

Immunizations: What You Need To Know



Immunizations have helped children remain healthy for more than 50 years. But many parents still ask, “Why does my child need to be immunized? Why does my child need to receive vaccinations or ‘shots’?”

The following are common questions parents have about immunizations:

- Why are immunizations important?
- How well do vaccines work?
- What vaccines does my child need?
- How safe are vaccines?
- Where can I get more information?

Why are immunizations important?

Q: “Why are vaccines needed if the diseases they prevent are not as common anymore?”

A: Vaccines *are* still needed because the bacteria and viruses that cause these diseases still exist. Vaccines have protected children and continue to protect children from getting these diseases. In the United States many diseases are not as common or widespread as they used to be thanks to better nutrition, less crowded living conditions, better sanitation, antibiotics, and, most importantly, vaccines.

For example, the *Haemophilus influenzae* type b (Hib) vaccine protects children from serious childhood diseases that include meningitis, pneumonia, and infections of the blood, bones, joints, and throat. Before the Hib vaccine was developed in the 1980s, there were about 20,000 cases of Hib disease in the United States a year. Today there are fewer than 100 cases a year. Because the bacteria that causes Hib disease still exists, children younger than 5 years need the Hib vaccine to be protected.

Vaccines also are needed to protect children from diseases that may be brought into the United States from people who have visited or are visiting from other countries. Many vaccine-preventable diseases are still common in many parts of the world. Travelers may be carriers of these diseases without them knowing they are infected. Influenza is an example of a disease that is transmitted between countries every year.

Q: “Chickenpox is not a fatal disease, so why is the vaccine needed?”

A: Chickenpox is one of the most common childhood diseases. Although it is usually a mild disease, serious complications from chickenpox lead to the hospitalization of more than 7,000 children.

About 1 child out of 500 who get chickenpox has to be hospitalized for severe bacterial infections of chickenpox sores (such as flesh-eating strep and staph toxic shock) and for brain inflammation. Four out of every 100,000 infants who get chickenpox die.

What vaccines does my child need?

Your child needs all of the following immunizations to stay healthy:

- **DTaP vaccine** protects against diphtheria, tetanus (lockjaw), and pertussis (whooping cough).
- **Hepatitis A vaccine** in selected areas protects against a serious liver disease.
- **Hepatitis B vaccine** protects against a virus that causes chronic liver disease and liver cancer.
- **Hib vaccine** protects against *Haemophilus influenzae* type b (a major cause of spinal meningitis).
- **Influenza vaccine** is recommended yearly for children older than 6 months with certain risk factors (such as lung, heart, and kidney disease). It is encouraged for all healthy children aged 6 to 23 months.
- **MMR vaccine** protects against measles, mumps, and rubella (German measles).
- **Pneumococcal vaccine** offers extra protection against bacterial meningitis and infections of the blood.
- **Polio vaccine** protects against crippling polio.
- **Varicella vaccine** protects against chickenpox and its many complications including flesh-eating strep, staph toxic shock, and encephalitis.

The chickenpox vaccine, licensed in 1995, is credited with the decline of cases of chickenpox and its frequent complications. Many studies show the vaccine is safe and effective. Research is being done to see how long the vaccine protects and if a person will need a booster shot in the future.

Q: “Does my baby need immunizations if I am breastfeeding?”

A: Breastfed babies still need immunizations. While breastfeeding can be considered a baby’s first immunization and is the best nutrition for your baby, breastfeeding and immunizations work together to give your baby the best protection against serious illness. Studies show that some immunizations stimulate greater immune response in breastfed babies. Also, it is important to know that you can breastfeed right before and after your baby receives any immunization.

How well do vaccines work?

Q: “Do vaccines even work? Most of the people who get these diseases have been vaccinated.”

A: Yes. Vaccines work extremely well. Millions of children have been protected from serious illnesses such as polio, whooping cough, measles, tetanus, and diphtheria because parents have had their children immunized.

Most childhood vaccines are 90% to 99% effective in preventing disease. They are even more effective in reducing disease severity. Occasionally a few children may not develop the desired protection after receiving a vaccine. But to *not* vaccinate your child gives them no protection from the possibility of getting one of these deadly diseases.

Q: “When should my child get immunized?”

A: Children should receive most of their shots during their first 2 years of life. Children need to be immunized when they are infants because vaccine-preventable diseases are deadliest in the very young. Some newborns receive their first shot (hepatitis B) at birth before leaving the hospital. Other shots are given before children go to school. Children who are behind on getting their shots are at great risk of getting many vaccine-preventable diseases. Also, children who are not immunized could spread diseases to others who have not been immunized. Talk with your child’s pediatrician about getting your child back on schedule.

Older children and teens also need immunizations to continue to protect them throughout adolescence and early adulthood. Ask your child’s pediatrician for the current recommended childhood immunization schedule to see when your child needs additional immunizations. Keep track of each vaccine your child receives and keep your child’s immunization record with you at all times. Check with your child’s pediatrician to make sure your child’s immunizations are given on time and are up to date.

How safe are vaccines?

Q: “Is it safe to immunize a child who has a cold and fever?”

A: A child with a minor illness *can* safely be immunized. Examples of minor illnesses include the following: low-grade fever (<100.4°F), ear infection, cough, runny nose, or mild diarrhea in an otherwise healthy child.

Q: “I’ve heard that some children have serious side effects from vaccines. Are vaccines safe for my child?”

A: Vaccines *are* safe, and severe reactions to vaccines are very rare. Mild reactions to vaccines do occur, but they do not last long. There may be some swelling, redness, and discomfort where the shot was given. Your child may have a low-grade fever and be fussy afterward. Symptoms of more serious reactions are much less common. Call your child’s pediatrician right away if your child has a

- Very high fever (>103°F)
- Generalized rash (including hives)
- Large amount of swelling around the shot or in the limb used for the shot

Your child’s pediatrician can decide whether your child should receive future doses of the same vaccine.

Children with certain health problems may need to avoid some vaccines or get them later. For example, children with cancer, those taking steroids for lung or kidney conditions, or those who have problems with their immune systems in most cases should not receive vaccines like the measles, mumps, and rubella (MMR) or chickenpox vaccine. These are not safe for children with these health problems because the vaccine is made with weakened live viruses. For children with seizures, the pertussis part of the diphtheria, tetanus, and pertussis (DTaP) vaccine may need to be delayed. Ask your child’s pediatrician when the vaccine can be given.

Q: “Does the MMR vaccine cause autism?”

A: MMR *does not* cause autism. Many research studies have been done to address this issue. There is no scientific link between the MMR vaccine and autism. There may be confusion because autism is often identified in children from 18 to 30 months of age—around the same time the MMR vaccine is given. This has led some people to mistakenly assume the vaccine is the cause of autism. However, increasing evidence shows that autism starts before a baby is born.

Q: “Does the DTaP vaccine cause sudden infant death syndrome (SIDS)?”

A: Careful scientific studies have confirmed that the DTaP shot *does not* cause SIDS. This myth continues because the first dose of the vaccine is given at 2 months of age, and the greatest risk for SIDS is at 1 to 6 months of age. However, there is no link between the DTaP shot and SIDS.

Q: “I saw on the news that there are ‘hot lots’ of vaccines that are more dangerous than other lots. Is this true?”

A: No. More dangerous lots of vaccines have *never* been released. The federal government monitors every production lot of a vaccine before it is released. A database called the Vaccine Adverse Events Reporting System (VAERS) receives reports of reactions following a vaccination. People may think that if a number of VAERS reports result from a certain batch of vaccine, then this must be a “hot lot” that produces more side effects. No such vaccine lot has ever been released.

Keep in mind, the US Food and Drug Administration (FDA) licenses all vaccines. Vaccine manufacturing facilities are licensed and regularly inspected. Also, every vaccine lot is safety-tested by the manufacturer. The fact that a vaccine continues in use means that the FDA considers it safe.

Q: “What is thimerosal?”

A: Since the 1930s a preservative called thimerosal was added to vaccines to prevent bacterial contamination of vaccines packaged in multidose vials. However, since 2001 all routinely recommended vaccines for infants are made either thimerosal-free or contain only trace amounts of the preservative. Thimerosal contains very small amounts of mercury. The form of mercury in thimerosal has never been shown to cause health problems other than rare allergic reactions in some people. In amounts much larger than found in vaccines certain forms of mercury can cause brain and kidney damage. Because children can be exposed to mercury found in foods (such as fish and grains) and environmental sources (such as contaminated soils, water, and wastes) that cannot always be readily removed as an exposure threat, the US Public Health Service and the American Academy of Pediatrics (AAP) believe removing thimerosal from vaccines is one means of reducing mercury exposure.

Q: “Is it safe to give more than one immunization at a time?”

A: Many years of experience and careful research have shown that vaccines used for routine childhood immunizations can be given together safely and effectively. Side effects are not increased when multiple vaccines are given together when compared with vaccines given on separate occasions. Infants and children are able to handle the immunizations they receive during the typical well-baby office visit. Talk with your child’s

Remember

Immunizations are an important part of your child's total health care. Immunize your child on time, and keep your child's immunization record up to date. Make sure you take your child to the pediatrician's office or a health clinic on a regular basis.

pediatrician if you are concerned that your child is scheduled to receive too many vaccines.

Q: "Don't shots hurt? How can I lessen the pain?"

A: Shots do hurt some, and your baby may cry for a few minutes. Your child's pediatrician may suggest ways to reduce the discomfort before and after your child receives his immunizations.

Acetaminophen or ibuprofen can be used to help relieve some of the more common side effects, such as irritability and fever. Always check the dosage with your child's pediatrician.

If your child is old enough to understand, explain that immunizations help to keep him healthy. Distract your child as the vaccination is given. Comfort and play with your child after the immunization. Remember, protecting your child's long-term health and avoiding deadly vaccine-preventable diseases is worth a few tears.

Where can I find more information?

Q: "I want to learn more, where can I find more information?"

A: Be sure your information comes from reliable and accurate sources. You cannot trust everything you find on the Internet.

Credible sources include

AAP Childhood Immunization Support Program
www.cispimmunize.org

Centers for Disease Control and Prevention's (CDC)
National Immunization Program
www.cdc.gov/nip

Immunization Action Coalition
www.immunize.org

Infectious Diseases Society of America
www.idsociety.org

National Network for Immunization Information
www.immunizationinfo.org

Vaccine Education Center
www.vaccine.chop.edu

Call your child's pediatrician, local public health department, or community health center if

- Your child is sick and is scheduled to receive an immunization.
- You need information about immunizations or your child's health care needs.

You can also call the CDC's National Immunization Information Hotline at
800/232-2522 (English)
800/232-0233 (Spanish)
800/243-7889 (TTY)

Please note: Listing of resources does not imply an endorsement by the American Academy of Pediatrics (AAP). The AAP is not responsible for the content of the resources mentioned in this brochure. Addresses, phone numbers, and Web site addresses are as current as possible, but may change at any time.

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From your doctor

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