re-adopted by an Amish Mennonite family. (China, India and Indonesia are among countries moving fast to mass-vaccination programs.)
- The second autistic Amish child definitely had received a vaccination and developed autism shortly thereafter.
- The reporter was unable to determine the vaccination status of the third child.

### Dangerous Effects of Thimerosal

In some vaccines, they use a mercury-based preservative called thimerosal that keeps multiple-dose vials from becoming contaminated by repeated needle sticks. After health officials became concerned about the amount of mercury infants and children were receiving through thimerosal-tainted vaccines, the toxin was phased out of U.S. vaccines starting in 1999.

However, due to mislabeling and other problems, its presence is still being felt, and more and more children are suffering because of it.

[Washington Times](#) April 18, 2005

[Washington Times](#) April 19, 2005

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Dr. Mercola's Comment:

Does anyone out there really need more evidence than this?

Admittedly, this was not a placebo-controlled scientific trial but an evidence-based fact analysis that, in my mind, provides an irrefutable link to a lifestyle and, most likely, mercury-containing vaccine connection to autism.

Folks, you don't have to be a medical doctor, hold advanced epidemiology degrees or teach molecular genetics to figure this one out. You don't even need a degree in rocket science. How much more obvious could it be?

The link between autism and vaccines is certainly not a new idea. In fact, suggestions of this link have been in the national news for [at least six years now](#). Just last year a study, that reviewed data from the Centers for Disease Control and Prevention's (CDC) Vaccine Data Link, concluded that [children who receive thimerosal-containing vaccinations](#) are 27 times more likely to develop autism than children who do not.

That's a **2,700 percent increase**. The numbers just don't lie.

Considering how important this issue is for nearly everyone you know, it might be a good one to forward to your friends and relatives. You can easily do this by using the E-mail to a friend button in the upper right hand section of this page, just under the search box. You can make a larger impact if you write them a personal message in the e-mail as to why they should seriously consider the advice -- and why they may want to subscribe to the newsletter.

This most recent investigation simply provides the proverbial icing on the cake. There aren't too many other places, if any, in America where you can find large groups of children who haven't been vaccinated.

The reporter found three children with autism. One child was adopted and previously vaccinated, another was one of the few Amish children who were vaccinated, and the third had an unclear vaccine history. That leaves, at most, potentially **one** child out of an expected **200** (from national statistics) with autism. The odds of this being mere coincidence are slim to none.

### **At Least Change the Rules Concerning the Hepatitis B Vaccine**

Because of their religious beliefs, the Amish community chooses not to give their children any vaccines. Understandably, many of you may not choose such a radical approach. However, if you were to focus on just one vaccine, I would encourage you to look at the issues surrounding the [hepatitis B vaccine](#).

The multi-dose version of this vaccine, which is typically administered to newborns before they leave the hospital, still contains thimerosal. This is reprehensible, irresponsible negligence of the highest magnitude. The immature central nervous systems of these helpless newborns are particularly susceptible to toxic insults, and thimerosal, the mercury-containing preservative used in these vaccines, is one of the worst.

It would be much easier to understand if the hepatitis B vaccine had some value, but most natural health experts who study this are convinced that this is nearly always an absolutely unnecessary vaccine.

There are only about 5,000 people a year who develop the most serious consequence of hepatitis B infection, liver cancer. That means we are immunizing tens of millions of infants and causing brain injury that has caused an epidemic of autism to protect liver cancer in 5,000 adults. And, many of these adults have serious social problems like IV drug abuse, alcoholism and poor nutrition that seriously increases their risk for this disease.

If you're a young parent weighing the pros and cons of vaccines, I strongly urge you to learn more about the [toxicity of thimerosal](#), which, again, is still present in multi-dose hepatitis B vaccines, and nearly all the mandated flu vaccine for infants. From [http://www.mercola.com/2005/may/4/amish\\_autism.htm](http://www.mercola.com/2005/may/4/amish_autism.htm)



## **the Mercury in Vaccines Can Kill Your Baby**

Thimerosal, a preservative developed by Eli Lilly, was once widely used in vaccines. That was until it was identified as the source of the largest exposure to mercury in the United States in children under 18 months of age and mandated to be removed from vaccines. However, amazingly, despite its well-documented potential toxic effects, this harmful preservative remains present in the flu vaccine, which is given to pregnant women, the elderly and children.

### **A team of researchers examined the toxicity of thimerosal within the body including neurons. They explored:**

- Neurotoxic mechanisms
- How the body detoxifies mercury
- The use of N-Acetylcysteine (or NAC) in aiding the detoxification pathway within the body

Ordinarily, the brain and liver can manufacture enough glutathione (an essential antioxidant and naturally occurring tripeptide made of cysteine, glutamate, and glycine) to protect your body from exposure to various heavy metals, including mercury. When this critical compound is depleted in your body, however, the mercury that is left can bind with cellular proteins, can lead to toxic damage.

### **Studies have indicated low incredibly tiny concentrations of thimerosal induced:**

- DNA strand breaks
- Caspase-3 activation
- Membrane damage
- Cell death

Researchers also found that higher concentrations of thimerosal lead to a greater number of cells that were killed, and the nerve cell response occurred with only a three-hour exposure.

[Neurotoxicology January 2005;26\(1\):1-8](#)

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### **Dr. Mercola's Comment:**

I've posted many articles on this site about the perils of vaccines -- specifically the presence of [thimerosal](#) -- including extensive features by contributing editors and a board-certified neurosurgeon, [Dr. Russell Blaylock](#) and [Dr. Sherri Tenpenny](#).

Thimerosal, which contains almost 50 percent ethyl mercury by weight, should have been removed from vaccines over six years ago, when the EPA first mandated its removal. But due to mislabeling and other problems its presence is still being felt. So much so that even package inserts, which are required to detail

exactly what is in a vaccine, may not even be accurate. This means your physician may not even be aware that a toxic additive such as thimerosal is in the vaccine,

For this reason, before making [a decision on vaccinating your children](#), I strongly urge you, to do your family a major favor by reviewing the many side effects and risks involved in being subjected to this potentially life-threatening preservative.

Making the effort could mean all the difference between life and death.

Thus, an essential resource to aid you in learning more about this vitally important vaccine issue, including how to protect your children, is [Vaccines: What CDC Documents and Science Reveal](#), a two-hour video by world-renowned vaccine expert Dr. Sherri Tenpenny. The video is the culmination of Dr. Tenpenny's three-year investigation into the true story behind vaccines. The facts on several crucial areas are covered including:

- How vaccines can cause illnesses including autoimmune diseases, allergies, ear infections, and more
- The very real link between vaccines and developmental learning and behavioral disorders in children
- How vaccines have never been proven safe
- The ingredients and contaminants in vaccines and why they're detrimental to your health
- How vaccine studies are seriously flawed

If you are a parent, a medical practitioner, or otherwise interested in how to exercise your freedom of choice to bypass vaccines, please also consider Dr. Tenpenny's insightful cassette tape, [The Dangers of Vaccines, and How You Can Legally Avoid Them](#) which is a 90 minute teleconference interview I conducted with her.

If, for whatever reason, you are not yet convinced of the value and safety in avoiding vaccines, you should NOT let your child receive vaccines from the multi-dose vials.

These vaccines still have thimerosal in them.

Inform the physician or nurse that you want the single-dose vaccine container and request that you want to actually witness them removing it from the vial and would like the empty vial to take home with you as proof that your child did not receive the mercury-contaminated vaccine. This way you will at least avoid one of the problems with the vaccines. From [http://www.mercola.com/2005/jan/19/mercury\\_vaccines.htm](http://www.mercola.com/2005/jan/19/mercury_vaccines.htm)

## The Danger of Vaccines, and How You Can Legally Avoid Them

Vaccines can harm, and in some cases, even kill. And at school, vaccine requirements for admission are a serious problem that many of you, whether parents of preschool to college students, or a college student yourself, will face.

**The Danger of Vaccines,  
and How You Can  
Legally Avoid Them**  
*MP3 File*

Just \$39.97

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"The Danger of Vaccines, and How You Can Legally Avoid Them" is a professionally recorded 90-minute MP3 audio file that you can conveniently listen to on your personal MP3 player, computer, or other MP3 playing source. The audio file features an important and detailed conversation between world-renowned vaccine expert Dr. Sherri Tenpenny and me in the first hour, with select questions from over 600 conference participants in the second half-hour. This audio file will help you:

- **Discover simple, practical steps you can take to legally avoid dangerous immunizations**
- **Learn the difference between philosophical, religious and medical exemptions**
- **Understand why most medical exemptions will not stand up in court**
- **Learn practical methods of improving your child's immunity so they won't get the diseases the vaccines are supposed to, but frequently don't, prevent**

Health care practitioners and others with a professional interest in health will also find this tape invaluable, as your patients will benefit from this information and you will learn the serious legal dangers you risk if you falsify a medical exemption.

The damage vaccines inflict on individuals and society far outweighs any potential benefit they may claim. This is not unverifiable hype from the fringes. Indisputable facts support this claim. Countless firsthand stories testify to the pain, damage and death vaccines have caused; a powerful story from a Mother who lost her baby to routine vaccination that is currently circulating the Internet is but one example.

But your government, under the thumb of a traditional medical system grown fat on extreme drug profits, refuses to expose this epidemic. They would still have you believe vaccinations are good. They would still have you believe vaccines for your child are "mandatory."

"The Danger of Vaccines, and How You Can Legally Avoid Them" finally dispels the myths and helps you:

- Understand why vaccines are essentially loaded guns aimed at your child's body
- Find out how you can disarm your school nurses by legally avoiding vaccines

- Learn what approaches you can take to immunize your child against disease safely - and for life

### ***Crucial Vaccine Insight from the World's Leading Authority***

Most of the 150,000 readers of my free health newsletter need no introduction to Dr. Sherri Tenpenny, as she has been a contributing editor on the vaccine issue for several years. For that matter, many people throughout North America have likely heard of her, too, as she has offered her unparalleled insight on vaccines on countless health programs.

Her articles, such as "Expert" Believes Infants Can Tolerate 10,000 Vaccines and Smallpox Vaccines and Heart Disease, No "Coincidence", gives an idea of the range of her expertise and important insight. With "The Danger of Vaccines, and How You Can Legally Avoid Them" MP3, though, you will get all of the crucial information you need to protect you and your loved ones. What's more, you'll get it in a manner you can understand, and that's not "dry" but actually engaging to listen to.


If you are also interested in how and why vaccines themselves are dangerous, you should seriously consider Dr. Tenpenny's new video, "Vaccines: What CDC Documents and Science Reveal." You'll learn how vaccines can cause illnesses including autoimmune diseases, allergies, ear infections, and more. You'll discover the very real link between vaccines and developmental, learning and behavioral disorders in children. You'll find out how and why vaccine studies are seriously flawed. And much more: read more about Dr. Tenpenny's vaccine video.

### ***Ordering Information***

"The Danger of Vaccines, and How You Can Legally Avoid Them," a 90-minute MP3 audio file, costs just \$39.97.

**The Danger of Vaccines, and How  
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[http://www.mercola.com/forms/vaccine\\_teleconference.htm](http://www.mercola.com/forms/vaccine_teleconference.htm)

## Autism and the Vaccine Court

From [Lisa Jo Rudy](#),  
Your Guide to [Autism](#).

**FREE** Newsletter. [Sign Up Now!](#)

*About.com Health's Disease and Condition content is reviewed by [Steven Gans, MD](#)*

### Autism, Vaccines and the Law

Virtually no mainstream institution or practitioner believes that vaccines cause autism. Nevertheless, thousands of parents, doctors and researchers are convinced otherwise. They have what they feel is compelling medical evidence that thimerosal (a mercury-based preservative) and measles virus, either separately or together, can be blamed for many cases of autism.

In some states, certain vaccinations are required by law before a child can enter school. Vaccinations are considered to be a public health necessity though there have always been people who opposed compulsory vaccination.

Since the development of the first vaccines, it has been well-known that some people react badly to some vaccinations. Certain reactions are well-documented, and well understood.

### Sponsored Links

[Autism Treatment Biomedical & Neuro Enhancement Long Island Spectrum Center](#)  
[www.sirricenter.com](http://www.sirricenter.com)

[Symptoms Of Autism Here You'll Find The Facts on Autism Symptoms & Treatment!](#)  
[www.iMedix.com/Autism](http://www.iMedix.com/Autism)

[NYC Travel Medicine See us before your trip Travel vaccines/malaria protection](#)  
[www.globaltraveler.com](http://www.globaltraveler.com)

To make it possible for parents to sue for compensation without endangering the public health, the United States Court of Federal Claims created a Vaccine Injury Compensation Program.

The United States Court of Federal Claims was founded during the Lincoln Administration to handle suits against the federal government. In 1988, a special branch of that court was founded to manage claims made as a result of vaccine injuries. Here's how the Vaccine Injury Compensation Program is described

The National Vaccine Injury Compensation Program ("Vaccine Program") comprises Part 2 of the National Childhood Vaccine Injury Act of 1986 ... The Vaccine Act became effective October 1, 1988. It establishes the Vaccine Program as a no-fault compensation scheme whereby persons allegedly suffering injury or death as a result of the administration of certain compulsory childhood vaccines may petition the federal government for monetary damages. Congress intended that the Vaccine Program provide individuals a swift, flexible, and less adversarial alternative to the often costly and lengthy civil arena of traditional tort litigation.

The Vaccine Program has its own set of "[Vaccine Rules](#)" which govern the manner in which cases may be brought and handled. It is important to know that a parent may not bring a vaccine-related case before a civil court until it has been addressed in the Vaccine Court. It is also important to know that the case must be filed within three years of the first appearance of vaccine-related symptoms in the child.

### **The "Vaccine Trials"**

In June 2007, the first of nearly 5,000 cases claiming compensation for autism-related vaccine injury came before the "Vaccine Court." To facilitate this rush, the Special Masters who hear and judge vaccine-related cases requested that several "test cases" be brought before the court. The idea was that evidence from these test cases would not have to be repeated 5,000 times as each plaintiff comes before the court.

The test cases address at least three possible scenarios under which vaccines could be considered to blame for autism. These include a combination thimerosal/MMR scenario; an MMR alone scenario; and a thimerosal alone scenario. The outcomes of the test cases will have a significant impact on those that follow.

### **Q&A: Autism and the Vaccine Court**

Sheila Bjorklund (of Lommen, Abdo, Cole, King & Stageberg, P.A.) is one of 10 attorneys from around the country on the Executive Steering Committee for the Petitioners (plaintiffs) in the Court of Federal Claims: Office of Special Masters. Bjorklund, who is representing 23 families, and more than 60 attorneys from around the country are working on behalf of all plaintiff families against the defendants, or "respondents" at the Department of Health and Human Services, represented by Department of Justice attorneys.

Here are the questions I asked, along with Bjorklund's responses:

**If the courts determine that one or more of the test cases is legitimate, and awards families compensation, what does that mean for other families with similar claims? What kind of recompense is the court likely to award, and in what form? (cash money? services?)**

*If the court determines that the test cases prove by a preponderance of the evidence that it is more likely than not that the thimerosal in childhood vaccines and in this particular test case, the MMR vaccine have combined to cause autism and other issues, then the families would need to prove their degree of damages related to the vaccine injury.*

### Sponsored Links

[The 13 Autism Myths. Discover The Truth About Autism & The Methods That Really Work.www.Essential-Guide-To-Autism.com](http://www.Essential-Guide-To-Autism.com)

[Autism Symptoms ?Relax. We Have All The Information You Need About Autism Symptoms!www.iMedix.com/Autism](http://www.iMedix.com/Autism)

[Autism & Speech Unlock your child's potential for language & help kids learn to talkwww.BabyBumbleBee.com](http://www.BabyBumbleBee.com)

*Awards under the National Vaccine Injury compensation Act are in the form of money. Awards are to cover unpaid past and future medical expenses related to the vaccine injury, past and future pain and suffering, and loss of earning capacity. Other families would still need to present the specific facts of their child's case, the court would need to determine that they are eligible for compensation and they too would need to prove their degree of damages.*

**If the courts determine that none of the test cases is legitimate, what does that mean for families who believe their children are vaccine-injured?**

*If the petitioners lose, there are a couple of avenues. They can appeal to the Judges of the Court of Federal Claims or they can go out to the civil court (state/federal) and bring their claims directly against the vaccine manufacturers.*

**Who are the 4,800 families who are also part of this case? How do the test cases impact these 4,800?**

*The families are from all around the country. They have on their own or through legal representation have petitioned the Court of Federal Claims, under the National Vaccine Injury Compensation Act for compensation. This test case will only affect a portion of these families. It represents one of three theories of causation. For those families who are claiming the combined effect of thimerosal and the MMR have caused injury to their child, their case will be evaluated against the test cases for eligibility for compensation. For the cases in which the theory is that thimerosal alone has caused their child's injury, they will wait a little longer. Those test cases are scheduled to go to hearing in late 2007 or early 2008.*

**If a family feels that they are in the same situation as the 4,800 named in the trials, can they join the suit? If so, how would they do so? Or would they be better off going to civil court?**

*Any claim under the NVICP must be brought within 3 years of the onset of first symptoms or the manifestation of onset of the vaccine injury. If a family believes they may have a claim, they can contact the Court of Federal Claims or a lawyer who handles these cases. The Court of Federal Claims can give them a list of such lawyers.*

**Do you think this case will have a significant impact on how Americans view and administer vaccines overall?**

*This case is not anti-vaccine. It is a case in which a small number (%-wise) of children who were injured because they followed the recommendations for childhood vaccinations are seeking compensation under a program specifically established by Congress to accomplish that end.*

**What happens after these trials are over? Is this the end of the vaccine trials, or is there more to come?**

*There are more to come. The additional test cases will be heard within the next 9 to 12 months. Depending upon the outcome, there will be additional hearings as the individual claims of the 4,800 petitioners are heard.*

**Who Should Take Their Case Before the Vaccine Court?**

Robert J. Krakow is an attorney in New York City and the father of a child on the autism spectrum. He's also representing more than 75 families who are plaintiffs in the ongoing Vaccine Court trials. I asked him for detailed information about how and whether additional families with children on the autism spectrum could take part in the proceedings.

**Who Can Take Part in the Vaccine Court?**

*The first thing parents have to know is the statute of limitations. This court has the shortest statute of limitations that exists in law: three years from "manifestation of onset of symptoms" (whether or not you knew whether your child might be affected).*

*Next, parents need evidence of a child's immune dysfunction.*

### Sponsored Links

[Autism & Speech](http://www.BabyBumbleBee.com) Unlock your child's potential for language & help kids learn to talk [www.BabyBumbleBee.com](http://www.BabyBumbleBee.com)

[Children and Mercury](http://helpBodyHealth.com) The Ultimate in Heavy Metal Detoxification. Metal-Free can help [BodyHealth.com](http://helpBodyHealth.com)

[Autism Vaccine](http://Blurtit.com) Get Answers & Info About Autism Vaccine [Blurtit.com](http://Blurtit.com)

*This would take the form of clear medical records.*

*If families fall into these categories, they may have a claim. It's important to act immediately: Contact a lawyer right away. Unfortunately, only a handful of lawyers handling these cases: Lawyers don't get paid until the case is over, and these cases go on for many years. Ultimately, they'll be paid from the vaccine court fund.*

### **What If My Child's Vaccine Injury Occurred More Than Three Years Ago?**

*My understanding is that if you didn't file in time in the vaccine court, you can't file suit against vaccine makers in civil court. There are a few exceptions. You can sue the manufacturer of thimerosal because they're not the manufacturer of the actual vaccine [the manufacturer of thimerosal is the pharmaceutical company Eli Lilly]. The second exception: Certain mothers may have received Rhogam during their pregnancy (a shot that mothers received during pregnancy to help resolve an immune conflict). If so, up until 2002, Rhogam contained thimerosal, so children in utero could get exposed to thimerosal. So that's not a vaccine case.*

*Talk to a lawyer to find out whether you're eligible. And if you can't find a lawyer, you can represent yourself.*

### **When Will We Hear Any Outcomes from the Vaccine Court?**

According to Arthur Allen, author of *Vaccine: the Controversial Story of Medicine's Greatest Lifesaver* (WW Norton, it could take up to three years for final decisions to be made. Says Allen, "Chief special master Golkiewicz told me that they won't rule on the bulk of the 4,800 cases until the specific test case for each of these comes down from the two higher levels to which it is expected to be appealed -- the first being the Judge of first instance in the federal claims court, the second being the Appeals Court for the Federal Circuit, i.e. the federal appeals court that hears DC cases. Golkiewicz said he expected this to take three years."

From [http://autism.about.com/od/autismandthelaw/a/vaccinecourt\\_3.htm](http://autism.about.com/od/autismandthelaw/a/vaccinecourt_3.htm)

## **The Great Thimerosal (Mercury) Vaccine Cover-up**

By Dawn Prate

11-17-7

You have probably seen your nurse insert a syringe into a large vial, extract some liquid, and then leave a substantial amount of vaccine in the original container. If you've witnessed this seemingly benign procedure, you've seen how vaccine manufacturers are saving money at the expense of public health. In order to store larger amounts of vaccine at a lower cost, companies began offering "multi-dose units" while adding preservatives to prevent contaminations. That way doctors can open and close a vaccine container, inviting germs into the once-sterile solution, while assuring the public that those contaminants are quickly killed by the preservative.

Sound familiar? It's the same story of corporate America's love affair with preservatives. It saves them money, while posing an undue risk to your health. But like many toxic preservatives found in food, a vaccine preservative kills more than just bacteria and fungi; it can lead to extensive neurological damage in your children, and has even been implicated in autism.

### Thimerosal

Thimerosal is the preservative of choice for vaccine manufacturers. First introduced by Eli Lilly and Company in the late 1920s and early 1930s, the company began selling it as a preservative in vaccines in the 1940s. Thimerosal contains 49.6 percent mercury by weight and is metabolized or degraded into ethylmercury and thiosalicylate. Mercury, or more precisely, ethylmercury, is the principle agent that kills contaminants. Unfortunately, mercury also kills much more than that.

The Department of Defense classifies mercury as a hazardous material that could cause death if swallowed, inhaled or absorbed through the skin. Studies indicate that mercury tends to accumulate in the brains of primates and other animals after they are injected with vaccines.

Mercury poisoning has been linked to cardiovascular disease, autism, seizures, mental retardation, hyperactivity, dyslexia and many other nervous system conditions. That's why the FDA rigorously limits exposure to mercury in foods and drugs. Some common sources of mercury include dental amalgam fillings, various vaccines and certain fish contaminated by polluted ocean waters.

The toxicity of mercury has never been in question. The real question is precisely how much mercury-laced thimerosal is toxic, and what are the possible consequences for our children at low doses?

Eli Lilly and Co. supposedly answered this question for us back in 1930. Concluding thimerosal to be of "a very low order of toxicity . . . for man," the company hired its

own doctors to perform thimerosal experiments in Indianapolis City Hospital on meningitis patients during a severe outbreak in 1929. This 60-year-old evidence was still quoted on the company's brochures as recently as 1990. Andrew Waters, who is involved in a lawsuit against Eli Lilly, claims that most critical studies on the toxicity of thimerosal were suppressed by the company until now.

#### Banned Around The World - But Not In The US

That might explain why thimerosal was eliminated in many countries 20 years ago. In 1977, a Russian study found that adults exposed to ethylmercury, the form of mercury in thimerosal, suffered brain damage years later. Studies on thimerosal poisoning also describe tubular necrosis and nervous system injury, including obtundation, coma and death. As a result of these findings, Russia banned thimerosal from children's vaccines in 1980. Denmark, Austria, Japan, Great Britain and all the Scandinavian countries have also banned the preservative.

Eli Lilly stuck to its "scientific" facts, but the truth began slipping between the cracks in 1999. After the number of immunizations rose to 12 to 15 per child, the public finally became privy to the possible dangers of thimerosal. One 1999 study revealed that some infants, due to a genetic or developmental factor, lack the ability to eliminate mercury. Trace amounts of mercury in these infants, when accumulated over several vaccines, could pose a severe health risk.

Some vaccines, such as vaccines for hepatitis B, contained as much as 12.5 micrograms of mercury per dose. That's more than 100 times the EPA's upper limit standard when administered to infants.

Hepatitis B vaccines aren't the only immunizations under suspicion. According to Burton Goldberg in *Alternative Medicine*, scientists are finding stronger and stronger links between thimerosal and neurological damage. One report by Dr. Vijendra Singh of the Department of Pharmacology at the University of Michigan found a higher incidence of measles, mumps and rubella vaccine (MMR) antibodies in autistic children.

The National Vaccine Information Center in Vienna, Virginia, has noted a strong association between the MMR vaccine and autistic features. Reporting similar findings, the Encephalitis Support Group in England claims that children who became autistic after the MMR vaccine started showing autistic symptoms as early as 30 days after vaccination. The diphtheria, pertussis and tetanus vaccine (DPT) given at two, four and six months has triggered autistic symptoms, as well.

When the FDA finally formally released this information in 1999, the news came too little too late for some parents. The damage had already been done.

#### Links Between Autism And Thimerosal

Autism affects 500,000 to 1.5 million Americans and has grown at an annual rate of 10 to 17 percent since the late 1980s. California found a 273 percent increase in autism between 1987 and 1998. Maryland reported a 513 percent increase in autism between 1993 and 1998 and several dozen other states reported similar findings. Some scientists say the estimated number of cases of autism has increased 15-fold

1,500 percent since 1991, when the number of childhood vaccinations doubled. Whereas one in every 2,500 children was diagnosed with autism before 1991, one in 166 children now have the disease.

This increase in reported autism cases eerily parallels the increase in the number and frequency of thimerosal-containing vaccinations administered to infants. As of today, children are given as many as 21 immunizations in the first 15 months of life. After a number of scientists and concerned activists noticed the correlation, an investigation was launched to get to the heart of the matter.

Statistical evidence links thimerosal with nervous system disorders In June 2000, federal officials and industry representatives were assembled by the Centers for Disease Control and Prevention to discuss the disturbing evidence. According to Tom Verstraeten, an epidemiologist who had analyzed the data on the CDC's database, thimerosal appeared to be responsible for a dramatic increase in autism and other neurological disorders. Verstraeten told those at the meeting that a number of earlier studies indicate a link between thimerosal and speech delays, attention-deficit disorder, hyperactivity and autism.

Verstraeten offered no possible cause for this correlation, but held that the statistical evidence linking vaccines and neurological disorders was strong. Dr. Bill Weil, a consultant for the American Academy of Pediatrics, and Dr. Richard Johnston, an immunologist and pediatrician from the University of Colorado, presented similar concerns to the group. However, given no causal relationship, the CDC and industry representatives were quick to discredit the evidence.

Consequently, the CDC paid the Institute of Medicine (IOM) to conduct another study on thimerosal. According to Robert F. Kennedy Jr., this study was fixed in order to "whitewash" previous findings. In its 2001 report, the IOM's Immunization Safety Review Committee did conclude that the link between thimerosal and neurodevelopmental disorders was biologically plausible, though the evidence neither proved nor negated it. The Committee stated that phasing out thimerosal from vaccines was "a prudent measure in support of the public health goal to reduce mercury exposure of infants and children as much as possible."

However, these findings offered no imperative. The data presented at the 2000 meeting was withheld from publication and the link between thimerosal and autism remained "inconclusive."

But what does "inconclusive" mean? Well, that depends on who you talk to. According to the FDA, these "inconclusive" findings negate the risk of a causal relationship between thimerosal and autism. Even Tom Verstraeten, one of the presenters of epidemiological evidence at the CDC meeting, seemingly changed his tune a bit. In 2000, Verstraeten vigorously campaigned against thimerosal based upon his "inconclusive" correlation, but after he was hired by GlaxoSmithKline, the doctor changed his position. The same evidence from 2000, in Verstraeten's eyes, became "neutral" in 2003. After criticism for this apparent flip-flop, Verstraeten wrote a letter to the editor of Pediatrics in 2004 backing the CDC's actions and his own research methods. Merck continues selling vaccines with thimerosal.

Without an imperative to eradicate thimerosal immediately, vaccine manufacturers

like Merck & Co. seemingly took their time in reducing thimerosal levels in vaccines. After a large public outcry in 1999, Merck & Co. began decreasing or eliminating the amount of thimerosal in its vaccines. In September 1999, Merck announced that its new line of vaccines were preservative-free, but still continued to distribute the remainder of thimerosal-preserved vaccines until 2001. Only after a congressional inquiry in 2002 did they stop distributing their stockpile. Rep. Dave Weldon, R-Fla., called Merck's actions "misleading."

While officials at the Center for Disease Control claim evidence is lacking to support the possible risks of thimerosal, Dr. Mark Geier, a Maryland geneticist and vaccinologist, along with his son and research partner David Geier, says the CDC has chosen to ignore the science. According to Dr. Geier, more than 5,000 articles have been published that question the safety of thimerosal in vaccines.

The Geiers analyzed the data and determined that the more thimerosal a child receives, the greater his or her chances are of being autistic. The CDC says the Geiers misused information from a CDC database that was not intended to help prove theories. Given no real causal mechanism linking thimerosal and autism, the game seems to have become one of slanting the data to suit the needs of government and industrial interests. Even Verstraeten has admitted that these "inconclusive" findings certainly don't rule out the possibility of finding a link in the future.

#### Grassroots Action Against Vaccine Manufacturers

Given the dearth of health organizations owning up to the dangers of thimerosal, many parents followed their gut instincts and took legal action against vaccine manufacturers. More than 4,200 families have filed lawsuits claiming thimerosal caused injuries to their children. These lawsuits often have two goals: First, to seek reparations for the loss of consortium (basically meaning that an autistic child creates emotional and psychological burdens on their family life), and second, to ensure that these companies exercise more concern for public health and less concern for their own bottom line.

The lawsuits are slow in producing results. The first constraint on these lawsuits is the National Childhood Vaccine Act of 1986. This act stipulates that victims cannot seek redress in the courts without first filing a claim for recovery in the federal Vaccine Court. The statute of limitations for this is within three years of "the first symptom or manifestation of onset or of the significant aggravation of a [vaccine-related] injury."

In the cases of many thimerosal victims, the link between autism and vaccines didn't appear until six years after the first vaccine was administered. While this statute has stopped some claims against vaccine manufacturers, including such big firms as Aventis, GlaxoSmithKline, Merck and Johnson & Johnson, many judges are now allowing suits against Eli Lilly, the maker of thimerosal, to stand. While the Vaccine Act shields vaccine manufacturers, one judge reasons that the legislation does not protect the production of thimerosal because it is a "component."

The burden of proof in court is also extremely problematic for most of these suits. Given the supposed lack of scientific data, lawyers are hard-pressed to prove the

link between thimerosal and autism. In what seems like an underhanded move, the CDC sold its data to a private company, ensuring that lawyers could not access it under the Freedom of Information Act.

In the past five years, Congress has also aided vaccine manufacturers, supposedly for "security" reasons. In 2002, a mysterious piggyback on the 2002 Homeland Security bill freed drug companies of liability in lawsuits regarding thimerosal. Called the "Eli Lilly Protection Act" by outraged parents and activists, the then-House Majority Leader Dick Armey told CBS News he snuck the amendment in to keep vaccine-makers from going out of business. Armey claimed it was a matter of national security. "We need their vaccines if the country is attacked with germ weapons."

Ironically, foreign biological terrorism hasn't been a big problem for American citizens, but those whose lives (and the lives of their children) have been affected if not ruined by the harmful effects of thimerosal would undoubtedly say these potentially harmful vaccines are indeed a problem. Armey's piggyback bill was repealed in 2003, but that didn't stop lawmakers from continuing to protect the vaccine industry.

Senate Majority Leader Bill Frist is no stranger to the thimerosal debate, having received \$873,000 in contributions from the pharmaceutical industry and \$10,000 from Eli Lilly. Frist's position allowed him to attempt to help the industry from the inside, according to Kennedy. Kennedy reports that on five occasions, Frist tried to seal the government's vaccine-related documents and shield Eli Lilly from subpoenas. Frist also introduced a provision in the 2005 Senate Bill S-3 called the "Protecting America in the War on Terror Act," that would effectively insulate the pharmaceutical industry from liability for thimerosal poisoning. Pharmaceutical manufacturers, including Merck, GlaxoSmithKline, Aventis, Weyeth and Eli Lilly, can basically get off scot-free for their actions, even as more and more evidence suggests that top company officials were aware of the possible dangers and did nothing.

A secret memo leaked to the Los Angeles Times reportedly implicates one vaccine manufacturer, Merck & Co., for knowing that thimerosal could pose serious threats to infants. Allegedly, Dr. Maurice Hilleman, one of Merck's top scientists, warned the president of Merck of a possible threat as early as 1991. Dr. Hilleman told executives that six-month-old children receiving regular immunizations frequently received mercury doses 87 times higher than guidelines for the maximum consumption of mercury. Given today's more prudent mercury standards, those thimerosal doses would be 400 times that of safe levels.

Dr. Hilleman recommended in the memo that thimerosal be discontinued. Not only do government and industry officials seem to be trying to downplay the possible harms of thimerosal; the media is also denying the issue coverage. Just recently, ABC flip-flopped on whether it will air interviews with Robert Kennedy Jr., a leading critic of thimerosal. ABC has been accused of suppressing the interviews because of its ties to the pharmaceutical industry.

The Thimerosal Debate Continues

Along with the enormous amount of controversy surrounding this issue, the five-year-old plea for "more research" may have finally produced some results. Burton Goldberg notes that a defect in the myelination process (insulation of nerve fibers) could explain mercury's propensity to cause autism and neurological damage. This may also account for the frequent development of epilepsy in older autistic children.

Scientists are also working on biological links that support the strong correlations. Researchers at Northeastern University, working with scientists from the University of Nebraska, Tufts and Johns Hopkins University, may have recently found the mechanism by which thimerosal interferes with brain activity. If these researchers are right, vaccine manufacturers could do little to keep the damaging effects of thimerosal hidden.

Pharmacy professor Richard Deth and colleagues found that exposure to thimerosal potently interrupts growth factor signaling, causing adverse effects on the transfer of carbon atoms. These carbon atoms play a significant role in regulating normal DNA function and gene expression and are critical to proper neurological development. Additionally, the scientists recently obtained more insight into the mechanism by which thimerosal interferes with folate-dependent methylation. The mechanism inhibits the biosynthesis of the active form of vitamin B12 (methylcobalamin), a vitamin now being administered to autistic children.

#### The Experts Speak On Mercury, Vaccines And Thimerosal

All childhood vaccines now have at least one mercury-free version, and I urge parents to ask for those versions if they choose to vaccinate their children. Injecting mercury into children, especially infants whose immune systems are still underdeveloped (hepatitis B shots are typically given at birth, before the immune system has developed), can be an assault to the immune system.

#### What Your Doctor May Not Tell You About Autoimmune Disorders

By Stephen B Edelson MD  
page 65

In 1999, studies began to surface showing that multi-dose vial vaccines, such as the MMR and hepatitis B vaccines, contained enough thimerosal to expose vaccinated children to 62.5 ug of mercury per visit to the pediatrician. This is one hundred times the dose considered safe by the Federal Environmental Protection Guidelines for infants! Worse yet, some infants will receive doses even higher; because thimerosal tends to settle in the vial. If it is not shaken up before being drawn, the first dose will contain low concentrations of mercury and the last dose will contain enormously high concentrations. If your baby is the unlucky one that gets the last dose, serious brain injury can result

#### Health And Nutrition Secrets

By Russell L Blaylock MD,  
page 166

Thousands of families say they can demonstrate with videotapes and photos that their children were normal prior to being vaccinated, reacted badly to the vaccines, and became autistic shortly thereafter. The number of vaccines given before age two has risen from 3 in 1940, when autism occurred in perhaps one case per 10,000 births, to 22 different vaccines given before the age of two in the year 2000.

### Building Wellness With DMG

By Roger V Kendall PhD  
page 104

We know that certain forms of mercury, such as methylmercury and phenylmercury, are highly lipid soluble, which makes the brain especially susceptible to mercury accumulation. These forms of mercury are found in vaccines as the preservative thimerosal. Once in the brain, it tends to attach itself to protein structures, especially to the cell membrane, where it can disrupt membrane functions.<sup>23</sup> By binding to the cell membrane, mercury changes the membrane's fluid-like quality, making it stiffer and causing the cell to age faster.<sup>24</sup> The brain is unique in that neurons depend on special microscopic tube-like structures within the cell, appropriately called neurotubules, for their function. These neurotubules are manufactured by the cell from a substance called tubulin. We know that mercury interacts with tubulin causing it to unravel. Studies in rats have shown that doses of mercury corresponding to those seen in humans can cause a 75 percent increase in tubulin inhibition.

### Health And Nutrition Secrets

By Russell L Blaylock MD  
page 53

In the case of the susceptible newborn infant and toddler, multiple exposures to mercury-containing and multiple antigen vaccines are highly suspect in the causation of multiple organ injury (Bernard et al. 2000). The GI tract, the liver, the pancreas, the kidneys, the immune system, and the brain are major sites of mercury absorption. Researchers have clearly shown a chronic inflammatory bowel disease due to vaccine strain measles in a subset of children with autism (Thompson et al. 1995; Wakefield et al. 1995, 1999, 2000a,b; Kawashima et al. 2000; Pardi et al. 2000; Uhlmann et al. 2002).

### Disease Prevention And Treatment

By Life Extension Foundation  
page 153

Studies of autistic children have frequently shown very high levels of mercury, with no other source but vaccines found for the exposure. These levels are equal to those seen in adults during toxic industrial exposures. Several autism clinics have found dramatic improvements in the behavior and social interactions in children from whom

the mercury was chelated. Results depended on how soon the mercury was removed following exposure, but permanent damage can be caused if the metal is not chelated soon enough. Still, even in cases of severe damage, because of the infant brain's tremendous reparative ability, improvements are possible. The problem of autism involves numerous body systems including the gastrointestinal, immune and nervous systems; as a result we see numerous infections and magnified effects of malnutrition. Intrepid workers in the shadows, that is outside the medial establishment, have worked many miracles with these children using a multidisciplinary scientific approach completely ignored by the orthodoxy. Some children have even experienced a return to complete physiological normalcy.

### Health And Nutrition Secrets

By Russell L Blaylock MD  
page 166

Mercury and autism mercury toxicity is a suspected cause of a steep rise-a tenfold increase between 1984 and 1994-in diagnosed cases of autism in children around the world, according to some scientists. Specifically, the culprit is thimerosal, a mercury-based compound used as a preservative in vaccines commonly administered to babies and infants. thimerosal-free vaccines are available. If you have a child who will be receiving vaccinations, ask for and make sure thimerosal-free vaccines are used. Kelp, with its essential minerals (especially calcium and magnesium), helps remove unwanted metal deposits.

### Prescription For Dietary Wellness

By Phyllis A Balch  
page 198

The pertussis vaccine (DPT) may cause 45,000 cases of autism per year in America, affecting 15 cases out of 10,000 vaccinations; also caused by the measles-mumps-rubella vaccine (MMR) that causes mental impairment, gastrointestinal damage, and increased mortality in 6-12 months from impaired immunity; 9 out of 10 cases were not breast-fed; eating dairy products caused parasites in the autistic (take Vermex; contact Dr. Nelson in Mexico for control of parasites in children with autism). There are now over 500,000 victims of autism residing in the United States, in 1994. The pertussis vaccination is not used in Sweden, which has virtually 0 cases of autism, as does Holland.

This mental illness afflicts environmentally and socially non-reactive persons, of withdrawn personality; with inability to speak, violent tantrums, insomnia, actions such as bolting across a road with no regard for the dire consequences. May be caused infant antibiotic use in ear infections with subsequent yeast overgrowth, by cumulative genetic Brain damage, Vitamin deficiencies, or milk and additives allergies. Immune disorders in autism include white blood cell neutrophil Myeloperoxidase enzyme deficiency for insufficient hypochlorite ions to kill yeast - genetic type from Chromosome 17 mutation or biotinidase deficiency, or acquired type from lead poisoning, Folic acid or B-12 deficiency, infection or leukemias

## Anti-Aging Manual

By Joseph B Marion  
page 450

Multiple vaccinations, especially in newborns, are another major source of childhood mercury exposure because of the mercury-containing thimerosal preservative. Over twenty-two vaccinations are now recommended for children before the age of two!

## Health And Nutrition Secrets

By Russell L Blaylock MD  
page 64

In addition, there is some anecdotal evidence that autism may be tied to diet. One theory is that, in very rare cases, a child's immune system could be weakened by the measles-mumps-rubella vaccination (MMR), which is usually administered before a child turns 2. As a result of this weakening, the theory goes, the child's digestive system is unable to break down certain food proteins, leading to abnormal brain development. Proponents of this theory believe that putting the child on a diet that eliminates certain foods, such as wheat and dairy products, could in certain cases reverse the course of the disease. This theory remains speculative, however, and research needs to be done to determine its validity. In fact, a 2001 report issued by an Institute of Medicine committee examining studies about the health effects of the MMR vaccine in young children suggests that there is no proven link between the vaccine and autism. The committee recommends that there be no change in immunization practices that require children to be immunized during early childhood.

## The Immune Advantage

By Ellen Mazo and Keith Berndtson MD  
page 292

Rather than calling for an all-out immediate ban on thimerosal-containing vaccines, they suggested that parents continue to have their children vaccinated with mercury-contaminated vaccines until new stocks of uncontaminated vaccine could be made available. Here are two doctors' unions that had to be beat over the head with an overwhelming amount of data that mercury-contaminated vaccines were harming children far worse than the actual diseases against which the vaccine was intended to protect them, only to have them suggest that parents continue to harm their children just to satisfy their vaccination obsession.

Are you surprised to discover that recent investigations have found that several doctor-members of vaccine boards were either receiving grants from vaccine manufacturers or held stock in the companies? They were willing to sacrifice the health of millions of children just to fill their pockets with cash. These people should be looking through bars, not serving on boards.

## Health And Nutrition Secrets

By Russell L Blaylock MD  
page 167

Vaccines may afflict 45,000 cases of autism per year in America, which afflicts 15 victims in every 10,000 births: there are now 500,000 of these victims in the U.S. In Sweden not using the pertussis vaccine, there is virtually no autism (and likewise in Holland).

## Anti-Aging Manual

By Joseph B Marion  
page 600

Many symptoms of autism are similar to those of mercury poisoning. Immune dysfunction, visual disturbances, and motor dysfunction are seen in both. Treating autistic children for removal of mercury and other heavy metals has shown significant improvement in their autistic symptoms. Most autistic individuals have poor liver detoxification, low antioxidant levels, and low levels of glutathione. Vaccines are effective, but the production and use of vaccines should proceed more cautiously. Currently manufactured vaccines still contain harmful substances like mercury. The link between vaccines and autism is far stronger than the medical community is willing to admit, and more research in this area should be an urgent priority.

## Building Wellness with DMG

By Roger V Kendall PhD  
page 105

Studies indicate that autism may be the result of adverse reactions to childhood vaccinations. Dr. Alan Cohen, an environmental physician from Connecticut, notes that high levels of autism and attention deficit disorder (ADD) did not occur until the mandatory use of childhood vaccinations, and suggests that there may be a connection between certain vaccines and the onset of these conditions.

## Complete Encyclopedia Of Natural Healing

By Gary Null PhD  
page 46

Almost from the inception of vaccination programs, manufacturers added a mercury preservative called thimerosal to vaccines. The practice continued until recently, and was stopped only because of the outcry from thousands of concerned parents and numerous experts in the field. The American Academy of Pediatrics and the American Academy of Family Practice did not warn parents or pediatricians that the

mercury was dangerous until they were forced to. That mercury was toxic to cells had been known for over sixty years, but manufacturers apparently were more worried about lawsuits

#### Health And Nutrition Secrets

By Russell L Blaylock MD  
page 165

In fact, a 2001 report issued by an Institute of Medicine committee examining studies about the health effects of the MMR vaccine in young children suggests that there is no proven link between the vaccine and autism. The committee recommends that there be no change in immunization practices that require children to be immunized during early childhood. Another disorder affecting the brain, Alzheimer's disease, may also have an immune connection. Alzheimer's is a degenerative disease that slowly attacks nerve cells in the brain. It eventually results in the loss of all memory and mental functioning. Scientists are currently investigating the role that the immune system plays in producing an overabundance of the amino acid glutamate, a powerful nerve-cell killer. Another immune connection that researchers are investigating is the idea that Alzheimer's might be triggered, in part, by a virus.

#### The Immune Advantage

By Ellen Mazo and Keith Berndtson MD  
page 292

In the past 10 years, the number of autistic children has risen between 200 and 500 per cent in every state in the U.S. This sharp increase in autism followed the introduction of MMR vaccine in 1975. Representative Dan Burton's healthy grandson was given injections for 9 diseases in one day. These injections were followed by autism.

#### A Physicians Guide To Natural Health Products That Work

By James Howenstine MD  
Page 267

"Probably 20% of American children, one in five, suffers from a 'development disability'," according to Harris Coulter, Ph.D., Founder and Director of the Center for Empirical Medicine, in Washington, D.C. "This is a stupefying figure and we have inflicted it on ourselves. 'Development disabilities' are nearly always generated by encephalitis. And the primary cause of encephalitis in the U.S. and other industrialized countries is the childhood vaccination program. To be specific, a large proportion of the millions of U.S. children and adults suffering from autism, seizures, mental retardation, hyperactivity, dyslexia, and other branches of the hydra-headed entity called 'development disabilities' owe their disorders to one of the vaccines against childhood diseases."

## Alternative Medicine

By Burton Goldberg  
page 1101

Martin noted that the increased incidence of chronic fatigue syndrome, attention deficit hyperactivity disorder, autism, and other behavior-linked illnesses "may be an inadvertent consequence of stealth virus vaccine contaminants."

## AIDS And Ebola

By Leonard Horowitz PhD  
page 493

Just for perspective if we go back to 1971 up to 1980, we see that California consistently added 100 to 200 new cases a year; but in the year 2002, California added 3,577 new cases. Since 1980, the documented start of California's autism epidemic, the number of new cases has steadily increased. If we break down those statistics it means that from 1994 to 1995, California only added on average 2 new autistic children a day into its system. In 2001, it was a rate of 8 new autistic children added a day; in 2002, it jumped up to 10 children a day. mercury-containing vaccines are still in use today, including the most recently recommended addition to the childhood immunization schedule, 2 shots of flu vaccine for infants, bringing the total number of vaccines up to 41 in California that a child will receive before the age of two. It will take a few years to start seeing the effect of the phasing out of the mercury-containing preservative thimerosal from childhood vaccines on this autism epidemic.

Many symptoms of autism are similar to those of mercury poisoning. Immune dysfunction, visual disturbances, and motor dysfunction are seen in both. Treating autistic children for removal of mercury and other heavy metals has shown significant improvement in their autistic symptoms. Most autistic individuals have poor liver detoxification, low antioxidant levels, and low levels of glutathione.

## Building Wellness with DMG

By Roger V Kendall PhD  
page 105

Since the 1990s, there has been a tenfold or 1000-percent increase in autism, an increase which has been linked by some researchers to the organic mercury preservative commonly found in baby vaccines. A greatly increased incidence of juvenile diabetes has been correlated to specific vaccination sequences and to the number of vaccines given. In some Australian Aboriginal communities, every second child died shortly after vaccination.

## The Natural Way to Heal

By Walter Last page

309

The best current estimates are that autism occurs in 40 to 67 children per 10,000 live births. This means that the prevalence of autism has increased 1,000 percent in the last decade. According to the latest figures just released in January 2003 by the California Department of Developmental Services, California experienced an astounding 31 percent increase in the number of new children

From <http://www.rense.com/general79/merc.htm>

### **Safe Minds' Assessment of the Thimerosal-Containing Vaccine Study**

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#### **Introduction**

This analysis describes the concerns that Safe Minds has over a recently published study in The Lancet, by Michael Pichichero et al.(1), in which blood measurements were taken of infants after administration of vaccines containing thimerosal. The article and accompanying commentary contain several sweeping statements about thimerosal safety:

- "Overall, the results of this study show that amounts of mercury in the blood of infants receiving vaccines formulated with thimerosal are well below concentrations potentially associated with toxic effects."
- "Administration of vaccines containing thimerosal does not seem to raise blood concentrations of mercury above safe values in infants."
- "This study gives comforting reassurance about the safety of ethyl mercury as a preservative in childhood vaccines."

The design and results of the study do not support these statements. In fact, the results suggest that thimerosal exposure from vaccines may have caused neurological damage in some children. Safe Minds questions the objectivity of the study authors due to their ties to vaccine research and vaccine manufacturers, which may have resulted in a biased study design and biased interpretation of the results.

#### **Objectivity of the Authors**

- Pichichero has an acknowledged financial tie to Eli Lilly, the developer of thimerosal and the main target of thimerosal litigation. He has also claimed financial ties to a number of vaccine manufacturers, including manufacturers of thimerosal-containing vaccines.(2) For example, in an article in the American Academy of Family Physicians newsletter of April 2000, Dr. Pichichero makes this disclosure statement (3):

"The author has received research grants and/or honoraria from the following

pharmaceutical companies: Abbott Laboratories, Inc.; Bristol-Myers Squibb Company; Eli Lilly & Company; Merck & Co.; Pasteur Merieux Connaught; Pfizer Labs; Roche Laboratories; Roussel-Uclaf; Schering Corporation; Smith Kline Beecham Pharmaceuticals; Upjohn Company; and Wyeth-Lederle."

- Pichichero's work has been cited in 21 vaccine patent applications. He was involved in the recommendation for the Wyeth rotavirus vaccine and failed to anticipate its risks. (4) This vaccine was withdrawn soon after licensure due to adverse reactions.
- Similarly, the University of Rochester Web site provides biographical information on Dr. Pichichero, which describes his focus on vaccine research. (6) It describes him as an immunologist, not a toxicologist. None of his work involves safety assessment of a heavy metal or other toxicant. One paragraph cites his work on the Haemophilus influenzae type B vaccine, one of the thimerosal-containing vaccines that was added to the CDC/AAP-recommended infant schedule in 1991, nearly doubling the thimerosal load.
- John Treanor, another author, has also conducted substantial research into thimerosal-containing vaccines, and the University of Rochester is one of a few sites designated by NIH for evaluating new vaccines. Investigators at the University of Rochester helped develop the Haemophilus influenzae B vaccine. Per its Web site, "Rochester has become a national model...in ensuring that as many people as possible are immunized." (7)

### Study Design Issues

Sample:

- The sample size was small. Although the overall sample size was stated as 61 infants, there were only 33 exposed children who were used for the blood mercury assessment upon which the safety conclusions were made.

One major shortcoming of a small sample size is the low chance of including infants who are especially sensitive to mercury's effects or who may have detoxification difficulties. We know from the mercury literature that there is wide variability in the population in regard to mercury sensitivity and clearance. Since vaccines are given to virtually all infants, even if one percent retained mercury to a much greater degree than the "norm," this would represent a large number of injured children.

- The small sample size means that the study lacks sufficient power to establish safety claims.
- The sample was not randomly drawn, but was a convenience sample, and therefore not representative of all infants in terms of health status, socio-economic status, ethnicity and other potentially important factors.

## Dose

- Given that the half-life of ethyl mercury appears to be six to seven days, virtually all, if not all, blood draws missed the peak blood concentrations of mercury. It is evident that earlier peaks existed because the feces contained high mercury values, and feces reflect earlier blood levels. It is impossible to state what the peak values are if they were not measured. It is also impossible to calculate average blood concentrations unless peak concentrations are measured.

Standard methyl mercury pharmacokinetic (PK) studies consider peak and average blood concentrations, along with tissue distribution, as necessary components of toxicity assessment. It is disingenuous to compare the blood levels in this study with past methyl mercury ones without any type of adjustment factor, because the methyl mercury studies incorporated peak levels into their values, whereas this study only included the smaller values.

- The dose of ethyl mercury given to subjects varied greatly and was less than what a typical child in the 1990s could receive. In a rationally designed PK study, the dose is kept constant. In the Pichichero study, the 2-month-old subjects were injected with between 37.5 mcg and 62.5 mcg of ethyl mercury reflecting a 67 percent difference between the lowest and highest dose. The mean was 45.6 mcg.

The typical child in the 1990s could receive 62.5 mcg of mercury at age 2-months and an additional 12.5 mcg at birth (from the Hepatitis B vaccine), or 37 percent and 64 percent more Hg, respectively, than the children in this study. The 6-month-old subjects were injected with between 87.5 mcg and 175 mcg of ethyl mercury reflecting a 100 percent difference between the lowest and highest dose. The mean was 111.3 mcg.

By 6 months of age, the typical child in the 1990s would have received 187.5 mcg Hg, or 68 percent more than the Pichichero study group average.

- The total recorded dose of ethyl mercury was not administered during the study data collection period. According to the national immunization schedule that existed during the data collection period (November 1999 to October 2000), it is not possible for a 6-month-old infant to receive 175 mcg of ethyl mercury at only the six-month visit. Rather, at 6 months of age, an infant would receive a maximum of 62.5 mcg Hg, from a DTaP, a HiB, and a Hep B vaccine.

Thus, the Pichichero study, in calculating dose, included exposures that occurred months prior to the last injection. Thus, when the study characterizes blood draws as being "X" days after the mercury exposure, this is misleading, because it refers only to the last injection. Thus, the reader really doesn't know how much dose any infant received at that last exposure from the data presented in the table in the study.

- In a properly designed PK study, multiple blood draws should be taken from each subject, and blood collection times should be consistent for all subjects. In this study, there was a single draw per child, and the collection times varied from

three to 21 days for 2-month-old infants, a 700 percent difference, and from four to 27 days for 6-month-old infants, a 675 percent difference.

## Modeling

- The single compartment model and safety assumptions looked at blood levels as the determinant of safety. However, a more important measure is mercury distribution into tissue, particularly the brain. Estimation of brain accumulation would require a two compartment model and measurement of peak blood levels, neither of which were components of this study. Yet it is apparent that the mercury is moving through the body and is redistributing because it is in the feces at substantial levels.

## Study Interpretation

- Improper use of methyl mercury safety levels as a marker for ethyl mercury risk: the Pichichero study compares ethyl mercury blood levels with levels from methyl mercury risk assessments, but obviously ethyl mercury is a different molecule than methyl mercury, and therefore it needs its own safety assessment. A slight change in molecular structure can have very different effects in the body. There has never been a full safety assessment of thimerosal, as the FDA has admitted.

The only way to do this is to conduct a series of cellular or molecular level studies as well as population studies consisting of either (a) animal studies, which measure behavioral, neuropsychological, or physiological outcomes (that is, does "x" dose result in "y" aberrant behavior or "z" reduction on memory tests, etc.), or (b) human studies on exposed populations, again looking at behavioral, neuropsychological or physiological outcomes.

These types of studies have been done extensively for methyl mercury, and this is why methyl mercury blood levels can be correlated with certain outcomes or risk, but it has never been done thoroughly for thimerosal. The Pichichero study does not address adverse outcomes at all, and therefore does not constitute a true safety assessment.

- Improper interpretation of 1994 Grandjean study to assess safety: the Lancet study authors cite a 1994 article by Philippe Grandjean as saying that a 29 nMol/L blood concentration is the level for methyl mercury which is thought to be safe, since it is 10 times lower than the levels at which adverse effects have been found in methyl mercury research. (10 times 29 nMol/L equates to 290 nMol/L, or 59 parts per billion.)

Actually, as the EPA explains (8), the EPA incorporated a ten-fold factor into their safety assessments due to "uncertainty factors" because the methyl mercury studies are small, have a high margin of error, and there is immense variability in human response to mercury. Thus, to be truly protective of the population, blood levels should not exceed 29 nMol/L (which equates to 5.8 parts per billion, or the 6 mcg/L the EPA refers to in their document). The EPA was concerned when a national study (NHANES) showed that 10 percent of U.S. women of childbearing age had blood mercury over 6 ppb. Thus, a level of 6 ppb or over, equivalent to 29+ nMol/L, is considered by the EPA to be cause for

alarm.

In the Pichichero study, there is one infant blood level out of the 17 2-month-old blood samples (12 percent) that was 20.55

nMol/L, or 4.1 ppb. This infant had his or her blood drawn at day five, received 37.5 mcg/Hg and weighed 5.3 kg.

a) Day five is past the peak value in blood, meaning that at days one to three, levels would be much higher.

b) A 37.5 mcg dose is (conservatively) 60 percent of what a typical 1990s infant may have received ( $37.5/62.5=60$  percent).

c) A 5.3 kg infant is at the 95th percentile of weight for a 2-month-old, that is, a large, heavy baby. Since blood Hg concentrations are in part dependent on weight, a child with a lower weight than this infant (that is, 95 percent of the 2-month-old population) would have had a higher blood level than this infant.

The implications of points a, b, and c are that (1) if the study infant's blood were taken at one to three days, it is more than likely that the Hg levels would have exceeded 6 ppb; (2) it is likely that the peak levels of more than 12 percent of 2-month-old children given the full 62.5 mcg of mercury would exceed 6 ppb; and (3) a larger percentage of smaller infants -- but still those of "normal" weight -- would be likely to have blood levels exceeding 6 ppb.

In addition, there were two other 2-year-olds with mercury levels between 10 and 15 nMol/L. These values are within one-half to one-third of the EPA margin of safety, with blood draws on days six to seven.

For these reasons alone, the results of the Pichichero study are anything but "reassuring" to parents whose children were exposed to thimerosal as infants.

### **Learning From the Study**

Despite its many limitations, the Pichichero study does provide new or confirming information about the pharmacokinetics of ethyl mercury injected into infants.

- The half-life of ethylmercury in infants appears to be shorter than methyl mercury, approximately six to seven days. Pharmacologically, this period would be considered a very long half-life and a long time for a toxic substance to be circulating in the body. In fact, the single blood draw after 20 days for which mercury quantization could be made showed mercury being circulated at about 5 nMol/L. In a developing brain a few days are significant time periods for an agent that interferes with cell division and organization.
- The control group had no detectable mercury, indicating that the mercury in the

exposed group was due to the thimerosal in the vaccines.

## Summary

The Pichichero is a small-scale descriptive study with many design limitations, which has moderate value in advancing understanding of ethyl mercury pharmacokinetics. It has little if no value as a safety assessment of thimerosal from vaccines, and its conclusions are overreaching, perhaps reflecting a bias on the part of its lead author toward absolving licensed vaccines of any adverse effects.

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Editorial in JAMA 1999 –

<http://www.vaccinationnews.com/dailynews/april2002/limitinginfantexposurethimvax.htm>

The public has become intolerant of unnecessary exposure to real and theoretical risks for children from all sources as evidenced by demands to make food products, toys, seat belts, and air bags as safe as possible.<sup>26</sup> Reducing or eliminating exposure to mercury from all sources, including industrial contamination of waterways that leads to accumulation of mercury in fish, should be a national priority.<sup>27</sup> Further reductions or elimination of mercury in vaccines will help maintain public confidence by demonstrating a commitment to provide the safest vaccines possible for protecting children against disease.

However, clinicians are uncertain as to how much mercury can be safely given at 1 time when multiple thimerosal-containing vaccines are administered simultaneously.

The FDA regulations require preservatives in multidose vials of most vaccines (with the exception of certain live viral vaccines) to protect against inadvertent contamination from repeated puncture of the seal.<sup>20</sup> Thimerosal does not prevent all bacterial contamination, as evidenced by clusters of disease from group A streptococcus infections traced to multidose diphtheria toxoid, tetanus toxoid, and pertussis (DTP) vaccine vials that were contaminated after opening.<sup>21</sup> The use of single-dose vials or pre-filled syringes for vaccines should be encouraged because this eliminates errors in preparation as well as the need for preservatives for most vaccines.

**From: <http://www.msnbc.msn.com/id/7012824/>**

**Parents of autistic kids battle for medical coverage**

***Many insurers withholding payment for therapy***

**By Sue Herera**

Anchor

CNBC

updated 12:07 p.m. ET, Wed., Feb. 23, 2005 

Thomas Hiltajczuk may look like a typical 4-and-a-half-year-old. He loves to play with his sister, jump on his trampoline and watch The Wiggles. But Thomas is anything but typical. He doesn't speak and he can't tolerate crowds or changes in his routine. Thomas is autistic.

"When he was 15 months old, Thomas stopped talking," said his mother, Lynn. "He has a twin sister and he wasn't developing like she was. That was when we started to wonder if something wasn't going on."

Lynn and Jurie Hiltajczuk took their son to a developmental pediatrician. "We didn't think he would tell us he had autism, but that's what they told us," said Lynn Hiltajczuk.

Autism is a complex brain disorder that inhibits a person's ability to communicate, form relationships and interact with people. Few disorders are as emotionally or financially devastating to a family. Over the last decade, the incidence of autism has increased from a rate of 1 in 2,500 children to 1 in 166, some experts say. According to the Centers for Disease Control and Prevention, autism is now the fastest growing serious developmental disability in the United States.

"There's this sense that people have that for the first time they know somebody who knows somebody who has autism and you find that almost anywhere you go," says

Thomas Insel, Director of the National Institute of Mental Health. "And just that experience alone suggests that, gee, this is more common than it would have been 10 years ago."

While there is no cure for autism, one of the most promising therapies is Applied Behavior Analysis, or ABA, a system of rewards that breaks down tasks and learning into very simple steps.

In the 1970's, Dr. Ivar Lovaas of the University of California at Los Angeles, showed that 50 percent of autistic children who received 40 hours per week of ABA therapy developed enough skills to eventually become indistinguishable from their peers.

### **Who will pay?**

But for ABA therapy to have an effect, the program needs to be intensive — one child working individually with a therapist for 25 hours or more per week. All this therapy can cost families over \$5,000 a month. And most often, the fees are not covered by health insurance.

"While ABA appears to work for some children, how it gets paid for is another question," said Insel. "It's a tremendous financial burden for one family to take on, and we don't want to be in a situation where only families with means have children who will recover and be mainstreamed."

Most insurance companies have been reluctant to cover ABA therapy, calling it experimental, investigational and not medically necessary.

"'Medically unnecessary' is a difficult thing to deal with," says Lynn Hiltajczuk. "Does that mean he'll die if he doesn't have ABA? No. But it does mean he won't have a fulfilling life and be part of society. And 'experimental'? There are 30 years of studies that show it's the best thing to do."

### **'A double whammy'**

Adds Jurie Hiltajczuk, "It's kind of a double whammy. Here you're trying to deal with the emotional side of it and then you get hit financially on top of it."

That's why the Hiltajczuks started their national campaign to get ABA covered by insurance. Jurie is a federal employee and the group has begun their effort by targeting the federal employees health plan.

"Insurance companies love to avoid their responsibility," says Rep. Chris Smith, R-N.J., chair of the Congressional Autism Caucus. Smith is pushing insurance companies within the federal employees system to cover ABA therapy.

"We can be trend setters as to what a minimum benefit should include, and then there's the peer pressure that if federal programs covers it then why isn't it a benefit for everyone in corporate America?" says Smith.

After dozens of phone calls, [CNBC](#) was unable to find an insurance industry representative willing to speak on camera about ABA coverage. However, the American Managed Behavioral Health Care Association, a trade organization for mental health care coverage, said member companies have reviewed ABA and have determined that the treatment has not yet been proven to be effective.

"It's bad enough you have the emotional part, but then when you start dealing with the financial, and the fights, and the just trying to get the care for your child, it just wears you down in a way that was unimaginable before his diagnosis," says Lynn Hiltajczuk.

*(CNBC special projects producer Alison Tepper-Singer contributed to this report.)*

## ***Cases of child autism have increased 850 percent in Missouri***

[http://www.semissourian.com/story.html\\$rec=136164](http://www.semissourian.com/story.html$rec=136164)

Sunday, April 25, 2004

By Callie Clark, Southeast Missourian

The smell of burning flesh made Tammila Miller turn around. The Grassy, Mo., mom was on the phone in the kitchen waiting for her oven to preheat. She whirled around to find her autistic son, Michael, gripping the hot baking rack in the oven.

Michael, now 7 years old, suffered third-degree burns on his palms but never cried or showed any sign of pain during the ordeal.

There are more than 2,800 children in Missouri diagnosed by schools as autistic, an 850 percent increase since 1991. That's 2,800 children who may, for no apparent reason, bolt toward a busy highway. That's 2,800 children who may get so frustrated at their inability to communicate that they punch themselves in the face or bang their heads against a wall.

The skyrocketing numbers of autistic children across the United States are starting to test society's ability to treat them. The demand for services has outpaced the supply of therapists as parents waste critical months on a waiting list just to get diagnosed.

Autistic children wait a year to have their first music therapy lesson because there is only one part-time music therapist in a 100-mile region. Schools are having to pay more to educate autistic children. Parents are going broke because insurance companies refuse to pay for services.

The United States spends \$90 billion per year to provide care for the country's 1.5 million autistic children and adults. The Autism Society of America estimates that cost could balloon to \$200 billion to \$400 billion by 2013.

To make matters worse, scientific research offers conflicting and inconclusive explanations as to why autism is growing more like an infectious disease than a genetic neurological disorder.

The rate of children being diagnosed with autism is now as high as one in 166. Ten years ago it was one in 2,500, according to the American Academy of Pediatrics and the Centers for Disease Control and Prevention.

The actual number of autistic Missourians -- children and adults -- is unknown because some children diagnosed by medical authorities as autistic aren't recognized as such by the Missouri Department of Elementary and Secondary Education -- the only government-sanctioned census of autistic children in the state.

DESE currently identifies 2,801 children between the ages of 3 and 21 as autistic, up from 294 children in 1991. Some parents believe there are actually many more.

Whatever the numbers are, the medical establishment hasn't been able to agree on the cause of the huge increase over the past decade.

"Before too long it's going to become a public health issue," said Dr. David Crowe, a Cape Girardeau orthodontist whose son was diagnosed with autism in 1985. "It's like a ticking time bomb, because the cost of providing the needed care and therapy is astronomical."

### **National explosion**

Other states are seeing similar explosions in the number of children diagnosed as autistic. The Autism Society of America, an advocacy organization in Bethesda, Md., estimates that every day 50 children in the United States are diagnosed with a form of autism.

"We are seeing more diagnoses, and there doesn't seem to be one good reason why," said Julia Kaufmann, director of children's services with the Missouri Department of Mental Health. "It could be a number of things. We're open to looking at all causes."

The Department of Mental Health, in conjunction with lawmakers, state agencies and universities, has formed the Missouri Autism Research and Response Agenda to look at the possible causes of autism and improve support services for individuals with the disorder. The agenda group is putting together a statewide database with information on autism to aid research in the growing field.

The words "epidemic" and "autism" are being paired in hushed tones in the country's medical community.

Dr. Mark Geier, a Maryland geneticist and vaccinologist, and his research partner and son, David Geier, estimate the lifetime cost of caring for an autistic person at between \$5 million and \$10 million.

"It's the greatest catastrophe to fall on this country," said David Geier. "We've looked at it backwards, forwards, upside down. It won't go away. This thing is absolutely going to damage the country."

The father-son team are part of a growing number of scientists, physicians and parents who believe the increase in autism during the 1990s was caused by the mercury-containing preservative thimerosal, which was added to vaccines 70 years ago.

During the past decade, the amount of thimerosal children received increased as the United States expanded its immunization program. At the same time, the country's autism population began to grow significantly.

### **Autism origins**

The word autism is derived from the Greek word "autos," which means self. It was first defined as a specific condition in 1943.

Originally, the medical community believed autism to be a psychological disturbance caused by uncaring, detached mothers. Those suffering from it often were institutionalized. In the 1960s, a new theory developed that labeled autism as a biological problem. Recent research classifies it as a genetic disorder.

Autism is referred to as a spectrum disorder because of the wide range of characteristics and effects it can have on people. Signs usually appear by age 3. It's more prevalent in boys than girls.

Although diagnoses and definitions may vary from one physician to another, the autism spectrum is generally broken down into five different categories, which all fall under the general term pervasive developmental disorder:

autism

Asperger's syndrome

childhood disintegrative disorder

Rett's disorder

pervasive developmental disorder -- not otherwise specified

The "not otherwise specified" category includes those with autism symptoms that do not fall clearly into the other four categories.

Autism's only predictable symptom is unpredictability. Symptoms are different with every child.

Autistic children often have a high tolerance for pain but can be overly sensitive to certain lights, odors, sounds and textures. These sensitivities have been a big adjustment for Karen Manning of Perryville, Mo., whose son, Darin, was diagnosed as autistic at age 4.

The Mannings no longer take family photos. To Darin, the camera's flash looks more like the first daylight after a long stay in a black room.

Karen Manning no longer dresses her son in blue jeans. To Darin, the denim feels like coarse sandpaper, causing him to curl up and cry.

"It's a feeling like you've been burglarized, like somebody came in and stole my son's mind," Manning said.

In addition to sensory sensitivity, autistic children may not have a sense of danger or feel pain. They may have a hard time staying focused and may flap their hands or engage in other repetitive movements.

### **Communication block**

But the lack of communication and social skills are perhaps the most telltale characteristics of autism.

Some autistic children, like Nicholas Clark of Parma, Mo., stop speaking entirely.

Nicholas, now 7 years old, developed normally until age 2, when he began losing his vocabulary and exhibiting other signs of autism. Eventually, he regressed into complete silence.

"We didn't know if he would ever talk," said Melinda Clark, Nicholas' mother. "He's in his own world, and we have to give him as much incentive as possible to come into our world."

Poor voluntary control of speech muscles, a condition called verbal apraxia, is common among autistic children, says Dr. Carol Ludwig, a Jackson speech pathologist.

"Being autistic is like hearing a foreign language," Ludwig said. "The words don't make any sense."

Within each of the autism disorders, symptoms and degree can range from mild to severe. Doctors look for specific symptoms in communication and social impairments to diagnose autism. Doctors look for an inability to make friends, a lack of eye contact, an inability to express spontaneous joy and a failure to connect emotionally with others.

Autism is widely regarded as a genetic disorder because of its heritability; however, most researchers agree that there is no single cause. Many autistic people also have genetic syndromes or chromosome disorders, but there's little scientific explanation for how or why autism occurs.

The April issue of the American Journal of Psychiatry includes a new study identifying two variants of a single gene that may raise a child's risk of autism by twofold or more, the Associated Press reported.

Those variants, however, aren't enough to cause autism by themselves. Researchers involved in the new study believe it takes between five and 10 genes working together to produce autism.

Similar genetic research is taking place at the Autism Center and Clinic at the University of Missouri-Columbia. Dr. Judith Miles, a geneticist and director of the autism center, has been bombarded by an increase in patients.

"Certainly we're seeing an explosion in the number of cases," Miles said. "We know that autism is highly genetic, but genes don't have epidemics, so that's why people are looking at environmental factors, such as vaccines."

*Staff writer Bob Miller contributed to this report.*

## **The Sky is Falling: An Analysis of the Swine Flu Affair of 1976**

**by Joel Warner**

In 1976, due to an outbreak of influenza at Fort Dix, New Jersey, the United States set a precedent in immunology by attempting to vaccinate the entire population of the country against the possibility of a swine-type Influenza A epidemic. While a great many people were successfully immunized in a very short period of time, the National Influenza Immunization Program (NIIP) quickly became recognized as a failure, one reason being that the feared epidemic never surfaced at all. But this massive undertaking deserves more analysis than just a simple repudiation. For example, all evidence linked to the pathology, microbiology, and historical cycle of influenza and the outbreak at Fort Dix suggests that the reactions of the scientists and other personnel involved in the NIIP were correct. However, one must also acknowledge the many complications and misjudgments that plagued the program after its initiation, from biological difficulties, logistical problems, to tensions with the media. The swine flu is a historical event that needs to be evaluated, regarding both its successes and its failures, so that lessons can be learned for future immunization programs.

While influenza, or the "flu", is not commonly recognized as an extremely lethal disease, the pathology of influenza, and especially of the kind found at Fort Dix, does suggest that an immunization program was a reasonable course to take in 1976. In the public's mind, influenza is often not seen as a specific disease, using interchangeable names for it like "flu", "gripe", and "virus". (Silverstein: 1) However, influenza is very different from an everyday low fever or "stomach flu". It is a respiratory infection, connected with a fever, coughing, and muscle aches, which often lasts a few days in duration.

While the disease itself is usually harmless, it can lead to exposure of the lungs to viral or bacterial pneumonia, which can prove fatal, especially for the very young, elderly, or infirm. (Silverstein: 13) There are three types of influenza, depending on their activity: type A, which is usually the cause of outbreaks; type B, which is linked to sporadic cases, and type C, which rarely causes disease reactions. (Silverstein: 54) The virus which causes influenza enters the host through the respiratory tract, and binds itself to epithelial cells. The virus causes the cell to engulf it by endocytosis, and then fuses to the wall of the endocytic vesicle, injecting the contents of the virus into the cytosol of the cell. The RNA of the virus enter the nucleus of the cell, and spur the creation of new copies of the genes. These genes, as well as new viral proteins that are created in the cell, leave the cell as fresh viruses, budding off the plasma membrane of the cell.

While Scientists still do not know a great deal about the communicability of influenza, they do know that it can be spread by human-to-human contact, and has some airborne stability. (Silverstein: 59) Specifically, the characteristics of the influenza at Fort Dix was extremely discouraging. First of all, it was very similar to the 1918 swine influenza A pandemic, which turned out to be one of the most lethal outbreaks of disease in recorded history, and one victim had already died. Also, while usually this disease is caused by exposure to pigs, it was obvious that this was the first time since the earlier pandemic that it was being spread by people. (Silverstein: 23) While influenza is usually not deadly in itself, the scientists in 1976 were right to assume that the virus was a serious threat.

The biological similarity between the influenza at Fort Dix and the swine flu of 1918 was one of the biggest factors in determining the course of action to be taken at that point. The influenza virus is globular in shape, and is approximately 100 nanometers in diameter. The sheath of the virus is made up of a lipid bilayer, taken from the plasma membrane of the original host. Within the central core of this bilayer are located about 3000 matrix proteins (which differ depending on the type of the influenza), and 8 RNA genes. The surface membrane is spiked with protein molecules of two kinds: about 500 hemagglutinin ("H") and 100 neuraminidase ("N") molecules. Hemagglutinin molecules appear as pointed spikes, which are used to bind the virus to a cell and inject contents into it. Neuraminidase appear as blunt spikes, and possesses specialized enzymes which cause the infected cell to release the new viruses. (Silverstein: 50-52 and Flu)

The influenza virus is relatively unique in its ability to change its H and N molecules, called antigenic shift. For example, the swine flu of 1918 was named H1N1, while a later strain of influenza which was found to have changed its hemagglutinin molecules was named H2N1, and an even later influenza was found to have changed both its surface molecules (double antigenic shift), and was named H2N2. Scientists believe that these changes are due to the recombination of influenza viruses from different sources, such as if an influenza from a swine was mixed with an influenza from a person, which could create a new strain that has swine-type hemagglutinin and human-type neuraminidase. (Silverstein: 55-56) Spot mutations on the viral RNA, or missence mutations, also occur and are thought to cause slight changes in the make-up of the influenza virus, or antigenic drift. (Flu) It has been observed that an antigenic shift usually occurs after a number of years, after the population has built up immunities to the old strain. It is common for a major outbreak to occur after a shift, and even more likely after a double shift, because the antibodies in the population are useless against these new forms of disease. Missence mutations usually cause smaller epidemics, since the change in the virus is not so great. It has also been found that older strains of influenza are likely to return to a population once the antibodies against them have mostly died out. (Silverstein: 55, 62 and Flu) What was particularly alarming about the influenza at Fort Dix was that not only was it a double antigenic shift, but it was a shift back to H1N1, the cause of the 1918

pandemic. (Silverstein: 55) The biological make-up of the swine flu was evidence enough to take precautions against a major outbreak.

The influenza virus' shifts created a cycle of virility of the disease, one that also pointed to the possibilities of a major outbreak in 1976. Owing to its constant adaptation and re-emergence, there is much reason why influenza is called "The last great plague", since it is basically impossible to come up with a lasting solution to it. (Silverstein: 9) While influenza has been recorded since the 15th century, the number of years between major world outbreaks (or pandemics) has decreased in the last century, due to increased and faster intercontinental travel, which accelerates the build-up of immunity to a given influenza strain.

(Silverstein: 11) It has been hypothesized that the cycle has now stratified into 11-year periods between major antigenic shift pandemics. Within these periods occur smaller epidemics (centralized outbreaks), linked to an antigenic drift.

(Silverstein: 18-19) It is also suggested that the strains recycle themselves in about 50 years, long enough so that most of the original immunities have died out in a population. (Silverstein: 55) This model appears to function well, since there were exactly 11 years between the pandemics of 1946, 1957, and 1968, as well as the fact that the 1957 disease was similar to the 1889 disease, and the 1968 disease was similar to that of 1900. (Silverstein: 57) Using this model, the next year for a major pandemic would be fairly close to 1976, and the next strain up for recycling would likely be the swine flu of 1918.

Looking at the pathological, microbiological, as well as historical evidence surrounding the Fort Dix outbreak, it is not difficult to see why those in charge in 1976 decided that action had to be taken. It is also important to note, however, how they decided what action this was going to be. There are a few possibilities of drugs that can be taken to fight influenza. Examples of these are Amantadine, which blocks the shift of pH in the infected cell which triggers the release of the RNA into the cytosol; Zanamivir, which blocks the neuraminidase and inhibits the release of the viruses (though this drug was not even around in 1976); and antibiotics, which do not affect the flu, but can help against secondary bacterial infections. There are very few drugs that can be taken, however, because it is difficult to find a drug which affects the processes of the virus which does not also hurt the cell (Flu) Vaccines, which trigger the body's production of antibodies without actually causing the disease, are usually more productive than drugs. While antibodies created against the core proteins of the influenza virus do not create an ineffective immunity, the antibodies created against hemagglutinin are extremely potent, and block the penetration of cells by the virus. Also, neuraminidase antibodies help to lessen the release of viruses from cells and the disease's spread. (Silverstein: 52-54) Because of these reasons, the scientists in 1976 chose to create a vaccine against the swine flu. Another question surrounding the action to be taken involved whether to stockpile the vaccine after manufacturing it for the country, or immediately moving to immunization. It was decided to go ahead with immunization, because they had a good amount of time until the next flu season to organize the project, the threat of swine flu seemed

real, and if they waited until influenza hit they would not have time to start the vaccinations before the disease set in. (Silverstein: 29-31) Another, though more personal reason for the decision to immunize was that it gave the scientists, like those at the Center for Disease Control (CDC) who were heading up the project, an opportunity to demonstrate to the public the value of immunizations. (Silverstein: 38)

To truly understand the National Influenza Immunization program, it is necessary to look at the operation itself. The preparation of the vaccine was similar to previous vaccine productions, except it was to a much larger scale - about 200 million doses. (Silverstein: 105) To create the vaccine, the scientists inject the appropriate strain of influenza (and possibly another strain to increase growth) into embryonated eggs, which create a culture for the viruses. The multiplied viruses are separated from the yolk and rendered noninfectious by formaldehyde. The potency of this vaccine is measured in the amount which the vaccine, using its hemagglutinin, clumps together blood cells (agglutination), and is recorded in terms of chick cell agglutination (CCA). Since the vaccine can be somewhat toxic, causing sore arms and fevers, it is important to find the right balance of efficacy (immune response) and safety for the vaccine, by either reducing the virus amount or using split-virus vaccine, which is made up of further purified viruses. (Silverstein: 61) After massive field tests, it was decided that 200 CCA units was very effective for most of the population (85% had at least 40 "units" of hemagglutinin antibody, the accepted amount), and caused few side effects. (Silverstein: 82) Once the appropriate vaccine was determined, four manufacturers went into production of the substance, and the vaccination procedures were organized. The high-risk groups for the disease (elderly and infirm) would be vaccinated first, in nursing homes and health departments. Then the rest of the population would be reached through the schools, factories, medical centers, and shopping centers. (Silverstein: 108) To speed up the process, jet guns would be used for the injections instead of syringes. (Silverstein: 80) Not only this, but an informed consent authorization would be required for all participants, so that the vaccination of every person, as well as track outbreaks of the flu, could be monitored. (Silverstein: 78) Despite all the planning, NIIP began three months late, and only vaccinated 24% of the population before the program was terminated. (Silverstein: 113) And while the feared swine flu pandemic failed to surface, this was just one example of the many complications which surrounded the program.

One major difficulty in the immunization program involved the fact that the biological results of the vaccine did not always go as planned. For example, while the organizers expected two doses of vaccine from each egg that was used for incubation, the eggs only yielded one dose, drastically setting back the timetable for production. (Silverstein: 79) Also, while the vaccine produced the desired hemagglutinin antibody, the neuraminidase antibody was not created. This was probably due to the inactivation of this protein in the virus in treatment or production. While this antibody was not as necessary as that of hemagglutinin, it

was still important in stopping the spread of the disease. (Silverstein: 84) Not only this, but the field trials demonstrated that, while the vaccine worked well for adults, it did not work well in these doses for young adults and children. (Silverstein: 83) This problem was not fully resolved until the vaccinations had already begun, when it was decided that children ages 3-18 should get two doses of split virus vaccine, four weeks apart. Unfortunately, there were only 4 million doses of split-virus left for 57 million children. (Silverstein: 112) To make matters worse, while the swine flu influenza never surfaced, the original influenza of the time, Victoria, did appear this season. This disease could not be confronted, however, since all the vaccine for this strain had been mixed with the new vaccine, and by this point the president had called a moratorium of all influenza vaccinations. It was only after the moratorium was lifted for the mixed swine and Victoria vaccine that the original influenza could be combated. (Silverstein: 126) It was obvious that one can not always count on Nature to be as effective a partner as one would hope.

A major biological complication to the immunization campaign was its connection to Guillain-Barré acute; Syndrome (GBS). For the most part, the vaccination went more smoothly than even expected, with less than the predicted side effects and deaths. (Silverstein: 116) However, it was discovered that the vaccinations could be a factor in an increased number of cases of GBS. GBS is a rare paralytic disease, similar to polio, which causes an onset of polyneuritis, or tingling and weakness of the extremities and then some extent of paralysis. While most recover in the following months, there is a 5% fatality rate (mostly due to secondary respiratory disease or pneumonia), and 10% remain paralyzed to some extent. GBS is thought to result from an immunopathological reaction to an foreign agent in the body. (Silverstein: 117 and Laitin) While it was difficult to know for certain if the vaccines were causing GBS, since there were few prior statistics of GBS incidences to compare it with, there was enough evidence to suggest that this was the case. Preliminary calculations estimated that while there were 0.7 cases of GBS per million of non-vaccines at this time, there were 8.3 cases per million in vaccines. Not only this, but those non-vaccines which developed GBS were much more likely to have been sick prior to the syndrome than those who were vaccines, suggesting that the vaccine contained the trigger effect that usually would not have been present in healthy individuals. (Laitin ) While the vaccination program did not create an epidemic of GBS, this was enough to shut down the already flailing NIIP, which ended on December 16, 1976. (Silverstein: 119) This date was not the end of the troubles between the NIIP and the GBS, however, since the 500 cases of the syndrome and 25 deaths cost the government (who had agreed to take liability of the program) millions of dollars, not to mention a serious blow to its image. (Silverstein: 127 an Laitlin).

If the scientific complications of the NIIP were not enough, the media only helped to make the situation worse. First of all, while the program received broad support at its inception, the press was quick to criticize the program once no new incidents of swine flu appeared in the months after the Fort Dix affair, and

emphasized the criticisms of people such as Albert Sabin, known for his polio vaccinations, who originally supported the project, but later pushed for a stockpiling of the vaccination. (Silverstein: 85-6) The press did more than just discourage the immunization plan, for they also helped to push the program forward. In August, when the NIIP appeared likely to never get off the ground, an outbreak of a particularly lethal strain of pneumonia occurred at the Pennsylvania State Convention of the American Legion, killing 29 of 182 cases. While it was later discovered that the disease, called Legionnaire's Disease, was caused by a relatively unknown bacteria, and was in no way connected to swine flu, the press had already played its part. Immediately, despite no evidence to support the claim, the connection was made in the media between the Legionnaires' Disease and swine flu. This was enough public agitation to push necessary legislation through congress, allowing the NIIP to go forward. While the press had helped to save the immunization program, it had done so using extravagant claims, and it might have proved useful if the NIIP had not survived at all. (Silverstein: 98-99, 106) Another example of sensationalism in the media occurred when a few days after the beginning of the immunization program three elderly people died at a vaccination station. Once again, while there was no evidence that the deaths were related to the vaccine, the press quickly exaggerated the story, creating an imagined "body-count" of vaccine victims. The hysteria that followed caused nine states to close down their immunization programs until the CDC announced decisively that the deaths were in no way connected to the vaccination. (Silverstein: 110-111) Judging from these incidents, it is not surprising that the press acted little differently when the actual connection between GBS and the vaccine was discovered. While the press can be slighted for its sensationalist portrayals of the immunization program, the leaders of the program should also be held responsible, for not creating a better relationship with the media, and not using this source as a way to educate the public about the program and influenza.

What made all of these difficulties more troublesome at the time was the inability of the program to adapt to new situations and obstacles. When the outbreak was announced, the responsibility of facing the threat quickly moved up the political hierarchy, until President Gerald Ford himself announced the instigation of the NIIP. By this time, however, the threat of the pandemic had been exaggerated, in part to serve political purposes. (Silverstein: 42-43) While the prestige of the presidency helped gather momentum for the project, it also complicated matters, since because the President had taken control of the undertaking, no one beneath him could take initiative and re-organize the plans to face unexpected obstacles. (Silverstein: 47) Another problem with the logistics of the NIIP was that its planning was so overwhelmingly optimistic about the success of all the different facets of this immense endeavor that only in the best-case scenario would all go as planned. If the organizers had instead planned for the worst, they very well might have been able to deal with the many difficulties that occurred in a more suitable manner. (Silverstein: 138) Not only this, there was no re-evaluation of the program at different stages of its progress. For example, once

the decision had been made to go ahead with both the manufacturing of the vaccine and the immunization, there was no reconsideration of stockpiling the vaccine, even when the disease failed to appear in the months after the manufacturing. (Silverstein: 142) Because of these organizational difficulties, the NIIP was unable to adapt to challenges that occurred, and there were many such challenges. Aside from those already listed, the NIIP and the government also had to face the refusal of the American Insurance Association to insure the manufacturers of the influenza vaccine, since it was afraid of mass quantities of invalid lawsuits regarding the immunization. This dilemma threatened to kill the NIIP, and it took many months for Congress to accept liability for the vaccinations, having to pass special legislation to allow individuals to file claims against the government. (Silverstein: 96-7, 106) Other predicaments which plagued the immunization program included the discovery that one of the manufacturers had made millions of the wrong kind of influenza vaccine, legal complications which stalled the organization of advertising for the campaign, and arguments over the form and content of the consent forms for the vaccination. (Silverstein: 79, 108-109) Because of the inadequacies of the logistics of the NIIP, these complications often set the entire program back weeks or months, and threatened the integrity of the undertaking altogether.

This is not to say that the immunization program did not have its positive points. First of all, it would be ridiculous to renounce the NIIP because the swine flu never occurred. The program was a preventative action, in order to protect the population if the disease did occur, and things would have been a lot worse if swine flu had erupted and the government had done nothing to prepare for it. (Silverstein: 134) Also, despite the mistakes of those in charge of the project, and the negative publicity it received from the press, the NIIP was successful in vaccinating a large amount of the population in a very short time. This is proof that the people had made their own decisions about the benefits and risks of the program, and that the local health officials had adequately taken control of the program in their areas. (Silverstein: 115) And because of this vast undertaking, there is no question that the people had become more knowledgeable of immunization, for as one Senator explained, "We have raised the public's awareness of the need to prevent disease from happening." (Silverstein: 124) Also, for the most part, the surveillance system of the vaccinations was largely successful, in that it competently kept track of every individual vaccinated, carefully watched for outbreaks of the swine flu, and was able to monitor adverse side effects to the immunization. (Laitlin) In fact, because the syndrome's increase was so slight, the connection between GBS and the influenza vaccinations probably would never have been noticed if not for the scrutiny of the surveillance system. (Silverstein: 121) Because of the information that this system gathered, as well as the increased scientific and public interest in influenza at the time, the NIIP has undoubtedly helped to further knowledge of the influenza disease, as well as contribute to the fields of microbiology and epidemiology in general. (Laitlin)

With such a massive undertaking as the National Influenza Immunization Campaign of 1976, it is normal to try to identify heroes and villains among those who were involved in the endeavor. However, it is not possible to do so. The immunization campaign had its strong points and its weak points, and the people who organized the project made both good decisions and mistakes. The scientists and the politicians who evaluated the Fort Dix were right to take the most cautious reaction they could, because all of the pathological, microbiological, and historical evidence they had at the time strongly suggested that a dangerous pandemic could occur. But while many of the unforeseen difficulties which arose to complicate the NIIP can not be blamed on the organizers of the immunization campaign, they should be held responsible for not creating a more adaptable program that could deal with these occurrences. The NIIP must be evaluated for its drawbacks and its successes, so that people will not just see this as an unfortunate historical event, but can use it to help further immunization and disease-fighting programs in the future.

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