

Vaccines for babies and children age 0 to 6 years (The Basics)

Written by the doctors and editors at UpToDate

What are vaccines? — Vaccines are treatments used to prevent certain serious or deadly infections that can strike at any time in life. Vaccines work by preparing the body to fight the germs that cause the infections.

Vaccines usually come in shots, but some come in nose sprays or medicines that children swallow. Vaccines are also called “vaccinations” or “immunizations.”

Why should my child get vaccinated? — Getting vaccinated can help keep your child from getting sick. If your child does get sick, being vaccinated can keep him or her from getting severely ill. Plus, being vaccinated also helps protect the people around your child from getting sick.

What vaccines do babies and children get? — Doctors recommend that babies and children get vaccines that can prevent the following infections:

- Hepatitis B – Hepatitis B can cause long-term liver problems or liver cancer.
- Diphtheria, tetanus, and pertussis – Vaccines to prevent these 3 different diseases are usually grouped together in one shot. Diphtheria can cause a thick covering in the back of the throat that can lead to breathing problems. Tetanus causes the muscles to work abnormally. Pertussis, also called “whooping cough,” can cause a severe cough.
- Polio – Polio can cause muscle weakness and pain, and lead to long-term paralysis. Paralysis is when people are unable to move their arms or legs.
- Rotavirus – Rotavirus can cause severe diarrhea. Babies and children who have severe diarrhea can lose too much water and get “dehydrated.”
- Haemophilus influenzae type B, called “Hib” – Hib can cause an infection of the skin, throat, joints, or tissues around the brain.
- Pneumococcus – Pneumococcus is a germ that can cause an infection of the lungs, ears, blood, or tissues around the brain.
- Measles, mumps, and rubella – Vaccines to prevent these 3 different diseases are grouped together in one shot. Measles can cause a rash, fever, and cough. It can lead to long-term problems with the lungs, ears, or brain. Mumps causes swelling of glands in the cheeks, and can lead to long-term problems of the brain or testes. Rubella is also called “German measles.” If a woman gets rubella while she is pregnant, her baby can be born with a birth defect.
- Chickenpox – Chickenpox can cause a fever, sore throat, and rash. Some children with chickenpox can get very sick and get a lung or brain infection.
- Hepatitis A – Hepatitis A does not usually cause problems in children, but can cause severe liver disease in adults. Children who get the [hepatitis A vaccine](#) help prevent the adults around them from getting the infection.
- Flu – The flu can cause fever, chills, muscle aches, cough, or sore throat.
- Meningococcus – Meningococcus is a germ that can cause an infection of the blood or tissues around the brain. Most children age 6 and younger do not need this vaccine, but some do.

How many vaccine doses does my child need? — Each vaccine is different. Some vaccines work after just one dose. But most need two or more doses to prevent an infection. Vaccines usually take a few weeks to start working.

At what ages will my child get vaccines? — Different vaccines are given at different ages. Most babies get their first vaccine at birth when they get their first dose of the [hepatitis B vaccine](#). After that, most healthy children follow a set vaccine schedule ([table 1](#)). Even though doctors follow a set vaccine schedule, children can get certain vaccine doses at different times. For example, children can get their 3rd dose of the polio vaccine any time from 6 to 18 months old.

Some children will follow a different vaccine schedule. Children might be on a different schedule if they:

- Have certain medical problems
- Started getting their vaccines later than usual
- Started getting their vaccines on time, but then missed doses and fell behind schedule

Your doctor or nurse will recommend a vaccine schedule that is right for your child.

What side effects can vaccines cause? — Often, vaccines cause no side effects. When they do cause side effects, they can cause:

- Redness, mild swelling, or soreness where the shot was given
- A mild fever
- A mild rash
- Headache or body aches

Vaccines also sometimes cause more serious side effects, such as severe allergic reactions. But serious side effects are rare.

Ask your doctor or nurse what side effects to expect each time your child gets a vaccine. If your child has a reaction or a problem after a vaccine, let your doctor or nurse know.

What if my child is sick, and he or she is supposed to get a vaccine? — If your child is sick and supposed to get a vaccine, let your doctor or nurse know. Depending on the type of vaccine and your child's symptoms, your doctor or nurse might give your child the vaccine or wait until your child is better.

What if my child has an egg allergy? — If your child has an egg allergy, let your doctor or nurse know. Some vaccines can have egg in them because of the way they are made. Your doctor or nurse will tell you which vaccines are safe to get.

Should I keep track of my child's vaccines? — Yes. It's important to keep a list of the vaccines that your child gets and when he or she gets them. Many schools and day cares need this information before they let a child in. You can keep your list up to date by bringing it to your check-ups.