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**Respiratory disorders**

**Pneumonia**

Pneumonia is an infection that inflames your lungs' air sacs (alveoli). The air sacs may fill up with fluid or pus, causing symptoms such as a cough, fever, chills and trouble breathing.

**causes of pneumonia**

There are more than 30 different causes of pneumonia,bacterial, viral, and fungul **pneumonia**

***Bacterial causes***

They have been classically studied under the subheadings "typical" and "atypical" organisms in terms of ease of culture positivity. Common typical organisms include *Pneumococcus*, *Haemophilus influenzae*, *Moraxella catarrhalis*, Group A *Streptococcus*, and other aerobic and anaerobic gram-negative organisms. Atypical organisms commonly seen in clinical practice include *Legionella*, *Mycoplasma*, *Chlamydia*, among others.[[7]](https://www.ncbi.nlm.nih.gov/books/NBK526116/) In the United States, the most common bacterial causes of CAP include *Streptococcus pneumoniae*, *Staphylococcus aureus*, *Mycoplasma pneumoniae*, and gram-negative enteric bacilli

***Viral causes***

It is often observed that viral species colonize nasopharynx of patients with CAP. Whether they are the primary cause or contribute to the pathogenesis by secondary bacterial causes is still being investigated. However, some of the most frequent viral agents implicated in CAP in the United States include influenza virus followed by respiratory syncytial virus, parainfluenza virus, and adenoviruses.

***Fungal causes***

Fungal infections are usually implicated in patients with certain predisposing immunocompromised states like HIV and organ transplant recipients, among others. However, often overlooked, some fungal species can cause pneumonia in immunocompetent individuals which results in a delay in diagnosis and leads to unfavorable outcomes. The 3 commonest ones in North America include *Histoplasma*, *Blastomyces*, and *Coccidioides*. [[](https://www.ncbi.nlm.nih.gov/books/NBK526116/)

**Symptoms of Pneumonia**

Pneumonia symptoms can vary from so mild you barely notice them, to so severe that hospitalization is required. How your body responds to pneumonia depends on the type germ causing the infection, your age and your overall health.

The signs and symptoms of pneumonia may include:

* [Cough](https://www.lung.org/lung-health-diseases/lung-disease-lookup/cough), which may produce greenish, yellow or even bloody mucus
* Fever, sweating and shaking chills
* [Shortness of breath](https://www.lung.org/lung-health-diseases/lung-disease-lookup/shortness-of-breath)
* Rapid, shallow breathing
* Sharp or stabbing chest pain that gets worse when you breathe deeply or cough
* Loss of appetite, low energy, and fatigue
* Nausea and vomiting, especially in small children
* Confusion, especially in older people

**Classification of pneumonia**

**Hospital-acquired pneumonia.** You catch this type during a stay in a hospital. It can be serious because the bacteria causing the pneumonia can be resistant to antibiotics.

**Community-acquired pneumonia.** This is a fancy way of saying you got infected somewhere other than a hospital or long-term care facility. Community-acquired pneumonia can be caused by bacteria, viruses, and fungi. Vaccines can help protect against the flu virus and certain bacteria that can also cause pneumonia.

**Aspiration pneumonia**, which happens when you breathe food, fluid, or vomit into your lungs. It's more likely if you have problems swallowing or coughing. If you can't cough up the material you took in, bacteria can multiply in your lungs.

**Respiratory acidosis** is a condition that occurs when the lungs cannot remove all of the carbon dioxide the body produces. This causes body fluids, especially the blood, to become too acidic.

**Respiratory alkalosis** is a primary decrease in carbon dioxide partial pressure (Pco2) with or without compensatory decrease in bicarbonate (HCO3−); pH may be high or near normal. Cause is an increase in respiratory rate or volume (hyperventilation) or both. Respiratory alkalosis can be acute or chronic

**Diagnose pneumonia**

A chest X-ray is often used. Blood tests, such as a complete blood count (CBC) to see whether your immune system is fighting an infection. Pulse oximetry to measure how much oxygen is in your blood. Pneumonia can keep your lungs from moving enough oxygen into your blood

**Treatment of pneumonia**

Mild **pneumonia** can usually be **treated** at home with **rest**, **antibiotics** (if it's likely be caused by a bacterial infection) and by **drinking plenty of fluids**. More severe cases may need **hospital treatment**