

## What Is Asthma?

Asthma (AZ-ma) is a chronic (long-term) lung disease that inflames and narrows the airways. Asthma causes recurring periods of wheezing (a whistling sound when you breathe), chest tightness, shortness of breath, and [coughing](#). The coughing often occurs at night or early in the morning.

### Overview

To understand asthma, it helps to know how the [airways](#) work. The airways are tubes that carry air into and out of your lungs. People who have asthma have inflamed airways. The inflammation makes the airways swollen and very sensitive. The airways tend to react strongly to certain inhaled substances.

When the airways react, the muscles around them tighten. This narrows the airways, causing less air to flow into the lungs. The swelling also can worsen, making the airways even narrower. Cells in the airways might make more mucus than usual. Mucus is a sticky, thick liquid that can further narrow the airways.

This chain reaction can result in asthma symptoms. Symptoms can happen each time the airways are inflamed.

### Asthma

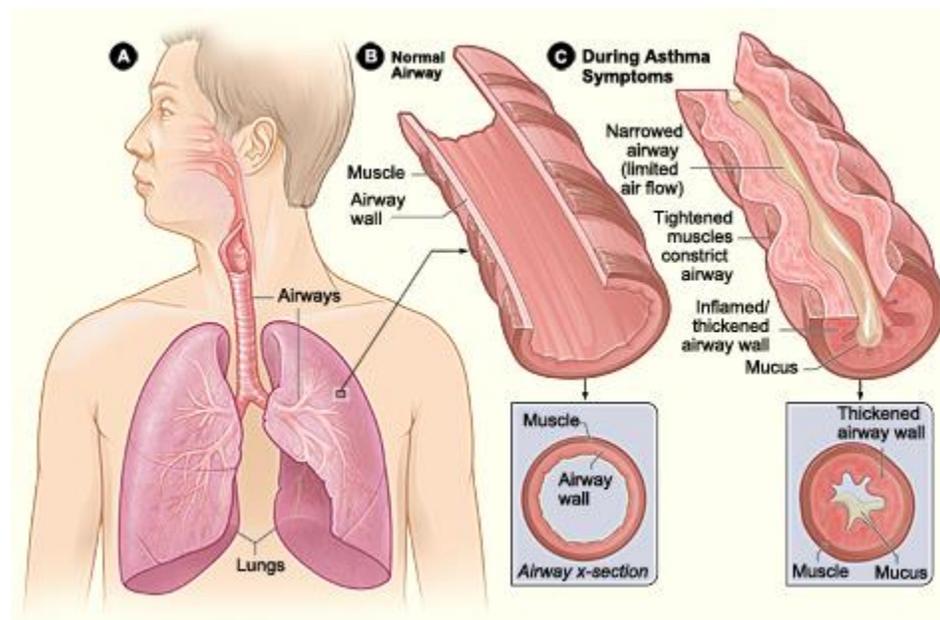


Figure A shows the location of the lungs and airways in the body. Figure B shows a cross-section of a normal airway. Figure C shows a cross-section of an airway during asthma symptoms.

Sometimes asthma symptoms are mild and go away on their own or after minimal treatment with asthma medicine. Other times, symptoms continue to get worse.

When symptoms get more intense and/or more symptoms occur, you're having an asthma attack. Asthma attacks also are called flareups or exacerbations (eg-zas-er-BA-shuns).

Treating symptoms when you first notice them is important. This will help prevent the symptoms from worsening and causing a severe asthma attack. Severe asthma attacks may require emergency care, and they can be fatal.

### Outlook



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Asthma has no cure. Even when you feel fine, you still have the disease and it can flare up at any time.

However, with today's knowledge and treatments, most people who have asthma are able to manage the disease. They have few, if any, symptoms. They can live normal, active lives and sleep through the night without interruption from asthma.

## What Causes Asthma?

The exact cause of asthma isn't known. Researchers think some genetic and environmental factors interact to cause asthma, most often early in life. These factors include:

- An inherited tendency to develop allergies, called atopy (AT-o-pe)
- Parents who have asthma
- Certain respiratory infections during childhood
- Contact with some airborne allergens or exposure to some viral infections in infancy or in early childhood when the immune system is developing

If asthma or atopy runs in your family, exposure to irritants (for example, tobacco smoke) may make your airways more reactive to substances in the air.

Some factors may be more likely to cause asthma in some people than in others. Researchers continue to explore what causes asthma.

## Who Is at Risk for Asthma?

Asthma affects people of all ages, but it most often starts during childhood. In the United States, more than 22 million people are known to have asthma. Nearly 6 million of these people are children.

Young children who often wheeze and have respiratory infections—as well as certain other risk factors—are at highest risk of developing asthma that continues beyond 6 years of age. The other risk factors include having allergies, eczema (an allergic skin condition), or parents who have asthma.

Among children, more boys have asthma than girls. But among adults, more women have the disease than men. It's not clear whether or how sex and sex hormones play a role in causing asthma.

Most, but not all, people who have asthma have allergies.

Some people develop asthma because of contact with certain chemical irritants or industrial dusts in the workplace. This type of asthma is called occupational asthma.

## What Are the Signs and Symptoms of Asthma?

Common signs and symptoms of asthma include:

- **Coughing.** Coughing from asthma often is worse at night or early in the morning, making it hard to sleep.
  - **Wheezing.** Wheezing is a whistling or squeaky sound that occurs when you breathe.
  - **Chest tightness.** This may feel like something is squeezing or sitting on your chest.
  - **Shortness of breath.** Some people who have asthma say they can't catch their breath or they feel out of breath. You may feel like you cannot get air out of your lungs.
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Not all people who have asthma have these symptoms. Likewise, having these symptoms doesn't always mean that you have asthma. The best way to diagnose asthma for certain is to use a [lung function test](#), a medical history (including type and frequency of symptoms), and a physical exam.

The types of asthma symptoms you have, how often they occur, and how severe they are may vary over time. Sometimes your symptoms may just annoy you. Other times, they may be troublesome enough to limit your daily routine.

Severe symptoms can be fatal. It's important to treat symptoms when you first notice them so they don't become severe.

With proper treatment, most people who have asthma can expect to have few, if any, symptoms either during the day or at night.

### **What Causes Asthma Symptoms To Occur?**

Many things can trigger or worsen asthma symptoms. Your doctor will help you find out which things (sometimes called triggers) may cause your asthma to flare up if you come in contact with them. Triggers may include:

- Allergens from dust, animal fur, cockroaches, mold, and pollens from trees, grasses, and flowers
- Irritants such as cigarette smoke, air pollution, chemicals or dust in the workplace, compounds in home décor products, and sprays (such as hairspray)
- Medicines such as aspirin or other nonsteroidal anti-inflammatory drugs and nonselective beta-blockers
- Sulfites in foods and drinks
- Viral upper respiratory infections, such as colds
- Physical activity, including exercise

Other health conditions can make asthma harder to manage. Examples of these conditions include a runny nose, sinus infections, reflux disease, psychological stress, and [sleep apnea](#). These conditions need treatment as part of an overall asthma care plan.

## **How Is Asthma Treated and Controlled?**

Asthma is a long-term disease that has no cure. The goal of asthma treatment is to control the disease. Good asthma control will:

- Prevent chronic and troublesome symptoms, such as [coughing](#) and shortness of breath
- Reduce your need for quick-relief medicines (see below)
- Help you maintain good lung function
- Let you maintain your normal activity level and sleep through the night
- Prevent asthma attacks that could result in an emergency room visit or hospital stay

Asthma is treated with two types of medicines: long-term control and quick-relief medicines. Long-term control medicines help reduce airway inflammation and prevent asthma symptoms. Quick-relief, or "rescue," medicines relieve asthma symptoms that may flare up.

Your initial treatment will depend on the severity of your asthma. Followup asthma treatment will depend on how well your asthma action plan is controlling your symptoms and preventing asthma attacks.

Your level of asthma control can vary over time and with changes in your home, school, or work environments. These changes can alter how often you're exposed to the factors that can worsen your asthma.

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Your doctor may need to increase your medicine if your asthma doesn't stay under control. On the other hand, if your asthma is well controlled for several months, your doctor may decrease your medicine. These adjustments to your medicine will help you maintain the best control possible with the least amount of medicine necessary..

### ***Avoid Things That Can Worsen Your Asthma***

Many common things (called asthma triggers) can set off or worsen your asthma symptoms. Once you know what these things are, you can take steps to control many of them.

For example, exposure to pollens or air pollution might make your asthma worse. If so, try to limit time outdoors when the levels of these substances in the outdoor air are high. If animal fur triggers your asthma symptoms, keep pets with fur out of your home or bedroom.

One possible asthma trigger you should not avoid is physical activity. Physical activity is an important part of a healthy lifestyle.

You may need to see a specialist if you're thinking about getting allergy shots. These shots can lessen or prevent your asthma symptoms, but they cannot cure your asthma.

Several health conditions can make asthma harder to manage. These conditions include runny nose, sinus infections, reflux disease, psychological stress, and [sleep apnea](#). Your doctor will treat these conditions as well.