

Pneumonia Fact Sheet

1. **What is pneumonia?** - Pneumonia is a serious infection and/or inflammation of the lungs that causes mild to severe illness in people of all ages when the air sacs in the lungs fill with pus and other liquid. Under those conditions the patient has increased difficulty breathing as oxygen has trouble entering the blood from the lungs. Too little oxygen in the blood causes the body's cells and organs fail and may even cause death. Prior to the use of antibiotics (~1945), pneumonia was the primary cause of death in the United States.
2. **What are the symptoms of pneumonia** - The onset of pneumonia can vary from gradual to sudden. In the most severe cases, the patient may experience shaking chills, chattering teeth, severe chest pain, and a cough that produces rust-colored or greenish mucus. A person's temperature may rise as high as 105°F. The patient sweats profusely and breathing and pulse rate increase rapidly. Lips and nail beds may have a bluish color due to lack of oxygen in the blood. A patient's mental state may become confused or delirious.
3. **What causes Pneumonia?** - Pneumonia has several different causes:
 - a. Bacterial pneumonia can occur in anyone. However, alcoholics, the debilitated, post-operative patients, people with other respiratory diseases or viral infections and people who have weakened immune systems are at greater risk. Bacteria that can produce pneumonia such as *Streptococcus pneumoniae* and *Haemophilus influenzae* are often present in the throats of healthy people.
 - b. Viral pneumonia often occurs as a consequence of viral respiratory infections. Most of these pneumonias are not serious and last a short time, but some may become more serious if a bacterial pneumonia develops. Half of all pneumonias are believed to be caused by viruses such as respiratory syncytial virus and influenza virus. Infection with the influenza virus may be severe and occasionally fatal in those who have pre-existing heart or lung disease or are pregnant.
 - c. Mycoplasma organisms, unclassified as to whether they are bacteria or virus, may also cause a mild and widespread pneumonia. The most prominent symptom of Mycoplasma pneumonia is a cough that tends to come in violent attacks, but produces only sparse whitish mucus. They affect all age groups, occurring most frequently in older children and young adults. The death rate is low, even in untreated cases.
 - d. *Pneumocystis carinii* pneumonia is caused by an organism believed to be a fungus. This pneumonia may be the first sign of illness in many persons with AIDS. It can be successfully treated in many cases however it may recur a few months later.
 - e. Aspiration pneumonia occurs when you aspirate foreign matter into your lungs, most often when the contents of your stomach enter your lungs after you vomit. This can occur when a brain injury affects your normal gag reflex or consuming too much alcohol causes

unconsciousness. Diseases which cause difficulty swallowing such as ALS, Parkinson's disease, and strokes may also lead to aspiration pneumonia.

- f. Hospital-acquired pneumonia is the second most common healthcare-associated infection in the United States. It is caused by the same pathogens that can cause bacterial or viral community-acquired pneumonias but may be more likely to be caused by multi-drug resistant organisms or other agents more common in the hospital than in the community.
 - g. Ventilator-associated pneumonia may occur in any person who is on a ventilator. Ventilators are used to help a patient breathe by giving oxygen through a tube placed in a patient's mouth or nose, or through a hole in the front of the neck. While ventilators are often life-saving, they also increase a patient's chance of getting pneumonia by making it easier for pathogens to get into the patient's lungs. The risk of developing ventilator-associated pneumonia is highest during the first few days after intubation.
4. **How do you treat pneumonia?** - If you develop pneumonia, your chances of a fast recovery are greatest under certain conditions: if you're young, if your pneumonia is caught early, if your defenses against disease are working well, if the infection hasn't spread, and if you're not suffering from other illnesses. The drugs used to fight your pneumonia are determined by your doctor. Prescribed medications must be taken as instructed, otherwise the pneumonia may recur. Relapses can be far more serious than the first attack.
5. **Can pneumonia be prevented?**
- a. Because pneumonia is a common complication of influenza, getting a Flu shot every Fall is recommended.
 - b. A pneumococcal pneumonia vaccine is also available. The greatest risk of pneumococcal pneumonia is usually among people who:
 - (1) Have chronic illnesses such as lung disease, heart disease, kidney disorders, sickle cell anemia, or diabetes.
 - (2) Are recovering from severe illness.
 - (3) Are in nursing homes or other chronic care facilities.
 - (4) Are age sixty-five or older.
 - c. If you are at risk, ask your doctor about vaccination.
 - d. Since pneumonia often follows ordinary respiratory infections, the most important preventive measure is to be alert to any symptoms of respiratory trouble that linger more than a few days. Good health habits, proper diet and hygiene, rest, regular exercise, etc., increase resistance to all respiratory illnesses. They also help promote fast recovery when illness does occur.

- e. Quit smoking
- f. For ventilated patients healthcare providers can do the following things:
 - (1) Keep the head of the patient's bed raised between 30 and 45 degrees, if possible
 - (2) Check the patient's ability to breathe on their own every day – take them off the ventilator as soon as possible
 - (3) Clean hands with soap and water or an alcohol-based hand rub before and after touching the patient or the ventilator
 - (4) Clean the inside of the patient's mouth on a regular basis
 - (5) Clean or replace equipment between use

6. What do I do if I have symptoms of pneumonia?

- a. Call your doctor immediately. Even with the many effective antibiotics, early diagnosis and treatment are important.
- b. Follow your doctor's advice. In serious cases, your doctor may advise a hospital stay. Or recovery at home may be possible.
- c. Continue to take the medicine your doctor prescribes until told you may stop. This will help prevent recurrence of pneumonia and relapse.
- d. Remember, even though pneumonia can be treated, it is an extremely serious illness. Don't wait, get treatment early.

7. For more information about Pneumonia in children:

http://www.cdc.gov/ncidod/dbmd/diseaseinfo/streppneum_t.htm
http://www.cdc.gov/ncidod/dbmd/diseaseinfo/pneumchilddevcount_t.htm
<http://www.cdc.gov/HAI/vap/vap.html>
<http://www.cdc.gov/Features/Pneumonia/>

This fact sheet provides general information. Please contact your physician for specific clinical information.