

## Quick Facts

### About... Pneumococcal Disease (invasive infections)

#### What is Invasive Pneumococcal Disease?

*Streptococcus pneumoniae* bacteria cause many types of infections, most frequently middle ear (otitis media), sinus infections and is the most common cause of lung infections (pneumonia). These bacteria can also enter areas of the body where bacteria are normally not found, such as the blood (bacteremia) or fluid surrounding the brain and spinal cord (meningitis). When bacteria enter these areas, a severe, life-threatening infection (“invasive disease”) can develop. When these bacteria cause any type of infection, the condition is known as pneumococcal disease. Pneumococcal infections are most common during the winter months. Pneumococcal disease is a leading cause of bacterial meningitis and pneumonia in Indiana. Around 800 cases occur each year in the state of Indiana.

#### How is invasive pneumococcal disease spread?

The bacteria are commonly found in the nose and throat of people. The bacteria are spread through direct contact with the secretions from the nose and throat of persons who are sick as well as by contact with an infected person’s hands. When an infected individual coughs or sneezes into the air, the infection can spread. In most cases, pneumococcal disease is not easily spread from one person to another. Healthy people can also carry the bacteria; however, they generally do not spread the bacteria to others. On rare occasions, outbreaks have occurred in settings where people live or work very closely together, such as daycare centers and correctional facilities. The bacteria are not spread through direct contact with contaminated surfaces.

#### Who is at risk for invasive pneumococcal disease?

Disease rates are highest among children under two years of age, the elderly, African Americans, American Indians, Alaska Natives, children who

attend group day care centers, and persons with underlying medical conditions (such as HIV or sickle-cell anemia). Risk of infection is decreased with proper pneumococcal vaccination.

### **How do I know if I have invasive pneumococcal disease?**

Symptoms of pneumococcal disease will develop 1 – 3 days after exposure, and will vary based upon the site of infection.

Symptoms of pneumococcal disease include:

- Chills
- High fever
- Severe headache
- Stiff neck
- Eyes that are sensitive to light
- Chest pain
- Active, productive cough
- Discolored sputum (“rusty” colored)
- Ear pressure and sinus pain

In young infants and children are more difficult to identify but may include:

- Fever
- Fretfulness or irritability
- Poor appetite
- Difficulty in waking the baby

If you feel that you may have an infection, or if you have been exposed to someone with the disease and have these symptoms, it is important to seek medical attention immediately. Your health care provider may collect blood or samples from other sites of infection such as joint or spinal fluid to see if the bacteria are present. Test results from bacterial cultures will not be available for at least 24 hours following the test.

### **How can invasive pneumococcal disease be treated?**

Pneumococcal disease can be successfully treated with several different types of antibiotics; however, approximately one-third of individuals who are sick have a strain of the bacteria that is resistant to antibiotics making treatment more difficult. Your healthcare provider will run a series of tests to determine which course of antibiotic therapy is most appropriate. Early detection and treatment may reduce the risk of complications or death from the disease. A 24-hour course of antibiotic therapy reduces a person’s likelihood of spreading the bacteria. Supportive care in an intensive care unit may be necessary for those with severe infection.

To reduce the likelihood of antibiotic resistance, please be sure to:

- Take antibiotics only when prescribed by your health care provider.
- Take **all** doses **exactly** as described.
- Do not take medication prescribed for anyone else.
- Do not ask your health care provider for antibiotics to treat viral infections, such as colds or influenza (the flu).
- Do not take another person's antibiotic or share your antibiotic with someone else.

To find out more information on antibiotics and antibiotic resistance, please see the ISDH Quickfacts Sheet discussing proper antibiotic use at:

<http://www.in.gov/isdh/21166.htm>

### **How is invasive pneumococcal disease prevented?**

There are three vaccines that protect against most types of this disease. Two types are available for children ages 2 months through 4 years and is now recommended as part of routine childhood vaccinations. Another vaccine is available for persons over 65 years of age and persons with weakened immune systems. All individuals 65 years and older are encouraged to have this vaccine to prevent invasive pneumococcal disease.

Good personal hygiene can prevent the spread of many diseases. Cover the nose and mouth when sneezing or coughing, throw away used tissues, and wash hands often. Do not share eating or drinking utensils with anyone.

All information presented is intended for public use. For more information, please refer to: <http://www.cdc.gov/vaccines/vpd-vac/pneumo/in-short-both.htm>.

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