

**INTRODUCTION****WHAT HAPPENS WHEN YOU HAVE ASTHMA****ASTHMA TRIGGERS****ASTHMA DIAGNOSIS****EXERCISE-INDUCED ASTHMA****WHAT HAPPENS WHEN YOU HAVE EXERCISE-INDUCED ASTHMA?****TREATMENT FOR ASTHMA**

Introduction

Asthma is a chronic disease of the lungs that makes it difficult for people to breathe. Asthma is extremely common. About 20 million Americans have asthma. About 5,000 die each year because of the disease. Worldwide, it's estimated that about 300 million people have asthma.

Some of the symptoms of asthma include coughing, wheezing (a whistling sound when you breathe out), shortness of breath and chest tightness. These symptoms usually occur during what is known as asthma "attack" or "flare up." Many people with asthma have little or no trouble breathing when they are not having an asthma attack. Others almost always experience some asthma symptoms, even minor ones, every day of their lives.

There is no cure for asthma and its causes are unknown. However, with proper medication and treatment, the symptoms of the disease can be controlled.



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What Happens When You Have Asthma

Asthma affects people's bronchial tubes or airways, reducing the amount of air that gets into their lungs.

When we breathe, we take in air through our nose or mouth, down through the trachea (windpipe), through the bronchial tubes, into our lungs and then back out again. People with asthma have inflamed bronchial tubes. Their bronchial tubes are swollen and thick with too much mucus, making it difficult for air to get through them. This means that less air gets to the lungs and can result in relatively minor versions of the asthma symptoms described above – coughing, wheezing, shortness of breath and chest tightening.

Asthma attacks occur when people with asthma are exposed to one of their "triggers." These triggers, which can include things like cigarette smoke, dust or exercise, cause the muscles around the already inflamed bronchial tubes to tighten up. This narrows the airways more and further reduces the amount of air going to the lungs. Sometimes the airways narrow so much that asthma attacks can be fatal. The vast majority of asthma attacks, though, cause serious but not fatal versions of the typical asthma symptoms.

Some people with asthma compare asthma attacks to trying to breathe through a straw. An asthma attack makes it difficult to breathe air into and out of their lungs. An asthma attack can last a few hours or longer if a person does not take asthma medication. Once the asthma attack is over, however, the person usually feels fine again.

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Asthma Triggers

There are many different things that can act as triggers and cause asthma attacks. And not everyone with asthma has the same triggers. What may cause an attack for one person can be completely harmless for another person with asthma. Some of the most common asthma triggers include:

• Allergens:

Substances that can cause allergic reactions but can also cause asthma attacks. These include dust mites, molds, pollen, animal dander and cockroaches.

• Exercise:

Certain kinds of physical activity can cause what's known as exercise-induced asthma.

• Weather:

Cold or dry air can cause asthma attacks, as can extreme heat or humidity.

• Airborne irritants and pollutants:

Substances carried by the air that can irritate the bronchial tubes. They include cigarette smoke, perfumes, cosmetics and pollution.

• Respiratory tract infections:

Illnesses like colds, flu and other viral infections can cause asthma attacks.

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Asthma Diagnosis

Some people with asthma are diagnosed when they are children. Others aren't diagnosed until they are teens or even adults. Some people with asthma are misdiagnosed or not diagnosed at all. Asthma is complex to diagnose for many reasons, two of which are: 1) many of symptoms are similar to those caused by other health problems; and 2) its symptoms are often displayed only intermittently (when the person is exposed to his/her triggers).

Doctors ultimately diagnose asthma by using a combination of medical history, physical exams and other tools that measure how well a person's lungs are currently functioning.



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Exercise-Induced Asthma

We usually think of exercise as a good thing. It keeps us healthy. But for about 90% of the people who have asthma, exercise can be a trigger that causes asthma attacks. These people have exercise-induced asthma.



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What Happens When You Have Exercise-Induced Asthma?

In most circumstances, people take in much of their air through their noses. The air is breathed in slowly and then warmed and made moist by the nose. When people exercise, though, they tend to breathe quickly, shallowly and through the mouths. This air is much cooler and drier than the air they normally breathe through their noses.

People with exercise-induced asthma are very sensitive to the change in the temperature and moistness of the air they breathe during exercise. The cool, dry air irritates their bronchial tubes and triggers the typical asthma symptoms of coughing, wheezing, chest tightness and shortness of breath.

Some of the signs that a person may have exercise-induced asthma include:

- **They feel tired or winded easily from exercise**
- **They cough after coming indoors from outdoor activity**
- **They can't run for more than a few minutes without having to stop.**

Symptoms of exercise-induced asthma usually start about five or ten minutes into an activity and often peak five or ten minutes after stopping the activity.

Exercise-induced asthma is very different from being out of shape. An out-of-shape person may also become winded after exercise, but that person will recover fairly quickly. Someone with exercise-induced asthma generally takes a much longer time to recover after exercise.

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Treatment for Asthma

One of the main treatments for asthma is to avoid the things that trigger a person's asthma attacks. If cigarette smoke is a trigger, then the person should not smoke or be around smokers. If pet dander is a trigger, the person should avoid pets. This strategy can greatly reduce asthma attacks.

If avoiding asthma triggers is not enough to prevent a person's symptoms, their doctor may prescribe one of several kinds of asthma medication that can help control their symptoms.

While trigger-avoidance is usually helpful for people with other kinds of asthma, it is not a good strategy for people with exercise-induced asthma. Everyone needs physical activity to stay healthy. And people with exercise-induced asthma should not avoid exercise. Medication, therefore, takes on extra importance in helping reduce the symptoms of people with exercise-induced asthma.

There are two basic kinds of asthma medication:

- **Anti-inflammatory medications** – these help to reduce the swelling and mucus in the bronchial tubes. They are also known as “controller medication” and help to reduce asthma symptoms on an ongoing, everyday basis.
- **Bronchodilators** – these relax the muscles around the bronchial tubes, opening the airways for easier breathing. They are also known as “rescue medication” and are taken to help someone in the midst of an asthma attack.

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Treatment for Asthma

People with exercise-induced asthma often take bronchodilators before they begin exercise. This medication works to prevent symptoms that they might otherwise have during exercise. And it makes it possible for them to safely participate in a wide range of physical activities.

While asthma in all its forms, including exercise-induced asthma, is a very serious and potentially dangerous disease, proper treatment and preventative care can almost always reduce and control symptoms and help people with asthma lead normal and happy lives.