

Immunizations

Your Child's Best Defense

Parents sometimes feel confused about which vaccines their children should get and when they should receive them. Your pediatrician can help you understand them all and make sure that your child's vaccinations are up to date.

The list of children's vaccines and the diseases they prevent contains some strange-sounding names. The good news is that these vaccines are protecting your child against infectious diseases more than ever before.

From birth through age 18, your child should be given a series of vaccinations on a set schedule. These vaccines have been tested and found to be safe and effective, which is why they've been licensed by the U.S. Food and Drug Administration (FDA). Their use has been endorsed by the Centers for Disease Control and Prevention (CDC) as well as the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP).

There is nothing more important for children than getting these vaccines on the recommended schedule, notes AAP President Jay E. Berkelhamer, M.D. "Immunizations are our best defense in protecting our patients against infectious diseases," he says.

The 2007 recommended immunization schedules, one for children ages 0 to 6 years and another for those 7 to 18 years, were released earlier this year. The biggest changes from last year are these:

- The new rotavirus vaccine is recommended in a three-dose schedule at ages 2, 4, and 6 months. Rotavirus is the most common cause of severe diarrhea among children. It is responsible for the putting around 55,000 U.S. children in the hospital each year.
- The influenza (flu) vaccine is now recommended for all children ages 6 to 59 months, as well as siblings and parents of all infants and children 0 to 59 months of age.
- Varicella (chickenpox) vaccine recommendations have been updated. The first dose should be given at age 12 to 15 months, and a newly recommended second dose should be given at age 4 to 6 years.



- The new human papillomavirus vaccine (HPV) is recommended as a routine vaccine for girls to prevent cervical cancer among women. The first dose should ideally be given at 11 to 12 years of age. Three doses are required. The second and third doses should be given 2 and 6 months, respectively, after the first dose. Catch-up vaccines should be given to adolescent girls older than 12 years if they have not yet received it.

Are Vaccines Safe?

As research by the CDC shows, the United States has the safest, most effective vaccine supply in history. Federal law requires years of testing before a vaccine can be licensed. Once in use, vaccines are checked for safety and effectiveness.

In most cases, vaccines work well and cause no side effects or only mild reactions, such as fever or soreness at the site of the shot. Very rarely, people experience more serious side effects, such as allergic reactions, according to the CDC. If your child has health problems or known allergies, be sure to tell your pediatrician about them before your child is vaccinated.

Studies from the CDC and the FDA also show that your child faces much greater risks if he isn't vaccinated. For example, measles is a very serious disease. One out of 17 children with measles gets pneumonia. For every 1,000 children who get measles, one or two will die from it and one will get encephalitis, a serious inflammation of the brain. Thanks to vaccines, there are few cases of measles in the United States today, and most of those affect those who travel abroad. The disease is extremely contagious, however, so the vaccine is just as needed as ever before. Each year, dozens of cases are imported from outside the country.

Vaccines for Children

For children up to 6 years of age, the 2007 Immunization Schedule includes the following vaccinations. Talk with your pediatrician to make sure that your child has these vaccinations when appropriate or to have catch-up immunizations if particular vaccines have been missed:

- **Hepatitis B** vaccine (HepB). (Minimum age: birth)
- **Rotavirus** vaccine. (Minimum age: 6 weeks; maximum age: 32 weeks)
- **Diphtheria and tetanus** toxoids and **acellular pertussis** vaccine (DTaP). (Minimum age: 6 weeks)
- **Haemophilus influenzae** type b conjugate vaccine (Hib). (Minimum age: 6 weeks)
- **Pneumococcal** vaccine. (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPV])
- **Influenza vaccine**. (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 5 years for live, attenuated influenza vaccine [LAIV])
- **Measles, mumps, and rubella** vaccine (MMR). (Minimum age: 12 months)
- **Varicella** [chickenpox] vaccine. (Minimum age: 12 months)
- **Hepatitis A** vaccine (HepA). (Minimum age: 12 months)

Resources to Help Parents Understand Vaccines

Trusted medical organizations such as the AAP, AAFP, and American Medical Association (AMA) provide accurate, up-to-date information on vaccines to parents. Other organizations include:

- CDC: Information on immunization, vaccines, and the diseases they prevent. www.cdc.gov/nip, or call the CDC-INFO Contact Center at 1-800-CDC-INFO (232-4636)

Vaccines for Adolescents

Immunizations can prevent several infections that pose serious threats to adolescents. In addition to HPV vaccine for all adolescent and pre-adolescent girls, two new vaccines against meningococcus and whooping cough (pertussis) have recently become available and are recommended for all adolescents. Three other vaccines (hepatitis B, varicella, and measles-mumps-rubella) are recommended for adolescents who did not receive them as children. Immunization can protect not only the health of adolescents but also their friends, families, and communities.

Pertussis (Whooping Cough)

- Highly contagious with prolonged debilitating cough. Whooping cough may be life threatening to infants.
- NEW VACCINE: Tetanus-diphtheria-acellular pertussis vaccine (Tdap) adds pertussis protection while maintaining tetanus and diphtheria protection.

- Adolescents from 11 to 18 years of age should receive a single shot of Tdap. Adolescents who have received a tetanus-diphtheria booster (Td) should receive Tdap at least two years after they received Td.

Meningococcal Infections

- Extremely serious disease that can rapidly progress to shock, meningitis, and death.
- NEW VACCINE: Meningococcal conjugate vaccine (MCV4) provides protection against these infections.
- Adolescents should receive a single shot of this vaccine during their 11- to 12-year-old check-up, or when they enter high school or college.

Hepatitis B

- Causes hepatitis with fever, fatigue, and jaundice.
- Can cause chronic infection resulting in chronic liver disease and liver cancer.
- Adolescents who did not receive the hepatitis B vaccine during childhood should receive the three-shot course of this vaccine.

Varicella (Chickenpox)

- Highly contagious and can be a serious and sometimes life-threatening disease.
- Adolescents who have not had chickenpox or the vaccine should receive this vaccine at their 11- to 12-year-old check-up. Parents who aren't sure can ask their pediatrician about a blood test for their child to see if she is already immune to the disease. If she had only a single dose as a child, she should receive a second dose.

Measles, Mumps, and Rubella

- Historically among the most serious vaccine-preventable diseases.
- Adolescents who did not receive the two-shot course of measles-mumps-rubella vaccine (MMR) during childhood should receive this vaccine at their 11- to 12-year-old check-up.

Human Papillomavirus

- Human papillomavirus (HPV) is a virus that causes cervical cancer and genital warts.
- HPV vaccine prevents cervical cancer among women.
- Routine vaccination with HPV is recommended for girls ages 11 to 12 years, with catch-up vaccination for female adolescents who have not received it.
- Recommended in a three-dose schedule with the second and third doses given 2 and 6 months, respectively, after the first dose.

Additional Vaccines

- Some adolescents with certain health conditions may need additional vaccines, such as hepatitis A, influenza, and pneumococcal vaccines. ●