

What Is Asthma?

Asthma is a chronic disease that affects the airways of your lungs. Your airways are the breathing tubes that carry air in and out of your lungs. When you have asthma, your airways become swollen.

This swelling (inflammation) causes the airways to make thick, sticky secretions called **mucus**. Asthma also causes the muscles in and around your airways to get very tight or **constrict**. This **swelling, mucus, and tight muscles** can make your airways narrower than normal and it becomes very hard for you to get air into and out of your lungs.

How do I know if I have Asthma?

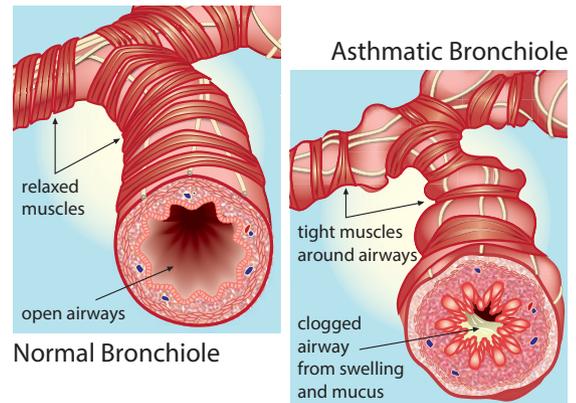
The most common symptoms of asthma are shortness of breath (see ATS Series on Breathlessness at http://patients.thoracic.org/information-series/en/resources/ATS_Patient_Ed_Breathlessness.pdf), wheezing, chest tightness, and cough. You may have days when you have every symptom and other days you may have no symptoms. When you do have asthma symptoms, you may feel like you are breathing through a straw. You may also hear **wheezing** (a whistling or squeaking sound) as air tries to move through your narrowed airways. You may also **cough**, most often at night or early in the morning. Chest pain, chest pressure, or a feeling of **tightness** in your chest can be other symptoms of asthma.

An "asthma attack" describes very severe symptoms. During an asthma attack, you may breathe so fast that you may have a hard time talking. Coughing, wheezing, and chest tightness can cause you to feel anxious or scared. This may make you feel even more short of breath. Although rare, low oxygen levels in your blood may cause your fingertips and lips to turn blue or gray. If you think that you are having a severe asthma attack, you should immediately seek emergency care.

What causes Asthma?

Asthma can be inherited or passed down to you from your parents through their genes, or you may have no history of asthma in your family (See Patient Information Series: *Genetics and Lung Disease* at <http://patients.thoracic.org/information-series/patient-health/PHSGeneticsandLungDisease.pdf>). If you have asthma, your airways are more sensitive than normal. Your airways can get irritated and tighten very easily by a variety of things called "triggers." Examples of "triggers" are:

Allergies: If you have allergies, you may also be more likely to have asthma. This type of asthma often begins in children, but can happen in adults as well. Common allergens (things that cause allergies) are pollen from weeds, trees, and grass, mold, cockroach droppings, dander from cats or dogs and dust mites. These can cause sneezing, wheezing, itchy eyes and a runny nose. If the lungs are irritated enough, the allergens can cause an asthma attack.



Respiratory infections: Frequent lung or sinus infections can also cause asthma. Infections can trigger longer episodes of wheezing or shortness of breath than those from allergies. In fact, respiratory viruses are the most common cause of asthma attacks that are bad enough to keep you home from school or work.

Irritants that can also cause asthma are:

- Exhaust fumes from cars, buses, trucks etc.
- Chemicals like garden sprays
- Molds and dust
- Strong odors from paint, perfumes, colognes, hair spray, deodorants, and cleaning products
- Tobacco smoke from cigarettes, pipes, or cigars
- Temperature or weather changes
- Stress or exercise (See ATS Patient Information Series: *Asthma and Exercise for Children and Adults* at <http://patients.thoracic.org/information-series/en/resources/asthma-and-exercise-for-children-and-adults.pdf>)
- Medications, including aspirin and beta-blockers (heart or blood pressure medicine)
- Sulfites in foods such as dried fruits, wine and beer

How is Asthma Diagnosed?

Asthma **cannot** be diagnosed without a breathing test. So, if you think you may have asthma, tell your health care provider (HCP) about all of your symptoms. If your HCP thinks your symptoms may be from asthma, they will ask you to have a **breathing test** called a pulmonary function test or spirometry test (See Patient Education Series: *Pulmonary Function Tests* at <http://patients.thoracic.org/information-series/en/resources/pulmonary-function-tests.pdf>). Because there are many types of asthma and many different things that can cause asthma (or appear to be asthma), your HCP may want you to have additional tests. Blood tests for allergies or for detecting problems with your immune system may also be ordered.

If your asthma is not getting better after you start treatment, you might benefit from seeing an asthma specialist. Sometimes, other diseases can act like asthma. The asthma specialist may do more testing to find the specific cause of your asthma or things that may be making it worse. Testing may also be done to test if your symptoms are caused by another disease such as vocal cord dysfunction (See Patient Information Series: *What is Vocal Cord Dysfunction?* <http://patients.thoracic.org/information-series/en/resources/vocal-cord-dysfunction.pdf>)

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How is Asthma Treated?

Once you are diagnosed with asthma, it is very important that you work closely with your HCP to control your asthma. You and your HCP will write an **Action Plan** that you will follow to treat your symptoms and improve your breathing. Your Action Plan will include when to take your medications, what you can do in your daily life to avoid triggers, and how to monitor your breathing.

Medications will be prescribed that keep your airways open and reduce swelling, so air can move in and out of your lungs more easily. You will be given an inhaler (see ATS Patient Information Series on inhaler use with and without spacer at <http://patients.thoracic.org/information-series/en/resources/patient-inhaler.pdf>), but you may also be given a pill as well as an inhaler. The most important thing about controlling your asthma is that you must take the medicine exactly as instructed by your HCP. When you use the medication correctly, you should be able to prevent your asthma symptoms.

- Short-acting (**relief or rescue**) bronchodilators, such as albuterol or levalbuterol, relax the muscles around your airways.
- Long-acting medicines (**controllers**) include inhaled corticosteroids (e.g. beclomethasone, budesonide, ciclesonide, flunisolide, fluticasone, mometasone) or inhaled corticosteroids in combination with long-acting bronchodilators (e.g. formoterol or salmeterol). These medications must be taken on a regular basis and are designed to keep your airways open over time. Inhaled corticosteroids decrease the swelling in your airways, so that they are less likely to be irritated by triggers. Long acting bronchodilators are never used alone as a controller in asthma; inhaled bronchodilators are to be taken at the same time as corticosteroids, often both are in the same inhaler. Pills, including leukotriene modifying drugs (montelukast, zafirlukast, zileuton) and theophylline, may also be prescribed. These drugs are not usually as effective as corticosteroids and long-acting bronchodilators.

Lifestyle management begins with learning what specific “triggers” may be causing your asthma symptoms. Keep a journal (or diary) to track your day-to-day activities along with any symptoms that you may be having during the day or at night. Once you know what may be causing your asthma, you can then try to stay away from those triggers.

Peak flow monitoring is often recommended. By blowing into a peak flow meter each day, you can see how well you are breathing. Sometimes your peak flow reading can make you aware that your asthma is worsening before you have symptoms. When your peak flow reading is high, you should generally be breathing well. When your lungs are tight, your peak flow reading will be lower. At these times, you may be asked to increase your medications, as outlined in your Action Plan. The goal of peak flow monitoring is to help guide you to prevent an asthma attack.

What can I do to prevent my asthma from getting out of control?

Medications: Take your asthma medication exactly as your HCP tells you. Work with your HCP to find a treatment plan

that controls your asthma. Carry your relief/rescue inhaler with you at all times and follow the directions on your Action Plan for when to use it.

Regular visits to your HCP: Keep your regularly scheduled visits with your HCP so that your asthma can be monitored and treated before it gets out of control. Be sure to know how to contact your HCP and know what to do in case of an emergency. This information will be on your Action Plan.

Stay healthy: Eat nutritious foods and get regular exercise. Avoid people who smoke and those that may have an infection, especially a cold or the flu.

Prevent the flu and pneumonia: Get a yearly flu shot (vaccine) and a vaccine for pneumonia, as recommended by your HCP.

Cope with stress: Learn new ways to cope with stress. Coping with stress can help prevent and control your asthma.

By taking an active role in the management of your asthma by partnering with your HCP, you can breathe easier and live a healthier life.

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Resources:

American Thoracic Society (ATS) <http://patients.thoracic.org/information-series/index.php>

National Heart, Lung, & Blood Institute (NHLBI) <http://www.nhlbi.nih.gov/health/health-topics/topics/asthma/>

American Lung Association (ALA) <http://www.lung.org/lung-disease/asthma/>

Asthma and Allergy Foundation of America www.aafa.org

Rx Action Steps

- ✓ Develop a written asthma Action Plan with your Health Care Provider
- ✓ To get the most benefit from your inhalers, be sure that you are using them correctly by showing your HCP how you use them
- ✓ Have your relief (rescue) inhaler with you at all times
- ✓ Know your asthma “triggers” and take steps to avoid or minimize exposure to them
- ✓ See your HCP at least yearly to review your Action Plan and have breathing tests done every 1 to 2 years or when your asthma symptoms worsen.

**Health Care Provider’s Contact Numbers/
E-mail Address:**
