

Controversial Study Reignites Debate Over Autism and Childhood Vaccines

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JUST A FEW MONTHS after the nations' top medical adviser rejected a link between vaccines and autism, a mouse study has reignited the debate and raised new fears among parents considering vaccinations and flu shots for their kids.

For years, a cadre of parents and physicians have contended that thimerosal, an ethyl-mercury compound that has been one of the most widely used vaccine preservatives, is partly responsible for an apparent rise in autism in recent decades. But broad population studies haven't supported the claim. In May, a major report from the Institute of Medicine's Immunization Safety Review Committee, sought to put the debate to rest, rejecting a link between autism and vaccines.

But tomorrow, a congressional committee will review a June study from Columbia University, which found that a mercury preservative used in vaccines can indeed cause autism-like symptoms in a specific strain of mice. The research raises important questions about whether some people might be genetically vulnerable to the effects of thimerosal.

The study also raises questions about a new push by the Centers for Disease Control and Prevention to add flu shots to the immunization schedule for school-age kids. Thimerosal has been mostly phased out of childhood vaccines, which include shots for whooping cough and other illnesses. But the vast majority of flu shots given to both adults and children still contain the preservative. In addition, it's widely believed that many unexpired vials of thimerosal-containing childhood vaccines remain on the shelves of pediatricians' offices.

None of this is to say that parents should stop having their children vaccinated. Instead, critics of thimerosal say parents should insist on thimerosal-free vaccines and ask to check the label themselves before a child receives a shot.

Many researchers believe increased use of vaccines with thimerosal may help explain the alarming rise in autism in the U.S, which was just 1 in 2,500 children 20 years ago. Now CDC studies show the rate for autistic disorders in some

areas to be as high as 1 in 150.

But the IOM report said an exhaustive review of the evidence doesn't support the claim that vaccines are to blame. The finding has sparked the ire of many autism researchers as well as parents who are convinced that vaccinations triggered autism in their kids. Among them is Congressman Dan Burton, an Indiana Republican, whose grandson developed autism five years ago after receiving shots containing thimerosal. Rep. Burton is chairman of the subcommittee that this week will hold hearings on the mouse study and other research. "We just need to get the mercury out of vaccinations," says Rep. Burton.

What is so frustrating to critics of the IOM report is that thimerosal is an entirely unnecessary ingredient. The mercury preservative typically is found in multi-dose vials to prevent contamination. But vaccines can be packaged in single doses and other preservatives can be used to protect multi-dose packs. Thimerosal remains in use in flu shots and adult vaccines mainly because of the cost of changing ingredients or switching to single-dose shots. "We have other ways to make vaccines safe," says Ellen Silbergeld, professor of environmental health sciences at Johns Hopkins Bloomberg School of Public Health.

The new mouse study bolsters the theory that genes involved in the immune system might make some people vulnerable to mercury -- explaining why the vast majority of kids do fine after vaccines while a small number develop problems.

In the Columbia study, researchers administered thimerosal to four strains of young mice, injecting them with amounts comparable to those given to kids. Three of the mice strains were unaffected by thimerosal, but the fourth developed problems consistent with autism such as delayed growth, social withdrawal and brain abnormalities. The vulnerable mice were known to have a specific genetic susceptibility to mercury.

While a mouse study is far from conclusive, it's important to know that mice have long been a useful proxy for understanding human health. The researchers are close to developing a blood test to look for similar patterns in autistic children to see if the research translates to humans. Until more is known, says Mady Hornig, associate professor of epidemiology at Columbia's Mailman School of Public Health. "I think we should err on the side of caution and more thimerosal-free vaccine should be available."

Other experts say the mouse study offers little insight into the issue, but is needlessly upsetting parents and could undermine the nation's childhood vaccination program. Unproven worries about autism and vaccines are "hypothetical" compared to "a very real risk of disease," notes Marie McCormick,

professor of maternal and child health at Harvard School of Public Health and chairwoman of the IOM committee.

Parents concerned that a pediatrician may have an old vial of thimerosal-containing vaccine can politely ask to see the label. Most doctors understand that parents can be nervous about vaccinations, says Ian Lipkin, director of the Center for Immunopathogenesis and Infectious Diseases at Columbia University and co-author of the mouse study. In addition, you can check Food and Drug Administration charts listing vaccines and their thimerosal status at www.fda.gov/cber/vaccine/thimerosal.htm.

Many doctors and clinics may not have a supply of thimerosal-free flu shots. Calling in advance may give a doctor enough time to obtain a single-dose syringe. Another option is to ask for Flu-Mist, a nasal mist vaccine that doesn't contain thimerosal.

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Journal Link: Join a discussion with Health Journal columnist Tara Parker-Pope about the latest findings on autism, at WSJ.com/PersonalJournal

Getting the Best Shot

Here are steps you can take to make sure your child receives a mercury-free vaccine.

- Ask for thimerosal-free vaccine
- Check availability before appointment
- Ask for vaccines in single-dose vials or syringes
- Read manufacturer label or insert to check ingredients yourself
- Look up common vaccines on www.fda.gov/cber/vaccine/thimerosal.htm
- Consider intranasal flu vaccine for school-age kids

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