

Facts About Pneumococcal Disease

Pneumococcal disease is caused by bacteria that can attack different parts of the body and is a leading cause of serious illness in people of all ages

What Is Pneumococcal Disease?

Pneumococcal (noo-muh-KOK-uhl) disease is caused by bacteria (*Streptococcus pneumoniae*) that can attack different parts of the body. When these bacteria invade the lungs, they can cause pneumonia; when they invade the bloodstream, they can cause sepsis; and when they invade the lining of the brain, they can cause meningitis. These serious conditions often require hospitalization, and can lead to death.

The bacteria can also cause milder common conditions like middle-ear infection (otitis media) and sinusitis.

Anyone can get pneumococcal disease, but some groups are at increased risk including:

- Children younger than age 2 years
- Adults age 65 years and older
- Children and adults with certain chronic health conditions, including chronic heart disease, lung disease, kidney or liver disease, diabetes, sickle cell disease, or illnesses that weaken the immune system, such as HIV and certain cancers, among others

Pneumococcal disease is spread from person to person through coughing, sneezing, and close contact. Some people, especially children, can carry the bacteria in their nose and throat without being sick and can spread the bacteria to others.

Burden

Pneumococcal pneumonia hospitalizes about 150,000 people in the US each year—killing about 5-7%, or 1 in 20 of those infected. The death rate is even higher among adults age 65 years and older and people with certain medical conditions or

other risk factors.

Fewer adults get pneumococcal meningitis or bloodstream infection (bacteremia), but the mortality rate for these infections is higher—killing more than 3,000 US adults each year, even with proper treatment. Pneumococcal meningitis kills about 1 in 6 older patients who are infected and bloodstream infections kill about 1 in 8 adults. Pneumococcal meningitis and bacteremia can also result in lifelong disability including deafness, brain damage, and limb amputation.

Symptoms

People with pneumococcal disease may have a combination of high fever, chills, cough, shortness of breath, chest pain, stiff neck, disorientation, and sensitivity to light. The specific symptoms of pneumococcal infection depend on the part of the body affected (lungs, brain or spinal cord, or blood). People can often have more than one type of pneumococcal infection simultaneously.

Early diagnosis and treatment are very important for serious pneumococcal infections.

Prevention

Vaccination is the best way to protect against pneumococcal disease. Pneumococcal vaccination is recommended for:

- All children younger than age 2 years
- All adults age 65 years and older
- Individuals age 2 to 64 years with certain chronic health conditions or other risk factors

In the US, there are two types of pneumococcal vaccines (conjugate and polysaccharide) currently available. There are several pneumococcal conjugate vaccines (PCV13, PCV15, PCV20, and PCV21). There is one pneumococcal polysaccharide vaccine (PPSV23). Vaccine recommendations vary by age and risk group. Still, many at-risk adults have not been vaccinated against pneumococcal disease.

Talk to a healthcare professional about pneumococcal vaccination.

CDC PneumoRecs Mobile App

[The Centers for Disease Control and Prevention has an app to help determine which pneumococcal vaccines a patient needs and when.](#)

Pneumococcal Disease and Influenza

Having influenza (flu) increases the risk of getting pneumococcal disease so protection against pneumococcal disease is especially important during flu season. If both vaccines are due, they can be given during one healthcare visit for both children and adults, but they should be given in two different injection sites (for example, one in the left arm and one in the right arm) if possible.

Pneumococcal Vaccine and COVID-19 Vaccine

COVID-19 vaccines may be administered on the same day as pneumococcal vaccines, but each vaccine should be injected in a different site (for example, different arms or at least one inch apart if in the same arm).

Treatment

Antibiotics are used to treat pneumococcal disease. However, in nearly one-third of cases, pneumococcal bacteria can be resistant to treatment with one or more antibiotics. Treatment may start with a broad-spectrum antibiotic, which works against a wide range of bacteria. After testing, once more is known about the specific bacteria the patient has, a more targeted antibiotic may be selected.

> [Read about Other Vaccines You May Need This Respiratory Season](#)

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