

## Asthma

### Definition

Asthma is a disease that causes the airways of the lungs to swell and narrow. It leads to wheezing, shortness of breath, chest tightness, and coughing.

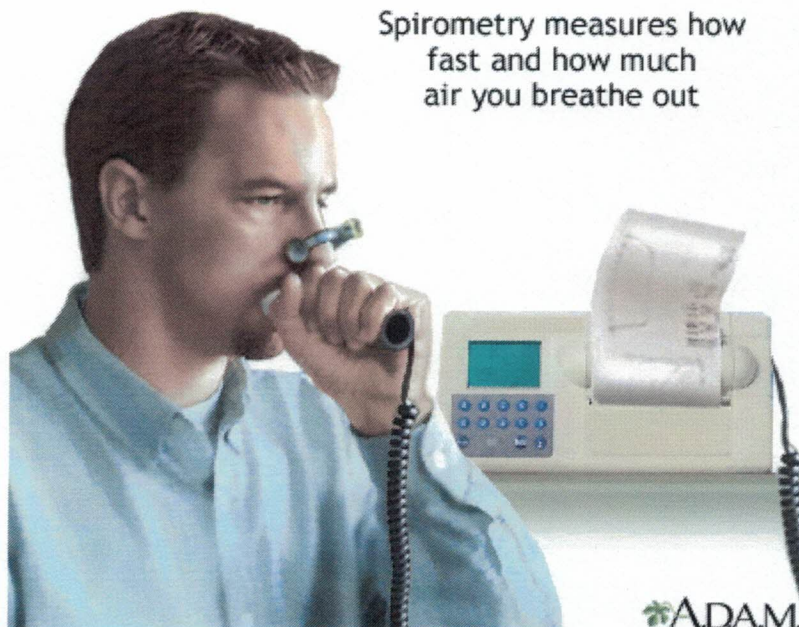
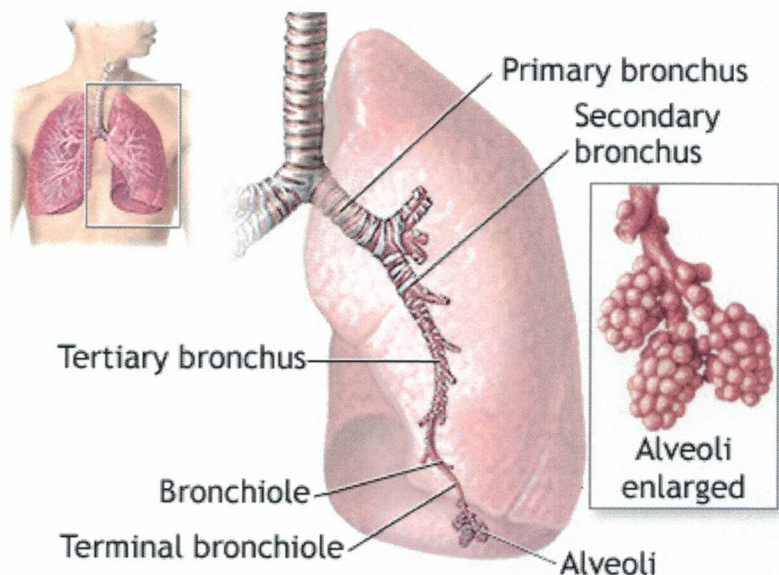
### Causes

Asthma is caused by swelling (inflammation) in the airways. When an asthma attack occurs, the lining of the air passages swells and the muscles surrounding the airways become tight. This reduces the amount of air that can pass through the airway.

In people who have sensitive airways, asthma symptoms can be triggered by breathing in substances called allergens or triggers.

Common asthma triggers include:

- Animals (pet hair or dander)
- Dust mites
- Certain medicines (aspirin and other NSAIDS)
- Changes in weather (most often cold weather)
- Chemicals in the air or in food
- Exercise
- Mold
- Pollen
- Respiratory infections, such as the common cold
- Strong emotions (stress)
- Tobacco smoke



Substances in some workplaces can also trigger asthma symptoms, leading to occupational asthma. The most common triggers are wood dust, grain dust, animal dander, fungi, or chemicals.

Many people with asthma have a personal or family history of allergies, such as hay fever (allergic rhinitis) or eczema. Others have no history of allergies.

### Symptoms

Most people with asthma have attacks separated by symptom-free periods. Some people have long-term shortness of breath with episodes of increased shortness of breath. Either wheezing or a cough may be the main

symptom.

Asthma attacks can last for minutes to days. Attacks can become dangerous if airflow is severely blocked.

Symptoms of asthma include:

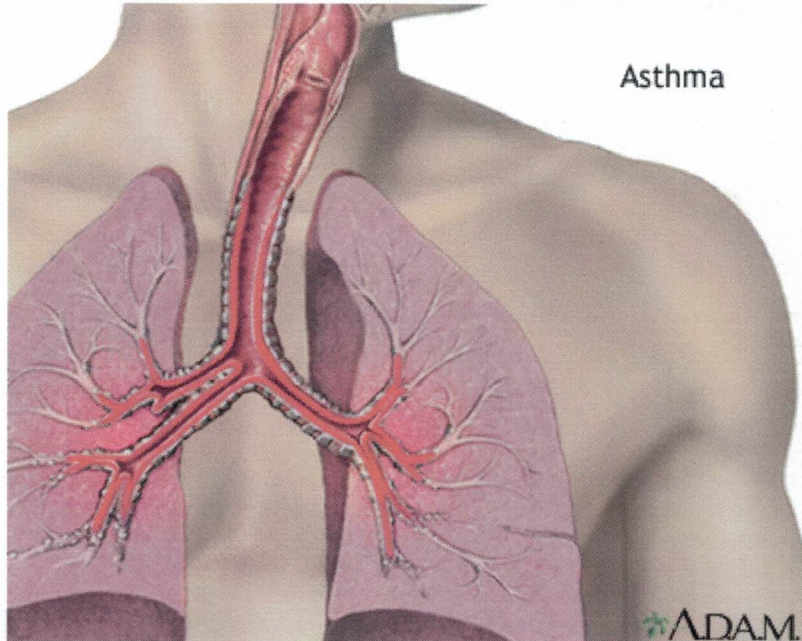
- Cough with or without sputum (phlegm) production
- Pulling in of the skin between the ribs when breathing (intercostal retractions)
- Shortness of breath that gets worse with exercise or activity
- Wheezing

Emergency symptoms that need prompt medical help include:

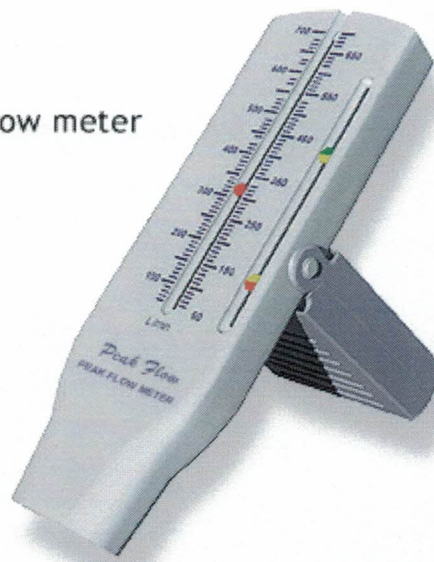
- Bluish color to the lips and face
- Decreased level of alertness, such as severe drowsiness or confusion, during an asthma attack
- Extreme difficulty breathing
- Rapid pulse
- Severe anxiety due to shortness of breath
- Sweating

Other symptoms that may occur:

- Abnormal breathing pattern -- breathing out takes more than twice as long as breathing in
- Breathing temporarily stops
- Chest pain
- Tightness in the chest



Peak flow meter



## Exams and Tests

The health care provider will use a stethoscope to listen to your lungs. Wheezing or other asthma-related sounds may be heard.

Tests that may be ordered include:

- Allergy testing -- skin or a blood test to see if a person with asthma is allergic to certain substances
- Arterial blood gas (usually only done with people who are having a severe asthma attack)
- Chest x-ray
- Lung function tests, including peak flow measurements

## Treatment

The goals of treatment are:

- Control airway swelling
- Stay away from substances that trigger your symptoms
- Help you to be able to do normal activities without asthma symptoms

You and your doctor should work as a team to manage your asthma. Follow your doctor's instructions on taking medicines, eliminating asthma triggers, and monitoring symptoms.

#### MEDICINES FOR ASTHMA

There are two kinds of medicines for treating asthma:

- Control medicines to help prevent attacks
- Quick-relief (rescue) medicines for use during attacks

#### LONG-TERM MEDICINES

These are also called maintenance or control medicines. They are used to prevent symptoms in people with moderate to severe asthma. You must take them every day for them to work. Take them even when you feel OK.

Some long-term medicines are breathed in (inhaled), such as steroids and long-acting beta-agonists. Others are taken by mouth (orally). Your doctor will prescribe the right medicine for you.

#### QUICK-RELIEF MEDICINES

These are also called rescue medicines. They are taken:

- For coughing, wheezing, trouble breathing, or an asthma attack
- Just before exercising to help prevent asthma symptoms caused by exercise

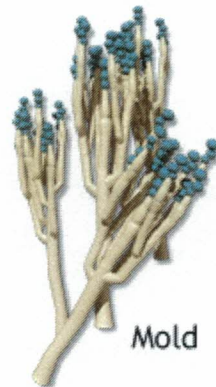
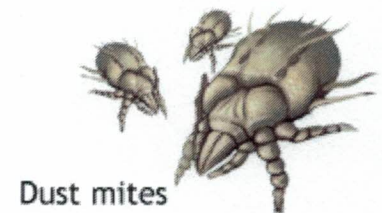
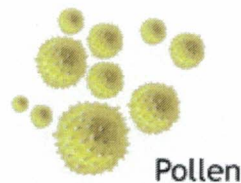
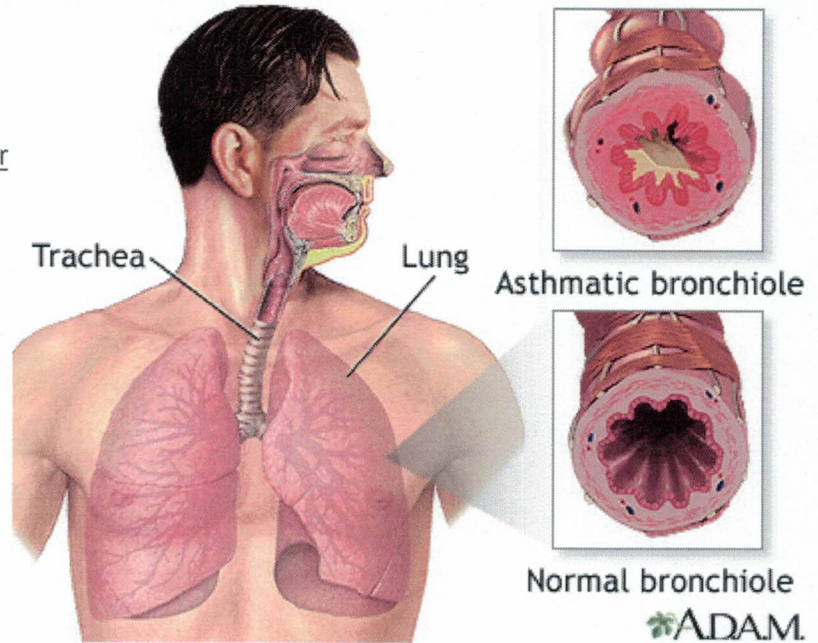
Tell your doctor if you are using quick-relief medicines twice a week or more. If so, your asthma may not be under control and your doctor may need to change your dose of daily control drugs.

Quick-relief medicines include:

- Short-acting inhaled bronchodilators
- Oral corticosteroids for when you have an asthma attack that is not going away

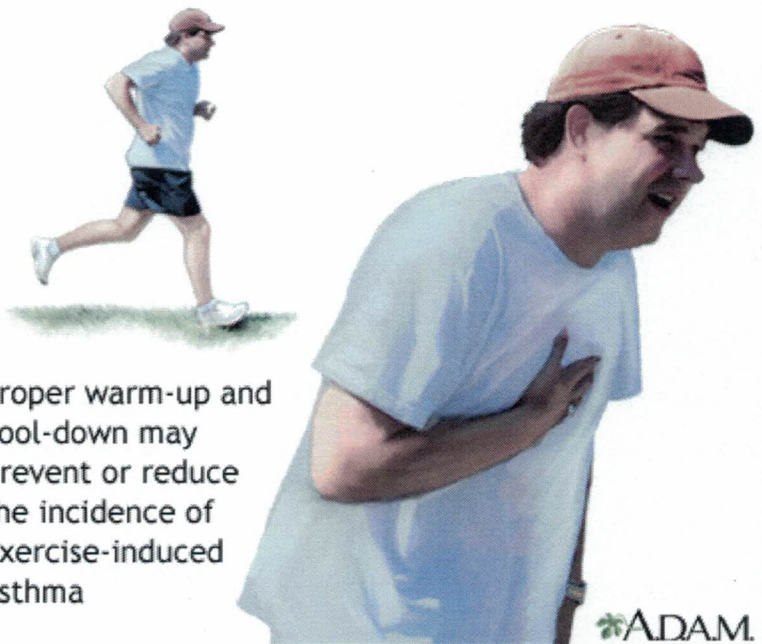
A severe asthma attack requires a checkup by a doctor. You may also need a hospital stay. There, you will likely be given oxygen, breathing assistance, and medicines given through a vein (IV).

#### ASTHMA CARE AT HOME



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- Know the asthma symptoms to watch for.
- Know how to take your peak flow reading and what it means.
- Know which triggers make your asthma worse and what to do when this happens.
- Know how to care for your asthma when you exercise.



Proper warm-up and cool-down may prevent or reduce the incidence of exercise-induced asthma

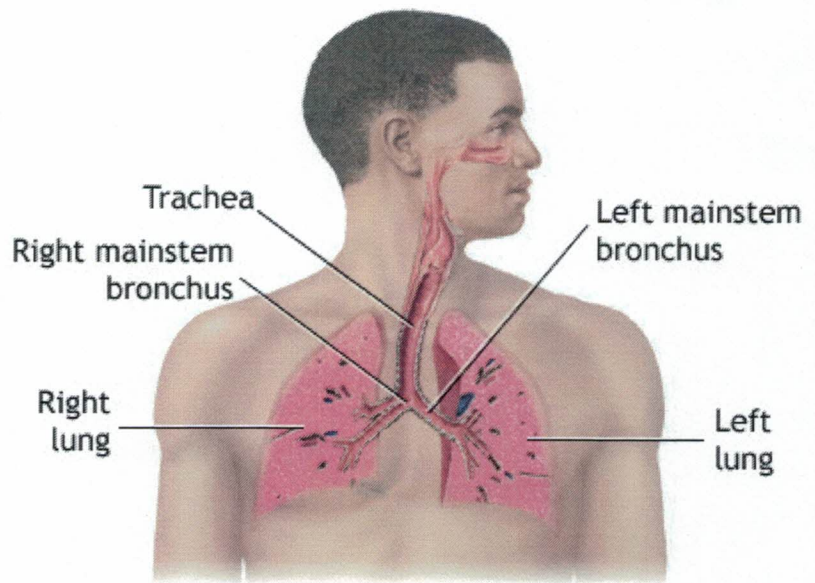
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Asthma action plans are written documents for managing asthma. An asthma action plan should include:

- Instructions for taking asthma medicines when your condition is stable
- A list of asthma triggers and how to avoid them
- How to recognize when your asthma is getting worse, and when to call your provider

A peak flow meter is a simple device to measure how quickly you can move air out of your lungs.

- It can help you see if an attack is coming, sometimes even before symptoms appear. Peak flow measurements help let you know when you need to take medicine or other action.
- Peak flow values of 50% to 80% of your best results are a sign of a moderate asthma attack. Numbers below 50% are a sign of a severe attack.



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### Outlook (Prognosis)

There is no cure for asthma, although symptoms sometimes improve over time. With proper self-management and medical treatment, most people with asthma can lead a normal life.

### Possible Complications

The complications of asthma can be severe, and may include:

- Death
- Decreased ability to exercise and take part in other activities
- Lack of sleep due to nighttime symptoms
- Permanent changes in the function of the lungs
- Persistent cough
- Trouble breathing that requires breathing assistance (ventilator)

## When to Contact a Medical Professional

Call for an appointment with your provider if asthma symptoms develop.

Call your provider or go to the emergency room if:

- An asthma attack requires more medicine than recommended
- Symptoms get worse or do not improve with treatment
- You have shortness of breath while talking
- Your peak flow measurement is 50% to 80% of your personal best

Go to the emergency room if these symptoms occur:

- Drowsiness or confusion
- Severe shortness of breath at rest
- A peak flow measurement of less than 50% of your personal best
- Severe chest pain
- Bluish color to the lips and face
- Extreme difficulty breathing
- Rapid pulse
- Severe anxiety due to shortness of breath

## Prevention

You can reduce asthma symptoms by avoiding triggers and substances that irritate the airways.

- Cover bedding with allergy-proof casings to reduce exposure to dust mites.
- Remove carpets from bedrooms and vacuum regularly.
- Use only unscented detergents and cleaning materials in the home.
- Keep humidity levels low and fix leaks to reduce the growth of organisms such as mold.
- Keep the house clean and keep food in containers and out of bedrooms. This helps reduce the possibility of cockroaches. Body parts and droppings from cockroaches can trigger asthma attacks in some people.
- If someone is allergic to an animal that cannot be removed from the home, the animal should be kept out of the bedroom. Place filtering material over the heating outlets to trap animal dander. Change the filter in furnaces and air conditioners often.
- Eliminate tobacco smoke from the home. This is the single most important thing a family can do to help someone with asthma. Smoking outside the house is not enough. Family members and visitors who smoke outside carry smoke residue inside on their clothes and hair. This can trigger asthma symptoms. If you smoke, now is a good time to quit.



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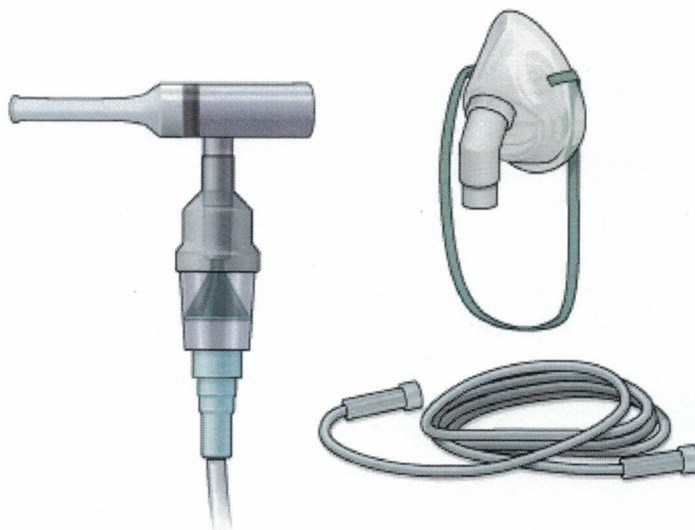
- Avoid air pollution, industrial dust, and irritating fumes as much as possible.

## Alternative Names

Bronchial asthma; Wheezing - asthma - adults

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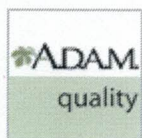
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