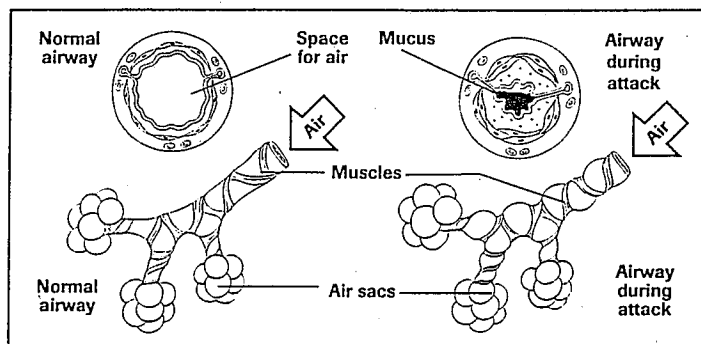


Understanding Asthma

What is asthma?

Asthma is a chronic lung disease that makes breathing difficult. During an episode of asthma, the lining of the airways, or bronchial tubes, becomes inflamed and swollen. Surrounding muscles become tighter so that the airways are even narrower. A thick mucus is also produced, which further blocks breathing. Although asthma cannot be cured, its symptoms can be controlled with the help of your doctor and a manageable treatment plan.



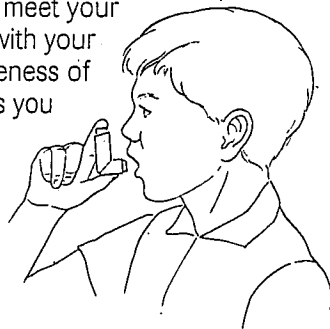
What are the symptoms of asthma?

Typical symptoms include shortness of breath, tightness in the chest, wheezing, and coughing.

How is asthma diagnosed and treated?

Asthma is best diagnosed with a visit to your doctor, who will evaluate your medical and family history. A physical exam will also be necessary, during which your doctor will listen to your breathing. Certain lab tests are also helpful in diagnosing asthma. These tests determine pulmonary function, blood counts, and allergies.

While there is no cure for asthma, there are a number of ways to control asthma symptoms. Your doctor will prescribe asthma medications to meet your needs. You should work closely with your doctor and report on the effectiveness of the medicine and any side effects you may experience. You should also try to discover what triggers an asthma attack. Together, you and your doctor can develop a medication plan and treatment plan that work best for you.



Two kinds of medicines are prescribed to treat asthma — bronchodilators and anti-inflammatory agents. One kind of bronchodilator acts quickly to relax the muscles that tighten around airways. They are available to provide rapid onset of relief. These are referred to as short-acting bronchodilators.

There are also long-acting bronchodilators that help prevent episodes of asthma. This type of bronchodilator should not be taken for treatment of sudden symptoms. Anti-inflammatory medicines, such as corticosteroids and cromolyn, take longer to work than bronchodilators. They are used to prevent and reduce inflammation and swelling of the airways.

What causes asthma?

The exact cause of asthma is not known, but it does seem to run in families.

Patients with asthma may be supersensitive to various substances and environmental conditions that are normally harmless. Some common triggers may include allergens such as pollen, animal dander, dust, and dust mites as well as irritants such as smoke, fumes, and strong odors. Other triggers can be changes in the weather or temperature, certain drugs, and food additives.

Nocturnal asthma, or asthma symptoms that occur at night, can be related to a number of factors including allergens in the bedroom, late responses to triggers exposed to during the day, heartburn, and even the drop in body temperature that occurs during sleep.

Exercise-induced asthma involves asthma symptoms that occur during or immediately following activity.

Take an active role in your own therapy. What you can do —

Managing your asthma correctly is the most important effort you can make to ensure that you lead a normal and healthy life. Your best start is forming a strong partnership with your doctor. Together you can develop a personalized treatment plan to help control your symptoms.

Eat right, exercise, and get enough rest. Know your asthma triggers and ways to avoid contact with them. Watch for warning signs of an episode so that you can begin treatment quickly and effectively with the proper dose of prescribed medicine. Stay calm when symptoms do arise and ask for help from family, friends, or your doctor when you need it.

If your medication does not seem to alleviate your symptoms, seek the medical care you need immediately. Be sure those around you are aware of your condition and teach them ways they can assist you when urgent help is needed. Keep emergency information and important phone numbers handy.

What you should avoid —

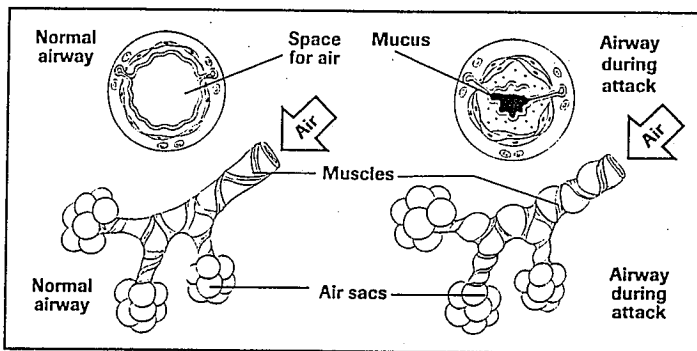
Preventing episodes of asthma becomes easier and more manageable when you know your triggers. Make some practical changes in your environment by removing as many irritants as you can. Asthma is a controllable disease that should not prevent you from enjoying a healthy and active life. See your doctor regularly and use your medications properly. Remember that you're in control!



Exercise-Induced Asthma

What is asthma?

In asthma, the airways in the lungs become swollen and inflamed and the muscles around them tighten. Excess mucus is also produced. All this makes it very difficult to breathe.



Signs of asthma include rapid and labored breathing, a whistling or wheezing sound with each breath, a cough, and a tightness in the chest. These symptoms occur during an asthma attack and may be triggered by many different factors.

What causes asthma?

The tendency to develop asthma may be inherited. Asthma is a noncontagious disease that may "run in the family."

Many factors can trigger asthma attacks. However, being aware of these triggers will allow you to control your condition more effectively.

The following factors have been found to cause asthma attacks:

- Airborne substances including pollen, dust, animal dander, smoke, automobile exhaust, and certain chemicals.
- Emotional stress such as excitement, anxiety, or even prolonged laughing or crying.
- Respiratory infections.
- Environmental changes in humidity or temperature.
- Strenuous exercise.

Exercise-induced asthma

For some people with asthma, exercise is the only trigger of an attack. Exercise-induced asthma occurs when the airways in the chest narrow and constrict within a few minutes after exercise. Usually the attack reaches its peak about 5 to 10 minutes after you stop exercising and continues for another 20 to 30 minutes.

If untreated, exercise-induced asthma can disrupt your life and prevent you from participating in many of the activities that you enjoy. The attacks may last only a few minutes, but they can be very frightening and can cause you to limit your activities unnecessarily.

This does not have to happen to you. By following your doctor's treatment plan and taking certain measures to control your asthma, you can participate in almost any activity you choose.

Controlling exercise-induced asthma

The goal of treatment in exercise-induced asthma is to allow you to participate in physical activities without experiencing asthma symptoms. You can work with your doctor to develop a plan to manage and control your condition. Here are some strategies that you may want to include in your management plan:

- Keep a diary of your activities, noting when you experience symptoms and what measures relieve those symptoms. Review this diary with your doctor so that you can evaluate the effectiveness of your treatment plan.
- Discuss with your doctor the appropriate time to take your medication in relation to your exercise schedule.
- Assess your present activity level. Evaluate the kinds of activities you can do and the length of time in which you are able to do them. Talk to your doctor about increasing your participation in these activities or even trying new ones.
- Pace yourself and rest, if necessary, during physical exertion. It may also help to do warm-up and cool-down exercises before beginning an activity.
- Talk about your asthma with family, friends, and even teachers and coworkers. Information about your asthma and ways to help you will increase their understanding and enhance their support.

Avoiding Asthma Triggers

Home Environment

For patients with asthma, the ideal atmosphere is as free as possible of asthma triggers. While it may be impossible to remove every trigger from your home, you can alter some things to provide cleaner and healthier air.

Air-conditioning may offer relief from some airborne triggers. If air-conditioning every room is not an option, then a window unit for your bedroom is a smart alternative. And, in houses with forced-air heat, a filter or damp cheesecloth over vents can trap airborne particles.

The simpler your decor, the better. Remove as many dust-trapping items as possible.

Ornate and upholstered furniture, knickknacks, draperies, and floor coverings are notorious collectors of dust. Opt for furnishings that are easily cleaned, such as

vinyl-covered couches, washable shades, and wood or linoleum flooring. And, when cleaning your home, a dampened dust cloth will attract particles and keep them from becoming airborne.

In your bedroom, choose Dacron or other synthetic pillows. Cover mattress and box spring with allergen-proof covers for additional protection. Use washable cotton or synthetic bedding.

Prevent situations that encourage mold to form. Keep bathrooms clean and dry. Install a dehumidifier. Check foods for spoilage. Dry your freshly laundered clothes promptly. And, don't cultivate a lot of houseplants since moist potting soil can be a haven for mold.

Avoid exposure to pets, particularly cats. Animal dander and animal saliva are known allergens. Do not smoke, and initiate a no-smoking policy in the home. If these efforts are not possible, designate pets and smokers to areas outdoors or at least to rooms in the house that are far removed from your bedroom. This will ensure that you have a healthy retreat when needed.

Work Environment

Air-conditioning may be effective in the workplace for reducing the number of airborne allergens. Air filtration systems are an additional help, provided they are used properly and maintained.

When you identify triggers that may provoke an asthma episode, minimize your exposure to them. Heavy scents,

smoke, and fumes may aggravate asthma symptoms. Investigate the possibility of relocating your work area or, at the very least, modifying working conditions. For example, you might ask your supervisor to initiate a no-smoking policy or to limit smoking to designated areas of the building.

Stress can also be a contributor to asthma episodes. Tension and anxiety cause your airway muscles to tighten, making breathing more difficult. Try stress reduction techniques to help you relax and to put you more in control of your asthma.

Foods and Drugs

An asthma episode can also be triggered by things you eat or medicine you take.

Processed foods contain chemicals, called sulfiting agents, which are added as

preservatives. Foods that may contain these chemicals include dried fruits, fruit juices, vegetables, and wines. Many patients may need to avoid sulfiting agents because these chemicals may initiate an asthma episode. Other foods can cause you to experience an allergic reaction that may trigger an asthma

episode. The most common culprits are cheese and dairy products, citrus fruits, tomatoes, seafood, and corn.

Certain drugs have been identified as asthma triggers. Aspirin and aspirin-like medicines are likely to instigate the occurrence of symptoms in those who encounter recurring sinusitis and have nasal polyps. Beta-adrenergic blocking agents, which are used to treat migraines, rapid heart rate, congestive heart failure, tremor, and glaucoma, are also known to provoke asthma episodes.

It is important to always follow the advice of your doctor. Be sure to ask if there are any foods or drugs you should avoid. Don't take any medications other than those for your asthma without first asking your doctor. And, be sure to notify your doctor when you experience any unusual reactions to foods or drugs.

