

How Is Asthma Treated and Controlled?

Asthma is a long-term disease that can't be cured. The goal of asthma treatment is to control the disease. Good asthma control will:

- Prevent chronic and troublesome symptoms such as coughing and shortness of breath
- Reduce your need of quick-relief medicines (see below)
- Help you maintain good lung function
- Let you maintain your normal activity levels and sleep through the night
- Prevent asthma attacks that could result in your going to the emergency room or being admitted to the hospital for treatment

To reach this goal, you should actively partner with your doctor to manage your asthma or your child's asthma. Children aged 10 or older—and younger children who are able—also should take an active role in their asthma care.

Taking an active role to control your asthma involves working with your doctor and other clinicians on your health care team to create and follow an asthma action plan. It also means avoiding factors that can make your asthma flare up and treating other conditions that can interfere with asthma management.

An asthma action plan gives guidance on taking your medicines properly, avoiding factors that worsen you asthma, tracking your level of asthma control, responding to worsening asthma, and seeking emergency care when needed.

Asthma is treated with two types of medicines: long-term control and quick-relief medicines. Long-term control medicines help reduce airway inflammation and prevent asthma symptoms. Quick-relief, or "rescue," medicines relieve asthma symptoms that may flare up.

Your initial asthma treatment will depend on how severe your disease is. Followup asthma treatment will depend on how well your asthma action plan is working to control your symptoms and prevent you from having asthma attacks.

Your level of asthma control can vary over time and with changes in your home, school, or work environments that alter how often you are exposed to the factors that can make your asthma worse. Your doctor may need to increase your medicine if your asthma doesn't stay under control.

On the other hand, if your asthma is well controlled for several months, your

doctor may be able to decrease your medicine. These adjustments either up or down to your medicine will help you maintain the best control possible with the least amount of medicine necessary.

Asthma treatment for certain groups of people, such as children, pregnant women, or those for whom exercise brings on asthma symptoms, will need to be adjusted to meet their special needs.

Follow an Asthma Action Plan

You can work with your doctor to create a personal written asthma action plan. The asthma action plan shows your daily treatment, such as what kind of medicines to take and when to take them. The plan explains when to call the doctor or go to the emergency room.

If your child has asthma, all of the people who care for him or her should know about the child's asthma action plan. This includes babysitters and workers at daycare centers, schools, and camps. These caretakers can help your child follow his or her action plan.

See the National Heart, Lung, and Blood Institute's (NHLBI's) [Asthma Action Plan](#) for a sample plan.

Avoid Things That Can Worsen Your Asthma

A number of common things (sometimes called asthma triggers) can set off or worsen your asthma symptoms. Once you know what these factors are, you can take steps to control many of them. (For more information on asthma triggers, see "[What Are the Signs and Symptoms of Asthma?](#)")

For example, if exposure to pollens or air pollution makes your asthma worse, try to limit time outdoors when the levels of these substances are high in the outdoor air. If animal fur sets off your asthma symptoms, keep pets with fur out of your home or bedroom. The NHLBI offers many useful tips for [controlling things that make your asthma worse](#). (See page 2 of NHLBI's Asthma Action Plan.)

If your asthma symptoms are clearly linked to allergies, and you can't avoid exposure to those allergens, then your doctor may advise you to get allergy shots for the specific allergens that bother your asthma. You may need to see a specialist if you're thinking about getting allergy shots. These shots may lessen or prevent your asthma symptoms, but they can't cure your asthma.

Several health conditions can make asthma more difficult to manage. These conditions include runny nose, sinus infections, reflux disease, psychological stress, and sleep apnea. Your doctor will treat these conditions as well.

Medicines

Your doctor will consider many things when deciding which asthma medicines are best for you. Doctors usually use a stepwise approach to prescribing medicines. Your doctor will check to see how well a medicine works for you; he or she will make changes in the dose or medicine, as needed.

Asthma medicines can be taken in pill form, but most are taken using a device called an inhaler. An inhaler allows the medicine to go right to your lungs.

Not all inhalers are used the same way. Ask your doctor and other clinicians on your health care team to show you the right way to use your inhaler. Ask them to review the way you use your inhaler at every visit.

Long-Term Control Medicines

Most people who have asthma need to take long-term control medicines daily to help prevent symptoms. The most effective long-term medicines reduce airway inflammation.

These medicines are taken over the long term to prevent symptoms from starting. They don't give you quick relief from symptoms.

Inhaled corticosteroids. Inhaled corticosteroids are the preferred medicines for long-term control of asthma. These medicines are the most effective long-term control medicine to relieve airway inflammation and swelling that makes the airways sensitive to certain substances that are breathed in.

Reducing inflammation helps prevent the chain reaction that causes asthma symptoms. Most people who take these medicines daily find they greatly reduce how severe symptoms are and how often they occur.

Inhaled corticosteroids are generally safe when taken as prescribed. They're very different from the illegal anabolic steroids taken by some athletes. Inhaled corticosteroids aren't habit-forming, even if you take them every day for many years.

But, like many other medicines, inhaled corticosteroids can have side effects. Most doctors agree that the benefits of taking inhaled corticosteroids and

preventing asthma attacks far outweigh the risks of side effects.

One common side effect from inhaled corticosteroids is a mouth infection called thrush. You can use a spacer or holding chamber to avoid thrush. A spacer or holding chamber is attached to your inhaler when taking medicine to keep the medicine from landing in your mouth or on the back of your throat.

Work with your health care team if you have any questions about how to use a spacer or holding chamber. Rinsing your mouth out with water after taking inhaled corticosteroids also can lower your risk of thrush.

If you have severe asthma, you may have to take corticosteroid pills or liquid for short periods to get your asthma under control. If taken for long periods, these medicines raise your risk for cataracts and osteoporosis (OS-te-o-po-RO-sis). A cataract is the clouding of the lens in your eye. Osteoporosis is a disorder that makes your bones weak and more likely to break.

Your doctor may have you add another long-term control asthma medicine to lower your dose of corticosteroids. Or, your doctor may suggest you take calcium and vitamin D pills to protect your bones.

Other long-term control medicines. Other long-term control medicines include:

- [Inhaled long-acting beta₂-agonists](#). These medicines open the airways and may be added to low-dose inhaled corticosteroids to improve asthma control. An inhaled long-acting beta₂-agonist shouldn't be used alone.
- [Leukotriene modifiers](#). These medicines are taken by mouth. They help block the chain reaction that increases inflammation in your airways.
- [Cromolyn](#) and [nedocromil](#). These inhaled medicines also help prevent inflammation and can be used to treat asthma of mild severity.
- [Theophylline](#). This medicine is taken by mouth and helps open the airways.

If your doctor prescribes a long-term control medicine, take it every day to control your asthma. Your asthma symptoms will likely return or get worse if you stop taking your medicine.

Long-term control medicines can have side effects. Talk to your doctor about these side effects and ways to monitor or avoid them.

Quick-Relief Medicines

All people who have asthma need a quick-relief medicine to help relieve asthma symptoms that may flare up. [Inhaled short-acting beta₂-agonists](#) are the first choice for quick relief.

These medicines act quickly to relax tight muscles around your airways when you're having a flareup. This allows the airways to open up so air can flow through them.

You should take your quick-relief medicine when you first notice your asthma symptoms. If you use this medicine more than 2 days a week, talk with your doctor about how well controlled your asthma is. You may need to make changes in your asthma action plan.

Carry your quick-relief inhaler with you at all times in case you need it. If your child has asthma, make sure that anyone caring for him or her and the child's school has the child's quick-relief medicines. They should understand when and how to use them and when to seek medical care for your child.

You shouldn't use quick-relief medicines in place of prescribed long-term control medicines. Quick-relief medicines don't reduce inflammation.

Track Your Asthma

To track your asthma, keep records of your symptoms, check your peak flow number using a [peak flow meter](#), and get regular asthma checkups.

Record Your Symptoms

You can record your asthma symptoms in a diary to see how well your treatments are controlling your asthma.

Asthma is "well controlled" if:

- You have symptoms no more than 2 days a week and they don't wake you from sleep more than 1 or 2 nights a month.
- You can carry out all your normal activities.
- You take quick-relief medicines no more than 2 days a week.
- You have no more than one asthma attack a year that requires you to take corticosteroids by mouth.
- Your peak flow doesn't drop below 80 percent of your personal best

number.

If your asthma isn't well controlled, contact your doctor. He or she may need to change your asthma action plan.

Use a Peak Flow Meter

This small, hand-held device shows how well air moves out of your lungs. You blow into the device and it gives you a score, or peak flow number. Your score shows how well your lungs are working at the time of the test.

Your doctor will tell you how and when to use your peak flow meter. He or she also will teach you how to take your medicines based on your score.

Your doctor and other clinicians on your health care team may ask you to use your peak flow meter each morning and keep a record of your results. It may be particularly useful to record peak flow scores for a couple of weeks before each medical visit and take the results with you.

When first diagnosed with asthma, it's important to find out your "personal best" peak flow number. To do this, you record your score each day for a 2- to 3-week period when your asthma is under good control. The highest number you get during that time is your personal best. You can compare this number to future numbers to make sure your asthma is under control.

Your peak flow meter can help warn you of an asthma attack, even before you notice symptoms. If your score falls to a number that shows that your breathing is getting worse, you should take your quick-relief medicines the way your asthma action plan directs. Then you can use the peak flow meter to check how well the medicine worked.

Get Asthma Checkups

When you first begin treatment, you will see your doctor about every 2 to 6 weeks. Once your asthma is under control, your doctor may want to see you anywhere from once a month to twice a year.

During these checkups, your doctor or nurse will ask whether you've had an asthma attack since the last visit or any changes in symptoms or peak flow measurements. You will also be asked about your daily activities. This will help them assess your level of asthma control.

Your doctor or nurse also will ask whether you have any problems or concerns

with taking your medicines or following your asthma action plan. Based on your answers to these questions, your doctor may change the dose of your medicine or give you a new medicine.

If your control is very good, you may be able to take less medicine. The goal is to use the least amount of medicine needed to control your asthma.

Emergency Care

Most people who have asthma, including many children, can safely manage their symptoms by following the steps for worsening asthma provided in the asthma action plan. However, you may need medical attention. Call your doctor for advice if:

- Your medicines don't relieve an asthma attack.
- Your peak flow is less than half of your personal best peak flow number.

Call 9–1–1 for an ambulance to take you to the emergency room of your local hospital if:

- You have trouble walking and talking because you're out of breath.
- You have blue lips or fingernails.

At the hospital, you will be closely watched and given oxygen and more medicines, as well as medicines at higher doses than you take at home. Such treatment can save your life.

Asthma Treatment for Special Groups

The treatments described in this section generally apply to all people who have asthma. However, some aspects of treatment differ for people in certain age groups and those who have special needs.

Children

It's hard to diagnose asthma in children younger than 5 years old. Thus, it's hard to know whether young children who wheeze or have other asthma symptoms will benefit from long-term control medicines. (Quick-relief medicines tend to relieve wheezing in young children whether they have asthma or not.)

Doctors will treat infants and young children who have asthma symptoms with long-term control medicines if the child's asthma health assessment indicates

that the symptoms are persistent and likely to continue after 6 years of age. (For more information, see ["How Is Asthma Diagnosed?"](#))

Inhaled corticosteroids are the preferred treatment for young children. Montelukast or cromolyn are alternative options. Treatment may be given for a trial period of 1 month to 6 weeks. The treatment usually is stopped if benefits aren't seen during that time and the doctor and parents are confident the medicine was used properly.

Inhaled corticosteroids can possibly slow the growth of children of all ages. If this slowed growth occurs, it usually is apparent in the first several months of treatment, is generally small, and doesn't get worse over time. Poorly controlled asthma also may reduce a child's growth rate.

Most experts think the benefits of inhaled corticosteroids for children who need them to control their asthma far outweigh the risk of slowed growth.

Older Adults

Doctors may need to adjust asthma treatment for older adults who take certain other medicines, such as beta blockers, aspirin and other pain relievers, and anti-inflammatory medicines. These medicines can prevent asthma medicines from working properly and may worsen asthma symptoms.

Be sure to tell your doctor about all of the medicines you take, including over-the-counter medicines.

Older adults may develop weak bones from using inhaled corticosteroids, especially at high doses. Talk to your doctor about taking calcium and vitamin D pills and other ways to help keep your bones strong.

Pregnant Women

Pregnant women who have asthma need to control the disease to ensure a good supply of oxygen to their babies. Poor asthma control raises the chance that a baby will be born early and have a low birth weight. Poor asthma control can even risk the baby's life.

Studies show that it's safer to take asthma medicines while pregnant than to risk having an asthma attack.

Talk to your doctor if you have asthma and are pregnant or planning to get pregnant. Your level of asthma control may get better or it may get worse while

you're pregnant. Your health care team will check your asthma control often and adjust your treatment as needed.

People Whose Asthma Symptoms Occur With Physical Activity

Physical activity is an important part of a healthy lifestyle. Adults need physical activity to maintain good health. Children need it for growth and development.

In many people, however, physical activity may set off asthma symptoms. If this happens to you or your child, talk to your doctor about the best ways to control asthma so you can stay active.

The following medicines may help to prevent asthma symptoms due to physical activity:

- Short-acting beta₂-agonists (quick-relief medicine) taken shortly before physical activity can last 2 to 3 hours and prevent exercise-related symptoms in most people who take them.
- Long-acting beta₂-agonists can be protective up to 12 hours. However, with daily use, they will no longer give up to 12 hours of protection. Also, frequent use for physical activity may be a sign that asthma is poorly controlled.
- Leukotriene modifiers. These pills are taken several hours before physical activity. They help relieve asthma symptoms brought on by physical activity in up to half of the people who take them.
- Cromolyn or nedocromil. These medicines are taken shortly before physical activity to help control asthma symptoms.
- Long-term control medicines. Frequent or severe symptoms due to physical activity may indicate poorly controlled asthma and the need to either start or increase long-term control medicines that reduce inflammation. This will help prevent exercise-related symptoms.

Easing into physical activity with a warmup period also may be helpful. You also may want to wear a mask or scarf over your mouth when exercising in cold weather.

If you use your asthma medicines as your doctor directs, you should be able to take part in any physical activity or sport you choose.

People Having Surgery

Asthma may add to the risk of having problems during and after surgery. For instance, having a tube put into your throat may cause an asthma attack.

Tell your surgeon about your asthma when you first consult him or her. The surgeon can take steps to lower your risks, such as giving you asthma medicines before or during surgery.