

Your Guide to **MANAGING ASTHMA**



Asthma and Allergy
Foundation of America

Asthma affects more than **24 MILLION AMERICANS.**

It is a chronic disease that causes your airways to become inflamed, making it hard to breathe. There is no cure for asthma. The best way to manage asthma is to avoid triggers, take medications to prevent symptoms and prepare to treat asthma episodes if they occur. AAFA has a lot of information on our website to help you learn more about asthma. Also, consider joining AAFA's online asthma support community, a local support group or contacting a regional AAFA chapter if one is in your area.



NEWLY DIAGNOSED

Being diagnosed with a chronic disease—especially a lifelong disease like asthma—affects many aspects of everyday life and can be a lot to take in. Patients who are diagnosed with asthma (including moderate-to-severe asthma, allergic asthma and severe asthma) are often filled with many questions and concerns. Often times, these questions are left unanswered because healthcare professionals have limited time with each of their patients.

The goal of AAFA's patient community is to bridge this gap by supporting patients in everyday management of asthma. By educating and empowering patients living with asthma, our community will provide families the crucial tools and resources they need to get started on a path toward improved health and quality of life. In addition to educational tools, AAFA's online community also provides emotional support for families facing asthma.

[JOIN NOW AT COMMUNITY.AAFA.ORG](https://community.aafa.org)

ASTHMA DIAGNOSIS



Personal and medical history: Your doctor will ask you questions to understand your symptoms and their causes. Bring notes to help jog your memory. Be ready to answer questions about your family history, the medicines you take and your lifestyle. This includes any current physical problems. Shortness of breath, wheezing, coughing and tightness in your chest may show asthma. This also includes all previous medical conditions. A history of allergies or eczema increases your chance of asthma. A family history of asthma, allergies or eczema increases your chance of having asthma, too. Tell your doctor about any home or work exposure to environmental factors that can worsen asthma. For example, these might include pet dander, pollen, dust mites and tobacco smoke. The doctor may also ask if you get chest symptoms when you get a head cold.



Physical examination: If your doctor thinks you have asthma, they will do a physical exam. They will look at your ears, eyes, nose, throat, skin, chest and lungs. This exam may include a lung function test to detect how well you exhale air from your lungs. You may also need an X-ray of your lungs or sinuses. A physical exam then allows your doctor to review your health.



Lung function tests: To confirm asthma, your doctor may have you take one or more breathing tests known as lung function tests. These tests measure your breathing. Lung function tests are often done before and after inhaling a medication known as a bronchodilator (bron-co-DIE-a-later), which opens your airways. If your lung function improves a lot with use of a bronchodilator, you probably have asthma. Your doctor may also prescribe a trial with asthma medication to see if it helps.

COMMON LUNG FUNCTION TESTS USED TO DIAGNOSE ASTHMA



Spirometry

This is the recommended test to confirm asthma. During this test, you breathe into a mouthpiece that's connected to a device. It is called a spirometer. The spirometer measures the amount of air you're able to breathe in and out and its rate of flow. You will take a deep breath and then exhale forcefully.



Peak airflow

This test uses a peak flow meter. It's a small, handheld device that you breathe into to measure the force of air out of your lungs. During the test you breathe in as deeply as you can and then blow into the device as hard and fast as possible. If you're diagnosed with asthma, you can use a peak flow meter at home to help track your condition.



Trigger tests

If your other results are normal, but you've been experiencing signs and symptoms of asthma, your doctor may use known asthma triggers to try and provoke a mild reaction. If you don't have asthma, you won't react. But if you do have asthma, you likely will develop asthma symptoms.



Asthma in **INFANTS AND CHILDREN**

Diagnosing asthma in children under 5 is a little different. Children this age usually are not given a breathing test. Instead, the doctor asks about certain signs and symptoms and prescribes a bronchodilator if they think it might be asthma. If the bronchodilator helps reduce your child's symptoms, that is a sign that your child may have asthma.

Infants and toddlers have much smaller airways than older children and adults. In fact, these airways are so small that even small blockages caused by viral infections, tight airways or mucus can make breathing difficult for the child.

We still do not know what causes some people to get asthma. If a child has a family history of asthma or allergies, a specific allergy or had a mother who smoked during pregnancy, they have a higher chance of getting asthma early in life.

For more information on childhood asthma, please refer to our website at aafa.org, or speak with your health care provider.

DIFFERENT LEVELS of asthma

There are four levels of asthma, based on how severe it is. How often you have symptoms and your lung function determines how bad your asthma is. Your doctor will ask you questions about how often you have symptoms and wake up at night from coughing or trouble breathing. They might also ask how often you have trouble doing normal activities or use a rescue inhaler.

1

Intermittent Asthma

You have symptoms less than twice a week and wake up less than two nights a month.

2

Mild Persistent Asthma

You have symptoms two or more days a week and wake up three to four nights a month.

3

Moderate Persistent Asthma

You have symptoms at least every day and wake up one or more nights a week.

4

Severe Persistent Asthma

You have symptoms during the day and wake up every night due to asthma.

CAUSES AND TRIGGERS

People with asthma have inflamed airways which are sensitive to things which may not bother other people. These things are “triggers.” Asthma triggers vary from person to person. Some people react to only a few while others react to many. If you have asthma, it is important to keep track of the causes or triggers that you know provoke your asthma. Because the symptoms do not always occur right after exposure, this may take a bit of detective work. Delayed asthma episodes may occur depending on the type of trigger and how sensitive a person is to it. The most common asthma triggers include:



Allergies: Substances that cause allergies (allergens) can trigger asthma. If you inhale something you are allergic to, you may experience asthma symptoms. It is best to avoid or limit contact with known allergens to decrease or prevent asthma episodes. Common allergens that cause allergic asthma include dust mites, cockroach, pollens, molds, pet dander and rodents.



Exercise: Exercise and other activities that make you breathe harder can affect your asthma. Exercise—especially in cold air—is a frequent asthma trigger. Exercise-induced bronchoconstriction (EIB) is a form of asthma that is triggered by physical activity. It is also known as exercise-induced asthma (EIA). Symptoms may not appear until after several minutes of sustained exercise. (If symptoms appear sooner than this, it usually means you need to adjust your treatment.) With proper treatment, you do not need to limit your physical activity.



Feeling and expressing strong emotions: When you feel strong emotions, such as anger, fear, excitement and laughter, your breathing changes – even if you don't have asthma. It may cause wheezing or other asthma symptoms in someone with asthma.



Irritants in the air: Irritants in the environment can also bring on an asthma episode. Although people are not allergic to these items, they can bother inflamed, sensitive airways. Examples include: smoke from cigarettes, air pollution, wood fires, charcoal grills, strong fumes, dust and chemicals.



Respiratory illness: Respiratory infections include the common cold, the flu and other infections. These common illnesses can affect your lungs when you have asthma. They can cause inflammation (swelling) and narrowing of your airways. These changes could trigger asthma symptoms (an asthma episode or an asthma attack). Respiratory infections are the most common asthma trigger in children.



Weather: Dry wind, cold air or sudden changes in weather can sometimes bring on an asthma episode.

WHAT HAPPENS during an asthma episode

During normal breathing, the airways to the lungs are fully open. This allows air to move in and out of the lungs freely. Asthma causes the airways to change in the following ways:

- The airway branches leading to the lungs become overly reactive and more sensitive to all kinds of asthma triggers
- The linings of the airways swell and become inflamed
- Mucus clogs the airways
- Muscles tighten around the airways (bronchospasm)
- The lungs have difficulty moving air in and out (airflow obstruction: moving air out can be especially difficult)

These changes narrow the airways. Breathing becomes difficult and stressful, like trying to breathe through a straw stuffed with cotton.



SYMPTOMS

Asthma is a chronic disease that inflames the airways. This means that people with asthma generally have inflammation that is long lasting and needs managing.

An asthma episode, also called an asthma flare-up or asthma attack, can happen at any time. Mild symptoms may only last a few minutes while more severe asthma symptoms can last hours or days.

Common symptoms of asthma:

- Coughing
- Wheezing (a whistling, squeaky sound when you breathe)
- Shortness of breath
- Rapid breathing
- Chest tightness



SIGNS OF A severe asthma attack

Asthma may lead to a medical emergency. Seek medical help immediately for:

- Fast breathing with chest retractions (skin sucks in between or around the chest plate and/or rib bones when inhaling)
- Cyanosis (very pale or blue coloring in the face, lips, fingernails)
- Rapid movement of nostrils
- Ribs or stomach moving in and out deeply and rapidly
- Expanded chest that does not deflate when you exhale
- Infants with asthma who fail to respond to or recognize parents

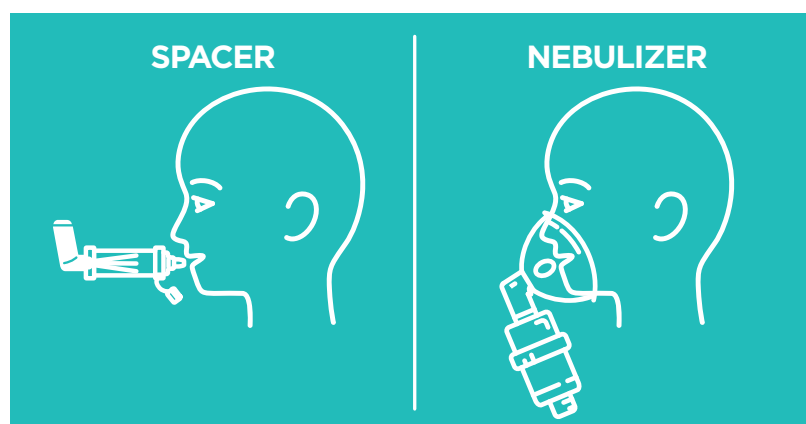
ASTHMA TREATMENT

Even though we cannot cure asthma, we can control it. Each case of asthma is different, so you and your doctor need to create an asthma treatment plan just for you. This plan will have information about your asthma triggers and instructions for taking your medicines. You take most asthma medicines by breathing them in using an inhaler or nebulizer. But some asthma medicines are in pill form. An inhaler (also called a puffer) or nebulizer allows the medicine to go directly to your lungs. There are two types of inhalers: metered dose inhaler (MDI) and dry powder inhaler (DPI).

- **Metered Dose Inhalers:** use an aerosol canister inserted into a plastic mouthpiece to deliver a short burst of medicine
- **Dry Powder Inhalers:** deliver medicine as a dry powder using a special inhaler

For inhalers to work well, you must use them correctly. But more than half of all people who use inhalers don't use them properly. Ask your doctor or nurse to watch you and check your technique. If it's still difficult to use, you have two choices. Ask them to recommend a **spacer** or holding chamber. This device attaches to the inhaler to make it easier to use and to help more medicine reach the lungs. Everyone can benefit from using a spacer or holding chamber, especially children. Or, ask about using a "breath-actuated" inhaler, which automatically releases medicine when you inhale.

A **nebulizer** is a machine with tubing that takes liquid medicine and turns it into a mist that you inhale. Nebulizers are an option for anyone who has difficulty using an asthma inhaler.



Infants or toddlers can use most medicines used for older children and adults. The dosage may be lower and the way the child takes it is different. Inhaled medicines work fast to make symptoms better and produce few side effects. Asthma is treated with several different medications. Many people with asthma, including infants and toddlers, are given a mix of medications, depending on how severe and how often they have symptoms. Work with your child's health care providers to develop an asthma care management plan.

Different types of **ASTHMA MEDICINE**

LONG-TERM CONTROL MEDICINES help you prevent and control asthma symptoms. You may need to take this type of medicine every day for best results. There are several kinds of long-term control medicines:



Inhaled corticosteroids prevent and reduce airway swelling. They also reduce mucus in the lungs. They are the most effective long-term control medicines available. Corticosteroids are not the same as anabolic steroids that are taken by some athletes and banned in many athletic events.



Inhaled long-acting beta agonists open the airways by relaxing the smooth muscles around the airways. If used, this type of medicine should always be taken in combination with an inhaled corticosteroid.



Combination inhaled medicines contain both an inhaled corticosteroid and a long-acting beta agonist. If you need both of these medicines, this is a convenient way to take them together.



Leukotriene modifiers are taken in pill or liquid form. This type of medicine reduces swelling inside the airways and relaxes smooth muscles.



Biologics are shots or infusions given every few weeks. They work by targeting a cell or protein in your body to prevent airway inflammation. They can be very expensive treatments and are usually only prescribed if other asthma medicines have not controlled your asthma.



Cromolyn sodium is an inhaled non-steroid medicine. It prevents airways from swelling when they come into contact with an asthma trigger.



Theophylline comes as a tablet, capsule, solution and syrup to take by mouth. This medicine helps open the airways by relaxing the smooth muscles.



Oral corticosteroids are taken in pill or liquid form. This medicine may be prescribed for the treatment of asthma attacks that don't respond to other asthma medicines. They also are used as long-term therapy for some people with severe asthma. Corticosteroids are not the same as anabolic steroids taken by some athletes and banned in many athletic events.

QUICK-RELIEF MEDICINES are used to help relieve asthma symptoms when they happen. These medicines act fast to relax tight muscles around your airways. This allows the airways to open up so air can flow through them. You should take your quick-relief medicine when you have asthma symptoms. If you use this medicine more than 2 days a week, talk with your doctor about your asthma control. You may need to make changes to your treatment plan.



Short-acting beta agonists are inhaled and work quickly to relieve asthma symptoms. These medicines relax the smooth muscles around the airways and decrease swelling that blocks airflow. These medicines are the first choice for quick relief of asthma symptoms.



Anticholinergics are inhaled but act slower than the short-acting beta agonist medicines. These medicines open the airways by relaxing the smooth muscles around the airways. They also reduce mucous production.



Combination quick relief medicines contain both an anticholinergic and a short-acting beta agonist. This combination comes either as an inhaler or nebulizer for inhalation.

MANAGING ASTHMA



1. Know your asthma triggers and minimize contact with them. Avoiding triggers is the best way to prevent asthma episodes and reduce your need for medication. But first, you have to learn what those triggers are. Any time you have an asthma episode, think about where you were and what you were doing the past day or so. Answer questions like these in a diary or on your calendar:

- Was I making a bed or vacuuming?
- Was I near an animal? Cigarette smoke?
- Did I have a cold or other infection?
- Was I running, playing or exercising?
- Was I upset, excited or tired?

Discuss your notes with your doctor to look for trends. As you identify your triggers, talk about how to best avoid them. For instance, if you're allergic to dust mites, consider putting an airtight cover around your pillow and mattress. You may also talk with your doctor about treatments that may help prevent allergy symptoms.



2. Take your asthma medications as prescribed. Asthma medicines are usually inhaled through a machine called a *nebulizer*, a small device called a *metered dose inhaler* (also called an inhaler, puffer or MDI) or through a *dry powder inhaler* (DPI). For inhalers to work well, you must use them correctly. But more than half of all people who use inhalers don't use them properly. Ask your doctor or nurse to watch you and check your technique. If it's still difficult to use, ask them to recommend a *spacer or holding chamber*. This device attaches to the inhaler to make it easier to use and to help more medicine reach the lungs.

Unless your asthma is very mild, chances are you have prescriptions for at least two different medicines. The more you understand about what those medicines do and why they help, the more likely you are to use them correctly. Although there are some potential side effects from taking asthma medications, the benefits of controlling your asthma outweigh this risk. Discuss each of your asthma medications with your doctor to learn more about their effects.



3. Track your asthma and recognize early signs that it may be getting worse. Asthma episodes almost never occur without warning. Some people feel early symptoms, including: coughing, chest tightness and/or feeling tired. Since the airways to the lungs narrow slowly, you may not feel symptoms until your airways are badly blocked. The key to controlling your asthma is taking your medicine at the earliest possible sign of worsening.

There's a simple, pocket-sized device called a *peak flow meter* that can help detect narrowing in your airways hours or days before you feel symptoms. You simply blow into it, as instructed in your doctor's office, to monitor your airways the same way you might use a blood pressure cuff to measure high blood pressure or a thermometer to take your temperature. Peak flow meters come in many shapes and styles. Ask your doctor which is right for you. The good news is that using your peak flow meter should mean fewer symptoms, fewer calls to the doctor and fewer hospital visits!



4. Know what to do when your asthma is getting worse. If you understand your asthma management plan and follow it, you will know exactly what to do in case of an asthma episode or an emergency. Ask your health care provider for an **Asthma Action Plan**. If you have any questions at all, ask your doctor. Your asthma action plan will help you know:

- Which medicine to take
- How much to take
- When to take it
- When to call your doctor
- When to seek emergency care

ASTHMA ZONES

SAFE

CAUTION

EMERGENCY



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For more detailed information and a list of resources, please visit aafa.org.

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