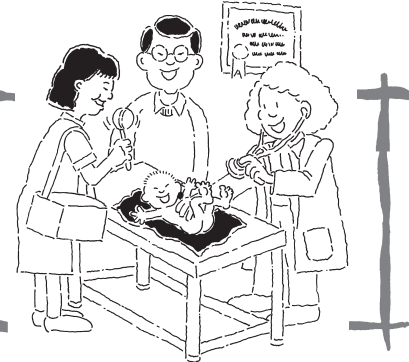


Immunizations: What You Need to Know



Immunizations have helped children stay healthy for more than 50 years. They are safe and they work. In fact, serious side effects are no more common than those from other types of medication. Vaccinations have reduced the number of infections from vaccine-preventable diseases by more than 90%! Yet many parents still question their safety because of misinformation they've received. That's why it's important to turn to a reliable and trusted source, including your pediatrician, for information. The following are answers to common questions parents have about immunizations.

Q: What vaccines does my child need?

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

- **Hepatitis A and hepatitis B** vaccines to help protect against serious liver diseases.
- **Rotavirus** vaccine to help protect against the most common cause of diarrhea and vomiting in infants and young children (and the most common cause of hospitalizations in young infants due to vomiting and diarrhea).
- **DTaP** vaccine to help protect against diphtheria, tetanus (lockjaw), and pertussis (whooping cough).
- **Hib** vaccine to help protect against *Haemophilus influenzae* type b (a major cause of spinal meningitis).
- **Pneumococcal** vaccine to help protect against bacterial meningitis and infections of the blood.
- **Polio** vaccine to help protect against a crippling viral disease that can cause paralysis.
- **Influenza** vaccine to help protect against the flu. This vaccine is now recommended for all children 6 months to 18 years of age.
- **MMR** vaccine to help protect against measles, mumps, and rubella (German measles).
- **Varicella** vaccine to help protect against chickenpox and its many complications including flesh-eating strep, staph toxic shock, and encephalitis (an inflammation of the brain).
- **Meningococcal** vaccine to help protect against very serious bacterial diseases that affect the blood, brain, and spinal cord.
- **HPV** vaccine for girls and women to help protect against a virus called human papillomavirus, certain types of which can lead to cervical cancer.

Q: Why are some of these vaccines still needed if the diseases are not as common anymore?

A: Because of vaccines, many of these diseases are not as common as they once were. However, the bacteria and viruses that cause them still exist.

For example, 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. However, the bacteria that causes Hib disease still exists. That is why children need the vaccine to be protected.

In the United States vaccines protect children from many diseases. However, in many parts of the world vaccine-preventable diseases are still common. Because diseases may be brought into the United States by Americans who travel abroad or from people visiting areas with current disease outbreaks, it's important that your child is vaccinated.

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

A: Chickenpox is usually mild. However, there can be serious complications. In fact, before the vaccine was licensed in 1995, there were about 4 million cases, 11,000 hospitalizations, and 100 deaths each year from chickenpox. Chickenpox is also very contagious. Most children feel miserable and miss about 1 week or more of school when infected. It is because of the vaccine that the number of cases of chickenpox and its complications have gone down so dramatically.

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

A: Yes! While breastfeeding gives some protection against many diseases (and is the *best* nutrition for your baby), it is not a substitute for immunizations. However, breastfeeding and immunizations work well together. In fact, studies show that breastfed babies respond better to immunizations and get better protection from them than babies who are not breastfed. Also, it is important to know that you can breastfeed right before and after your baby receives any immunization.

Q: Do vaccines even work? It seems like most of the people who get these diseases have been vaccinated.

A: Yes. Vaccines work very well. Millions of children have been protected against serious illnesses because they were immunized. Most childhood vaccines are 90% to 99% effective in preventing disease. When a large majority of children have been vaccinated, it is expected that most who get the disease will have been vaccinated. And if a vaccinated child does get the disease, the symptoms are usually milder with less serious side effects or complications than in a child who hasn't been vaccinated.

Q: When should my child get immunized?

A: Children should get most of their shots during their first 2 years of life. This is because many of these diseases are the most severe in the very young. Most newborns receive their first shot (hepatitis B) at birth before leaving the hospital and more are given at well-child checkups. Other shots are given before children go to school. Older children and teens also need immunizations to continue to protect them throughout adolescence and early adulthood.

Children who are not immunized or who are behind on their shots are at risk of getting many of these diseases. They can also spread these diseases to others who have not yet been immunized. Ask your doctor if your child is up to date. Keep track of the vaccines your child receives and bring this information to each doctor visit.

Q: What side effects will my child have after getting a vaccine? Are they serious?

A: There may be mild side effects, like swelling, redness, and tenderness where the shot was given, but they do not last long. Your child may also have a slight fever and be fussy for a short time afterward. It is rare for side effects to be serious. However, call your pediatrician right away if your child has

- A very high fever ($>103^{\circ}\text{F}$)
- Hives or black-and-blue areas at places where the injection was not given
- A seizure

You should also call your pediatrician if you have any other concerns.

Q: Should some children *not* be immunized?

A: Children with certain health problems may need to avoid some vaccines or get them later. In most cases, children with cancer, those taking oral or injected steroids for lung or kidney conditions, or those who have problems with their immune systems should not get vaccines that are made with live viruses. To protect these children it is very important for others to be vaccinated. For children with a recent history of seizures, the pertussis part of the DTaP vaccine may need to be delayed. However, a child with a minor illness such as low-grade fever ($<100.4^{\circ}\text{F}$), an ear infection, cough, a runny nose, or mild diarrhea can safely be immunized.

Q: Does the MMR vaccine cause autism?

A: No! The MMR vaccine does not cause autism. Many research studies have been done to address this issue. There is no scientifically proven link between the MMR vaccine and autism. There may be confusion because children with autism are often diagnosed between 18 and 30 months of age—around the same time the MMR vaccine is given. This has led some people to mistakenly assume that the vaccine is the cause. Increasing evidence shows that even though the symptoms of autism may not be noticeable until the second year of life or later, autism starts before a baby is born.

Q: Do vaccines cause sudden infant death syndrome (SIDS)?

A: No! Babies get many of their first vaccines between 2 and 4 months of age. This is also the peak age for SIDS, which is why some people feel they might be related. However, careful scientific studies have confirmed that vaccinations do not cause 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. The federal government monitors all vaccine lots before they are released. A database called the Vaccine Adverse Event Reporting System (VAERS) receives reports of reactions following a vaccination. People may think that if a number of VAERS reports come from a certain batch of vaccine, then this must be a hot lot that causes more side effects. But different vaccine lots contain different numbers of doses, so it is expected that a lot that contains 10,000 doses will result in more reports of reactions than lots that contain 1,000 doses. No hot lots have ever been released.

Keep in mind, the US Food and Drug Administration tests all vaccines and monitors where and how vaccines are made. The places where vaccines are made are licensed. They are regularly inspected and each vaccine lot is safety-tested before release.

Q: What is thimerosal and does it cause neurologic problems?

A: In the 1930s a preservative called thimerosal was added to vaccines to prevent bacterial contamination of vaccines. However, since 2001 all vaccines for infants are either thimerosal-free or contain only trace amounts of the preservative. Thimerosal contains very small amounts of mercury, but it is in a different form than the mercury we are all exposed to in the environment. Even after many studies, the type of mercury in thimerosal has never been shown to cause health problems other than rare allergic reactions in some people.

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

A: Many years of experience and careful research have shown that routine childhood immunizations can be given together safely and effectively. Side effects are not increased when vaccines are given together. The capacity of the human immune system, even in young infants, is enormous, making it possible for infants and children to handle the immunizations they receive.

Q: How can I comfort my child after an immunization?

A: Shots do hurt some, and your baby may cry for a few minutes. Your doctor may suggest giving your child pain medicine to help relieve some of the more common side effects, such as irritability and fever. Be sure to ask your doctor how much medicine to give your child.

You may also want to try and distract your child as the vaccination is given. Comfort and play with your child after the immunization as well. Remember, keeping your child healthy and avoiding deadly diseases is worth a few tears.

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

American Academy of Pediatrics Childhood Immunization Support Program

www.cisppimmunize.org

Centers for Disease Control and Prevention (CDC) Vaccines and Immunizations

www.cdc.gov/vaccines

CDC INFO Contact Center (English and Spanish)

800/232-4636 (800/CDC-INFO)

The Children's Hospital of Philadelphia Vaccine Education Center

www.vaccine.chop.edu

Immunization Action Coalition

www.immunize.org

Infectious Diseases Society of America

www.idsociety.org

National Network for Immunization Information

www.immunizationinfo.org

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