

Scientific Papers Supporting Continued Use of Thimerosal

April 16, 2015

Am J Prev Med. 2003 Aug;25(2):101-6.

Autism and thimerosal-containing vaccines: lack of consistent evidence for an association.

Stehr-Green P¹, Tull P, Stellfeld M, Mortenson PB, Simpson D.

<http://www.ncbi.nlm.nih.gov/pubmed/12880876>

“Between the mid-1980s through the late-1990s, we compared the prevalence/incidence of autism in California, Sweden, and Denmark with average exposures to Thimerosal-containing vaccines. In all three countries, the incidence and prevalence of autism-like disorders began to rise in the 1985-1989 period, and the rate of increase accelerated in the early 1990s.”

“The body of existing data...is not consistent with the hypothesis that increased exposure to Thimerosal-containing vaccines is responsible for the apparent increase in the rates of autism in young children being observed worldwide.”

****CDC funded study***

JAMA. 2003 Oct 1;290(13):1763-6.

Association between thimerosal-containing vaccine and autism

Hviid A¹, Stellfeld M, Wohlfahrt J, Melbye M.

http://www.ncbi.nlm.nih.gov/pubmed/14519711?ordinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum

“Population-based cohort study of all children born in Denmark from January 1, 1990, until December 31, 1996 (N = 467 450) comparing children vaccinated with a thimerosal-containing vaccine with children vaccinated with a thimerosal-free formulation of the same vaccine.” “The results do not support a causal relationship between childhood vaccination with thimerosal-containing vaccines and development of autistic-spectrum disorders.”

Pediatrics. 2003 Nov;112(5):1039-48.

Safety of thimerosal-containing vaccines: a two-phased study of computerized health maintenance organization databases.

Verstraeten T¹, Davis RL, DeStefano F, Lieu TA, Rhodes PH, Black SB, Shinefield H, Chen RT; Vaccine Safety Datalink Team.

<http://www.ncbi.nlm.nih.gov/pubmed/14595043>

“No consistent significant associations were found between TCVs and neurodevelopmental outcomes. Conflicting results were found at different HMOs for certain outcomes. For resolving the conflicting findings, studies with uniform neurodevelopmental assessments of children with a range of cumulative thimerosal exposures are needed.”

***CDC funded study. CDC website states: “CDC and VSD researchers found statistically significant associations between thimerosal and language delays and tics.”**

Pediatrics. 2004 Sep;114(3):584-91.

Thimerosal exposure in infants and developmental disorders: a retrospective cohort study in the United Kingdom does not support a causal association.

Andrews N¹, Miller E, Grant A, Stowe J, Osborne V, Taylor B.

<http://www.ncbi.nlm.nih.gov/pubmed/15342825>

“...in 1 analysis for tics was there some evidence of a higher risk with increasing doses [of thimerosal]. Statistically significant negative associations with increasing doses at 4 months were found for general developmental disorders... unspecified developmental delay... and attention-deficit disorder.”

“With the possible exception of tics, there was no evidence that thimerosal exposure via DTP/DT vaccines causes neurodevelopmental disorders.”

Pediatrics. 2006 Jul;118(1):e139-50.

Pervasive developmental disorders in Montreal, Quebec, Canada: prevalence and links with immunizations.

Fombonne E¹, Zakarian R, Bennett A, Meng L, McLean-Heywood D.

http://www.ncbi.nlm.nih.gov/pubmed/16818529?ordinalpos=3&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum

“The findings ruled out an association between pervasive developmental disorder and either high levels of ethylmercury exposure comparable with those experienced in the United States in the 1990s or 1- or 2-dose measles-mumps-rubella vaccinations.”

Can J Neurol Sci. 2006 Nov;33(4):341-6

Immunizations and autism: a review of the literature.

Doja A¹, Roberts W.

¹Division of Neurology, Children's Hospital of Eastern Ontario, Ottawa, ON, Canada.

http://www.ncbi.nlm.nih.gov/pubmed/17168158?ordinalpos=4&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum

“Because of a temporal correlation between the first notable signs and symptoms of autism and the routine childhood vaccination schedule, many parents have become increasingly concerned regarding the possible etiologic role vaccines may play in the development of autism.” “Our literature review found very few studies supporting this theory.” “The vaccine preservative thimerosal has alternatively been hypothesized to have a possible causal role in autism. Again, no convincing evidence was found to support this claim.”

N Engl J Med 2007; 357:1281-1292 September 27, 2007

Early Thimerosal Exposure and Neuropsychological Outcomes at 7 to 10 Years

William W. Thompson, Ph.D., Cristofer Price, Sc.M., Barbara Goodson, Ph.D., David K. Shay, M.D., M.P.H., Patti Benson, M.P.H., Virginia L. Hinrichsen, M.S., M.P.H., Edwin Lewis, M.P.H., Eileen Eriksen, M.P.H., Paula Ray, M.P.H., S. Michael Marcy, M.D., John Dunn, M.D., M.P.H., Lisa A. Jackson, M.D., M.P.H., Tracy A. Lieu, M.D., M.P.H., Steve Black, M.D., Gerrie Stewart, M.A., Eric S. Weintraub, M.P.H., Robert L. Davis, M.D., M.P.H., and Frank DeStefano, M.D., M.P.H. for the Vaccine Safety Datalink Team

N Engl J Med 2007; 357:1281-1292 September 27, 2007 DOI: 10.1056/NEJMoa071434

<http://www.nejm.org/doi/full/10.1056/NEJMoa071434>

“We did not assess autism spectrum disorders”

“Among the 42 neuropsychological outcomes, we detected only a few significant associations with exposure to mercury from thimerosal.” “Our study does not support a causal association between early exposure to mercury from thimerosal-containing vaccines and immune globulins and deficits in neuropsychological functioning at the age of 7 to 10 years.”

****CDC sponsored study. CDC website states: “The study found only a few statistically significant associations between exposure from thimerosal and neuropsychological functioning.”***

Pediatrics 2008;121:e208-e214

Mercury Levels in Newborns and Infants After Receipt of Thimerosal-Containing Vaccines

Yan and John Treanor Clarkson, Elsa Cernichiari, Grazyna Zareba, Carlos Gotelli, Mariano Gotelli, Lihan Michael E. Pichichero, Angela Gentile, Norberto Giglio, Veronica Umido, Thomas

<http://www2.aap.org/pressroom/issuekitfiles/mercurylevelsinnewbornsafterthimerosolvaccines.pdf>

“We conducted a pharmacokinetic study to assess blood levels and elimination of ethyl mercury after vaccination of infants with thimerosal-containing vaccines.” “Because of the differing pharmacokinetics

of ethyl and methyl mercury, exposure guidelines based on oral methyl mercury in adults may not be accurate for risk assessments in children who receive thimerosal-containing vaccines.”

Pediatrics. 2009 Feb;123(2):475-82. doi: 10.1542/peds.2008-0795.

Neuropsychological performance 10 years after immunization in infancy with thimerosal-containing vaccines.

Tozzi AE¹, Bisiacchi P, Tarantino V, De Mei B, D'Elia L, Chiarotti E, Salmaso S.

<http://www.ncbi.nlm.nih.gov/pubmed/19171612>

“Given the large number of statistical comparisons performed, the few associations found between thimerosal exposure and neuropsychological development might be attributable to chance. The associations found, although statistically significant, were based on small differences in mean test scores, and their clinical relevance remains to be determined.”

****CDC funded study in Italy. Compared thimerosal and 2-PE only (not preservative-free).***

J Pediatr Pharmacol Ther. 2010 Jul-Sep; 15(3): 173–181.

Thimerosal-Containing Vaccines and Autism: A Review of Recent Epidemiologic Studies

Anne M. Hurley, PharmD,^{1,2} Mina Tadrous, PharmD, MS,^{1,2} and Elizabeth S. Miller, PharmD²

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018252/>

“Whereas an infant younger than 6 months in 1999 could have been exposed to approximately 200 mcg of mercury derived from vaccines, the current amount is less than 3 mcg, if certain influenza vaccines are not included.¹³ Children should receive recommended immunizations to prevent serious disease.¹² The known risks of serious complications from preventable infections—e.g., influenza—outweigh the risks of adverse consequences from vaccines, including TCVs.”

Pediatrics. 2010 Oct;126(4):656-64. doi: 10.1542/peds.2010-0309. Epub 2010 Sep 13.

Prenatal and infant exposure to thimerosal from vaccines and immunoglobulins and risk of autism.

Price CS¹, Thompson WW, Goodson B, Weintraub ES, Croen LA, Hinrichsen VL, Marcy M, Robertson A, Eriksen E, Lewis E, Bernal P, Shay D, Davis RL, DeStefano F.

<http://www.ncbi.nlm.nih.gov/pubmed/20837594>

“Exposure to thimerosal, a mercury-containing preservative that is used in vaccines and immunoglobulin preparations, has been hypothesized to be associated with increased risk of autism spectrum disorder (ASD). In our study of MCO members, prenatal and early-life exposure to ethylmercury from thimerosal-containing vaccines and immunoglobulin preparations was not related to increased risk of ASDs.”

*CDC sponsored study.
