



PIC QUESTION OF THE WEEK: 10/08/07

Q: Is there a link between thimerosal-containing vaccines and neuropsychological disorders?

A. Thimerosal, a mercury containing antimicrobial preservative, has been used in biological and pharmaceutical preparations since the 1930's and is still incorporated into some cosmetics, ophthalmic solutions, and nasal sprays. Because children previously received multiple doses of various thimerosal-containing vaccines prior to 6 months of age, there has been long-standing concern about their excessive exposure to mercury. Toxic accumulation of this element can result in brain injury and even death. Thimerosal is metabolized to ethyl mercury and frequent exposure through vaccine administration has served as the basis for its possible link to autism, attention deficit-hyperactivity disorder (ADHD), and other neuropsychologic disorders. There are currently thousands of claims filed with the government's Vaccine Injury Compensation Program (VICP) seeking compensation for vaccine-related injuries including autism. In 1999, the U.S. Department of Health and Human Services, The American Academy of Pediatrics, and vaccine manufacturers agreed that thimerosal levels should be reduced or the compound eliminated from all vaccines. Today, all pediatric vaccines are manufactured thimerosal-free or contain significantly reduced quantities of the preservative (e.g. some *multiple dose vials* of inactivated influenza vaccine still contain trace amounts of thimerosal). A recent study evaluated the neuropsychological effects of thimerosal in more than 1,000 children ages 7 to 10 years. The children had received multiple immunizations with thimerosal-containing vaccines or immunoglobulins. Children exposed to thimerosal because of prenatal administration of immunoglobulins to the mother were also enrolled. Over forty neuropsychologic outcomes were evaluated. Autism was not included among the battery of tests and observations incorporated into this study because its association with thimerosal is a separate issue currently being investigated by the Centers for Disease Control and Prevention (CDC). The authors of this comprehensive investigation concluded that exposure to thimerosal-containing immunobiologics did not result in any consistent pattern of neuropsychologic defects in children 7 to 10 years of age. This and many other studies have attempted to establish a link between thimerosal-containing vaccines and a host of conditions including autism and attention deficit-hyperactivity disorder. Thus far, a direct relationship between these vaccines and adverse neuropsychological outcomes has not been proven.

References:

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