

Pneumonia

Pneumonia is an infection of the lungs which is usually caused by bacteria, viruses, or fungi. These often occur after an infection that starts in the nose and throat area spreads to the lungs.

Transmission

This will depend on the type of organism causing the pneumonia, but usually pneumonia is not spread easily from **person to person**.

Risk factors for Pneumonia include:

- **Age:** children younger than five and adults older than 65 are at increased risk for pneumonia
- **Immune status:** people who are immunocompromised or have other diseases are at increased risk for pneumonia, particularly those with lung diseases such as asthma or COPD
- **Smokers:** people who smoke tobacco products like cigarettes are at increased risk for pneumonia

Symptoms

Symptoms depend on the source of infection. Pneumonia often includes productive cough (with mucus), headache, and trouble breathing.

Diagnosis

Diagnosis depends on the type of infection. Cases are often diagnosed based on symptoms and physical assessment. A health care provider may collect an X-ray of the chest or a sample from the lungs and send this for laboratory testing.

Treatment

Bacterial pneumonia is treated with antibiotics and fungal pneumonia is treated with antifungal medication. Viral pneumonia may be treated with antivirals, if available. Depending on the type and severity of illness, hospitalization may be required. For those who do not require hospitalization, other medications and supportive care may be used.

Prevention

- ***Streptococcus pneumoniae* is preventable by vaccination.** Vaccination is routinely recommended for young children, older adults, and people with certain medical conditions. Documentation of vaccination against *Streptococcus pneumoniae* is required for child care attendance in North Dakota.
- **To prevent secondary pneumonia, or pneumonia caused by respiratory viruses,** stay up to date on vaccinations against other respiratory pathogens, like influenza and COVID-19.
- **Routine childhood immunizations** will also prevent many causes of pneumonia, including *Haemophilus influenzae* Type B, pertussis, varicella, and measles.

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

Exclusion from work, school, and child care should be appropriate for the type of infection.

- Children should be excluded until they are feeling well enough to attend and have been on antibiotics for 24 hours.

Many causes of pneumonia are mandatory reportable conditions, in North Dakota. [Please see our website for a complete list of reportable conditions.](#)

For additional information about pneumonia, please contact the North Dakota Department of Health and Human Services', Disease Control and Forensic Pathology Section, at 701.328.2378.

Resources:

1. Centers for Disease Control and Prevention. (2022, September 30). CDC Pneumonia. Centers for Disease Control and Prevention. Retrieved September 7, 2023, from <https://www.cdc.gov/pneumonia/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; Pneumococcal Infections] [pages 717-727].

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