

## A Short Note on Pneumococcal Diseases

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### DESCRIPTION

*Streptococcus pneumoniae* is a common bacteria causes pneumococcal illness, which can affect major body parts. When this infection occurs in the lungs, they can cause pneumonia; when they penetrate into the bloodstream, they can cause sepsis; and when they invade the brain's covering, they can cause meningitis. These invasive infections are dangerous, often possibly requiring hospitalisation, and can result in death. Milder conditions such as middle ear infection (Otitis media) and sinusitis can also be caused by the bacteria. *Streptococcus pneumoniae* bacteria are commonly found in children's throats and noses.

When a person with the infection coughs or sneezes, bacteria can spread through droplets in the air. Infected food or drink does not transfer the pathogen. If a person's immune system is compromised, bacteria can spread from the throat to the lungs, blood, sinuses, middle ear, and brain. This could result in a serious infection. Fever, cough, shortness of breath, and chest pain are all symptoms of pneumococcal pneumonia (which are similar to pneumonia caused by other species). Stiff neck, fever, mental confusion and disorientation, and coma are all indications of pneumococcal meningitis. Chills, a drop in blood pressure, and organ dysfunction, etc., are some of the symptoms of pneumococcal bloodstream infection, which are similar to those of pneumonia and meningitis.

#### Types of pneumococcal infections

Non-invasive and invasive pneumococcal illness is the two main forms, with non-invasive being the less dangerous.

**Non-invasive pneumococcal diseases:** These occur outside of the primary organs or the bloodstream. The microorganism may cause the following symptoms:

Otitis media is an ear infection that produces inflammation in the middle ear. Ear ache and ear drum enlargement are common symptoms. Pus may flow into the ear canal if the eardrum is punctured.

Acute bronchitis is an airway inflammation that produces coughing and mucus production. It normally lasts up to three weeks and is most common in children under the age of five.

Sinusitis is a frequent illness in which the sinuses in the brain become inflamed. Some of the symptoms include pain, swelling, and discomfort around the cheek bones, eyes, and forehead.

**Invasive pneumococcal diseases:** These grow within a major organ or in a person's blood, Invasive Pneumococcal Diseases (IPDs) are more severe than non-invasive pneumococcal infections. Bacteraemia is a potentially fatal blood illness caused by bacteria. In a short period of time, it commonly progresses to sepsis. Fever, chills, and tiredness are among the symptoms.

The body's potentially fatal infection reaction is sepsis. Fever, chills, clammy skin, disorientation, a fast heart rate, trouble breathing, and intense pain are some of the symptoms. Stiff neck, headache, disorientation, light sensitivity, and fever are some of the symptoms. Symptoms, on the other hand, vary and some may not emerge at all.

#### Prevention

Vaccination is recommended for all children and adults over the age of 65, as well as those aged 19 to 64 who have certain risk factors. Considering this, many individuals are at risk for pneumococcal disease has not been immunised.

Pneumococcal vaccines are now available in the United States and are suggested for a wide range of people.

#### Treatment

Antibiotics can be used to treat pneumococcal illness. However, antibiotic resistance does develop in pneumococcal bacteria. To begin therapy, a broad-spectrum antibiotics that acts against a wide range of microorganisms may be administered. Once the sensitivity of the bacteria has been assessed, a more targeted antibiotic can be chosen.

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