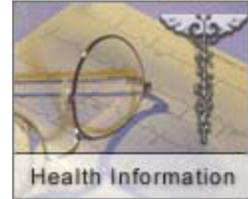


Asthma

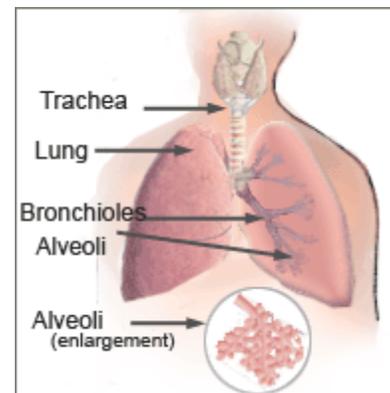
Asthma is a growing problem in the United States. The National Institute of Allergy and Infectious Diseases (NIAID) says the prevalence of asthma has been increasing since the early 1980s. Today, the Asthma and Allergy Foundation of America (AAFA) says the number of Americans with asthma has grown to over 20 million.



Asthma has been increasing in all age, sex and racial groups. Asthma can also be deadly, with the risk of death being higher for African Americans and for males, according to the National Heart, Lung and Blood Institute (NHLBI). In fact, men are one and a half times more likely to die from an asthma attack than women. One last statistic: in the last two decades, the death rate from asthma in 5-24 year olds has more than doubled. All this is why it's essential to recognize the symptoms of asthma and get it treated.

What is asthma

Asthma is a disease that affects the air passages in your lungs. NIAID says it makes them inflamed and swollen *all* the time, not just during an attack. During an attack, muscles around the airways tighten up, making the airways narrower so less air flows through. Inflammation increases, and the airways become more swollen and even narrower. Cells in the airways may also make more mucus than usual. This extra mucus also narrows the airways. These changes make it harder to breathe.



Common symptoms

According to the American Medical Association (AMA), the symptoms of asthma can be mild or very severe. They include:

- coughing
- wheezing - it sounds like you are whistling when you breathe
- feelings of chest tightness, like someone is sitting on your chest all the time
- shortness of breath

Asthma can be allergic or non-allergic. AAFA says the symptoms for both are similar; the difference is in the triggers that produce the symptoms.

Asthma Overview

The symptoms of allergic asthma are triggered by inhaled allergens such as dust mites, pet dander, pollen or mold. Allergic irritants can be found at home, outdoors, in the workplace or in other locations.

Non-allergic asthma is triggered by factors not related to allergies, for example stress, exercise, cold air, dry air or hyperventilation. The American Academy of Allergy, Asthma and Immunology (AAAAI) says potential irritants can include air pollutants, odors, sprays, changes in weather, viral infections, sinusitis, certain food additives, tobacco smoke and certain medications such as aspirin and non-steroidal anti-inflammatory drugs. Gastroesophageal reflux disease can also trigger asthma symptoms.

NHLBI says asthma cannot be cured, but most people with asthma can control it so that they have few and infrequent symptoms and can live active lives. Your doctor will work with you to develop an asthma self-management plan for controlling your asthma on a daily basis and an emergency action plan for stopping asthma attacks. These plans will tell you what medicines you should take and other things you should do to keep your asthma under control. You should get and keep your action plan in writing, with step-by-step instructions for preventing and handling asthma attacks. Instructions should include:

- all your contacts for asthma information and treatment
- how to manage medications - what to take and when to take them
- how and when to use your peak flow meter, and what actions to take based on its readings
- how to recognize an asthma attack
- when to get immediate emergency care
- how to avoid asthma triggers

Drugs

There are two main types of medicines for asthma:

Quick-relief medicines - These are taken at the first signs of asthma symptoms for immediate relief of these symptoms. You will feel the effects of these medicines within minutes. Examples of medications used for quick relief include:

- short-acting beta-2 agonists
- ipratropium
- oral and/or intravenous corticosteroids

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Long-term control medicines - These are taken every day, usually over long periods of time, to prevent symptoms and asthma episodes or attacks. You will feel the full effects of these medicines after taking them for a few weeks. Examples of medications used for long term control include:

- inhaled corticosteroids
- long-acting beta-2 agonists
- leukotriene modifiers
- other types of medications including cromolyn, nedocromil, or theophylline

The American Lung Association says anti-inflammatories such as corticosteroids, work to keep air tubes open, thereby preventing an asthma episode from happening in the first place. Anti-inflammatories can be inhaled, or administered in oral or intravenous (IV) form. Inhaled corticosteroids are generally used for long-term control, and can take several weeks to start taking effect. Oral or IV corticosteroids provide faster relief, but are generally reserved for quick-relief emergency treatment. The Asthma & Allergy Foundation of America says in some people, high oral corticosteroid usage can reduce bone-mineral density, leading to osteoporosis. Links have been found between steroid use and inhibiting bone formation, calcium absorption and the production of sex hormones that help keep bones vital. You should discuss potential risks and benefits with your doctor.

Another category of drug is called bronchodilators. Bronchodilators are medicines that open up the small airways of the lungs to make it easier to breathe. Bronchodilators are often inhaled; they include beta agonists, anticholinergic drugs and theophylline. There are both quick-relief bronchodilators and long-term control bronchodilators. NHLBI says that if someone with asthma finds themselves relying on increasing use of short-acting bronchodilators, however, they should talk with their doctor about ways to better control the asthma. Due to environmental concerns, metered dose inhalers with chlorofluorocarbon (CFC) propellant have been phased out in the United States. There are many other inhalers available that do not contain CFCs. For example, the Food and Drug Administration (FDA) says there are inhalers that use the propellant hydrofluoroalkane, or HFA. There are also dry powder inhalers that don't use a propellant at all, and liquids that are used with a nebulizer machine. Talk to your healthcare professional to decide which choice is right for you. A doctor can also show a patient how to use devices such as a peak flow meter to monitor the severity of their disease. It's also essential that anyone with asthma talk with their doctor about recognizing important warning signs and knowing when an attack requires emergency medical help.

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For some adults with severe asthma, a procedure using radiofrequency energy may help reduce inflammation of smooth muscle in the airways to improve their ability to breathe.

For allergy-induced asthma, immunotherapy may be an option. There is also a biotechnology product to treat patients with a type of asthma related to allergies. While the cause for many forms of asthma is unclear, asthma caused by allergies is better understood. It results from the immune system's over-reaction to inhaled allergens such as dust mites or animal dander. The body forms antibodies in response to the allergen and this immune system reaction prompts inflammation causing airway narrowing and other symptoms. The newest drug is a genetically engineered protein that blocks this immune response.

Peak flow meter

As part of a daily asthma self-management plan, your doctor may recommend that you use a hand-held device called a peak flow meter at home to monitor how well your lungs are working. The National Heart, Lung, and Blood Institute (NHLBI) says you use a peak flow meter by taking a deep breath in and then blowing the air out hard into the peak flow meter. The peak flow meter then gives you a peak flow number that tells you how fast you moved the air out. You record your peak flow number every day for a few weeks until your asthma is under control. The highest number you get during that time is your personal best peak flow. Then you can compare future peak flow measurements to your personal best peak flow, and that will show if your asthma is staying under control.

A peak flow meter can help warn you of a possible asthma attack even before you notice symptoms. If your peak flow meter shows that your breathing is getting worse, you should follow your emergency asthma action plan. Take your quick-relief or other medicines as your doctor directed. Then you can use the peak flow meter to see how your airways are responding to the medicine.

Triggers

The other way to control your asthma is to avoid the things that will set off an attack. The following is a list of some of the common things that set off asthma attacks and suggestions from the National Institutes of Health (NIH) on how to handle them.

Tobacco smoke is a common trigger. If you smoke, stop now. Get help from your doctor if need be. Ask family members to stop smoking or at least not smoke while you're around. Avoid places where there is smoke and certainly don't allow it in your home. If your child has asthma, make sure they aren't exposed to smoke at school or at daycare.

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Dust mites are tiny, tiny bugs that live in cloth and carpets. To help avoid them, encase your mattress in a special dust-proof cover. Do the same with your pillow or wash it in water hotter than 130 degrees each week. The water must be that hot to kill the mites. Wash your bedding each week also, in water just as hot. If you can, remove carpets from your bedroom. Try not to sleep or lay your head on cloth covered furniture.

Animal dander is something many people without asthma are also allergic to. It's best to keep furred or feathered pets out of your house. If you can't avoid having a pet in the house, keep it out of the bedroom. Remove cloth furniture and carpets from your home or least keep the pets out of the rooms the material is in.

Cockroaches also have been identified as a trigger, the droppings and remains especially. Follow all the usual rules to avoid and get rid of roaches. Keep all food out of the bedrooms and don't leave any food out or uncovered. Use appropriate commercial products to trap and kill roaches, but carefully following all the directions and safety precautions, especially around children.

Vacuuming can set off an attack, according to NIH. If it does, get someone else to do it for you once or twice a week. Stay out the rooms while it is being done. If you do vacuum, you can wear a dust mask and get special bags for your vacuum.

Indoor mold should be cleaned from surfaces using a product with bleach. Leaky pipes or facets should be fixed to eliminate the moisture most mold needs. Pollens during the regular allergy season can be a big problem. It's best to stay indoors with the windows closed if you can.

Sulfites in some foods trigger asthma attacks. Sulfites can be found in beer, wine, shrimp, dried fruit and processed potatoes as well as other products. Check the labels carefully.

In addition, AAAAI says that gastroesophageal reflux disease or GERD affects up to 89 percent of patients with asthma. GERD is a condition in which stomach acid flows back up the esophagus and AAAAI says treatment for GERD can be beneficial for asthma symptoms as well.

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An asthma attack can also be triggered by physical activity. According to the American College of Sports Medicine (ACSM), when this happens, the exercise-induced asthma is most likely to occur in predisposed individuals, after inhaling large quantities of air, especially cold dry air that contains environmental pollutants or allergens. ACSM says people with asthma can benefit from exercise, provided they discuss this with their doctor and take all necessary precautions. The Asthma and Allergy Foundation of America also suggests that people with asthma consider an annual flu shot, as protection against developing potentially serious upper-respiratory problems. You should discuss this with your doctor.

People with asthma may be at higher risk of pneumothorax, a condition that can lead to collapsed lung. Keeping your asthma under control can help reduce this risk.

It can be difficult to avoid all the things that may start an attack, so it's essential that anyone with asthma also knows what to do once an attack starts. Work closely with your doctor to control your asthma. And remember just because you haven't had a recent attack doesn't mean you are cured. Asthma never goes away.

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