

# What You Need to Know About Vaccine Safety

Why are some parents so opposed to immunization for their children?

The widespread use of vaccines in the U.S. has reduced disease to such an extent that many parents now question whether vaccines are still necessary. In addition, parents are concerned that vaccines may actually be the cause of diseases such as autism, hyperactivity, diabetes, multiple sclerosis, and sudden infant death syndrome, among others. These concerns have caused some parents to delay or withhold vaccines for their children. These fears are often spread by misinformation on the Internet.

Who determines vaccine safety?

Parents' decisions about vaccine safety should be based on scientific studies rather than on conflicting information found on the Internet (such as that found on the website of the Minnesota Natural Health Coalition), parents magazines, and the evening news. But few parents have the background in microbiology, immunology, epidemiology, and statistics to separate good studies from poor studies. That is why our nation looks to groups such as the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics, the American Academy of Family Physicians, and the Food and Drug Administration, among others, for guidance on vaccine safety and recommendations on vaccine use. These groups are made up of scientists and medical specialists who are experts in these subjects and can therefore make reasoned, informed decisions about vaccine safety and use.

How is vaccine safety determined?

Before a vaccine can be licensed, it must be tested on thousands of people. This lets scientists study relatively common side effects. Rare side effects (those that happen to fewer than one vaccinated person in several thousand) are hard to study unless the vaccine is tested on a million or more people.

After a vaccine is licensed, CDC uses two primary reporting systems to monitor vaccine safety. These monitoring systems are known as the Vaccine Adverse Event Reporting System and the Vaccine Safety Datalink project.

What is the Vaccine Adverse Event Reporting System (VAERS)?

VAERS receives 800 to 1,000 reports each month. Health care providers and consumers are encouraged to report any side effect that might be caused by a vaccine. In 1999, VAERS data were important in studying the rotavirus vaccine. The vaccine was withdrawn from the market after VAERS data uncovered reports of bowel obstruction developing in the first two weeks after the vaccine was given.

What is the Vaccine Safety Datalink (VSD) project?

The VSD project is a large database of all vaccines given to persons in seven large health maintenance organizations (which include more than six million people). At present, the VSD project is monitoring any possible connections between vaccines and medical conditions.

Do vaccines have side effects?

Like all medications, all vaccines can have side effects. Most side effects are mild, such as soreness and redness at the spot the shot was given. Some can be severe, however, such as a severe allergic reaction to the vaccine, which can be treated.

If vaccines cause side effects, wouldn't it be safer to just avoid them?

Unfortunately, choosing to avoid vaccines is simply a choice to take a different risk. Unvaccinated children are vulnerable to getting many diseases. Children not vaccinated against pneumococcus and *Haemophilus influenzae* type b (Hib) can get meningitis and blood-stream infections. Those who haven't had the measles vaccine can get measles-induced pneumonia; those who haven't had mumps vaccine can go deaf; and those who haven't had the vaccine against hepatitis B virus can develop liver cancer.

Does the preservative thimerosal cause autism? (Thimerosal, which contains a form of mercury, used to be in some common childhood vaccines.)

No. Several studies have found that the small amounts of mercury that vaccines used to contain have not caused any health problems in infants or young children. Recent studies by the National Institutes of Health showed that the levels of mercury found in the blood of immunized children are similar to the levels in unimmunized children.

Does the MMR vaccine cause autism?

Please read the article by Dr. Paul Offit of the Children's Hospital of Philadelphia. It is at [www.immunize.org/catg.d/p2065.htm](http://www.immunize.org/catg.d/p2065.htm). He reviews two studies by Dr. Wakefield (a British endocrinologist who claims that MMR vaccine causes autism), as well as studies that prove that MMR vaccine does not cause autism. Unfortunately, for the many parents who have children diagnosed with autism, Dr. Wakefield's claims have redirected attention and resources away from sound, scientific autism research.

Does the hepatitis B vaccine cause multiple sclerosis?

No. In May 2002, the Institute of Medicine's Immunization Safety Committee released a report that failed to document a link between hepatitis B vaccine and multiple sclerosis.