



Patient Information

Pneumonia: Know the Facts

The lung disease *pneumonia* (new-moe-nya) usually is caused by infection. The infecting organism may be one of several types of bacteria, viruses, fungi, or parasites. In adults, bacterial infection—especially with *pneumococcus* (new-muh-kahk-us)—is the most common cause.

Pneumonia is classified as either community-acquired (meaning that the person contracted it outside of a hospital, within the community) or hospital-acquired (meaning that the person developed the disease while hospitalized for some other illness). The hospital-acquired type tends to be more severe, though community-acquired pneumonia, or CAP, is quite common. Each year, more than five and a half million people develop CAP and more than one million of them require hospitalization.

Most often, CAP is passed from one person to another through contact with coughed up mucus, or *sputum* (spewt-um), from the lungs. It can affect either one or both lungs. Depending on a person's age and health, CAP may be mild or extremely severe. But when it's diagnosed and treated early, outcomes tend to be better.

How do I know if I'm at risk?

People with immature or weakened immune systems—such as infants, young children, and elders; people with AIDS, chronic lung disease, or no spleen; and people taking *corticosteroid* (kort-ih-koh-stehr-oyd) med-

ication for cancer or to prevent organ rejection after a transplant—are at greater risk for CAP than are healthy, young adults. But young adults who smoke or are exposed to smoke on a continual basis, use illegal drugs, drink alcohol in excess, or live in a confined space with many others (for example, in a military barrack or college dormitory) are more likely to become infected with CAP than those who don't.

CAP also may be triggered by a cold or flu that weakens the body's immune system. In addition, children with *gastroesophageal* (gas-troe-eh-sohf-uh-gee-ahl) reflux disorder, heart or lung defects, or asthma are at risk for recurring CAP.

What are the warning signs?

Signs of CAP vary depending on the type of organism that has caused the infection and the age and health of the person. Signs can include sudden chest pain that becomes worse with deep breaths; a fever with shaking chills; a cough with green or yellow sputum; and rapid, difficult breathing. CAP may progress gradually with flu-like symptoms, such as headache, excessive sweating, fatigue, sore throat, hacking cough with or without sputum, earache, fever, and stomachache. Elderly people may become weak or confused. Go to the hospital right away if you cough up bloody sputum, you have severe pain in your belly, your breathing becomes labored or heavy, or you become confused.

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What tests do I need?

To check for CAP, your doctor will tap your chest lightly with a metal instrument as you breathe in and out and while he or she uses a *stethoscope* (**steth**-eh-sko-pe) to listen for abnormal sounds. Your doctor also will ask about your medical history. Be sure to mention any recent respiratory infection, whether you've been traveling, if you smoke or take any illegal drugs, and any medications you take.

To rule out other illnesses that CAP can resemble, your doctor may take a sample of your sputum, urine, or blood and recommend a chest X-ray or another test that takes pictures of your lungs.

If fluid has built up around your lungs, your doctor may need a sample of this fluid, which would be collected using a long needle that's inserted between your ribs—a procedure called *thoracentesis* (thoe-ruh-sen-**tee**-sus). You also may require a *bronchoscopy* (brahn-**kahs**-kuh-pee), a procedure in which a small tube is inserted through your nose or mouth in order to view the passages that lead to your lungs or to take a sample of infected tissue for analysis. These tests can help your doctor find the specific cause of your CAP, which can influence treatment.

How can I avoid the problem?

Eating a healthy diet rich in fruits and vegetables, exercising, and avoiding stress can keep your immune system strong and able to fight infection with organisms that cause colds, flu, and CAP. Washing your hands before touching or eating any foods and after going outside, using the bathroom, or blowing your nose helps protect your body

further. Wear a mask when you clean dusty or moldy areas and avoid smoke-filled environments. If you smoke, ask your doctor for help quitting.

There are vaccines available that provide protection from certain types of CAP: the *pneumococcal* (new-muh-**kahk**-uhl) vaccine, which protects against infection with pneumococcus, and the flu vaccine, which prevents CAP caused by flu viruses. Ask your doctor if you're a candidate for either or both of these. (To be effective, the flu vaccine must be administered each year.)

How is it treated?

Most cases of CAP are mild and can be treated with oral antibiotics and without hospitalization. Your doctor will tell you not to suppress coughing, which helps clear sputum from your lungs, and to drink plenty of liquids. Chest therapy, which you can perform at home, also may be advised. This therapy involves rhythmic breathing and coughing exercises designed to remove sputum from your lungs and the use of a plastic device, called a peak flow meter, which measures the force of your exhaled breath. To control fever and pain, your doctor may advise you to take aspirin or another fever and pain reducing medicine.

More serious cases of CAP may require hospitalization with intravenous, or IV, antibiotic treatment for up to eight days. Rarely, CAP causes the formation of pus pockets around or inside the lung. This condition may require surgery.

For more information on pneumonia, visit the web site of the American Lung Association (www.lungusa.org) and search for pneumonia. ●

