

CDC's Key Messages: Thimerosal, Vaccines, and Autism

An advertisement in today's [April 6, 2006] edition of USA Today is very disappointing – it completely mischaracterizes the efforts that CDC and many others have taken to protect the lives and well being of children. It is also misleading regarding the causes of autism and the existence of effective treatments—the value and safety of chelation therapies, for instance, has not been demonstrated, and such treatments can place children at risk for serious harm.

If the levels of thimerosal found in vaccines, including influenza vaccines, were associated with harm, CDC, the Public Health Service, and the nation's leading medical organizations (the American Academy of Pediatrics, the American Association of Family Physicians, the Institute of Medicine and others) would not recommend their use.

Our highest mission at CDC is protecting the health and well-being of all Americans, starting with our children. We would never recommend any vaccine be given to children or any person if there were sound, scientific evidence it could be harmful.

We welcome and recognize interest in finding causes of autism—and share people's desire to identify the causes of autism, ways to prevent autism, and effective treatments.

The American people want and expect CDC to be driven by sound science and we are—multiple, scientifically rigorous studies have found no relationship between thimerosal and autism.

We agree that mercury is a potentially harmful substance, but mercury is also a naturally occurring element found in low levels in air, soil, and water—and also, as a result, it can make its way, in small or trace amounts, into many food items, including infant formula and breast milk. It's difficult or impossible to reduce children's exposure to those sources, and that's why CDC and others have encouraged the removal of thimerosal from vaccines.

Today, with the exception of some types of influenza vaccine, none of the routinely recommended childhood vaccines contain thimerosal as a preservative. (Specific information on thimerosal content in vaccines can be found at www.fda.gov/cber/vaccine/thimerosal.htm#1)

We encourage and welcome additional studies that evaluate the effects of thimerosal, promising advances in preventing and treatments for autism, and any efforts that foster understanding of the causes of autism. It's important that efforts to identify potential causes of autism extend beyond thimerosal.

Key Messages

“CDC's number one concern is the health and well-being of Americans, starting with our children.”

- Autism is a heart-wrenching situation for affected children and families. We at CDC and our sister agencies in the Public Health (FDA, NIH) are committed to doing everything we can to discover its causes and how it can be prevented.
- When it comes to the nation's immunization recommendations, the CDC and Public Health Service are always guided by one overriding goal and interest—all our recommendations are designed to protect the health and well-being of all children. If the levels of thimerosal found in vaccines, including influenza vaccines, were associated with harm, CDC, the Public Health Service, and the nation's leading medical organizations (the American Academy of Pediatrics

the American Association of Family Physicians, the Institute of Medicine and others) would not recommend their use.

- We've made substantial progress in removing and eliminating thimerosal from vaccines – and have done so without placing infants and children at risk for potentially serious vaccine preventable diseases. As we make this transition, we must also ensure, particularly in the case of influenza, that our efforts do not create serious, undesirable outcomes- vaccine shortages that would place people, including children, at risk. History has shown that disruptions in vaccine supplies can render the population more vulnerable to diseases we know we can prevent.

“We know that parents want answers related to autism causes and effective treatments.”

- Parents want answers. They want answers about autism and they want answers about the safety of their vaccines that we're recommending, and they deserve answers. We really want to emphasize how important it is that we as government agencies and as clinicians and as parents all address collectively our shared responsibility to protect the health and safety of our children.
- We don't know, unfortunately, for most kids with autism what

causes it. That's a fact. We just simply don't have answers to the cause of this disorder or the disorders that fall into the autism spectrum. We don't have a complete picture of the scope of the problem. We're just learning about the subtleties that can be early signs of autism, we're learning about the importance of early detection, and we're learning about the importance of early treatment, but we have a long way to go before we really understand the scope and magnitude of this problem in our country and what the trends really mean.

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“The amount of mercury found in influenza vaccine has not been found to be associated with autism or any other harm.”

- The American people want and expect CDC to be guided by sound science and we are. Numerous, repeated, scientifically rigorous studies involving hundreds of thousands of children have found no relationship between thimerosal and autism.
- We agree that mercury is a harmful substance, but mercury is also a naturally occurring element found in low levels in air, soil, and water—and also, as a result, it can make its way, in small or trace amounts, into many food items, including infant formula and breast milk. It’s difficult or impossible to reduce

children’s exposure to those sources, and that’s why CDC and others have encouraged the removal of thimerosal from vaccines.

- Although it is clear that large quantities of mercury can damage the nervous system, there is no evidence that the small quantities contained in water, infant formula, breast milk, or in some influenza vaccines do. Further, in the case of influenza vaccines, parents can ask their child’s healthcare provider for thimerosal-free influenza vaccine.

CDC’s efforts have been open, public, and visible, and involved a wide range of organizations, including parents of children with autism.

- We’ve engaged a wide range of outside people and organizations— from the nation’s physicians (e.g., the American Academy of Pediatrics) to leading scientific organizations (e.g., the Institute of Medicine) to many of the organizations and parents actively involved in autism-related activities— in our efforts to evaluate concerns about thimerosal and to develop the best recommendations and information.

- We’ve worked to provide outside researchers access to the Vaccine Safety Datalink database, a resource that provides information on millions of medical and immunization records. We’ve also asked independent outside organizations, such as the Institute of Medicine for their recommendations on how to improve access, and are working to implement many of their suggestions.

“Our immunization decisions and recommendations have been guided by sound science, the latest medical knowledge, and our core mission— protecting the health and well-being of all people, starting with our children.”

- CDC relies on science when making health recommendations — and the science tells us very clearly that vaccines save lives and protect our children. Science also has guided with respect to thimerosal in vaccines— many studies that have looked at children in various populations around the world including the United States. These studies, which have compared hundreds of thousands of children, have consistently failed to find an association between thimerosal and autism.

- That said, we also recognize that it is impossible to be 100 percent certain that there is absolutely never going to be any association of thimerosal and autism in one or more children. Science doesn’t say that and it will be very difficult for science to ever prove a negative. Rather, what we can say is that the predominance of evidence does not associate a link, and we’ve certainly looked hard to find such a link.

“CDC and the Public Health Service have acted quickly and responsibly to reduce children’s exposure to mercury.”

- CDC, the Public Health Service, and many other organizations quickly endorsed the recommendation that vaccine manufacturers reduce or remove thimerosal from vaccines – an action taken not because there were any indications that the amount of thimerosal in vaccines caused health problems, but because it was one of the few sources of mercury exposure that could be reduced.

- A number of agencies, and a number of steps, are taken to ensure that our routinely recommended vaccines are safe and effective.
 - First, vaccines must meet the standards and go through the multiple steps required by the Food and Drug Administration.
 - Second, the monitoring of vaccines continues after they are licensed to ensure their safety.

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“Vaccines protect and save lives—and all the recommended childhood and adult vaccines are licensed by the FDA as safe and effective.”

- As we’re looking for answers related to the causes and effective treatment for autism, we have to also be careful not to base our health recommendations on unproven hypotheses or fear. We have to base our decisions on the best available science that we have in front of us, and today the best available science indicates to us that vaccines save lives, and that’s a very, very important message for all of us to remember.
- We know for certain that children today live longer and healthier because of the vaccines they receive in childhood. Just to put this in context, before the Childhood Immunization

Program was present in the United States, 13- to 20,000 kids developed paralytic polio every year. Before measles vaccines, almost everyone in the country got measles when they were a child, and about 450 children died every year from measles. Before rubella vaccine, epidemics of rubella occurred and sometimes up to 20,000 children were born with congenital rubella syndrome with 2,000 deaths and more than 1,000 miscarriages. We also know that rubella is a cause of autism, and during the most recent epidemic in the 1960s, 7 percent of children with congenital rubella syndrome developed autism.

“Longer-term solutions are on the way.”

- Thankfully, the technology of our vaccine production has, and continues to, evolve and we can manufacture almost all of our recommended vaccines today without thimerosal as a preservative.
- Longer term solutions are on the way. With funding provided by Congress to accelerate vaccine development for pandemic influenza, we will continue to make improvements in vaccine manufacturing that will profoundly change the development and manufacturing of seasonal flu vaccine.

Please note: The information that follows is not part of the official CDC statement but has been added by IAC.

Websites with additional information on vaccines and thimerosal

American Academy of Pediatrics: “Vaccine Safety: at http://www.cispimmunize.org/ill/ill_main.html

Centers for Disease Control and Prevention:

“Vaccine Safety Issues” at <http://www.cdc.gov/nip/vacsafe/concerns/gen/of-interest.htm>

“CDC Statement Regarding Autism-Related Advertisement in USA Today” at <http://www.cdc.gov/od/oc/media/pressrel/s060406.htm>

Every Child by Two: “Vaccine Safety” at <http://72.32.4.217/ecbt/vaccinesafety.htm>

Immunization Action Coalition: “Thimerosal Information” at <http://www.immunize.org/safety/thimerosal.htm>

Institute for Vaccine Safety, Johns Hopkins Bloomberg School of Public Health: “Thimerosal in Vaccines” at <http://www.vaccinesafety.edu/cc-thim.htm>

Institute of Medicine: “Immunization Safety Review: Vaccines and Autism” at <http://darwin.nap.edu/books/030909237X/html/>

National Network for Immunization Information: “Thimerosal/Mercury” at http://www.immunizationinfo.org/thimerosal_mercury_issues.cfm

U.S. Food and Drug Administration: “Thimerosal in Vaccines” at <http://www.fda.gov/cber/vaccine/thimerosal.htm>

Vaccine Education Center, Children’s Hospital of Philadelphia: “Thimerosal and Autism” at <http://www.chop.edu/consumer/jsp/division/generic.jsp?id=75751>

World Health Organization: “Vaccine Safety” at http://www.who.int/immunization_safety/en/