

# Your Guide to **MANAGING ASTHMA**



Asthma and Allergy  
Foundation of America

# Asthma affects more than **25 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 medicines 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. People who are newly diagnosed with asthma (including allergic asthma and moderate-to-severe asthma) may be filled with many questions and concerns. Often times, these questions are left unanswered because patients and health care professionals have limited time with each other.

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

**Join now at [community.aafa.org](https://community.aafa.org)**

# ASTHMA DIAGNOSIS

Other conditions have similar symptoms to asthma. It is important to get the right diagnosis so that you can find a treatment plan that controls your symptoms and improves your health.



**Personal and medical history:** Bring notes to your appointment to help answer your doctor's questions about your medical history and symptoms. This also includes all previous medical conditions. A personal or family history of allergies or eczema increases your chance of asthma. Be ready to talk about the medicines you take and your lifestyle. 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.

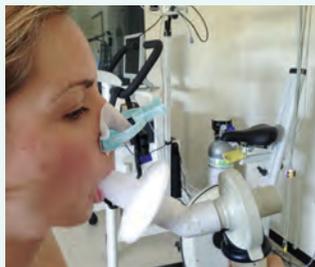


**Physical examination:** If your doctor thinks you have asthma, they will do a physical exam. They will look at your ears, eyes, nose, throat, skin, chest and lungs. This exam may include a lung function test to detect how well you exhale air from your lungs. You may also need an X-ray of your lungs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



**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 medicine 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. But a negative test does not always rule out asthma. Your doctor may also prescribe a trial with asthma medicines to see if it helps.

## LUNG FUNCTION TESTS USED TO DIAGNOSE AND/OR MONITOR ASTHMA



### **Spirometry** (to diagnose and monitor asthma)

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



### **Trigger tests** (to diagnose asthma)

If your other results are normal, your doctor may use known asthma triggers to try and provoke a mild reaction. If you have asthma, you will react to lower doses of the trigger than people without asthma.



### **Fractional exhaled nitric oxide (FeNO)** (to diagnose or monitor asthma)

A FeNO test measures the amount of a gas called nitric oxide in your breath. This test helps doctors tell if and how much inflammation you have in your airways. It can also help find out if your asthma treatment is working.



### **Peak airflow** (to monitor asthma)

A peak flow meter is a small, handheld device that you breathe into to measure the force of air out of your lungs. 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.



## 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.

A child has a higher risk of developing asthma if:

- They have a parent with asthma or allergies
- They have an allergic condition (like eczema)
- They get sick with a severe respiratory infection (like RSV)
- Their mother smoked during pregnancy
- They are exposed to harmful levels of air pollution

For more information on childhood asthma, please refer to our website at [aafa.org](http://aafa.org), or speak with your health care provider.

## DIFFERENT LEVELS OF ASTHMA

There are four levels of asthma. Your asthma level is based on your lung function and how often you have symptoms. 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 quick-relief 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.

# ASTHMA 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. 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, cockroaches, pollens, molds, pet dander and rodents.



**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.



**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.



**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 start 5-10 minutes after you finish exercising. (If symptoms appear sooner than this, it usually means you need to adjust your treatment.) With proper asthma treatment, you do not need to limit your physical activity.



**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.



**Weather:** Dry wind, thunderstorms, 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 out (airflow obstruction)

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



# SYMPTOMS

People with asthma generally have airway inflammation that is long lasting and needs managing. An **asthma episode** 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



# SEVERE ASTHMA ATTACKS

**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 - easier to see on lighter-toned skin)
- Rapid movement of nostrils (more common in children)
- Ribs or stomach moving in and out deeply and rapidly (more common in children)
- Expanded chest that does not deflate when you exhale
- Infants with asthma who fail to respond to or recognize parents
- Trouble speaking
- Quick-relief medicine is not helping

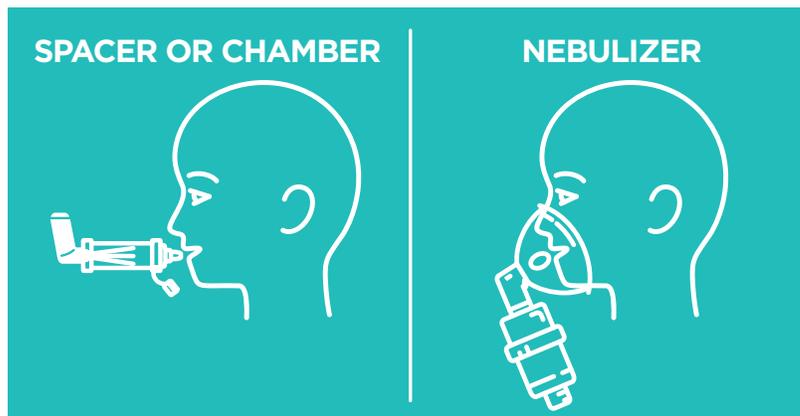
# ASTHMA TREATMENT

Even though we cannot cure asthma, we can take steps to 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 pills, injections or infusions. 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 if using a **spacer or holding chamber** would improve delivery of your medicine. This device attaches to MDI inhalers and helps more medicine reach your lungs. Or you can ask if using a "breath-actuated" inhaler might be a choice for you.

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.



Many people with asthma, including infants and toddlers, are given a mix of different medicines. It depends on how severe their symptoms are and how often they have symptoms.

Infants or toddlers can use most of the same medicines used for older children and adults. The dosage may be lower and the way the child takes it is different.

The goal will be to control your asthma with the least amount of medicine. Over time, you may need to step up or step down your treatment depending on how well your asthma is under control. Work with your 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.



**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** come as tablets, chewables or granules. This type of medicine reduces swelling inside the airways and relaxes smooth muscles.



**Biologics** are shots or infusions given every few weeks to treat moderate to severe asthma. They work by targeting a cell or protein in your body to prevent airway inflammation. They can be expensive treatments but can improve uncontrolled asthma that doesn't respond to other treatments.



**Theophylline** comes as tablets, capsules, solution or syrup to take by mouth. This medicine helps open the airways by relaxing the smooth muscles. Theophylline has many side effects and drug interactions, so it not usually used as a first-line asthma treatment.

**QUICK-RELIEF MEDICINES** 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 two 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 relax the smooth muscles around the airways. 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 mucus 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.



**SYSTEMIC CORTICOSTEROIDS**, often referred to as “steroids” may be necessary for the emergency treatment of asthma attacks that don't respond to other asthma medicines. They may be delivered as pills, liquid, intravenous (IV) infusion or injection and are absorbed into the whole body. Prednisone is a common steroid used for asthma. The dose is much larger than what is in inhaled corticosteroids. If you need higher dose systemic corticosteroids more than twice per year for asthma, it is a sign your asthma is not well controlled.

Oral corticosteroids (like prednisone pills) are sometimes used as long-term therapy for some people with difficult-to-treat severe asthma. But because steroids cause significant side effects, other treatment options (such as biologics) may offer a better solution.

## 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 medicine. But first, you have to learn what triggers your asthma. 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 tracking app, diary or on your calendar:

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

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 a CERTIFIED **asthma & allergy friendly**<sup>®</sup> allergy 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 medicines as prescribed.** 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. Discuss each of your asthma medicines with your health care provider to learn more about their benefits and effects.

If you have trouble filling your prescription, ask your doctor or nurse if they have any samples. AAFA has additional information about what to do if you can't afford your asthma medicines. Visit [aafa.org/asthma-assistance](http://aafa.org/asthma-assistance) or call 800-7-ASTHMA for more information.



**3. Track your asthma and recognize early signs.** Asthma episodes almost never occur without warning. Some people feel early symptoms, including: neck or throat itchiness, 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 sign that your asthma is getting worse.

A *peak flow meter* may help detect narrowing in your airways hours or days before you feel symptoms.



**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



### Green Zone – GO!

**SIGNS:** Breathing is good. No coughing or wheezing. Sleeping through the night.

**ALERT:** You want to be in the Green Zone as much as possible. It means your asthma plan is working!



### Yellow Zone – CAUTION

**SIGNS:** Coughing, wheezing, chest tightness, shortness of breath. First sign of cold or exposure to trigger.

**ALERT:** Call your doctor. If you are in the Yellow Zone two times or more per week, your asthma is not under control.



### Red Zone – DANGER

**SIGNS:** You have *any* of these symptoms: Asthma is getting worse fast, lots of coughing. Can't talk well. Can't do normal activities. Medicine is not helping.

**ALERT:** **CALL YOUR DOCTOR or 911 NOW.** Go to the hospital or call an ambulance if you are still in the Red Zone after taking medicines as instructed by your doctor. Follow up with your doctor as soon as possible after your visit.



**ASTHMA Care for Adults**  
Asthma Symptoms, Treatment, Health Management and Activities<sup>SM</sup>

**Take our online course  
at [aafa.org/asthmacare](http://aafa.org/asthmacare)**