Pneumonia is an infection that affects the small airways and air sacs in the lungs. Types of pneumonia include:

- Community-acquired—from the community, such as a school, gym, or at work
- Nosocomial—in a hospital or healthcare setting
- Aspiration—happens when foreign matter is inhaled into the lungs, such as food, liquid, saliva, or vomit

Causes

Pneumonia may be caused by:
Infection from specific types of:
  - Bacteria
  - Viruses
  - Fungi

Aspiration

Other specific germs

Chemical exposure and irritation

Risk Factors

Pneumonia is more common in older adults. Other factors that may increase your chance of pneumonia include:

- Living in crowded living conditions, such as dormitories or nursing homes
- Smoking
- Alcohol use disorder or drug abuse
- Trouble swallowing or coughing
- Having certain lung conditions, such as chronic obstructive pulmonary disease (COPD) or cystic fibrosis
- Allergies or asthma
- Sleep apnea
- Mechanical ventilation
- Heart disease
- Diabetes
- Weakened immune system
- Malnutrition
- Exposures to respiratory inhalants at work, such as:
  - Ammonia
  - Chlorine
  - Minerals
  - Vegetable dusts

Symptoms

Pneumonia may cause:
• Cough
• Chest pain
• Increased mucus production
• Fever and chills
• Trouble breathing
• Weakness

**Diagnosis**

Your doctor will ask about your symptoms and medical history. A physical exam will be done. Your doctor may suspect pneumonia based on your symptoms, and breath and lung sounds. Tests can confirm diagnosis and determine the specific germ causing the pneumonia.

Your bodily fluids may be tested with:

• Blood tests and/or cultures
• Sputum culture
• Urine tests

Pulse oximetry measures blood oxygen levels.

Images may be taken of your lungs. This can be done with:

• A chest x-ray
• A lung ultrasound

**Treatment**

Treatment of pneumonia depends on:

• What caused the pneumonia
• Severity of symptoms
• Other factors, like your overall health

People with severe pneumonia may need to be hospitalized.

**Medications**

Your doctor may advise:

• Antibiotics—for pneumonia caused by bacteria
• Antifungal medications—for pneumonia caused by fungi
• Antiviral medications—for pneumonia caused by viruses, such as influenza
• Over-the-counter medications to reduce fever and discomfort
• Vitamin C may be advised if you don't get enough in your diet
• Oxygen therapy may be needed in more severe cases
Prevention

Certain vaccines may prevent pneumonia:

- Flu vaccine—pneumonia may be a complication of the flu for people at high risk of infection, especially aged 50 years and older
- Pneumococcal vaccine:
  - All adults who are aged 65 years or older
  - Adults of any age who are at high risk of infection or have a suppressed immune system

Other preventive measures include:

- If you smoke, talk to your doctor about how you can successfully quit. Smoke weakens the lungs' resistance to infection and increases recovery time.
- Avoid close contact with people who have the cold or flu.
- **Wash your hands** often, especially after coming into contact with someone who is sick.
- Protect yourself on jobs that include chemicals or other lung irritants.
- Maintain good control of any chronic disease, such as asthma and diabetes.

Last Reviewed: March 2017 EBSCO Medical Review Board David L Horn, MD
Updated: 2/3/2015

Published by EBSCO Publishing. This content is reviewed regularly and is updated when new and relevant evidence is made available. This information is neither intended nor implied to be a substitute for professional medical advice. Always seek the advice of your physician or other qualified health provider prior to starting any new treatment or with questions regarding a medical condition.