

Mercury in Vaccines The Facts

Thimerosal FAQs...

WHAT IS THIMEROSAL?

Thimerosal contains ethyl-mercury, a documented and dangerous neurotoxin. It is used as an inexpensive preservative in vaccines. Developed in the 1930's and marketed by Eli Lilly, thimerosal has never been tested using modern safety standards.

WHAT AMOUNT OF MERCURY IN VACCINES IS SAFE?

The National Academies of Science set the safe standard for thimerosal based on The Environmental Protection Agency's (EPA) guidelines for methyl-mercury, 0.1 micro-grams per 2.2 pounds of body weight per day. Some vaccines, like the flu shot, contain as much as 25 micro-grams of mercury, over 10 times the safe limit for an infant.

ARE MERCURY FREE VACCINES AVAILABLE?

Many vaccines in the 1990s contained mercury. Today most vaccines in the U.S. are mercury free, except the flu shot. Most flu shots contain mercury, however, mercury free versions are available. (see www.vaccinesafety.edu) Vaccines in developing countries continue to contain mercury.

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WHAT YOU SHOULD KNOW

1. **Preference for thimerosal (mercury) free amount vaccines neutralizes public concerns:** Concerns regarding mercury in vaccines have not lowered immunization rates. Immunization rates are at an all time high, per CDC. Stating preference for mercury free vaccines has and will continue to encourage manufacturer efforts to produce safer vaccines.
2. **Supplies of mercury free influenza vaccine continue to increase with no impact on supply:** Correspondence with Sanofi Pasteur confirmed capacity for thimerosal free influenza vaccine to be between 8-10 million doses (2006); they have never sold out of thimerosal free vaccine and cut backs are due to lack of orders – not shortages. Sanofi alone in 2008/2009 will be able to produce up to 100 million doses of thimerosal free vaccine – if the market demanded it. Market demand is driven by the CDC and state health departments.
3. **Research specific to thimerosal continues to demonstrate its harmful nature:** The IOM 2001 Report found a causal link to neurodevelopmental disorders plausible and recommended additional biological and clinical studies. To date such research continues to demonstrate the dangers of thimerosal, making the 1999 and 2000 U.S. Agency Joint Statements advising thimerosal's removal more scientifically justifiable than when originally issued.
 - University of Pittsburgh, Thoughtful House, Wake Forest - Pediatric Vaccines Influence Primate Behavior, Alter GI Tissue - Hewitson, Wakefield, Walker & Colleagues; Observed changes to behavior, brain morphology, and gene expression in GI tissue in infant macaques exposed to the human-equivalent recommended infant vaccines, including ones with thimerosal, relative to unvaccinated animals. Abstracts presented at IMFAR 2008.
 - University of Santa Catarina, Brazil - Prenatal Methylmercury Exposure Hampers Glutathione Antioxidant System - Stringari et al; Found that prenatal exposure to mercury results in lower postnatal levels of the critical antioxidant glutathione in mouse brain, demonstrating that prenatal mercury exposure can increase vulnerability of infants to postnatal insults that increase oxidative stress such as mercury. February 2008
 - UC Davis - Dysregulation of Dendritic Cells by Nanomolar Thimerosal - Pessah & Colleagues; Observed changes in calcium signaling in important antigen-presenting cells of the immune system from extremely small amounts in thimerosal. July 2006
 - University of Washington - Comparison of Blood and Brain Mercury Levels in Infant Monkeys - Burbacher et al; Found mercury from thimerosal to persist in the brain at higher levels than from methyl-mercury. National Institutes of Health funded study, August 2005
 - Columbia University - Neurotoxic Effects of Postnatal Thimerosal are Mouse Strain Dependent - Hornig, Chian & Lipkin; Mercury dosing of mice at 1990s immunization levels produced autistic-like symptoms in genetically susceptible mice. September 2004
 - Northeastern University - Alterations in Methionine Synthase Pathway from Thimerosal - Deth & Colleagues; Thimerosal at vaccine levels modified critical cellular functions, including growth factor signaling, DNA methylation and methionine synthase activity. April 2004
4. **Continued Federal Agency Conflicts of Interest Subvert Objective Monitoring of Vaccine Safety:** Federal agency conflicts of interest noted in the 2003 Congressional Report "Mercury in Medicine - Taking Unnecessary Risks" remain today and have led to recent requests by Congressmen that CDC no longer conduct vaccine studies (2006) and a Senate Hearing (9/2007) to conclude that the FDA had not met their statutory obligation in adequately demonstrating the safety of mercury in vaccines. Putting the health of children first by stating preference to err on the side of caution and safety in light of on-going research must take precedence in national vaccine policy.