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## **Thimerosal: "Smoking Gun?"**

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OTTAWA -- Scientists have found what they believe could be a "smoking gun" linking vaccines to autism and attention-deficit hyperactivity disorder in children.

In a study that was rushed to print online today -- two months ahead of its scheduled publication in the journal *Molecular Psychiatry* -- U.S. researchers have discovered an apparent link between thimerosal, a controversial mercury-based preservative once commonly used in childhood vaccines, and an increased risk of neurological disorders such as autism and ADHD.

While most vaccines distributed in Canada have been thimerosal-free since the late 1990s, the preservative was used in the annual flu shot that doctors recommended this year for even healthy children.

The study could account for the rising rates of autism since the early 1980s, when more thimerosal-containing shots were added to a child's vaccine schedule, says investigator Dr. Richard Deth, a professor of pharmacology at Northeastern University in Boston.

A recent review of vaccine-related "adverse events" in the U.S. found a

"significant correlation" between shots containing thimerosal and autism, the researchers report.

The new study is "the first to offer an explanation for possible causes of two increasingly common childhood neurological disorders," the medical journal said in a statement.

But one of Canada's leading experts in vaccination says large studies have repeatedly failed to find any association between brain damage and vaccines that do, or don't, contain thimerosal.

"What [the researchers] are doing in the test tube may or may not have any relationship to what happens in the body," said Dr. Ronald

Gold, professor emeritus of pediatrics at the University of Toronto and author of *Your Child's Best Shot: A Parent's Guide to Vaccination*.

There's no evidence that the low doses of thimerosal that the researchers tested would even cross a child's blood-brain barrier, Gold said.

But Deth thinks there may be a link, and he believes thimerosal may play a role for the one out of 200 children who will experience some kind of developmental disorder.

"I don't want to impair the public-health importance of vaccine programs.

It's not the vaccines that are the problem -- it's the additives that are the problems.

"Some would consider [thimerosal] a smoking gun," Deth said.

"I think it is."

## THE TARGET

### WHAT IS THIMEROSAL?

Thimerosal had been used to prevent the growth of bacteria or fungi in multi-dose units of vaccines for diseases such as hepatitis and diphtheria, pertussis (whooping cough) and tetanus, or DPT.

Ontario, Nova Scotia, Newfoundland and P.E.I have not used childhood vaccines containing thimerosal since the early 1960s, when the provinces switched to a DPT vaccine that was combined with the killed polio vaccine.

(Thimerosal couldn't be used with the combined shot because it destroyed the efficacy of the polio vaccine.)

All other provinces, including B.C., began to move to thimerosal-free vaccines starting in 1997. As of March 2001, all vaccines for routine immunization of children in Canada have been available without thimerosal.

But the annual flu shot -- which Canadian doctors this year began pushing on even healthy children over six months of age -- contains the preservative.

And thimerosal is still found in larger, multi-dose vaccines shipped to Third World countries.

Dr. Laszlo Palkonyay, medical-scientific adviser for Quebec-based flu-vaccine maker Shire Biologics, said a study published in the journal *Pediatrics* last September, which was based on a registry of all psychiatric admissions in Denmark between 1971 and 2000, found no trend toward an increase in autism rates during the period thimerosal was used in vaccines in that country.

In fact, Palkonyay said, the incidence of autism increased after the preservative was removed from vaccines in 1990.

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