
Chronic Bronchitis

What is chronic bronchitis?

Chronic bronchitis is a long-term inflammation of the bronchi, which results in increased production of mucus, as well as other changes.

To be classified as chronic bronchitis:

- cough and expectoration must occur most days for at least three months per year, for two years in a row.
- other causes of symptoms, such as tuberculosis or other lung diseases, must be excluded.

What are the symptoms of chronic bronchitis?

The following are the most common symptoms for chronic bronchitis. However, each individual may experience symptoms differently. Symptoms may include:

- cough
- expectoration (spitting out) of mucus

Chronic bronchitis may cause:

- frequent and severe respiratory infections
- narrowing and plugging of the breathing tubes (bronchi)
- difficult breathing
- disability

Other symptoms may include:

- lips and skin may appear blue
- abnormal lung signs
- swelling of the feet
- heart failure

The symptoms of chronic bronchitis may resemble other lung conditions or medical problems. Consult your physician for a diagnosis.

What are the causes of chronic bronchitis?

In **acute bronchitis**, bacteria or viruses may be the cause, but in chronic bronchitis there is no specific organism recognized as the cause of the disease.

Cigarette smoking is cited as the most common contributor to chronic bronchitis, followed by:

- bacterial or viral infections
- environmental pollution

Chronic bronchitis is often associated with other pulmonary diseases such as:

- pulmonary emphysema
- pulmonary fibrosis
- asthma

- tuberculosis
- sinusitis
- upper respiratory infections

How is chronic bronchitis diagnosed?

In addition to a complete medical history and physical examination, your physician may request the following:

- **pulmonary function tests** - diagnostic tests that help to measure the lungs' ability to exchange oxygen and carbon dioxide appropriately. The tests are usually performed with special machines that the person must breathe into, and may include the following:
 - **spirometry** - a spirometer is a device used by your physician that assesses lung function. Spirometry, the evaluation of lung function with a spirometer, is one of the simplest, most common pulmonary function tests and may be necessary for any/all of the following reasons:
 - to determine how well the lungs receive, hold, and utilize air
 - to monitor a lung disease
 - to monitor the effectiveness of treatment
 - to determine the severity of a lung disease
 - to determine whether the lung disease is restrictive (decreased airflow) or obstructive (disruption of airflow)
 - **peak flow monitoring (PFM)** - a device used to measure the fastest speed in which a person can blow air out of the lungs. During an asthma or other respiratory flare up, the large airways in the lungs slowly begin to narrow. This will slow the speed of air leaving the lungs and can be measured by a PFM. This measurement is very important in evaluating how well or how poorly the disease is being controlled.
- **arterial blood gas (ABG)** - a blood test that is used to evaluate the lungs' ability to provide blood with oxygen and remove carbon dioxide, and to measure the pH (acidity) of the blood.
- **pulse oximetry** - an oximeter is a small machine that measures the amount of oxygen in the blood. To obtain this measurement, a small sensor (like a Band-Aid) is taped onto a finger or toe. When the machine is on, a small red light can be seen in the sensor. The sensor is painless and the red light does not get hot.
- **x-ray** - a diagnostic test which uses invisible electromagnetic energy beams to produce images of internal tissues, bones, and organs onto film.
- **computed tomography scan (Also called a CT or CAT scan.)** - a diagnostic imaging procedure that uses a combination of x-rays and computer technology to produce cross-sectional images (often called slices), both horizontally and vertically, of the body. A CT scan shows detailed images of any part of the body, including the bones, muscles, fat, and organs. CT scans are more detailed than general x-rays.

Treatment for chronic bronchitis:

Specific treatment for chronic bronchitis will be determined by your physician based on:

- your age, overall health, and medical history
- extent of the disease
- your tolerance for specific medications, procedures, or therapies
- expectations for the course of the disease
- your opinion or preference

Treatment may include:

- oral medications
- bronchodilators for inhaled medications
- oxygen supplementation from portable containers
- lung reduction surgery to remove damaged area of lung
- lung transplantation

What is Chronic Obstructive Pulmonary Disease (COPD)?

COPD is a term that refers to a large group of lung diseases which can interfere with normal breathing. It is estimated that nearly 16 million Americans have COPD. The two most common conditions of COPD are chronic bronchitis and emphysema.

The causes of COPD are not fully understood. It is generally agreed that the most important cause of chronic bronchitis and emphysema is cigarette smoking. Causes such as air pollution and occupational exposures may play a role, especially when combined with cigarette smoking. Heredity also plays a contributing role in some patients' emphysema, and is especially important in a rare form - due to alpha 1 anti-trypsin deficiency.

Patients with chronic bronchitis usually have a cough and sputum production for many years before they develop shortness of breath.

Patients with emphysema usually have shortness of breath and develop a cough and sputum during a respiratory infection, or in the later stages of the illness.