



About Childhood Vaccinations

Fact:

Childhood vaccinations save millions of lives each year.

Fiction:

It's a myth that vaccinations have side effects that are worse than the diseases they prevent.

Prevention:

A century ago, half of all children died before the age of five. Now, vaccinations have eliminated smallpox and saved millions of children, and their families, from needless suffering.

Understanding Vaccinations

When a germ such as a bacterium or a virus enters your body, your immune system produces special proteins called antibodies to destroy that specific invader. If the same germ is encountered again, the immune system recognizes it and produces antibodies much more quickly, killing the germ before the disease can develop. That's why someone who had a disease as a child becomes immune to it if ever exposed again.

Vaccines work by the same principle. Vaccines are made from a tiny amount of germs that are weakened or killed so they are harmless to the body. But the immune system still makes antibodies against them, and when the body later sees the true invader, it can fight off the actual disease. A few vaccines build immunity with one dose. Most require two or more doses. Some require periodic boosters to maintain immunity.

Side Effects

Serious side effects are very rare. Temporary side effects to a vaccination include fever, muscle aches, redness, swelling or soreness at the vaccination site.* Parents should ask for and read the *Vaccine Information Statements (VIS)* before children are vaccinated (immunized).

For a vaccine to be included on the annual Recommended Childhood Immunization Schedule for the United States, scientists and physicians in three different organizations must approve it:

- The Advisory Committee on Immunization Practices from the Centers for Disease Control and Prevention
- The American Academy of Pediatrics
- The American Academy of Family Physicians

Vaccinations are improving all the time, with reductions in side effects. To reduce trauma for children and parents, combination vaccines reduce the number of shots. In the future, some vaccinations may be administered by nose spray.

The Seven Routine Childhood Vaccinations*

Current guidelines call for children to receive doses of seven different vaccines, protecting against 11 diseases. Most doses are administered in the first two years of life.

Diphtheria/Tetanus/Pertussis (DTP/DTaP). The organisms that cause all three of these diseases are potentially fatal, and remain widely present. Continued vaccinations and regular booster shots are highly recommended. Careful investigation has shown that, contrary to rumors, there is no causal relationship between the DTP vaccine and sudden infant death syndrome, or SIDS.

Haemophilus influenzae type b (Hib). Not the flu virus that causes the flu, Hib causes potentially deadly meningitis, pneumonia and blood infections. Widespread use of the vaccine has almost eliminated Hib in the United States.

Hepatitis B. This can lead to acute and chronic liver disease as well as liver cancer, so the hepatitis B vaccine is recommended for all children and adolescents. There's a myth that the disease is transmitted only by sexual contact or shared needles, but it can be shared within families and even through children's play. There's also a myth that the vaccination can cause serious illnesses, but this is not true.

Measles/Mumps/Rubella (MMR). These diseases can cause death, brain infections, and birth defects. Less than one child in 1 million who get this vaccine has a serious allergic reaction or other severe problem.

Pneumococcal Conjugate (PCV). *Streptococcus pneumoniae* (pneumococcus) can cause serious infections in the lungs, blood, and coverings of the brain and spinal column, especially in young children. About 200 children younger than five years old die each year as a result of pneumococcal disease and thousands more are left with permanent damage. Pneumococcus is also the most common cause of bacterial infection in the ears (otitis media) and sinuses (sinusitis).

Polio (IPV). Polio has been eradicated in the United States but remains a serious threat elsewhere, so it's important to immunize all children. Serious but rare side effects have been reported with the "live" but weakened oral form of the vaccine, including some cases of vaccine-induced polio, so only the safer "killed" injectable form is now recommended for all children.

Varicella (Chickenpox). As many as 100 people die of chickenpox each year in the United States and many more are hospitalized for serious complications. This vaccine is recommended for all children. Adults who did not have the disease as a child should be tested to see if they have evidence of naturally acquired protection (immunity). If not, vaccination is recommended because chickenpox can be even more serious in an adult than in a child.

Three vaccines are recommended for children in certain situations:

Hepatitis A. The hepatitis A virus inflames the liver. Symptoms usually last two to four weeks, but in a minority of cases can last several months or longer. The virus is shed in the stool of an infected person and transmitted by personal contact or exposure to contaminated food and water. It is recommended for:

- Children living in 11 states where the prevalence of hepatitis A is greater than twice the national average: Alaska, Arizona, California, Idaho, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Utah and Washington. Routine vaccination also can be considered in six states where the prevalence of hepatitis A is less than twice but greater than the national average: Arkansas, Colorado, Texas, Missouri, Montana and Wyoming.
- Children traveling to countries where the disease is highly prevalent. This includes all countries other than Canada, Japan, Australia, New Zealand, Scandinavia and those in Western Europe.
- Children with chronic liver disease or blood-clotting disorder

Influenza. Influenza (the flu) is a virus that causes serious disease in many people, particularly in the winter.

Vaccines for Special Groups of Children

The flu vaccine is recommended for children who have significant heart disease (for example, acquired or congenital heart disease), lung disease (for example, asthma or cystic fibrosis), diabetes, sickle cell disease, kidney disease, muscular dystrophy or HIV infection. This vaccine is also available for any other child who wishes to be protected against the flu.

Meningococcus. *Neisseria meningitidis* (meningococcus) is a bacterium that can cause serious infections in the coverings of the brain and spinal column (spinal meningitis) or in the blood. Many children die of, or are permanently disabled by, these infections.

A young child's pediatrician may not recommend immunization for meningitis unless the child has spleen problems or immune system problems. However, the vaccination is often recommended for young adults who will be living in a dormitory or other group situation.

Stay Tuned

Check with your pediatrician for the latest recommendations, and your health care provider for covered vaccinations.

* IntelliHealth

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