

Pneumonia

(Community-Acquired Pneumonia; CAP; Bronchopneumonia)

Pronounced: Noo-MO-NEE-yah

by Michelle Badash, MS

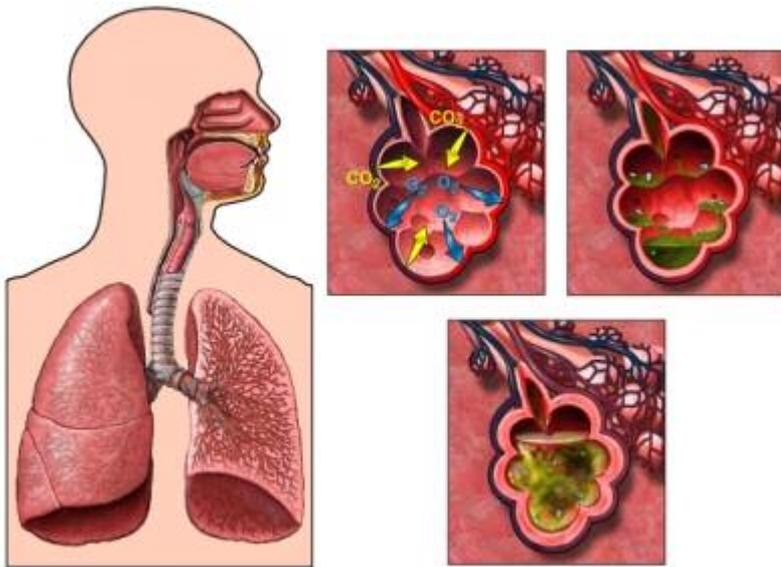
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[More InDepth Information on This Condition](#)

Definition

Pneumonia is an infection of the lungs. It affects the lower respiratory tract. This includes small bronchi (airways) and air sacs in the lungs.

Development of Pneumonia in the Air Sacs of the Lungs



The normal exchange of gases is interrupted by the build up of fluids.

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Causes

There are three main causes:

- Bacterial pneumonia—caused by bacteria, most commonly *Streptococcus pneumoniae*
- Viral pneumonia—caused by a virus
- Atypical bacterial pneumonia —often called "walking pneumonia," but can cause a more serious or potentially fatal pneumonia

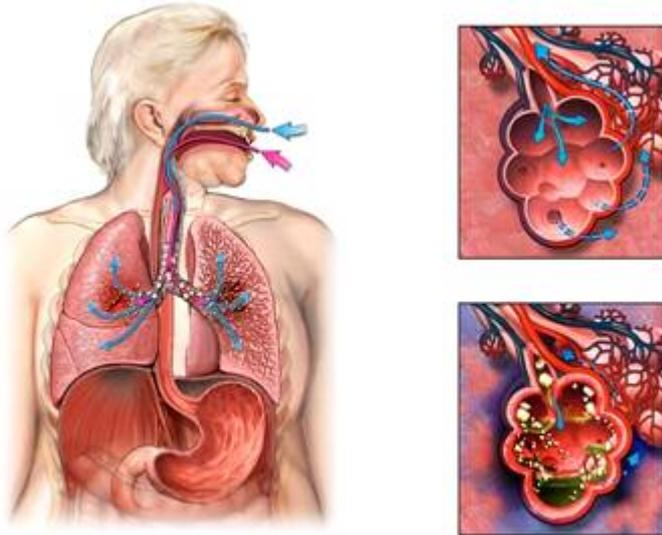
Other causes of pneumonia include:

- Fungal infections, such as infections that are common in people with AIDS

Pneumonias are sometimes described by where it was acquired and how you were exposed to it:

- Community-acquired pneumonia—acquired in the community (eg, at school, work, gym)
- Nosocomial pneumonia—acquired during a hospitalization
 - Can be very dangerous, especially for patients on a ventilator
- Aspiration pneumonia —happens when a foreign matter (often stomach content) is inhaled

Aspiration



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Risk Factors

Factors that increase your chance of pneumonia include:

- Age: 65 or older
- Flu or other respiratory illness
- Chronic illness, such as heart or lung disease
- Stroke (aspiration pneumonia due to difficult swallowing)
- Weakened immune system caused by AIDS or chemotherapy
- Chronic bronchitis
- Malnutrition
- Pregnancy
- Infants and very young children
- Alcohol or drug abuse
- Smoking
- Chronic exposure to certain chemicals (eg, work in construction or agriculture)

Symptoms

Symptoms of pneumonia may include some or all of the following:

Bacterial Pneumonia	Viral Pneumonia	Atypical Pneumonia
Fever	Fever	Fever, often low-grade
Shaking chills	Chills	Chills
Cough that produces green, yellow, or rust-colored mucus	Dry cough	Coughing; may be violent at times; produces white mucus
Chest pain	Headache	Possible nausea or vomiting
Profuse sweating	Muscle pain	Weakness
Bluish color of the nails or lips due to diminished oxygen in the blood	Bluish color of the nails or lips due to diminished oxygen in the blood	
Confused mental state	Weakness	

Diagnosis

The doctor will ask about your symptoms and medical history. A physical exam will be done. Diagnosis is based on symptoms and listening to your chest. Tests may include:

- Chest x-ray **NEW** —a test that uses radiation to take pictures of structures inside the body, in this case the chest
- CT scan —a type of x-ray that uses a computer to make pictures of structures inside the chest
- Blood tests
- Bronchoscopy —direct examination of airways
- Sputum culture—testing mucus coughed up from deep in the lungs
- Pulse oximetry—measures the amount of oxygen in the blood
- Arterial blood gas—measures oxygen, carbon dioxide, and acid in the blood

Treatment

Treatment of pneumonia depends on:

- Type of pneumonia
- Severity of symptoms
- Other factors

Common treatment approaches include:

- For bacterial pneumonia—antibiotics
- For viral pneumonia—antiviral medicines may be prescribed for young children and people with weakened immune systems
 - **Note:** Antibiotics are ineffective for treating viral pneumonia.
- Atypical pneumonia—antibiotics

It is very important to take the medicine as prescribed. Stopping medicine early may cause a relapse. It may also create a strain of drug resistant bacteria.

General treatment approaches include:

- Getting plenty of rest and drinking lots of fluids
- Eating a healthy diet (includes lots of fruits and vegetables)—If you do not get enough vitamin C in your diet, ask your doctor if you should take a supplement (up to 1,000 mg). This may be beneficial for some

- people.
- Taking over-the-counter medicines to reduce fever, aches, and cough
- Being hospitalized (in severe cases)

If you are diagnosed with pneumonia, follow your doctor's instructions.

Prevention

Certain vaccines may prevent pneumonia:

- Flu shot for people at high risk, particularly the elderly (Pneumonia may be a complication of the flu.)
- Pneumococcal vaccine —General recommendations include:
 - PCV vaccine series for children
 - PPSV for adults aged 65 years and older and for younger people who are at high risk for getting infected

Other preventive measures include:

- Avoid smoking. Smoke weakens the lungs' resistance to infection. <http://www.ebscohost.com/dynamed/>
- Avoid close contact with people who have the cold or flu.
- Wash your hands often. This is very important when coming in contact with infected people.
- Protect yourself on jobs that affect the lungs.
- Eat a healthy diet. If you do not get enough vitamin C or zinc in your diet, ask your doctor if you should take these supplements.
- Get adequate rest.
- Exercise regularly.

RESOURCES:

American Academy of Family Physicians
<http://www.familydoctor.org/>

American Lung Association
<http://www.lungusa.org/>

CANADIAN RESOURCES:

The Canadian Lung Association
<http://www.lung.ca/>

Health Canada
<http://www.hc-sc.gc.ca/>

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