



## Facts for Parents About Vaccine Safety

### Why are vaccines important?

Immunizations protect children. Vaccine-preventable diseases can have dangerous consequences, including seizures, brain damage, blindness and even death. Because of the success of the national immunization program, many young parents today have never seen a case of one of these illnesses, but measles, meningitis, chickenpox, pertussis and other diseases exist in the world and would re-emerge here if immunization rates fell. For example, recent outbreaks of measles in the U.S. were traced to unvaccinated children who became infected while traveling in Europe. Likewise, it would only take one case of polio from another country to bring the disease back to the U.S. if children are not protected by vaccination.

### Are vaccines safe?

Yes. Today's vaccines are safer than any in history. Vaccines contain antigens, which are either live but very weakened viruses, inactivated viruses, or small parts of bacteria or viruses that prompt the body to produce protective antibodies without causing the disease. Even though children receive more vaccines now, the total number of antigens is less because today's vaccines are more refined than older versions. At a very young age, children's immune systems are equipped to respond to many antigens at the same time, including those in vaccines as well as the ones they encounter in their daily activities such as eating, breathing and playing.

In addition to antigens, vaccines contain ingredients to prevent contamination and improve effectiveness. These ingredients have been found to be safe in humans in the quantities given in vaccines, which is much less than children are exposed to in their environment, food and water. Valid scientific studies have shown there is no link between autism and thimerosal, a mercury-based preservative once used in several vaccines (and still used in some flu vaccine). However, since thimerosal was removed from childhood vaccines in 2001, autism rates have actually increased, supplying further evidence that thimerosal does not cause autism.

Before a vaccine is licensed, it is studied in thousands of children and in combination with other vaccines. After licensure, the federal government continues to monitor a vaccine's safety. This continuous monitoring ensures researchers will uncover any rare side effects, even if they affect only a small number of children. For example, a rotavirus vaccine was withdrawn in 1999 after it was linked to intestinal blockages in about 100 children. This vaccine was replaced by a new and safer product. Today's recommended vaccines have been shown to be safe and effective for millions of children.

### Can I delay or skip vaccines?

It is not a good idea to skip or delay vaccines, as this will leave your child vulnerable to diseases for a longer time. Children are most vulnerable to complications from disease in their early years of life, when vaccines provide protection, and some vaccines produce a better immune response at particular ages. Parents should follow the schedule provided by the U.S. Centers for Disease Control and Prevention, the American Academy of Pediatrics and the American Academy of Family Physicians, which is designed by experts to ensure maximum protection and safety for children at various ages. This schedule allows for some flexibility to delay certain shots when advised by a child's pediatrician due to illness, certain chronic conditions or other medical reasons. Parents should discuss any concerns with their child's pediatrician.

More information is available at [www.aap.org/immunization](http://www.aap.org/immunization) and [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines).