

Chickenpox (varicella zoster infection)

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What is chickenpox?

Chickenpox is a highly contagious illness caused by the varicella-zoster virus (VZV), a type of herpes virus. It is often a mild illness, characterized by an itchy rash on the face, scalp and trunk with pink spots and tiny fluid-filled blisters that dry and become scabs four to five days later. Serious complications, although rare, can occur mainly in infants, adolescents, adults and persons with a weakened immune system. These complications include bacterial infections of skin blisters, pneumonia, and encephalitis (inflammation of the brain). In temperate climates, such as the Northeast, chickenpox occurs most frequently in the late winter and early spring.

Who gets chickenpox?

Chickenpox is a common childhood illness with 90 percent of the cases occurring in children younger than ten years of age. Before the availability of the varicella vaccine in the U.S., almost everyone developed chickenpox. Most people who are vaccinated will not get chickenpox. Those who are vaccinated and develop chickenpox usually have a mild form of the illness. They have fewer spots and recover faster.

How is chickenpox spread?

Chickenpox is transmitted from person to person by directly touching the blisters, saliva or mucus of an infected person. The virus can also be transmitted through the air by coughing and sneezing. Chickenpox can be spread indirectly by touching contaminated items freshly soiled, such as clothing, from an infected person. Direct contact with the blisters of a person with shingles can cause chickenpox in a person who has never had chickenpox and has not been vaccinated. Blisters that are dry and crusted are no longer able to spread chickenpox.

What are the symptoms of chickenpox?

Initial symptoms include sudden onset of slight fever and feeling tired and weak. These are soon followed by an itchy blister-like rash. The blisters eventually dry, crust over and form scabs. The blisters tend to be more common on covered than on exposed parts of the body. They may appear on the scalp, armpits, trunk and even on the eyelids and in the mouth. Mild or asymptomatic infections occasionally occur in children. The disease is usually more serious in young infants and adults than in children.

How soon do symptoms appear?

Symptoms commonly appear 14 to 16 days (range of ten to 21 days) after exposure to someone with chickenpox or herpes zoster (shingles).

What are the complications associated with chickenpox?

Newborn children (less than one month old) whose mothers are not immune may suffer severe, prolonged or fatal chickenpox. Any person with a weakened immune system, including those with cancer, human immunodeficiency virus (HIV) or taking drugs that suppress the immune system, may have an increased risk of developing a severe form of chickenpox or shingles.

Reye Syndrome is an unusual complication of chickenpox that is linked to children who take aspirin or aspirin-containing products during the illness. Reye Syndrome is a severe disease affecting all organ systems, but, most seriously the brain and liver and may be fatal. The exact cause of Reye Syndrome

is unknown. Aspirin or aspirin-containing products should never be given to children under 18 years of age with chickenpox.

When and for how long is a person able to spread chickenpox?

A person is most able to transmit chickenpox from one to two days before the rash appears until all the blisters are dry and crusted. People with a weakened immune system may be contagious for a longer period of time.

Is there a treatment for chickenpox?

Acyclovir is approved for treatment of chickenpox. However, because chickenpox tends to be mild in healthy children, most physicians do not feel that it is necessary to prescribe acyclovir. Acyclovir can be considered for otherwise healthy people who are at risk of moderate to severe varicella. It is important to consult with your physician for recommendations on the use of acyclovir.

Does past infection with chickenpox make a person immune?

Most people do not get chickenpox more than once. However, since varicella-zoster virus remains in the body after an initial infection, infection can return years later in the form of shingles in some older adults and sometimes in children.

Is there a vaccine for chickenpox?

A vaccine to protect children against chickenpox was first licensed in 1995. Children who have never had chickenpox should routinely be administered two doses of varicella vaccine with the first dose at 12 to 15 months and the second dose at four to six years of age. Persons 13 years of age and older who have never had chickenpox or have not received the varicella vaccine should get two doses of the varicella vaccine at least 28 days apart.

The varicella vaccine may be given along with the measles-mumps-rubella (MMR) vaccine in a combination called measles-mumps-rubella-varicella (MMRV) that is approved for use in children 12 months through 12 years of age.

In New York State, varicella vaccine is required for children enrolled in pre-kindergarten programs and schools. Vaccination is recommended for healthcare personnel and college students who have never had chickenpox.

What can be done to prevent the spread of chickenpox?

Maintaining high levels of varicella immunization in the community is critical to controlling the spread of chickenpox. To prevent further spread of chickenpox, people infected with the disease should remain home and avoid exposing others who are susceptible. Infected persons should remain home until the blisters become dry and crusted. It is very important to avoid exposing non-immune newborns and persons with a weakened immune system to chickenpox.

Varicella vaccination is recommended for outbreak control. During an outbreak, persons who do not have adequate evidence of immunity should receive their first or second dose as appropriate.

In 2006, a new product called VariZIG™ became available to protect patients without evidence of immunity to varicella who are at high risk for severe disease and complications and have been exposed to chickenpox. The patient groups recommended to receive VariZIG include those with a weakened immune system, pregnant women, newborns whose mothers have symptoms of varicella around the time of delivery (five days before to two days after delivery) and certain premature infants exposed to chickenpox as newborns.