

Varicella-Zoster Virus (VZV)

Chickenpox is caused by VZV, a member of the herpes family. Chickenpox is a very contagious illness that usually occurs in childhood. Although usually mild, chickenpox can be serious. The chickenpox (varicella) vaccine can prevent or lessen the severity of the disease. All children attending child care facilities and entering schools in North Dakota are required to have documentation of vaccination against chickenpox.

Transmission

Chickenpox is spread from **person to person** through direct contact with fluid from the blisters or discharge from the nose or mouth. A person who has chickenpox can release tiny drops of the virus into the air by coughing or sneezing.

Risk factors for chickenpox include:

- **Age:** most cases occur in young children who have not been vaccinated or previously infected
- **Immune status:** people with immune suppression may be more likely to contract chickenpox or experience more severe disease

Once people have been infected with chickenpox, they rarely will contract the disease again in their lifetime. However, they will be at risk for shingles later in life. Shingles is a recurrence of varicella-zoster virus within the body. (See shingles fact sheet.)

Symptoms

Early symptoms of chickenpox are a mild **fever**, runny nose, and cough. A **skin rash** develops as **itchy** red bumps on the chest, back, underarms, neck, and face. Within several hours, the bumps turn into small blisters; after a few days, the blisters break and then form scabs. The chickenpox sores often occur in different stages of development, with bumps, blisters and scabs present at the same time. Some people who have been vaccinated against chickenpox can still get the disease, although chickenpox disease in vaccinated persons is almost always mild with fewer blisters and often no fever.

Diagnosis

Chickenpox may be diagnosed clinically by a health care provider, but a laboratory test to confirm chickenpox is recommended.

Treatment

The best treatment is bed rest at home, keeping fingernails short to prevent secondary bacterial infection from scratching, frequent bathing, application of calamine lotion. Health care providers may recommend the use of over-the-counter pain relievers and fever reducers. **DO NOT GIVE ASPIRIN OR OTHER MEDICATION THAT CONTAINS SALICYLATE TO ANYONE YOUNGER THAN 18.** When children take aspirin for viral illnesses like chickenpox, they are at risk of developing Reye's syndrome, a serious condition that can cause death.

Prevention

- All children between 12 and 18 months of age should be vaccinated with one dose of chickenpox (varicella) vaccine. A second dose is recommended at 4 to 6 years of age. A combination vaccine is also available (MMRV) that protects against measles, mumps, rubella and varicella. Anyone, including adolescents and adults, who have not been vaccinated and who have not had the disease need two doses of varicella vaccine.
- Practice good hand washing after being in contact with secretions from the nose or mouth or the blister fluid of someone who has chickenpox.
- Unvaccinated people who have not had chickenpox should call their health care provider immediately if they are exposed to someone who has chickenpox. Receiving the vaccine within three to five days after exposure may prevent the disease.
- Pregnant women or people who have weakened immune systems who are exposed to someone with chickenpox, and who have not been vaccinated or have not previously had chickenpox, should contact a health care provider immediately for possible preventative treatment.
- During chickenpox outbreaks, people who have received only one dose of chickenpox vaccine should be given a second dose. The second dose should be given at least one month after the first dose for children older than 13. In children ages 12 months to 12 years, the second dose should be given at least three months after the first.

If you think your child has chickenpox, please isolate them at home call your health care provider. Do not go to the health care provider's office without calling first. Many provider offices will have children and others present who are at-risk for contracting chickenpox and developing severe disease.

Cost should not be a barrier to vaccination. The Vaccines for Children (VFC) Program provides all recommended vaccines to children who are American Indian, uninsured or underinsured, and Medicaid-eligible. Many recommended vaccines are also available for uninsured adults. Vaccines are available at your local health care provider, public health department or pharmacy.

Exclusion Guidance

Children who have chickenpox should be excluded from activities, including school or child care, until all the blisters have dried into scabs and no new blisters have started for 24 hours. Immunized children without scabs may return when no new lesions appear within a 24-hour period. This usually takes five to six days after the rash begins. Children who were exposed to chickenpox but don't show any symptoms of the disease do not need to stay home unless they develop illness.

For additional information about chickenpox, contact the North Dakota Department of Health and Human Services' Public Health Division at 800.427.2180.

Cases and clusters should be reported to the North Dakota Department of Health and Human Services.

Resources:

1. Centers for Disease Control and Prevention. (2021, April 28). *CDC Chickenpox (varicella)*. Centers for Disease Control and Prevention. Retrieved June 21, 2023, from <https://www.cdc.gov/chickenpox/index.html>.
2. Kimberlin, D. W., Barnett, E. D., Lynfield, R., Sawyer, M. H. (2021) Red Book: 2021-2024 Report of the Committee on Infectious Diseases. 32nd ed. American Academy of Pediatrics. [Management and Prevention of Infectious Diseases; Chickenpox] [pages 831-843].

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