

Pneumococcal Disease (includes pneumococcal pneumonia, pneumococcal meningitis and pneumococcal bacteremia)

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What is pneumococcal disease?

Pneumococcal disease is a bacterial infection caused by the bacteria *Streptococcus pneumoniae*, also called pneumococcus. It may cause middle ear infection, pneumonia, meningitis (inflammation of the coverings of the brain and spinal column) or bacteremia (a bloodstream infection).

Who gets pneumococcal disease?

Although anyone can get pneumococcal disease, it occurs more frequently in infants, young children, African Americans, some Native American populations, the elderly or in people with serious underlying medical conditions such as chronic lung, heart or kidney disease. Others at risk include alcoholics, diabetics, people with weakened immune systems and those without a spleen. Infections occur anytime but most often during the winter and early spring when respiratory illnesses are more common. Data suggests that the use of the pneumococcal conjugate vaccine (PCV7) has reduced invasive disease among children and their adolescent and adult household and close contacts.

How is the disease transmitted?

Pneumococcus is spread by airborne or direct exposure to respiratory droplets from a person who is infected or carrying the bacteria.

How soon after exposure do symptoms occur?

The incubation period may vary, but, it is generally 1 to 3 days.

What are the symptoms?

Symptoms generally include an abrupt onset of fever and shaking or chills. Other symptoms may include headache, cough, chest pain, disorientation, shortness of breath, weakness and occasionally a stiff neck.

What are the complications associated with pneumococcal disease?

Death occurs in 14% of hospitalized adults with invasive disease. Neurologic complications and/or learning disabilities can occur in meningitis patients. Hearing impairment can result from recurrent otitis media.

How is pneumococcal disease treated?

Prompt treatment with antibiotics, such as penicillin or a cephalosporin, is usually effective. However, penicillin-resistant strains of pneumococcus are increasingly being reported throughout the United States.

Does past infection with pneumococcal disease make a person immune?

Past infection with pneumococcus does not provide lifelong immunity against pneumococcal disease reoccurring due to the many types of pneumococcal bacteria.

Is there a vaccine to prevent infection?

Yes. There are two types of vaccines currently in use. The pneumococcal conjugate vaccine (PCV13) contains protection against thirteen types of pneumococcal bacteria. The pneumococcal polysaccharide vaccine (PPV23) contains protection from 23 types of pneumococcal bacteria. Both vaccines are safe and reduce disease occurrence.

Pneumococcal conjugate vaccine is recommended for all children less than 24 months old and for children between 24 and 59 months old who are at high risk of disease. Persons who are 2 years and older and at high risk for disease (e.g., sickle cell disease, HIV infection, or other conditions that weaken the immune system) should also receive PPSV23.

Adults aged 19-64 years who have asthma or who smoke should receive a single dose of PPSV23.

All adults should be vaccinated with PPSV23 at age 65 years. Those who received PPSV23 before age 65 for any indication should receive another dose of the vaccine at age 65 or later if at least 5 years have passed since their previous dose. Those who receive PPSV23 at or after age 65 should receive only a single dose.

In New York State, pneumococcal conjugate vaccine is required for pre-kindergarten attendance for children born on or after 1/1/08.

What can be done to prevent the spread of pneumococcal disease?

One of the most effective control measures is maintaining the highest possible level of immunization in the community.