

Pneumonia

UNDERSTAND the problem

Pneumonia is an infection in one or both of the lungs. Many germs—such as bacteria, viruses, and fungi—can cause pneumonia. The infection inflames your lungs' air sacs, which are called alveoli. The air sacs may fill up with fluid or pus, causing symptoms such as a cough with phlegm, fever, chills, and trouble breathing.

Pneumonia and its symptoms can vary from mild to severe. Pneumonia tends to be more serious for:

- Infants and young children
- Older adults (people 65 years of age or older)
- People who have other health problems, such as heart failure, diabetes, or chronic obstructive pulmonary disease (COPD)
- People who have weak immune systems as a result of diseases or other factors, such as HIV/AIDS, chemotherapy, or an organ transplant or blood and marrow stem cell transplant

WHO is at risk

Pneumonia can affect people of all ages. However, two age groups are at greater risk of developing pneumonia:

- Infants who are 2 years of age or younger (because their immune systems are still developing during the first few years of life)
- People who are 65 years of age or older

Other conditions and factors also raise the risk for pneumonia. Individuals are more likely to get pneumonia if they have a lung disease or other serious disease such as cystic fibrosis, asthma, COPD, bronchiectasis, diabetes, heart failure, and sickle cell anemia. There is also a greater risk for pneumonia for patients in a hospital intensive-care unit, especially if they are on a ventilator.

Having a weak or suppressed immune system also raises the risk for pneumonia. A weak immune system may be the result of a disease such as HIV/AIDS. A suppressed immune system may be due to an organ transplant or blood and marrow stem cell transplant, chemotherapy, or long-term steroid use.

Risk for pneumonia also increases if you have trouble coughing because of a stroke or problems swallowing. Individuals who can't move around much or are sedated are more likely to develop pneumonia as well.

Smoking cigarettes, abusing alcohol, or being undernourished also raises the risk for pneumonia. This risk also goes up if you've recently had a cold or the flu or if you're exposed to certain chemicals, pollutants, or toxic fumes.

WHAT are the signs and symptoms

The signs and symptoms of pneumonia vary from mild to severe. Many factors affect how serious pneumonia is, including the type of germ causing the infection and your age and overall health.

See your doctor promptly if you:

- Have a high fever
- Have shaking chills
- Have a cough with phlegm that does not improve or worsens
- Develop shortness of breath with normal daily activities
- Have chest pain when you breathe or cough
- Feel suddenly worse after a cold or the flu

People who have pneumonia may have other symptoms, including nausea, vomiting, and diarrhea. Symptoms may vary in certain populations. Newborns and infants may not show any signs of the infection. Or, they may vomit, have a fever and cough, or appear restless, sick, or tired and without energy.

Older adults and people who have serious illnesses or weak immune systems may have fewer and milder symptoms. They may even have a lower than normal temperature. If they already have a lung disease, it may get worse. Older adults who have pneumonia sometimes have sudden changes in mental awareness.

Complications

Often, people who have pneumonia can be successfully treated and not have complications. But some people, especially those in high-risk groups, may have complications such as:

- **Bacteremia:** This serious complication occurs if the infection moves into your bloodstream. From there, it can quickly spread to other organs, including your brain.
- **Lung abscesses:** An abscess occurs if pus forms in a cavity in the lung. An abscess usually is treated with antibiotics. Sometimes surgery or drainage with a needle is needed to remove the pus.
- **Pleural effusion:** Pneumonia may cause fluid to build up in the pleural space. This is a very thin space between two layers of tissue that line the lungs and the chest cavity. Pneumonia can cause the fluid to become infected—a condition called empyema. If this happens, you may need to have the fluid drained through a chest tube or removed with surgery.

HOW is pneumonia treated and prevented

Treatment for pneumonia depends on the type of pneumonia you have and how severe it is. Most people who have community-acquired pneumonia—the most common type of pneumonia—are treated at home. If symptoms are severe or you are at risk for complications, you may need to be treated in a hospital. The goals of treatment are to cure the infection and prevent complications.

General Treatment

Treatment of pneumonia depends on the type of germ causing the illness. Bacterial pneumonia is treated with antibiotics. You should take antibiotics as your doctor prescribes. If you stop too soon, the pneumonia may come back. However, antibiotics will not work when the cause of pneumonia is a virus. If you have viral pneumonia, your doctor may prescribe an antiviral medicine to treat it.

If you have pneumonia, follow your treatment plan, take all medicines as prescribed, and get ongoing medical care. Ask your doctor when you should schedule follow-up care. Your doctor may want you to have a chest x-ray to make sure the pneumonia is gone.

Although you may start feeling better after a few days or weeks, fatigue can persist for up to a month or more. People who are treated in the hospital may need at least 3 weeks before they can go back to their normal routines.

Prevention

Preventing pneumonia is always better than treating it. The best preventive measures include washing your hands frequently, not smoking, and wearing a mask when cleaning dusty or moldy areas. In addition, vaccines to prevent pneumonia and other illnesses that can lead to pneumonia are an important part of preventing serious illness.

Vaccination

Although vaccines can't prevent all cases of infection, compared to people who don't get vaccinated, those who do and still get pneumonia tend to have:

- Milder cases of the infection
- Pneumonia that doesn't last as long
- Fewer serious complications

A vaccine is available to prevent pneumococcal pneumonia, the cause of up to 25% of pneumonia cases. In most adults, one shot is good for at least 5 years of protection. This vaccine often is recommended for:

- People who are 65 years of age or older
- People who have chronic diseases, serious long-term health problems, or weak immune systems
- People who smoke
- Children who are younger than 5 years of age
- Children who are 5 to 18 years of age with certain medical conditions, such as heart or lung diseases or cancer

Because many people get pneumonia after having the flu, the influenza vaccine also helps prevent pneumonia. This vaccine is good for 1 year, and it is usually given in October or November, before peak flu season.

Haemophilus influenzae type b (Hib) is a type of bacteria that can cause pneumonia and meningitis, an infection of the covering of the brain and spinal cord. The Hib vaccine is given to children to help prevent these infections. The vaccine is recommended for all children in the United States who are younger than 5 years of age. The vaccine often is given to infants starting at 2 months of age.

Other Ways To Help Prevent Pneumonia

You also can take the following steps to help prevent pneumonia:

- Wash your hands with soap and water or alcohol-based rubs to kill germs.
- Don't smoke. Smoking damages your lungs' ability to filter out and defend against germs.
- Keep your immune system strong. Get plenty of rest and physical activity and follow a healthy diet.

If you have pneumonia, limit contact with family and friends. Cover your nose and mouth while coughing or sneezing, and get rid of used tissues right away. These actions help keep the infection from spreading.

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