

The family library

About Pneumonia



What is Pneumonia?

Pneumonia is a disease of the lungs that is caused by viruses, bacteria, and sometimes fungi or other organisms. In up to 65% of cases, the organism, such as bacteria or virus that is causing pneumonia, is not identified even with testing. It usually starts when a person inhales infected air particles into the lungs. Viral pneumonia usually comes on more slowly than bacterial pneumonia and is less obvious. It may not be detected initially because the person may not appear very ill. Symptoms of bacterial pneumonia are usually more severe.

Pneumococcal Pneumonia

Pneumococcal pneumonia is an infection in the lungs caused by bacteria called *Streptococcus pneumoniae*, or *pneumococcus*. It can infect the upper respiratory tracts of adults and children and can spread to the blood, lungs, middle ear, or nervous system.

Pneumococcal pneumonia primarily causes illness in children younger than 2 years old and adults 65 years of age and older. The elderly are especially vulnerable to becoming seriously ill and dying from this disease. Also, persons are at increased risk for developing pneumococcal pneumonia if they have certain medical conditions such as chronic heart, lung, or liver disease, sickle cell anemia, HIV or AIDS or people who have had organ transplants and are taking medications that lower their resistance to infection.

Pneumococcus is spread from person to person by coughing, sneezing, or close contact. It is believed that the noses and throats of up to 70 percent of healthy persons contain pneumococcus at any given time. It is still unclear as to why it suddenly invades the lungs and bloodstream to cause disease.

About Pneumonia (cont.)



Symptoms

People with bacterial pneumonia are usually very sick. Symptoms begin suddenly and often develop during or after an upper respiratory infection, such as influenza or a cold. The course of pneumonia depends on several factors:

- ✚ The age and health of the individual. Older, sicker people usually have more severe symptoms and are more likely to develop complications.
- ✚ Type of pneumonia. Viral pneumonia is usually less severe than most forms of bacterial pneumonia.
- ✚ Timeliness of treatment. The sooner pneumonia is treated the sooner the symptoms will be relieved.
- ✚ State of the immune system. People with impaired immune systems are more likely to have more severe symptoms.

The time between infection and the appearance of symptoms can be as little as 1 to 3 days or as long as 7 to 10 days. Symptoms of pneumococcal pneumonia can include:

- ✚ High fever, 100° F (37.78° C) - 106° F (41.11° C), may be less common in older adults.
- ✚ Cough, often producing discolored mucus from the lungs. Sputum (spit) may be rusty or green or tinged with blood. Older adults may have only a slight cough and no sputum.
- ✚ Shortness of breath.
- ✚ Rapid, often shallow breathing, and the feeling of being short of breath.
- ✚ Chest pains often made worse by coughing or deep breathing.
- ✚ Shaking, “teeth chattering” chills, may be a single episode or many.
- ✚ Rapid heart rate.
- ✚ Fatigue or vague feelings of weakness or malaise.

Other symptoms might include:

- ✚ nausea
- ✚ vomiting
- ✚ headache
- ✚ muscle aches

About Pneumonia (cont.)



Diagnosis and Treatment

A diagnosis of pneumonia is usually based on:

- ✚ Symptoms, medical history
- ✚ Physical examination
- ✚ Laboratory tests
- ✚ Chest x-ray, usually done to look for changes in the lungs that may indicate pneumonia, other causes of symptoms, or complications of pneumonia.
- ✚ Sputum (spit) specimen for culture, sensitivity and gram stain
- ✚ CBC will show elevated WBC
- ✚ Arterial blood gases (ABGs) will indicate presence of hypoxemia or lack of oxygen to body tissues
- ✚ Oximeter will indicate presence of diminished levels of oxygen in the blood

Treatment for pneumonia may include:

- ✚ Antibiotics given orally or intravenously.
- ✚ Fluids given intravenously if the person is unable to drink liquids because of shortness of breath or weakness.
- ✚ Respiratory therapy, to remove excess mucus from the lungs. This includes deep breathing exercises, postural drainage, spirometry, and chest physiotherapy.
- ✚ Oxygen therapy may be needed depending upon arterial blood gas (ABG) levels obtained and the condition of the patient. Oxygen may be given through a nasal cannula or mask.
- ✚ Medication to relieve wheezing and bronchial spasm may be given through a nebulizer.
- ✚ Bedrest in initial stages of disease then gradually increasing activity.
- ✚ Postural drainage and chest percussion to loosen secretions.
- ✚ Medications for pain may be required.
- ✚ Cough suppressants may be prescribed in the presence of a severe nonproductive cough. It would be important not to suppress a productive cough.
- ✚ Medications to reduce fever such as aspirin or acetaminophen (Tylenol).

About Pneumonia (cont.)



Treatment (cont.)

- ✚ Ventilatory assistance may be necessary in severe cases.
- ✚ Cough expectorant medications to aid in expelling secretions from the lungs.

If pneumonia does not improve with home treatment, symptoms worsen, or signs of complications of pneumonia develop, hospitalization may be necessary. Hospitalization may be required for older adults over age 65 if they have a weakened immune system and/or other serious chronic illnesses.

Prevention

The Centers for Disease Control and Prevention (CDC) recommends that those age 65 or older be immunized annually against pneumococcal pneumonia and also receive the influenza vaccination.

Family members can help reduce pneumonia by practicing good handwashing when entering and leaving the facility; by practicing good respiratory etiquette: 1) using a tissue to cover your sneezes and coughs; 2) sneezing or coughing into your sleeve if you do not have a tissue; 3) cleaning your hands often; 4) when needed, wearing a mask to protect yourself and others from germs; and staying at home when you have symptoms of cold or flu.

For more information about Pneumonia, click [HERE](#).