



Diseases Fact Sheet – Pneumococcal Disease

South Dakota Department of Health

Office of Disease Prevention Services - 605-773-3737 -(1-800-592-1861 in South Dakota only)

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What is pneumococcal disease?

Pneumococcal diseases are caused by a common but potentially harmful bacteria, *Streptococcus pneumoniae*. *S. pneumoniae* is the most common cause of pneumonia in the world and the most common cause of acute otitis media in children. There are 84 different pneumococcal serotypes. Some serotypes are common in adults, others are more common in children, and several are resistant to penicillin.

Who gets pneumococcal disease?

Pneumococci are commonly found in the upper respiratory tract but generally, people have a high resistance to disease. Resistance may be lowered by a number of risk factors including: age extremes (very young and the very old); some viral upper respiratory tract infections, especially influenza; immunoglobulin deficiency; Hodgkin's disease; splenic dysfunction (including sickle-cell anemia); asplenia; chronic cardiovascular or pulmonary disease; diabetes; alcoholism; cirrhosis; kidney disease; recent organ transplantation; AIDS; smoking; living in crowded conditions (institutions, barracks, and ships). Pneumococcal pneumonia occurs most often during the coldest months of the year when respiratory infections are common.

How is this bacteria spread?

The bacteria can be spread from person to person through respiratory droplet spread or indirectly through contact with articles soiled with respiratory discharges.

What are the symptoms of pneumococcal disease?

Symptoms of pneumonia caused by *S. pneumoniae* are: a sudden onset of chills, fever, chest pain, difficulty breathing, and a cough producing "rusty" sputum. In the elderly, symptoms may be more subtle; a chest x-ray may provide the first evidence of pneumonia. In infants, vomiting and convulsions may be the first indication of infection.

S. pneumoniae is the third leading cause of bacterial meningitis in the United States, most cases are in children under 5 years of age. Meningitis can develop from untreated middle ear or sinus

infections, pneumonia, or bacteremia. Bacterial meningitis is seen as an acute onset of high fever, headache, vomiting, drowsiness, and stiff neck. Illness progresses rapidly causing loss of consciousness and possibly death.

How soon after exposure do symptoms appear?

Symptoms may appear in 1-3 days from infection. People with normal immune systems may develop antibodies specific to each serotype of pneumococci which, in general, persist for life.

How is it diagnosed?

Clinical observation of the symptoms accompanied by laboratory cultures from blood and other body fluids and a high white blood cell count in people with normal immune systems. Chest x-rays are important diagnostic tools when pneumonia is suspected.

What is the treatment for pneumococcal infections?

Penicillin is the drug of choice. Some serotypes are resistant to penicillin or, if the patient is allergic to penicillin, vancomycin, erythromycin, clindamycin, and a number of other drugs are effective.

What precautions should the infected person follow?

Good personal hygiene, such as covering the mouth when coughing or sneezing, sanitary disposal of discharges from the mouth and nose, and frequent hand-washing will help prevent transmission.

Related Sites:

- [South Dakota Department of Health, Immunization Program](#)
- [Centers for Disease Control and Prevention](#)