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August 21, 2015

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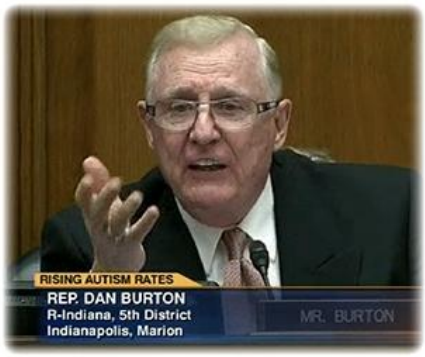
Can We Trust the CDC Claim that There is No Link Between Vaccines and Autism?



We have gone from one in 10,000 children with autism to one in 88. It is worse than an epidemic, it is an absolute disaster.

Health Impact News Editor Comments:

The CDC released a "new" study on "Good Friday" just before the Easter holiday weekend that supposedly showed there was no connection between vaccines and autism. One has to wonder on the timing of the announcement of this study, considering the fact that the CDC just released statistics about two weeks ago stating that the rate of autism among school children in the U.S. has now risen to one out of 50.

So I contacted Dr. Brian Hooker and asked him to respond to this "new" study that the mainstream media is reporting has ended the vaccine-autism debate. According to Dr. Hooker, the study is not so new, as it is based on data from 2010 and is basically a rehash of a "fraudulent" study published then.

Why did we ask Dr. Hooker to comment? There are probably very few people in the world who have spent as much time looking at CDC studies related to vaccines and autism as Dr. Hooker. Dr. Brian Hooker, a PhD scientist, has been fighting the CDC since 2004 in trying to get them to comply with Freedom of Information Acts to see the CDC research that supposedly shows there is no link between mercury in vaccines and autism. The CDC apparently believes they are above the law regarding the Freedom of Information Act, and have fought to withhold most of the information Dr. Hooker has requested. But as you will see from Dr. Hooker's critique below, even what the CDC does publish and make public doesn't amount to much of anything that will help us understand the problem of the rising rates of autism, let alone solve it.

Here are Dr. Hooker's comments on the CDC study just published in The Journal of Pediatrics.

Critique of Destefano et al. 2013 J Peds. Study

By Brian S. Hooker, Ph.D., P.E.

The recent CDC study "Increasing Exposure to Antibody-Stimulating Proteins and Polysaccharides in Vaccines Is Not Associated with Risk of Autism" by Destefano et al. 2013 was released in the Journal of Pediatrics last week. This study purports that "increasing exposure to antibody-stimulating proteins and polysaccharides in vaccines during the first 2 years of life was not related to the risk of developing an ASD (Autism Spectrum Disorder)." Of all of the papers I have reviewed over my 26-year career as a research scientist, this is perhaps the most flawed and disingenuous study I have encountered. The Destefano et al. 2013 study is to science what the movie *Ishtar* was to cinema.

No New Data

The basis for the study is essentially a rehash of the data that was used to generate the fraudulent Price et al. 2010 Pediatrics study (Price et al. 2010 "Prenatal and Infant Exposure to Thimerosal From Vaccines and Immunoglobulins and Risk of Autism" Pediatrics 126:656) that was supposed to be the CDC's "final word" stating that thimerosal, the mercury-containing preservative in some vaccines, was in no way causally linked to autism. Not only was this original study fatally flawed due to a statistical error called "overmatching" (which I'll discuss further below) but also the study authors hid data regarding the only valid part of the study (i.e., prenatal thimerosal exposure) which showed that children exposed to just 16 microgram mercury in thimerosal in utero were up to 8 times more likely to receive a diagnosis of regressive autism (Price C, et al. *Thimerosal and Autism.* Technical report. Vol I. Bethesda, MD: Abt Associates Inc; 2009). The study authors instead falsely reported no risk of autism associated with prenatal thimerosal exposure.

No True Controls in the Study

Within the Destefano study released last week, with the help of multimillionaire vaccine industrialist Dr. Paul Offit, CDC researchers merely added up the number of vaccine antigens that the case (autism) and control (neurotypical) children were exposed to through the infant vaccination schedule. The theory that they were trying to refute essentially was "children exposed to a greater total number of antigens had a greater risk of autism." Given this train wreck of a study, it is very difficult to know where to start my critique. However, the following statement stood out from the rest as the study authors described the control group:

> Of the remaining 752 controls included in the analysis, 186 had an SCQ (Social Communication Questionaire) score <16 but had indications of speech delay or language delay, learning disability, attention deficit hyperactivity disorder or attention deficit disorder, or tics, or had an individual education plan.

This clearly shows that the 186 aforementioned controls (25% of the control group) were not controls at all but instead had some underlying developmental deficit (all of which are features of autism or autism spectrum disorder). Unlike the study design described (i.e., where autism cases were matched to neurotypical controls), autism cases were matched with "cases" of other, similar neurodevelopmental maladies. Thus, you would expect to see no difference between the two groups.

Antigen Correlation is Meaningless

Next, the basis of the study was to confirm or deny a correlation between the "number of antigens received" and the incidence of autism. The possible number of antigens per given vaccine was reported in Table 1 of the study. However, the term "number of antigens" is a complete white-wash of what is actually in these vaccines, their concentrations and their relative strengths in terms of inflammatory response, and is not an accurate predictor of how the body will respond to specific antigens.

For example, "antigens" for the five antigen DTaP vaccines (e.g., Infanrix) include diphtheria toxoid, tetanus toxoid, pertussis toxoid, filamentous hemagglutinin and pertactin. The number "5" assigned in this category is merely the number of different antigens and doesn't account for each antigen's amount or relative strength.

Neither does this account for the fact that Infanrix also contains aluminum (an adjuvant – designed to elicit a non-specific immune response), formaldehyde and polysorbate 80, all which could also elicit some form of inflammatory reaction.

Thus, the main "independent" variable of "number of antigens" within the Destefano et al. 2013 study is essentially completely meaningless.

High Participant Refusal Rate Creates Selection Bias

The high participant refusal rate in this study is also problematic. Out of 668 cases and 2444 controls originally selected for the study, only 321 cases (48.1%) and 774 controls (31.7%) chose to participate in the research. In other words, 65% of the individuals contacted as potential participants flat-out refused to participate in the study.

Who could blame them?! The CDC has been producing junk science regarding vaccines and autism since 2002 and

the public knows. This indeed could produce selection bias in that the 35% of individuals that did participate were less likely to believe that vaccines were responsible for neurodevelopmental sequelae including autism.

Overmatching Statistical Error

Also, the analysis is plagued with a statistical error called "overmatching." For a comprehensive analysis of the previous CDC study completed on the same data set (Price et al. 2010 Pediatrics), regarding thimerosal exposure rather than the number of vaccine antigens, please see Chapter 6, "Vaccine Safety Study as an Interesting Case of 'Over-Matching'" by M. Catherine DeSoto and Robert Hitlan (http://www.intechopen.com/books/recent-advances-in-autism-spectrum-disorders-volume-i/vaccine-safety-study-as-an-interesting-case-of-over-matching-) in the book "Recent Advances in Autism Spectrum Disorders – Volume I", edited by Michael Fitzgerald, ISBN 978-953-51-1021-7.

The point made by Dr. DeSoto and Dr. Hitlan is that the cases and the controls in this study are too closely matched to each other. Cases were matched with controls of the same age, sex, within the same HMO and essentially the same vaccination schedule using the same vaccine manufacturers. This may be seen in Figures 1 and 2 of the Destefano et al. 2013 paper which indicated that there are almost no differences between the exposure to antigens between the case (autism) and control groups in every exposure group tested. This holds for cumulative antigen levels (Figure 1) as well as single day antigen exposure levels (Figure 2).

This type of error of course precludes "finding a difference" between cases and controls because all differences were matched out case-by-case.

This would be akin to analyzing radiation workers that got the same dosage of gamma radiation within cases and control groups to determine the relationship between gamma radiation and cancer incidence. Of course, since cases and controls got the same dosage, no effect would be seen. However, this is an unfair study. To see the true effect, cases would need to be matched with controls with variable levels of gamma radiation exposure and perhaps a "no exposure" group would be included as a baseline comparison to cancer rates within higher exposure groups.

In the same way, the CDC has used these overmatched data to obfuscate any true effect between vaccine antigen exposure and autism incidence.

Vaccinated vs. Unvaccinated Children Not Studied

Has the CDC done a study comparing vaccinated children with unvaccinated children yet?

This points back to the study that the CDC refuses to do: Health outcomes between vaccinated and unvaccinated populations. What is the CDC's point?

Ethics – i.e., we don't believe that is ethical NOT to vaccination children?… Nonsense – there are portions of the United States' population that choose not to vaccinate regardless of what CDC believes; Lack of "blinding" within the study design?… again, Nonsense – all current vaccine safety studies are retrospective anyway without any type of blinding to the subjects.

We have never studied vaccinated versus unvaccinated.

The CDC is simply afraid of what they already know – vaccines cause chronic disease and an unvaccinated population will be much healthier, period (as evidenced in the Glanz et al. 2013 study within the Journal of the American Medical Association which stated that unvaccinated children were seen at a lower rate of frequency in emergency room and outpatient visits).

(Editor's note: See our commentary on the JAMA study here: JAMA Study: Kids With Fewer Vaccines Have Fewer Doctor and Emergency Room Visits)

Autism Variances from Neurotypical Children Not Studied

Finally, this type of study misses the point entirely that children with autism are physiologically different than neurotypical children. Numerous studies have shown genetic (e.g., James et al. 2006), morphological (e.g., Herbert et al. 2005) and biochemical differences (e.g., Waly et al. 2004) between these two populations. To perform a case-control study such as that presented in the Destefano et al. 2013 paper assumes a genetically, morphologically and physiologically homogeneous population, which is simply not the case.

No one is claiming that children with autism or ASD got higher doses of vaccine antigens, thimerosal, MMR or whatever. What we know instead is that when our children received the same vaccines within the ACIP recommended schedule, they reacted differently. The scientists at the CDC are trained in managing infectious diseases with progressions that may be predicted with reasonable certainty. However, these neurological sequelae to vaccines are chronic, multifactorial conditions that cannot be put into the same tiny box as the common cold, influenza or chicken pox.

The CDC Has Conflicts in Interest Regarding Vaccines

It also needs to be pointed out the CDC is responsible for vaccine uptake in the United States. By their own standards, they believe that vaccine compliance should be at 90% for "herd immunity" to prevent infectious disease outbreaks.

Without going into the flawed logic behind this assertion, my point is that the CDC (and the DHHS as a whole) should not be conducting ANY type of vaccine safety study, based on their primary mandate of maximizing vaccine uptake. Their role is conflicted at best.

This has led to a long list of studies on vaccines and neurological disorders in children that are at a minimum fatally flawed but more often complete misrepresentations of the truth. Starting in 1999, when the CDC buried strong associations between thimerosal exposure early in life (0 to 1 month), where infants exposed to the highest levels of thimerosal possible were at least 7.6 times more likely to receive an autism diagnosis through this current study, there has been developed a full body of "tobacco science" designed to hide the truth of what has been found behind closed doors.

It is time for the CDC to come clean. Their own data show that vaccines cause neurodevelopmental disorders in children including autism.

About the Author

Brian S. Hooker, PhD, PE, is an Associate Professor of Biology at Simpson University in Redding California where he specializes in chemistry and biology. Additionally, Hooker is the Senior Process Consultant at ARES Corporation, working closely on process design for the environment restoration industry. His design efforts focus on industrial biotechnology and chemical engineering principles. Brian dedicated over 15 years as a bioengineer and the team leader for the High Throughput Biology Team and Operations Manager of the DOE Genomics: Genomes to Life (GTL) Center for Molecular and Cellular Systems at the Pacific Northwest National Laboratory (PNNL). Dr. Hooker managed applied plant and fungal molecular biology research projects at the Pacific Northwest National Laboratory, where systems biology researchers are focused on understanding gene and protein networks involved in individual cell signaling, communication between cells in communities, and cellular metabolic pathways. In 1985, Dr. Hooker earned his Bachelor of Science degree in chemical engineering, from California State Polytechnic University, Pomona, California. He earned his Masters of Science degree in 1988 and his doctorate in 1990, both in biochemical engineering, from Washington State University, in Pullman,
Washington.

Brian Hooker has many accomplishments to his credit including: co-inventor for five patents, recipient of the Battelle Entrepreneurial Award in 2001, and a Federal Laboratory Consortium Recognition Award in 1999, for his work on "Reactive Transport in 3-Dimensions." The breadth of Hooker's 50 science and engineering papers have been published in internationally recognized, peer reviewed journals. He has a 15-year old son with autism and has been active in the autism community since 2004.

Contact Dr. Hooker via Health Impact News here.

Published on March 31, 2013

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