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Fighting the Autism-Vaccine War

One of the most vitriolic debates in medical history is just beginning to have its day in court.

By Bernadine Healy, M.D. | Staff Writer April 10, 2008, at 11:29 a.m.

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One of the most vitriolic debates in medical history is just beginning to have its day in court—vaccine court, that is. Without laying blame, the independent Office of Special Masters of the Court of Federal Claims—with a 20-year record of handling vaccine matters—recently conceded that the brain damage and autistic behavior of Hannah Poling stemmed from her exposure as a toddler to five vaccinations on one day in July 2000. Two days later, she was overtaken by a high fever and an encephalopathy that deteriorated into autistic behavior. Even though autism has a strong genetic basis, and she has a coexisting rare mitochondrial disorder, I would not be too quick to dismiss Hannah as an anomaly.

At some level, the decision was a vindication for families who have been battling with the vaccine community, arguing that some poorly understood reaction to components of vaccines or their mercury-based preservative, thimerosal, could cause brain injury. Yes, vaccines are extraordinarily safe and bring huge public health benefit. (Remember the 1950s polio epidemics?) But vaccine experts tend to look at the population as a whole, not at individual patients. And population studies are not granular enough to detect individual metabolic, genetic, or immunological variation that might make some children under certain circumstances susceptible to neurological complications after vaccination.

A trigger? Families are not alone in searching for a trigger that might explain why autism and autism spectrum disorders have skyrocketed; now they reportedly affect about 1 in 150 kids. No doubt some of the increase is soft, due to broader diagnostic criteria, greater awareness, and—now that the notion of a detached "refrigerator" mom as a cause has blessedly fallen by the wayside—greater openness. But the rise of this disorder, which shows up before age 3, happens to coincide with the increased number and type of vaccine shots in the first few years of life. So as a trigger, vaccines carry a ring of both historical and biological plausibility.

Go back 40 or 50 years. The medical literature is replete with reports of neurological reactions to vaccines, such as mood changes, seizures, brain inflammation, and swelling. Several hundred cases of the paralytic illness Guillain-Barré after the swine flu vaccine were blamed on the government and gave Gerald Ford heartburn—but eventually led to the vaccine court.

Pediatricians were concerned enough about mercury, which is known to cause neurological damage in developing infant and fetal brains, that they mobilized to have thimerosal removed from childhood vaccines by 2002. Their concern was not autism but the lunacy of injecting mercury into little kids through mandated vaccines that together exceeded mercury safety guidelines designed for adults. But as in all things vaccine, this move too was contentious. Both the Centers for Disease Control and Prevention and the World Health Organization remain unconvinced that thimerosal puts young children at risk.

There is no evidence that removal of thimerosal from vaccines has lowered autism rates. But autism numbers are not precise, so I would say that considerably more research is still needed on some provocative findings. After all, thimerosal crosses the placenta, and pregnant women are advised to get flu shots, which often contain it. Studies in mice suggest that genetic variation influences brain sensitivity to the toxic effects of mercury. And a primate study designed to mimic vaccination in infants reported in 2005 that thimerosal may clear from the blood in a matter of days but leaves inorganic mercury behind in the brain.

The debate roils on—even about research. The Institute of Medicine in its last report on vaccines and autism in 2004 said that more research on the vaccine question is counterproductive: Finding a susceptibility to this risk in some infants would call into question the universal vaccination strategy that is a bedrock of immunization programs and could lead to widespread rejection of vaccines. The IOM concluded that efforts to find a link between vaccines and autism "must be balanced against the broader benefit of the current vaccine program for all children."

Wow. Medicine has moved ahead only because doctors, researchers, and yes, families, have openly challenged even the most sacred medical dogma. At the risk of incurring the wrath of some of my dearest colleagues, I say thank goodness for the vaccine court.

Tags: vaccines, autism

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Before her death in 2011, Dr. Bernadine Healy was Health Editor for U.S. News & World Report and wrote the On Health column. She was a member of the President's Council of Advisors on Science and Technology and served as director of the National Institutes of Health and president and CEO of the American Red Cross. Dr. Healy's blog, Heart to Heart, is where she covered matters close to her heart, including cardiovascular disease and other important aspects of personal health and health policy. [Archive of Columns: 2004 - 2008](#) [2008 Columns](#) [2007 Columns](#) [2006 Columns](#) [2005 Columns](#) [2004 Columns](#)