



Patient Information

Clearing the Air on Asthma

Asthma (**az**-muh), a chronic disease in the lungs, causes difficulty breathing and, without treatment, can produce symptoms that interfere with daily activities. Breathing becomes more difficult when the airways (tubes that carry air into and out of your lungs) produce extra mucus (**myoo**-kuhs), a sticky, thick liquid that can narrow the airway passages. When airways become blocked or narrowed, the muscles around them also tighten, preventing a sufficient amount of air to enter the lungs. The chain reaction then results in asthma symptoms.

People who have asthma have inflamed airways that are swollen and sensitive, and experience a strong reaction to certain substances that are inhaled. Complications of the disease may include symptoms that interfere with sleep, work, or recreational activities. The effects of asthma usually are temporary, but they do still cause shortness of breath, breathing trouble, and other symptoms.

In some cases, symptoms continue to get worse and you may experience an asthma attack, commonly referred to as a flare-up or exacerbation. A severe asthma attack can be avoided by treating your symptoms as soon as you notice them. Severe asthma attacks may require emergency care, and in some cases, cause death.

How do I know if I'm at risk?

People of any race, age, or sex can be affected by asthma. It is unclear why some people get the disease and others don't, but it is assumed to be a combination of

environmental and genetic or inherited factors. If asthma is diagnosed in a blood relative, you will be at a greater risk; having a mother who smoked during pregnancy also is a risk factor. Exposure to airborne allergens, such as dust mites or pet dander, may make your airways more reactive to inhaled substances if asthma runs in your family. Being a smoker and/or being exposed to secondhand smoke also will put you at a higher risk for developing asthma.

What are the warning signs?

Symptoms of asthma vary from person to person and can range in severity. The most common warning signs of asthma are coughing and shortness of breath. Wheezing, a whistling or squeaky sound that occurs when you breathe, also is a common symptom of asthma. In some cases, symptoms are a minor nuisance that cause you to limit your daily routine. However, if the symptoms are creating a major problem that interferes with your daily activities, you may be at risk of a life-threatening asthma attack.

Asthma flare-ups may be triggered by exercise; by the environment in your workplace if chemical fumes, gases, or dust are present; or by particular allergens, such as pet dander and pollen. With proper treatment, most asthma patients can expect to have few, if any, symptoms.

What tests do I need?

Diagnosing asthma is often difficult. Signs and symptoms can be similar to symptoms of wheezy bronchitis, pneumonia, or reactive airway disease; therefore, a physical



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examination by your doctor should be performed. During the examination, your doctor will ask you questions about the symptoms you have been experiencing, as well as questions about any other health problems.

One of 2 lung function tests, either a spirometry (spy-**rom**-eh-tree) or a peak flow test, may determine how much air moves in and out as you breathe. These tests are administered before and after taking a bronchodilator (brong-koh-**die**-lay-ter) medication that opens your airways.

A spirometry test checks how much air you can exhale after a deep breath, and how fast you can breathe out in order to measure the narrowing of the bronchial tubes.

A peak flow meter is a device that measures the pressure of breathing out. If the lung function improves through testing after taking the bronchodilator, it is likely you have asthma.

How can I avoid the problem?

Asthma is not preventable, but you can control your asthma by taking steps to reduce your exposure to environments that trigger symptoms. The use of an air conditioner helps reduce the amount of airborne pollen from outside, and lowers the humidity indoors; it also may reduce exposure to dust mites. Cleaning your environment regularly also will help avoid asthma symptoms by eliminating the collection of dust and pet dander. Asthma is worsened by cold, dry air; therefore, if the temperature outside is cold, wear a face mask to prevent symptoms.

How is it treated?

Asthma is an incurable disease; however, its symptoms can be controlled with treat-

ment. It is important to learn how to recognize your triggers and take steps to avoid them. Long-term control medications can be administered to prevent flare-ups. A quick-relief inhaler also may be prescribed to control symptoms once they start. Since asthma changes over time, it is advisable to track your symptoms and report them to your doctor so that treatment may be adjusted, if necessary.

Long-term control medications can be used to reduce the inflammation in airways that causes asthma symptoms, but these medications vary depending on your age, symptoms, asthma triggers, and what seems to work best in controlling your symptoms. These medications need to be taken every day.

Quick-relief medications also may be used in treating asthma and are needed for rapid, short-term symptom relief during an attack. It's important to keep track of how often and when you are using your quick-relief medications. If it is more often than your doctor recommends, it is possible that your long-term control medication may need to be adjusted.

For more information about asthma, visit the asthma page of the National Heart, Lung, and Blood Institute's Web page at <http://www.nhlbi.nih.gov/guidelines/asthma/index.htm>. ●

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