

Pneumonia

(Community-Acquired Pneumonia, CAP, Pneumonitis, Bronchopneumonia)

Pronounced: Noo-MO-NEE-yah

by Michelle Badash, MS

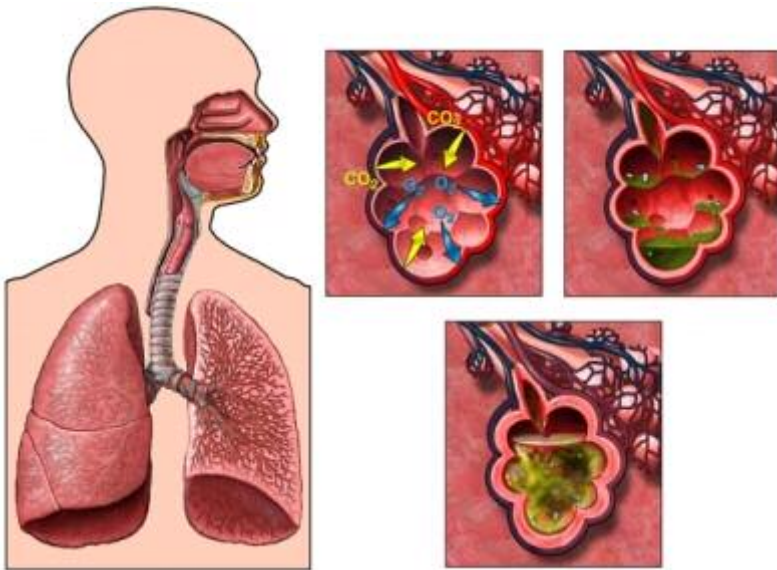
En Español (Spanish Version)

More In-Depth Information on This Condition

Definition

Pneumonia is an infection of the lungs. There are several different organisms that may cause it.

Development of Pneumonia in the Airsacs of the Lungs



The normal exchange of gases is interrupted by accumulated fluids.

©2008 Nucleus Medical Art, Inc.

Causes

Pneumonia affects the lower respiratory tract (small bronchi and air sacs in the lungs). There are three main causes:

- Bacterial pneumonia—caused by bacteria, most commonly *Streptococcus pneumoniae*
- Viral pneumonia—caused by a virus
 - Viruses cause half of all pneumonias.
- Atypical bacterial pneumonia—caused by mycoplasmas, chlamydias, or other tiny infectious agents that have traits of both bacteria and viruses
 - This type of pneumonia, often called "walking pneumonia," is thought of as a milder pneumonia. However, each of these infectious agents has the potential to cause a more serious or potentially fatal

pneumonia.

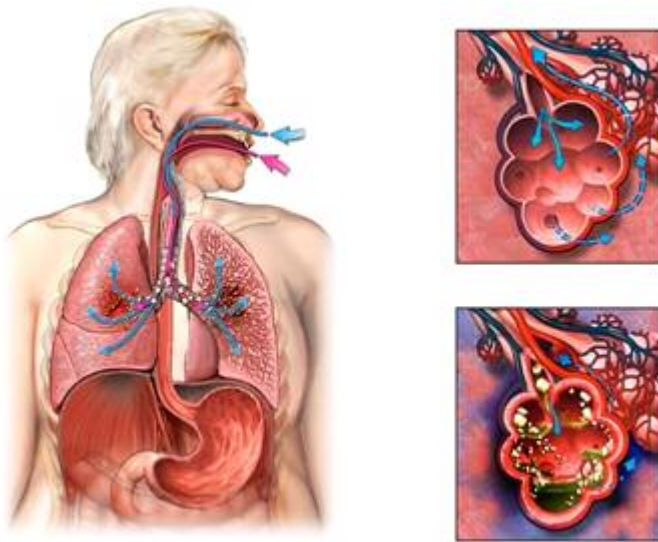
Other causes of pneumonia include:

- Fungal infections, such as *Pneumocystis carinii* pneumonia (PCP)—a fungal infection common in people with AIDS

Pneumonia is 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 etc.)
- Nosocomial pneumonia—acquired during hospitalization
 - It can be very dangerous, especially for patients on a ventilator.
- Aspiration pneumonia—happens when a foreign matter (often stomach content) is inhaled

Aspiration



©2008 Nucleus Medical Art, Inc.

Risk Factors

A risk factor is something that increases your chance of getting a disease or condition.

Risk factors include:

- Age: 65 or older
- Flu or other respiratory illness
- Chronic illness, such as heart or lung disease
- Stroke (aspiration pneumonia due to difficulty swallowing)
- Weakened immune system caused by AIDS or chemotherapy treatment
- 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, and perform a physical exam. Diagnosis is based on symptoms and listening to your chest with a stethoscope. Tests may include:

- Chest x-ray — 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 methods of treatment include:

Bacterial Pneumonia

Antibiotics

Viral Pneumonia

- Rest and fluids
- Antiviral medicines — may be prescribed for young children and patients with weakened immune systems

(Note: Antibiotics are ineffective for treating viral pneumonia.)

Atypical Pneumonia

Antibiotics

General

- Over-the-counter medicines to reduce fever and aches, and soothe the cough
- Hospitalization, for people with very severe symptoms

It is very important to take medicine exactly as prescribed. Stopping medicine midway may cause a relapse, or create a strain of bacteria resistant to drug treatment.

Prevention

Certain vaccines may prevent pneumonia:

Flu shot — for people at high risk, particularly the elderly, because pneumonia may be a complication of the flu

Pneumococcal vaccine — recommended for people over aged 65, or those who have a chronic illness, such as diabetes or sickle-cell disease, and children under two years old

Other preventive measures include :

- Avoid smoking. Smoking weakens the lungs' resistance to infection.
- Avoid close contact with people who have respiratory infections.
- Wash hands often when coming in contact with infected people.
- Protect yourself from exposures on the job that affect the lungs.
- Eat a healthy diet.
- 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/>

REFERENCES:

Blasi F, Aliberti S, Pappaletera M, Tarsia P. 100 years of respiratory medicine: pneumonia. Mar 21; [Epub ahead of print].

Respir Med .2007

Braunwald E, Harrison TR, Fauci AS, Kasper DL, Hauser SL, Jameson JL, et al.

Harrison's Principles of Internal

Medicine. 15th ed. Columbus, OH: McGraw-Hill; 2001.

Carpenter CC, Andreoli TE, Griggs RC. *Cecil Essentials of Medicine*. Philadelphia, PA: Elsevier Science; 2003.

Fleming CA, Balaguera HU, Craven DE. Risk factors for nosocomial pneumonia. Focus on prophylaxis. *Med Clin North Am*. 2001 Nov; 85(6): 1545-63. Review.

Niederman MS. Review of treatment guidelines for community-acquired pneumonia. *Am J Med*. 2004 Aug 2; 117 Suppl 3A: 51S-57S. Review.

Last reviewed March 2008 by Marcin Chwistek, MD

All EBSCO Publishing proprietary, consumer health and medical information found on this site is accredited by
URAC. URAC's Health Web Site Accreditation Program requires compliance with 53 rigorous standards of
quality and accountability, verified by independent audits.
To send comments or feedback to our Editorial Team regarding the content please email us at
HL Editorial Team@ebsohost.com.