



Hawaii State Department of Health

Disease Investigation Branch

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Pneumococcal Disease

What is pneumococcal disease?

Pneumococcal diseases are infections caused by the bacteria *Streptococcus pneumoniae*. The most common types of infections caused by these bacteria are ear infections, pneumonia, bloodstream infections and meningitis (infections of the lining of the brain and spinal cord).

How is it spread?

Streptococcus pneumoniae bacteria are transmitted by direct contact with droplets from the nose and throat of infected individuals. It is not spread by casual contact or by breathing the air where a person with the disease has been. Some people carry these bacteria in their nose and throat without developing symptoms of the disease. People can transmit this disease without ever having shown symptoms.

What are the symptoms?

Sudden onset of shaking chills, fever, chest pain, difficulty breathing, rapid breathing, a cough productive of "rusty" sputum, malaise, weakness, and loss of appetite may be seen. Symptoms of meningitis include high fever, headache, and stiff neck. Other symptoms may include nausea, vomiting, confusion and sleepiness. In infants, the classic symptoms of headache and neck stiffness may be hard to identify. Babies with meningitis may appear inactive or irritable, and they may vomit or not want to eat.

S. pneumoniae can also cause ear infections which can result in hearing loss.

Bloodstream infections occur in about 25% to 30% of patients with pneumonia cause by *S. pneumoniae*. This bacterium is the cause about 13% to 19 % of all bacterial meningitis in the U.S.

How is it treated?

Pneumococcal disease can be treated with antibiotics prescribed by a doctor.

Can it be prevented?

There is a vaccine for pneumococcal disease. It should be given to infants at 2, 4 and 6 months of age, with a booster dose given at 12-15 months. Older children should be given 2 or 3 doses at least two months apart. Ask your doctor or the Hawaii Department of Health for more information about the vaccine.

For more information, see the CDC's website at <http://www.cdc.gov/vaccines/vpd-vac/pneumo/in-short-both.htm>