Public Health Fact Sheet

Pneumococcal Disease

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What is pneumococcal disease?
Pneumococcal disease is a serious invasive infection caused by the bacteria *Streptococcus pneumoniae* (also called *Strep pneumo*). It can cause pneumonia, meningitis, and bacteremia (blood stream infection). *Strep pneumo* can also cause non-invasive infections and is the most common bacterial cause of acute ear infections and sinusitis. These infections rarely lead to serious invasive infections.

Who can get pneumococcal disease?
Although anyone can get pneumococcal disease, it occurs more often in young children, 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 sickle cell anemia, people with altered immune systems such as HIV/AIDS, or those without a spleen (asplenia).

How is pneumococcal disease spread?
Strep pneumo bacteria are spread by direct contact with the saliva or with respiratory droplets from the nose or mouth of a person who is infected or carrying the bacteria. It is uncommon for the bacteria to spread among casual contacts.

When does pneumococcal disease occur?
Infections occur most often during the winter and early spring, and less frequently during the summer.

How soon after infection do symptoms occur?
The symptoms usually start one to three days after exposure.

What are the symptoms of pneumococcal disease?
Symptoms may include fever, chills, headache, ear pain, cough, chest pain, disorientation, shortness of breath and occasionally stiff neck.

How is pneumococcal disease diagnosed?
Pneumococcal disease is diagnosed by laboratory tests of the blood, spinal fluid, middle ear, lungs, or other bodily fluids.

How is pneumococcal disease treated?
Quick treatment with antibiotics, such as penicillin, is usually effective. However, the occurrence of pneumococcal infections that are resistant to penicillin is increasing. These cases can be successfully treated with other antibiotics.

What is being done to monitor antibiotic resistance among pneumococcal infections?
The Oklahoma State Department of Health has been monitoring antibiotic resistance in pneumococcal disease since 1998. A group of laboratories in Oklahoma have been providing this information and the results are provided to healthcare providers each year. By 2004, approximately 29% of pneumococcal isolates from sterile sites from this group of laboratories has shown resistance to penicillin.

What is the most important measure to prevent the spread of bacteria?
Hand hygiene is the single most important action to prevent the spread of *Strep pneumo* to others and to yourself. Wash visibly soiled hands with soap and water, or use an alcohol-based hand rub to effectively prevent spread of the bacteria.

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Is there a vaccine that can prevent infections?

Yes. There are two different vaccines – one mainly for adults and one only for children. These vaccines cover the main types of *strep pneumo* that cause disease. Since other types can cause disease, it is still possible to get pneumococcal disease even if you have been vaccinated. The vaccine for adults has been available for many years and is called the pneumococcal polysaccharide vaccine (Pneumovax). It is effective in preventing the most serious complications of pneumococcal infection. The children's vaccine is called the pneumococal conjugate vaccine (Prevnar) and may only be used in children under five years of age.

Who should receive the pneumococcal polysaccharide vaccine?

- All adults 65 years of age and older.
- All persons two years of age and older with:
    - chronic illness such as diabetes, heart or lung diseases;
    - anatomic or functional asplenia (without a spleen);
    - altered immune systems (due to disease, cancer, chemotherapy, or steroids);
    - HIV infection.

Who should receive the pneumococcal conjugate vaccine?

- All children less than 24 months of age.
- All children aged 24 to 59 months with high risk medical conditions. Your child's doctor can tell you which vaccine your child should receive.

How can antibiotic resistance be prevented?

The increase in antibiotic resistance is partly due to the overuse and/or misuse of antibiotic medications. Antibiotics work against bacteria, not viruses. For example, common colds should not be treated with antibiotics, since they are caused by viruses. If your healthcare provider does suspect a bacterial infection and prescribes an antibiotic, it is important to take the medicine as directed. If you feel better before finishing the course of antibiotics, it is important to continue taking them until the prescription is gone. If your healthcare provider does not think you have a bacterial infection, it is important to avoid antibiotics. Only take antibiotics as prescribed by your healthcare provider.

Acute Disease Service
Oklahoma State Department of Health

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