

## **What Is Pneumonia?**

Pneumonia is a serious lung infection that affects people of all ages, but is particularly dangerous for older adults and young children.

The World Health Organization estimates that more than 160 million children around the world develop pneumonia each year, 20 million of whom are hospitalized and 2 million of whom die.

Worldwide, pneumonia is the leading cause of death for children under the age of five. Sub-Saharan Africa is disproportionately affected, accounting for more than half of such cases.

## **What Happens?**

After the germs reach the lungs, the lungs become inflamed and fill up with fluid. This causes breathing difficulties, which makes it difficult for enough oxygen to enter the bloodstream. The body's cells can't function as they normally would, and infection can't be flushed from the body. If untreated, the infection may continue to spread, leading to death.

## **Causes**

Bacteria, viruses, or fungi that live in your nose, mouth, sinuses, or the surrounding environment can enter your lungs and create infections, including pneumonia. You can get the bacteria or viruses from people who are infected with them, whether they show symptoms or not.

The leading cause of severe pneumonia in children in developing countries is *Streptococcus pneumoniae* bacteria, or pneumococcus. Another leading cause is *hemophilic influenza* type b, or Hib.

Other causes of pneumonia include influenza, staph infections, human respiratory syncytial virus, rhinovirus, herpes simplex virus, and severe acute respiratory syndrome (SARS).

Less common types of pneumonia can be acquired through the inhalation of food, liquids, gases, dust, and certain fungi.

Pneumocystis carinii (now renamed *Pneumocystis jiroveci*) pneumonia (PCP) is a fungal infection that can affect people with weakened immune systems, including those with HIV/AIDS.

## **Symptoms**

Symptoms of pneumonia can include:

- coughing up mucus (green, brown, or slightly bloody)
- fever
- fatigue
- weakness
- muscle weakness
- loss of appetite
- nausea
- vomiting
- headaches
- wheezing
- diarrhea
- shortness of breath
- rapid breathing
- chills
- chest pain
- chest retraction during respiration (children under age 5)
- convulsions, unconsciousness, hypothermia, lethargy, feeding problems (infants)

Milder forms of pneumonia that don't interfere with daily functions are commonly referred to as "walking" pneumonia.

## **Treatment**

Treatment options are dependent on the type of pneumonia—viral or bacterial—with which a person is infected.

Bacterial pneumonia is treated with antibiotics.

Viral pneumonia is treated with antiviral medicines, if it is diagnosed early enough, and antibiotics may be prescribed to prevent against secondary infections or complications.

Usually, a doctor will examine the patient after a complaint of certain symptoms. This may involve chest X-rays and a blood test, but more testing may be arranged if the symptoms are bad or if doctors are trying to distinguish between other health problems. Many patients feel better shortly after prescribed medications. Additional treatment may be needed if the patient doesn't feel better after 2 to 3 days of

treatment. A hospital stay may be necessary if symptoms are extreme or the patient has other serious illnesses. Recovery is aided by adequate sleep, avoiding overexertion, drinking plenty of fluids, and avoiding cigarette smoke.

## **Prevention**

Practicing good hygiene and health habits help prevent pneumonia. Thorough and frequent hand cleaning, coughing or sneezing into an elbow or sleeve instead of hands, avoiding interaction with those who are sick, receiving proper nutrition, and getting adequate rest are all things you and your children can do to ward off the bacteria and viruses that can cause pneumonia. Avoiding tobacco smoke and other pollutants helps prevent pneumonia.

Increasing access to immunization, reducing indoor and outdoor air pollution, and becoming knowledgeable about warning signs to identify infection, specifically a cough, fast breathing, and/or difficulty breathing will help prevent infection.

Breastfeeding during the first six months is critical in preventing pneumonia. Breast milk contains a nourishing supply of nutrients, antioxidants, hormones and antibodies a child needs for growth and development.

Many vaccines can prevent infection by bacteria or viruses that may cause pneumonia, including:

- Pneumococcal conjugate (PCV)
- *Hemophilic influenza* type b (Hib)
- Pertussis (whooping cough)
- Varicella (chickenpox)
- Measles
- Seasonal and 2009 H1N1 influenza (flu) vaccines

The CDC recommends following specific immunization schedules that apply to your child:

## **Immunization Schedules**

More resources and information are available here:

## **World Pneumonia Day**

