



# Immunizations 411:

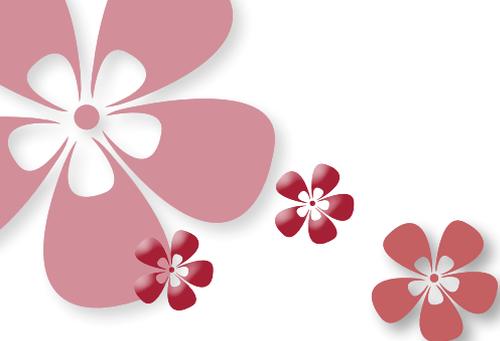
Your Guide to Childhood Immunizations



MISSOURI DEPARTMENT OF HEALTH  
AND SENIOR SERVICES

For their sake. For your sake.

**VACCINATE**



**For their sake. For your sake.**

# **VACCINATE**

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Some of the information in this guide is attributed to the Centers for Disease Control and Prevention (CDC), which is committed to applying rigorous scientific standards to ensure the accuracy and reliability of research results.



# Top Ten Reasons to Immunize

- 1 Immunizations save lives.** Immunizations provide you and your family protection against more vaccine-preventable diseases than ever before.
- 2 Immunizations protect you and your child from serious diseases.** Immunizations help the body fight off diseases.
- 3 Immunizations are safe and effective.** Immunizations are only given to children and adults after a long and careful review by scientists, doctors and health care professionals.
- 4 Immunizations are required for school and child care attendance.**
- 5 Immunizations can save time and money.** A child with a vaccine-preventable disease can be kept out of school or child care for longer periods of time. A prolonged illness can take a financial toll because of lost time at work, medical bills or long-term disability care.
- 6 It is easy to get immunizations.** If you have a doctor, call for an appointment. You can also contact your local public health agency to schedule an appointment.
- 7 Immunizations protect others you care about.** Unfortunately, some babies are too young to be completely immunized. To help keep these individuals safe, it is important that you and everyone else in your family be immunized.
- 8 Immunizations protect future generations.** Immunizations have reduced and eliminated many diseases that killed or severely disabled people just a few generations ago.
- 9 Immunizations only hurt for a few seconds yet give your child the best protection from these diseases.**
- 10 The best reason...you love your children and want to protect them.**

# Vaccine Safety

## Are vaccines safe?

Vaccines are very safe. The United States' long-standing vaccine safety system ensures that vaccines are safe. Currently, the United States has the safest, most effective vaccine supply in its history. Millions of children are safely vaccinated each year.

## What are the side effects of the vaccines? How do I treat them?

Vaccines, like any medication, may cause some side effects. Most of these side effects are very minor, like soreness where the vaccine was given, fussiness or a low-grade fever. These side effects typically only last a couple of days and are treatable. For example, you can apply a clean, cool, wet washcloth on the sore area to ease discomfort.

Serious reactions are very rare. However, if your child experiences any reactions that concern you, call the doctor's office.

## What are the risks and benefits of vaccines?

Vaccines can prevent infectious diseases that once killed or harmed many infants, children and adults. Without vaccines, your child is at risk for getting seriously ill, suffering pain, disability and even death

from diseases like measles and whooping cough. The main risks associated with getting vaccines are side effects, which are almost always mild (redness and swelling at the injection site) and go away within a few days. Serious side effects following vaccination, such as severe allergic reaction, are very rare and doctors and clinic staff are trained to deal with them. The disease-prevention benefits of getting vaccines are much greater than the possible side effects for almost all children.

## Is there a link between vaccines and autism?

No. Scientific studies and reviews continue to show no relationship between vaccines and autism.

Some people have suggested that thimerosal (a compound that contains mercury) in vaccines given to infants and young children might be a cause of autism. Others have suggested that the MMR (measles-mumps-rubella) vaccine may be linked to autism. However, numerous scientists and researchers have studied and continue to study the MMR vaccine and thimerosal and reach the same conclusion—there is no link between the vaccine and autism.



## Can vaccines overload my baby's immune system?

Vaccines do not overload the immune system. Within the first two years of life a child is exposed to 11 or 12 vaccines, some of which are given over time in multiple doses. The degree to which these vaccines challenge a child's immune system is just a drop in the ocean when compared to the tens of thousands of environmental challenges that babies successfully manage every single day. Every day, a healthy baby's immune system successfully fights off millions of germs. Antigens are parts of germs that cause the body's immune system to go to work.

The antigens in vaccines come from the germs themselves, but the germs are weakened or killed so they cannot cause serious illness. Even if they receive several vaccinations in one day, vaccines contain only a tiny fraction of the antigens that babies encounter every day in their environment. Vaccines provide your child with the antibodies they need to fight off the serious illnesses for which they have been vaccinated.

## What are the ingredients in vaccines and what do they do?

Vaccines contain ingredients that cause the body to develop immunity. Vaccines also contain very small amounts of other ingredients—all of which play necessary roles either in making the vaccine or in ensuring that the final product is safe and effective.

## Why are so many doses needed for each vaccine?

Getting every recommended dose of each vaccine provides your child with the best protection possible. Depending on the vaccine, more than one dose is needed to build high enough immunity to prevent disease, boost immunity that fades over time, make sure people who did not get immunity from a first dose are protected or protect against germs that change over time, like flu. Every dose of a vaccine is important because they all protect against infectious diseases that are threats today and can be especially serious for infants and very young children.



## Why do vaccines start so early?

The recommended schedule is designed to protect infants and children by providing immunity early in life, before they are exposed to life-threatening diseases. Children are immunized early because they are susceptible to diseases at a young age. The consequences of these diseases can be very serious and even life-threatening for infants and young children.



# Immunizing Your Child

## What about delaying some vaccines or following an alternate schedule?

Children do not receive any known benefits from following schedules that delay vaccines. Infants and young children who follow immunization schedules that spread out shots or leave out shots are at risk of developing diseases during the time that shots are delayed. Some vaccine-preventable diseases remain common in the United States. Children may be exposed to these diseases during the time they are not protected by vaccines, placing them at risk for a serious case of the disease that might cause hospitalization or death.

## Haven't most of the diseases in this country disappeared?

Some vaccine-preventable diseases, like pertussis (whooping cough) and chickenpox, remain common in the United States. On the other hand, other diseases prevented by vaccines are no longer common in this country because of vaccines. However, if we stopped vaccinating, even the few cases we have in the United States could very quickly become tens or hundreds of thousands of cases. Even though many serious vaccine-preventable diseases are uncommon in the United States, some are common in other parts of the world. Even if your family does not travel internationally, you could come

into contact with international travelers anywhere in your community. Children that are not fully vaccinated and are exposed to a disease can become seriously sick and spread it through a community.

## What are combination vaccines? Why are they used?

Combination vaccines protect your child against more than one disease with a single shot. They reduce the number of shots and office visits your child would need, which not only saves you time and money, but also is easier on your child.

Some common combination vaccines that are currently used are: DTaP (diphtheria-tetanus-pertussis) and MMR (measles-mumps-rubella).



*Adults need  
immunizations too!*



## Can't I just wait until my child goes to school to catch up on immunizations?

Before entering school, young children can be exposed to vaccine-preventable diseases from parents and other adults, brothers and sisters, on a plane, at child care or even at the grocery store. Children under age 5 are especially susceptible to diseases because their immune systems have not built up the necessary defenses to fight infection. Don't wait to protect your baby and risk getting these diseases when he or she needs protection now.

## My child is sick right now. Is it okay for her to still get shots?

Talk with the doctor, but children can usually get vaccinated even if they have a mild illness like a cold, earache, mild fever or diarrhea. If the doctor says it is okay, your child can still get vaccinated.

## Don't infants have natural immunity? Isn't natural immunity better than the kind from vaccines?

Babies may get some temporary immunity (protection) from mom during the last few weeks of pregnancy—but only for the diseases to which mom is immune. Breastfeeding may also protect your baby temporarily from minor infections, like colds. These antibodies do not last long, leaving the infant vulnerable to disease.

Natural immunity occurs when your child is exposed to a disease and becomes infected. It is true that natural immunity usually results in better immunity than vaccination, but the risks are much greater. A natural chickenpox infection may result in pneumonia, whereas the vaccine might only cause a sore arm for a couple of days.



# Less Stressful Immunizations



Immunizations can be stressful but you can ease your child's discomfort. Below are some steps you can take before, during and after an immunization visit to ease the pain and stress of getting immunizations.

## Come Prepared

- Read about the immunizations your child will get in advance.
- Ask your child's doctor any questions you have about vaccines.
- Bring your child's immunization record.
- Pack a favorite toy, book, blanket or other comfort item.
- Be honest - immunizations can pinch or sting, but not for long.
- Remind your child that immunizations help keep them healthy.
- Engage other family members, especially older siblings to be supportive.

- Avoid scary stories or making threats about getting immunizations.

## Make Immunizations Easy

- Distract your child with a toy, a story, a song or something interesting in the room.
- Make eye contact with your child and smile, talk softly or sing.
- Let your child know everything is going to be okay.
- Hold your child tightly on your lap, if you can.
- Take deep breaths with an older child to help "blow-out" the pain.
- Point out interesting things in the room to help create distractions.
- Tell or read stories.
- Support your child if he or she cries. Never scold a child for not "being brave."

## Be Supportive

- Hug, cuddle and praise your child.
- For babies, swaddling, breastfeeding or a bottle may offer quick relief.
- Read the Vaccine Information Sheets from your health care provider so you will know what to expect after the immunizations.

## After the Immunizations

- Observe your child for the next few days. You might see a small rash or notice a fever. If your child has any reaction that concerns you, call your doctor or seek medical attention.

# Vaccines for Children

The Vaccines for Children program is funded by the Centers for Disease Control and Prevention and provides free vaccines to children who qualify.

The Vaccines for Children program is designed to help protect all children against vaccine-preventable diseases. Unfortunately, many children are not vaccinated because their parents either do not have health insurance or their health insurance does not cover vaccines.

## How does my child qualify?

Children are eligible to receive free vaccines before their 19th birthday who:

- are Medicaid-eligible;
- do not have health insurance;
- are an American Indian or Alaskan Native; or
- are underinsured.

## How do I know if I am underinsured?

Underinsured is when a child has health insurance, but the plan:

- does not provide vaccine coverage;
- does not cover certain vaccines; or
- does cover vaccines, but has a fixed dollar limit or cap for vaccines.

Underinsured does not include those with an unmet deductible or who are unable to pay the deductible.

## How much will I have to pay?

All vaccines are free through the Vaccines for Children program. However, parents may be charged a small fee by the doctor's office for an office visit and each immunization.

Talk to your doctor if you are unable to pay the fee.

## Where can I get my child vaccinated?

The best place to take your child depends on where you live and your child's eligibility for the Vaccines for Children program. If your child's doctor isn't a Vaccines for Children provider, take your child to the local health department, a Federally Qualified Health Center or a Rural Health Clinic. If your child is underinsured, you must receive vaccines at a deputized local public health department, Federally Qualified Health Center or Rural Health Clinic.



Helping Families Keep Children Safe

**VACCINES**  
for **CHILDREN**

Disease	Symptoms of Disease	Possible Complications
<b>Hepatitis B (Hep B)</b>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Stomach pain and vomiting</li> <li>• Jaundice (yellowing of skin and eyes)</li> <li>• Joint pain</li> </ul>	<ul style="list-style-type: none"> <li>• Long-term liver infection</li> <li>• Liver failure</li> <li>• Liver cancer</li> <li>• Death</li> </ul>
<b>Diphtheria</b>	<ul style="list-style-type: none"> <li>• Sore throat</li> <li>• Mild fever</li> <li>• Swollen glands in the neck</li> </ul>	<ul style="list-style-type: none"> <li>• Heart failure</li> <li>• Paralysis</li> <li>• Death</li> </ul>
<b>Tetanus</b>	<ul style="list-style-type: none"> <li>• Stiffness in neck</li> <li>• Difficulty swallowing</li> <li>• Rigid abdominal muscles</li> <li>• Full-body muscle spasms</li> </ul>	<ul style="list-style-type: none"> <li>• Broken bones</li> <li>• Breathing difficulty</li> <li>• Death</li> </ul>
<b>Pertussis (Whooping Cough)</b>	<ul style="list-style-type: none"> <li>• Violent coughing fits that may persist for weeks</li> <li>• Difficulty eating, drinking and breathing</li> </ul>	<ul style="list-style-type: none"> <li>• Pneumonia</li> <li>• Seizures</li> <li>• Brain disorders</li> <li>• Death</li> </ul>
<b>Haemophilus Influenzae B (Hib)</b>	<ul style="list-style-type: none"> <li>• Individual may not experience any symptoms unless bacteria enters the blood</li> </ul>	<ul style="list-style-type: none"> <li>• Severe swelling of the throat</li> <li>• Infection of the lining of the brain and spinal cord</li> <li>• Death</li> </ul>
<b>Poliovirus (Polio)</b>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Individual may not experience any symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• Breathing problems</li> <li>• Permanent paralysis</li> <li>• Death</li> </ul>
<b>Pneumococcal (PCV)</b>	<ul style="list-style-type: none"> <li>• Ear infection</li> <li>• Pneumonia</li> <li>• Fever</li> <li>• Chills</li> <li>• Chest pain</li> </ul>	<ul style="list-style-type: none"> <li>• Deafness</li> <li>• Permanent brain damage</li> <li>• Infection of the lining of the brain and spinal cord</li> <li>• Bacteremia (blood infection)</li> <li>• Death</li> </ul>
<b>Measles</b>	<ul style="list-style-type: none"> <li>• Rash</li> <li>• Cough</li> <li>• Fever</li> <li>• Conjunctivitis (eye infection)</li> <li>• Runny nose</li> </ul>	<ul style="list-style-type: none"> <li>• Ear infections</li> <li>• Pneumonia</li> <li>• Seizures</li> <li>• Brain damage</li> <li>• Death</li> </ul>
<b>Mumps</b>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Headache</li> <li>• Swollen glands near jawbone</li> <li>• Muscle pain</li> </ul>	<ul style="list-style-type: none"> <li>• Infection of the lining of the brain and spinal cord</li> <li>• Deafness</li> <li>• Testicular inflammation</li> <li>• Ovarian inflammation</li> </ul>
<b>Rubella (German Measles)</b>	<ul style="list-style-type: none"> <li>• Rash</li> <li>• Swollen glands</li> <li>• Aching joints</li> </ul>	<ul style="list-style-type: none"> <li>• Miscarriage in pregnant women</li> <li>• Premature delivery</li> <li>• Birth defects</li> </ul>

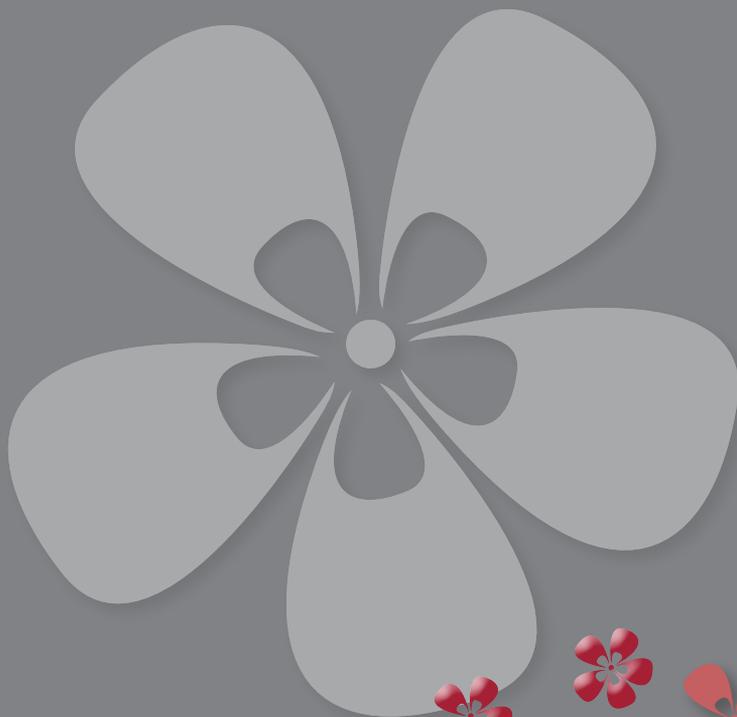
Disease	Symptoms of Disease	Possible Complications
<b>Chickenpox (Varicella)</b>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Many small blisters that develop scabs</li> <li>• Itching</li> </ul>	<ul style="list-style-type: none"> <li>• Infected blisters</li> <li>• Ear infections</li> <li>• Bleeding disorders</li> <li>• Death</li> </ul>
<b>Hepatitis A (Hep A)</b>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Stomach pain and vomiting</li> <li>• Loss of appetite</li> <li>• Jaundice (yellowing of skin and eyes)</li> <li>• Dark urine</li> </ul>	<ul style="list-style-type: none"> <li>• Liver failure</li> <li>• Death</li> </ul>
<b>Rotavirus (RV)</b>	<ul style="list-style-type: none"> <li>• Diarrhea</li> <li>• Fever</li> <li>• Vomiting</li> </ul>	<ul style="list-style-type: none"> <li>• Severe diarrhea</li> <li>• Dehydration</li> </ul>
<b>Meningococcal (MCV)</b>	<ul style="list-style-type: none"> <li>• High fever</li> <li>• Severe headache</li> <li>• Nausea and vomiting</li> <li>• Sensitivity to light</li> <li>• Stiffness in neck</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent brain damage</li> <li>• Loss of limbs</li> <li>• Deafness</li> <li>• Seizures or strokes</li> <li>• Death</li> </ul>
<b>Human Papillomavirus (HPV)</b>	<ul style="list-style-type: none"> <li>• Individual may not experience any symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• Genital warts</li> <li>• Cervical cancer</li> <li>• Genital cancer</li> <li>• Cancer in the back of throat, including the base of the tongue and tonsils</li> </ul>
<b>Influenza (Flu)</b>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Nausea and vomiting</li> </ul>	<ul style="list-style-type: none"> <li>• Pneumonia</li> <li>• Bronchitis</li> <li>• Sinus and ear infections</li> <li>• Death</li> </ul>



# Vaccine-Preventable Diseases

Protect your child right from the start. The immunization schedule insert in this guide will help you keep your child's immunizations up-to-date from birth to 12 years old.

Please refer to the schedule especially as your infant reaches 12-18 months old. Vaccines that are given as a three-dose series must be completed at this time to ensure your child is fully protected from the diseases.



[health.mo.gov/immunizations](https://health.mo.gov/immunizations)

Missouri Department of Health and Senior Services  
Bureau of Immunization Assessment and Assurance  
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