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# Chickenpox

# **About Chickenpox**

Caused by the varicella-zoster virus (VZV), chickenpox used to be a common illness among kids in the United States (particularly among those under age 12). An itchy rash of spots that look like blisters can appear all over the body and be accompanied by flu-like symptoms. Chickenpox is very contagious, so an infected child should stay home and rest until the rash is gone.



Kids can be protected from VZV by getting the chickenpox (varicella) vaccine. The vaccine significantly reduces the chances of getting chickenpox. Vaccinated kids who do get chickenpox tend to have milder cases and quicker recoveries compared to those who contract the virus and aren't immunized.

## **Symptoms**

Chickenpox often starts with a fever, headache, sore throat, or stomachache. These symptoms may last for a few days, with fever in the 101°-102°F (38.3°-38.8°C) range.

Chickenpox causes a red, itchy skin rash that usually appears first on the abdomen or back and face, and then spreads to almost everywhere else on the body, including the scalp, mouth, arms, legs, and genitals.

The rash begins as multiple small red bumps that look like pimples or insect bites, usually less than a quarter of an inch wide. They appear in crops over 2 to 4 days and develop into thin-walled blisters filled with fluid. The blister walls break, leaving open sores, which finally crust over to become dry, brown scabs. The rash is very itchy, and cool baths or calamine lotion may help to manage the itching.



A hallmark of chickenpox is that all stages (red bumps, blisters, and scabs) can appear on the body at the same time. The rash may be more extensive or severe in kids who have skin disorders like eczema, or weak immune systems. Young kids tend to have a mild illness with fewer blisters than older children or adults.

In rare cases, serious bacterial infections involving the skin, lungs, bones, joints, and the brain can occur.

# **Risk of Shingles**

Anyone who has had chickenpox is at risk for developing a skin condition called shingles (herpes zoster) later in life. That's because after an infection, VZV remains inactive in nerve cells near the spinal cord and reactivates later as shingles, which can cause tingling, itching, or pain in one area of the body, followed by a rash with red bumps and blisters. Fortunately, this is a rare occurrence in kids and teens who have healthy immune systems.

It's also uncommon for someone who's been vaccinated against chickenpox to develop singles later in life. When it does happen, the case of shingles is usually milder and less likely to cause complications than in a person who wasn't immunized.

# Contagiousness

The chickenpox virus spreads both through the air (by coughing and sneezing), and by direct contact with mucus, saliva, or fluid from blisters. Chickenpox is contagious from about 2 days before the rash appears until all the blisters are crusted over. A child with chickenpox should be kept out of school until all blisters have dried, usually about 1 week. If you're unsure about whether your child is ready to return to school, ask your doctor.

Chickenpox is very contagious — most kids with a sibling who's been infected will get it as well (if they haven't already had the disease or the vaccine), showing symptoms about 2 weeks after the first child does. To help keep it from spreading, make sure your kids wash their hands frequently, particularly before eating and after using the bathroom. And keep a child with chickenpox away from unvaccinated siblings as much as possible.

People who haven't had chickenpox or the vaccine also can catch it from someone with shingles, but they cannot catch shingles itself. That's because shingles can only develop from a reactivation of VZV in someone who has previously had chickenpox.

## **High-Risk Groups**

Certain groups of people are more at risk for complications from chickenpox, including pregnant women and anyone with immune system problems. These groups should avoid others who have chickenpox.

If a pregnant woman who hasn't had chickenpox in the past contracts it (especially in the first 20 weeks of pregnancy), the fetus is at risk for birth defects and the mother is at risk for more health complications than if she'd been infected when she wasn't pregnant. If she develops chickenpox just before or after the child is born, the newborn is at risk for serious health complications. There is no risk to a developing baby if the mother develops shingles during pregnancy.

If a pregnant woman has had chickenpox before the pregnancy, the baby will be protected from infection for the first few months of life, since the mother's immunity gets passed on to the baby through the placenta and breast milk.

Those at risk for severe disease or serious complications — such as newborns whose mothers had chickenpox at the time of delivery, patients with leukemia or immune deficiencies, and kids receiving drugs that suppress the immune system — may be given a medication after exposure to chickenpox to reduce its severity.

#### Prevention

The chickenpox vaccine is 99% effective at preventing the VZV infection in kids. Doctors recommend that kids receive the chickenpox vaccine twice — when they're 12 to 15 months old, with a booster shot at 4 to 6 years old.

People 13 years of age and older who have never had chickenpox or haven't gotten the vaccine should receive two doses of the vaccine at least 28 days apart to be protected. While few people who've been vaccinated actually develop chickenpox, those who do tend to develop very mild cases of the condition and recover quickly.

Healthy kids who have had chickenpox do not need the vaccine — they usually have lifelong protection against the illness.

#### **Treatment**

Since a virus causes chickenpox, doctors won't prescribe antibiotics to treat it. However, antibiotics may be required if the sores become infected by bacteria. This is pretty common among kids because they often scratch and pick at the blisters.

An antiviral medicine might be prescribed for people with chickenpox who are at risk for complications. The decision to use this will depend on a child's age and health, the extent of the infection, and the timing of the treatment. Your doctor can tell you if the medication is right for your child.

## **Dealing With Discomfort**

To help relieve the itchiness, fever, and discomfort of chickenpox:

- Use cool wet compresses or give baths in cool or lukewarm water every 3 to 4 hours for the first few days. Oatmeal bath products, available at supermarkets and drugstores, can help to relieve itching. (Baths do not spread the rash.)
- Pat (don't rub) the body dry.
- Put calamine lotion on itchy areas (but don't use it on the face, especially near the
  eyes).
- Serve foods that are cold, soft, and bland because chickenpox in the mouth can make drinking or eating difficult. Avoid feeding your child anything highly acidic or especially salty, like orange juice or pretzels.
- Ask your doctor or pharmacist about pain-relieving creams to apply to sores in the genital area.
- Give your child acetaminophen regularly to help relieve pain if your child has mouth blisters.
- Ask the doctor about using over-the-counter medication for itching.

**Never** use aspirin to reduce pain or fever in kids with chickenpox because aspirin has been associated with the serious disease Reye syndrome, which can lead to liver failure and even death.

As much as possible, discourage kids from scratching. This can be difficult for them, so consider putting mittens or socks on your child's hands to prevent scratching during sleep. In addition, trim fingernails and keep them clean to help lessen the effects of scratching, including broken blisters and infection.

Most chickenpox infections require no special medical treatment. But sometimes, there are problems. Call the doctor if your child:

- has fever that lasts for more than 4 days or rises above 102°F (38.8°C)
- has a severe cough or trouble breathing
- has an area of rash that leaks pus (thick, yellowish fluid) or becomes red, warm, swollen, or sore
- has a severe headache
- is unusually drowsy or has trouble waking up
- has trouble looking at bright lights
- has difficulty walking
- seems confused
- seems very ill or is vomiting
- has a stiff neck

Call your doctor if you think your child has chickenpox and you have a question or are concerned about a possible complication. The doctor can guide you in watching for complications and in choosing medication to relieve itching.

If you take your child to the doctor, let the office know in advance that your child might have chickenpox. It's important to try to avoid exposing other kids in the office — for some of them, a chickenpox infection could cause severe complications.

Reviewed by: Catherine L. Lamprecht, MD

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Note: All information is for educational purposes only. For specific medical advice, diagnoses, and treatment, consult your doctor.