



COLLIN COUNTY HEALTH CARE SERVICES

Chickenpox (Varicella)

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Causative Agent

Chickenpox is caused by the varicella-zoster virus, VZV, a member of the Herpesvirus group. VZV causes 2 distinct diseases: varicella, or chickenpox, is the primary infection, and later, if VZV reactivates, herpes zoster, or shingles.

Transmission

Humans are the only source of infection for this highly contagious virus. VZV enters the body through the respiratory tract and conjunctiva and replicates in these sites, then spreads to other organs, such as the liver, spleen, and nervous system. Therefore, it is spread by coughing and sneezing (highly contagious), by direct contact with an infected person's lesions, and by aerosolization of virus from skin lesions that open. The skin lesions of chicken pox and shingles (zoster) can cause chickenpox in a susceptible person, but will not cause shingles.

Incubation

The incubation period has a range of 10-21 days, with an average of 14-16 days after exposure.

Period of Communicability

A person infected with VZV is **contagious from 1-2 days before onset of the rash** until all lesions have crusted.

Symptoms

A skin rash consisting of 250-500 itchy, blister-like lesions, covering the body but usually more concentrated on the face, scalp, and trunk. Most, but not all, infected individuals have fever, which develops just before or when the rash appears. If exposed, persons who have been vaccinated against the disease may get a milder illness, with less severe rash (sometimes involving only a few red bumps that look similar to insect bites) and mild or no fever. Adolescents and adults are more at risk for severe disease. Women infected during pregnancy may pass the disease on to their baby.

Complications

Varicella is usually mild and self-limited, but may be associated with complications. These complications include bacterial superinfection of skin lesions (most commonly *Streptococcus* or *Staphylococcus*) with or without bacterial sepsis, pneumonia, central nervous system involvement (acute cerebellar ataxia, encephalitis, stroke, and meningitis), thrombocytopenia, and other rare complications, such as glomerulonephritis, arthritis, and hepatitis.

Reye syndrome is an unusual complication of VZV and occurs almost exclusively in children who take aspirin during the illness.

In immunocompromised children, severe VZV may occur with continuing eruption of lesions and high fever, persisting into the second week of illness, and complications such as encephalitis, hepatitis, and pneumonia can develop. Hemorrhagic VZV is more common among immunocompromised persons than immunocompetent persons.

Severe and even fatal VZV has been reported in otherwise healthy children.

Pregnant women are at higher risk for severe VZV and complications. Neonates whose mothers are not immune and people with leukemia may suffer severe, prolonged, or fatal VZV.

Prevention

Varicella vaccine can prevent this disease. Currently, two doses of vaccine are recommended for children, adolescents, and adults. Live, attenuated varicella vaccines are available throughout the world. They are licensed for use in healthy persons aged 12 months and older.

Postexposure Vaccination

Data from the U.S. and Japan in a variety of settings indicate that varicella vaccine is 70% to 100% effective in preventing illness or decreasing the severity of illness if used within 3 days, and possibly up to 5 days, after exposure.

School and Daycare Exclusion Policy

Children with suspected or confirmed chickenpox (varicella) should be kept out of school or childcare until the lesions are dry (scabbed) or if lesions are not vesicular (blister-like), until 24 hours have passed with no new lesions. This usually occurs after 5 days in non-immunized persons. These persons should be isolated until no new lesions appear within a 24-hour period. Rules for exclusion of sick children from school and childcare are outlined in the Texas Administrative Code, specifically [Rule 97.7](#) for schools and [Rule 746.3603](#) for childcare.

For further information, please contact the Collin County Health Department at 972-548-4707.

Resources:

<http://www.cdc.gov/chickenpox/index.html>

<http://www.dshs.state.tx.us/idcu/disease/chickenpox/>