



Living Well With **Asthma**

PATIENT EDUCATION GUIDE



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Living Well With Asthma

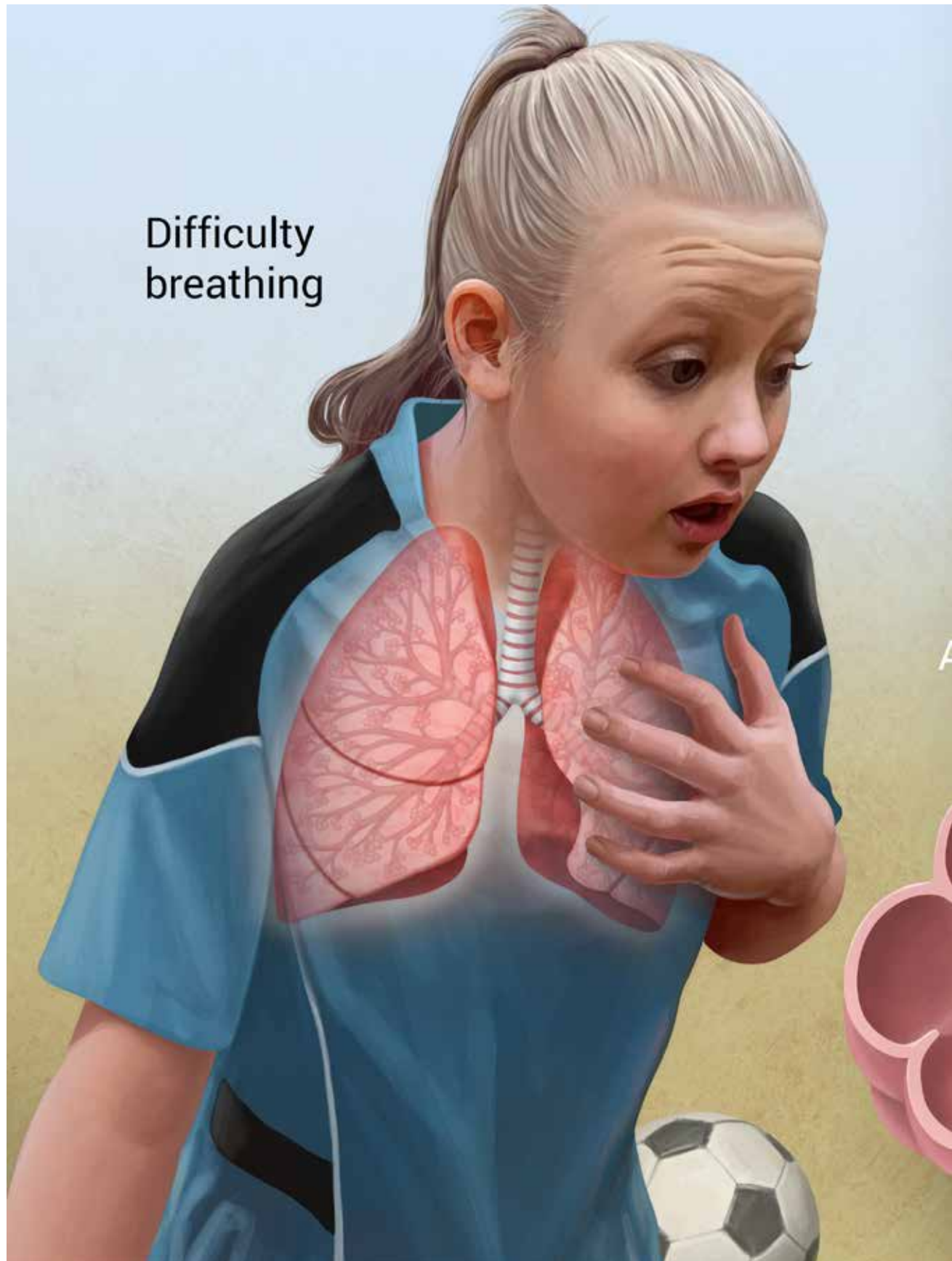
Now that your asthma is diagnosed, you're probably wondering how it will impact your day-to-day living. The good news is that with proper care and treatment, almost all people with asthma live full, active lives.

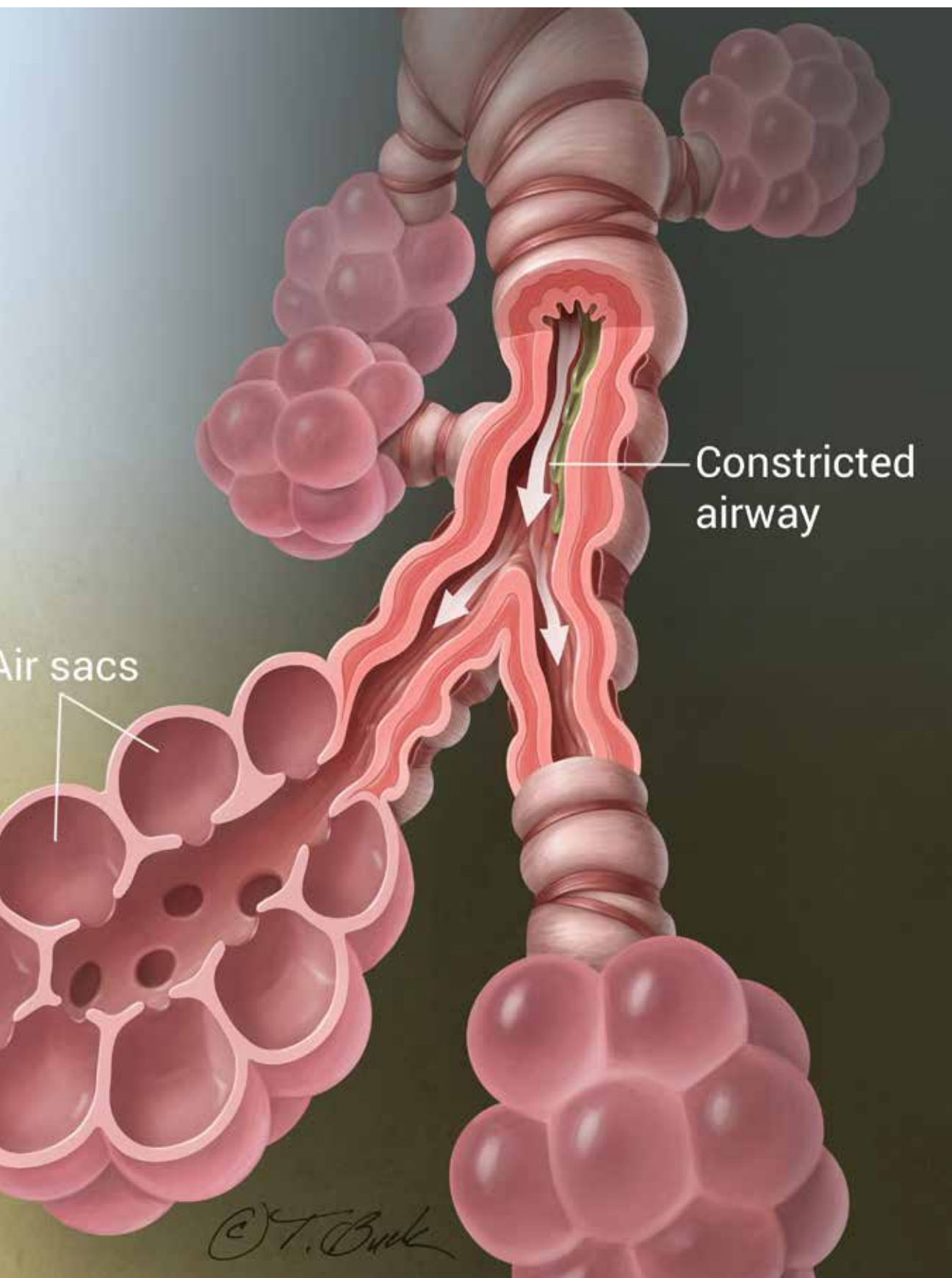
At the same time, it's important to remember that asthma is a serious disease that kills 10 people a day in the United States. While usually mild, its symptoms will vary from episode to episode and can turn life-threatening in moments.

Asthma begins with inflammation: the airways become swollen, inflamed, and clogged with mucus and fluid. Muscles surrounding the airways tighten and contract as they try to keep the passageways open. Inhaled allergens or irritants, such as secondhand smoke and air pollution, act like sandpaper on the raw surfaces. You begin to cough and wheeze as you struggle to breathe. This is called bronchospasm.

Your health-care provider is committed to helping you manage your asthma, which is why he or she has given you this practical guide to **Living Well With Asthma**. In this guide, we'll explain the common triggers for asthma, how you can control and/or reduce your symptoms, and the best medical options to help you keep your asthma in check.







Common Triggers and Solutions



What causes your airways to become inflamed, swollen, and easily irritated? A trigger is anything that causes the airway to tighten or twitch. It can be an infection, irritants such as smoke or air pollution, allergens in the air, strenuous exercise, or strong emotions. Each person's asthma is unique and reacts to different triggers.

In most cases, triggers are found in the air we breathe – especially allergens, which can cause an allergic reaction that increases inflammation and sets off asthma symptoms. By knowing the allergens that you react to, you can take actions to avoid them and prevent your airways from becoming inflamed and swollen.

Reducing exposure to your asthma triggers is the first important step in keeping your airways open and managing your asthma. Following are the most common things that trigger asthma. Don't be intimidated by the full list – most asthma patients react to a few, not all of them.



House Dust

House dust contains a potent mixture of dirt and allergens, from dust mites and mold to animal dander and insects. Breathing dust particles can irritate inflamed airways, as well as set off allergic reactions.

Dust mites are tiny insects, not visible to the naked eye. They require two things to live: human dander (the skin flakes that people naturally shed) and moisture. Dust mites live in mattresses, pillows, carpets, bed covers, and upholstered furniture, and their allergens easily settle in furnishings and house dust.

How can you control dust mites?

- Vacuum regularly with a HEPA (high-efficiency particulate air)-filtered vacuum.
- Cover mattresses and pillows with special dust-mite-proof encasings, to keep allergens out of your airways while sleeping.
- Wash bed linens, sheets, and covers every week in hot water (at least 130°F).
- If possible, get rid of carpets, extra pillows, and upholstered furniture, especially in your bedroom.
- Limit stuffed animals in children's rooms; use only those that can be washed weekly in hot water (at least 130°F).
- Dust often.
- Keep humidity levels in your home below 50%; use a dehumidifier in damp areas, such as basements.



Molds

Molds can be found almost anywhere that moisture and oxygen are present. They live both indoors and outdoors. The key to managing molds indoors is to reduce moisture throughout your home.

- Keep humidity at less than 50% to discourage mold growth. If needed, use a dehumidifier, especially in basements.
- Repair water leaks wherever they occur, such as around pipes or in the walls or ceilings. Watch out for mold in areas where water is normally present, such as around and under sinks and in bathtubs and showers.
- If mold is visible on a surface, clean it with fungicide or a bleach and water solution.



Cockroaches

Cockroaches leave droppings behind that contain potent allergens. Cockroach allergies are a particular concern for people living in big cities.

If you live in a building with cockroaches:

- Keep your house clean and food in tight containers.
- Repair water leaks.
- Use traps and poison baits to control cockroaches. Sprays can be irritating to your airways.
- If spraying is necessary, use a professional service regularly and leave your home until any odor has cleared.



Smoking

Cigarette, pipe, and cigar smoke has a severe effect on asthma. In fact, children who live in homes with adults who smoke are far more likely to have asthma problems and ear infections. If you or someone in your family has asthma, the best solution is to not smoke at all. Additional ways to prevent smoking from triggering asthma include:

- Never allow anyone to smoke in your home, in your car, or around people with asthma.
- If your state allows smoking in public places, eat in restaurants that do not allow smoking.
- Ask smokers to wear a shirt or jacket while smoking outside that can be taken off upon returning inside.



Weather

Weather conditions can affect airways of people with asthma. Usually this happens when the temperature is very hot, very humid, or very cold and dry.

What can you do to reduce weather triggers?

- Avoid outdoor activity when the weather is very hot, very cold, or very humid.
- Wear a scarf around your mouth and nose to warm the air you breathe and protect your airways when you must be out in cold, dry weather.



Infections

Respiratory viruses and sinus infections can make asthma worse. In fact, viral infections such as cold and flu are the most common triggers in young children and can be just as dangerous for adults.

What can you do?

- Get a flu shot every year and ask your health-care provider about whether you should have a pneumonia vaccine.
- Be sure you and everyone in your household wash hands frequently.
- See your health-care provider for immediate treatment if you suspect an infection. Often, you will need more of your regular asthma medicines until the infection clears.
- Don't ignore a drippy nose. Talk to your health-care provider about medicines you can take to reduce the drainage.
- Don't share toothbrushes or toothpaste when you have a cold.
- If your child gets viral infections every year, ask your health-care provider about asthma medicines before the flu season to prevent asthma attacks.



Outdoor Triggers

Tree, grass, and weed pollens and outdoor mold can trigger asthma, as can air pollution, smoke, and car exhaust.

How can you prevent exposure to outdoor triggers?

- Keep the doors and windows to your house shut, with heating or air conditioning running, particularly during times when outdoor triggers are present.
- Avoid outdoor activities during high pollen or ozone hours.
- If allergic to pollen, use allergy medicines to reduce reactions.
- Shower to wash away pollen when you come inside after spending time outdoors.



Food and Medicine Allergies

Many people with asthma report problems with eating certain types of foods. This is especially true of foods that contain sulfites, such as beer, wine, shrimp, and processed potatoes. Some medicines can also cause problems, especially aspirin and beta-blockers, which can be contained in some heart medicines and eyedrops.

How can you deal with food or medicine allergies to prevent airway inflammation or swelling?

- Talk with your health-care provider or pharmacist about all prescription or over-the-counter medications you take, as well as vitamins and herbal supplements to find out if any of them could affect your asthma.
- Stay away from any food or medicine that makes your asthma worse.
- Be careful to avoid eating foods that contain sulfites.
- Read food labels.
- Use substitute medicines when appropriate, such as acetaminophen instead of aspirin.



Stress and Emotions

Stress and strong emotions are common asthma triggers. Some people find that laughing or crying can set off symptoms, and research also indicates that stress – especially chronic stress – can increase inflammation.

How can you reduce stress?

- Think about the different events or situations in your life that cause you to feel stressed and take steps to reduce them wherever possible.
- Use stress management techniques, such as meditation and yoga.
- Develop a regular exercise program and healthy eating habits.
- Spend time with friends and family, as research shows healthy social interaction reduces stress.



Animals

All warm-blooded animals produce dander (shedding skin, fur, and feathers), urine, saliva, and droppings – all of which contain allergens that can trigger allergy and/or asthma symptoms.

How can you minimize these allergens?

- Don't have furry pets in your home.
- If you do have a pet, keep it out of your bedroom and off upholstered furniture.
- Consider using HEPA (high-efficiency particulate air) filters in your heating and air conditioning system and replace them monthly. Be sure they are sized correctly for your system.
- Keep pets off carpets as much as possible.
- Wash pets weekly and brush them outdoors, away from people with pet allergy.



Exercise

While exercise is important for all people, some people with asthma find it triggers asthma symptoms .

What can you do to prevent this?

- Do warm-up and cool-down exercises 5 to 10 minutes before and after strenuous exercise.
- Talk to your health-care provider about medicine you can take 15 to 30 minutes before exercising to prevent asthma symptoms.
- Talk to your health-care provider about your symptoms if they persist when you exercise, as they may be caused by non-asthma-related conditions (such as vocal cord dysfunction), or you may need additional medication.

Remember that regular exercise can improve your lungs and overall health. So don't assume you should discontinue exercise if it triggers your asthma. Instead, work with your health-care provider to develop a safe and healthy exercise program.



Strong Smells

Strong smells from paints, sprays, cleaning fluids, garden chemicals, scented candles, perfumes, lotions, hair sprays, and deodorants can trigger asthma problems. The best solution is to avoid these scents whenever possible.

- Stay away from your home when chemicals, paints, or sprays are in use and until the smell clears away.
- Don't use scented products on your body or in your home.



Reflux and Heartburn

Heartburn is a common term for reflux, or GERD (gastroesophageal reflux disease), that causes a burning sensation in the chest. It is caused by stomach acids or foods coming up into the food pipe or swallowing tube, known as the esophagus. Although many are not aware of the connection, GERD is a common asthma trigger.

What can you do to reduce reflux or heartburn?

- Some lifestyle changes can help, such as avoiding certain foods, alcohol or tobacco, or sleeping with your head slightly elevated.
- Talk with your physician about medications that control acid in your stomach.

Working With Your Health-care Provider



Asthma is a variable disease, with symptoms that come and go and often change in intensity. To manage symptoms, you'll need to work in partnership with your health-care provider over time. Ask for a written Asthma Action Plan that outlines exactly what you should do to prevent and treat symptoms, then see your health-care provider regularly to review and refine it. That means keeping regular appointments even when you feel fine. Well visits help you keep your asthma under control and identify problems early. And by having a team who knows you and your condition, it will be easier to maintain effective treatment plans and deal with emergencies.

Your Asthma Action Plan will tell you what medicines to take and when. You can also keep an accurate Asthma Diary to help you and your health-care provider monitor your lung function every day.

Follow Your Asthma Action Plan



Your Asthma Action Plan outlines treatment according to colored zones:

- **Green Zone:** Means you are doing well
- **Yellow Zone:** Means your asthma is getting worse
- **Red Zone:** Means you need immediate medical attention

The action plan will give you guidance on which medicines you need to take, including dosages and frequency, for everyday management and in cases of flares.

Controlling your asthma may seem like a lot of work at first, but turning these steps into daily habits now can help you live a normal life. Remember to:

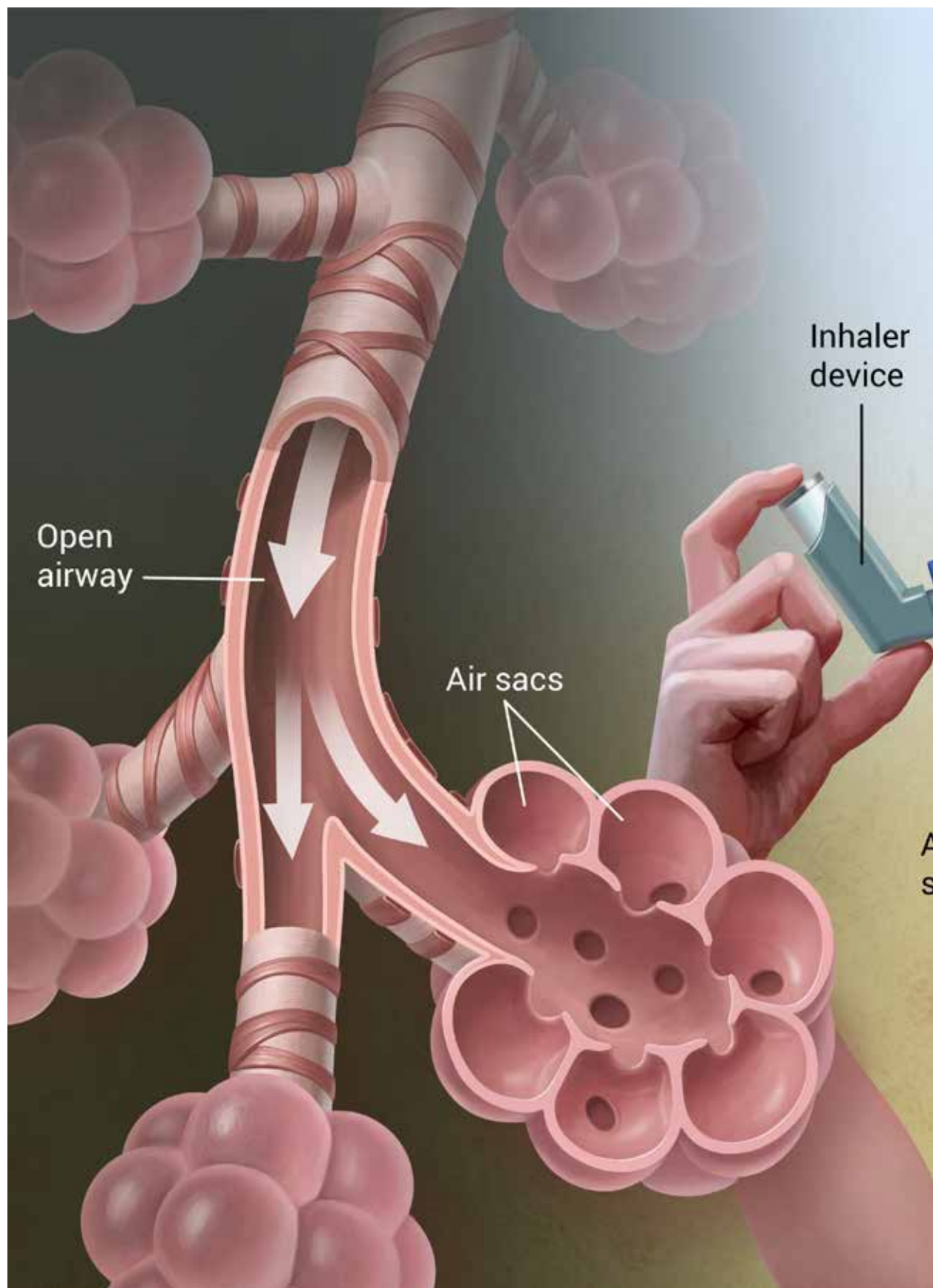
- Take action to control your individual asthma triggers.
- Keep your asthma diary up-to-date every day and follow your Asthma Action Plan.
- Take your long-term control medicines daily or as prescribed.
- Always carry your quick-relief medicine with you.

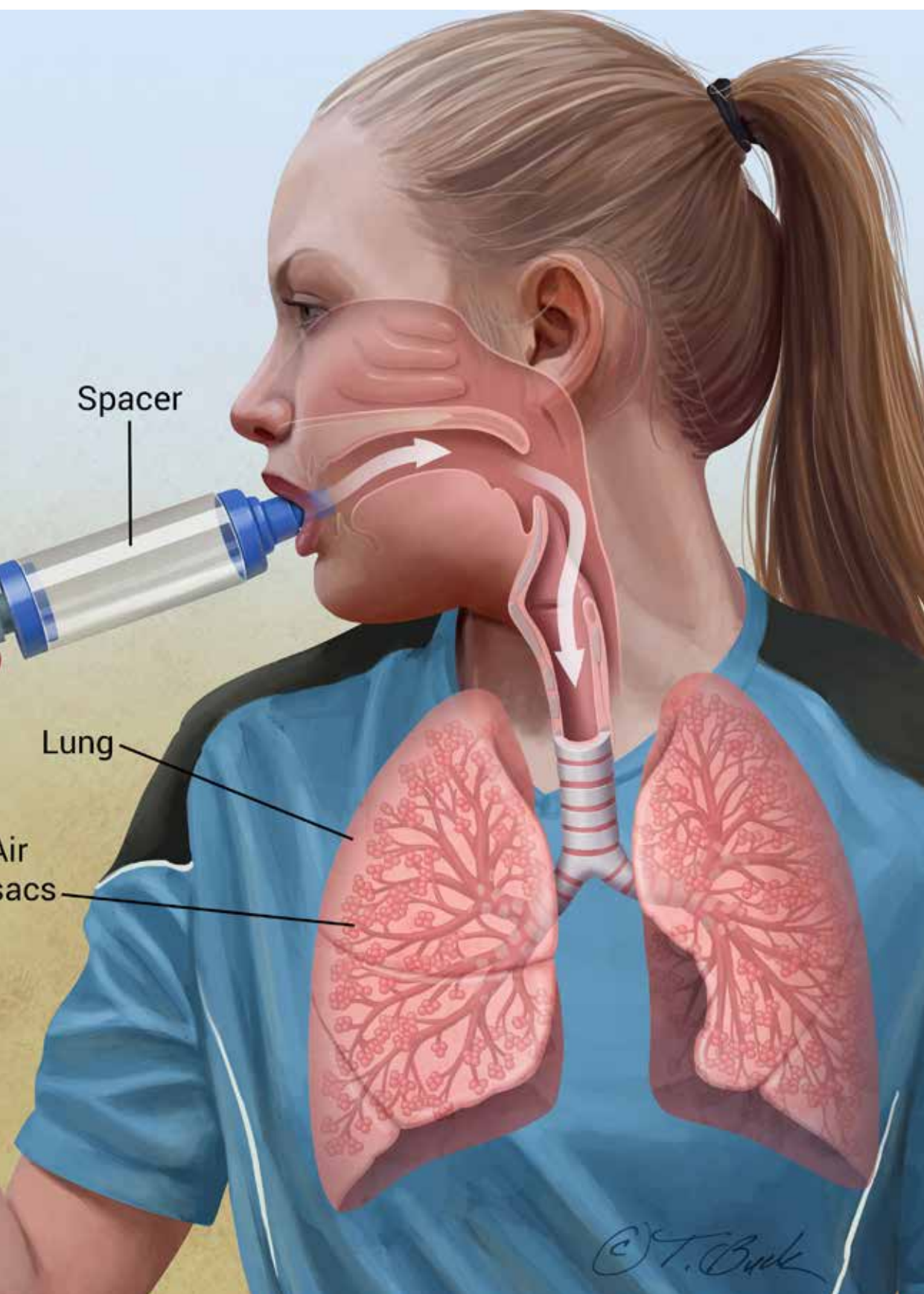
Understanding Your Asthma Medicines



Asthma medications play a central role in your treatment plan. Some prevent or reduce airway inflammation (often called controller medicines); others interrupt the allergic reaction that triggers symptoms; and even others relieve the coughing and wheezing, making it easier to breathe. These last medicines are called bronchodilators, either quick-relief, to be used as soon as symptoms appear, or long-acting, taken daily to prevent symptoms.

Your health-care provider will work with you to find the right combination of medicines to manage your asthma, and will adjust the type and amount based on your symptoms and control. The goal of asthma treatment is to help you feel your best with the least amount of medicine.





Testing Your Lung Function With a Peak Flow Meter



Many Asthma Action Plans are based on peak flow meter readings. A peak flow meter is a simple, hand-held device you can use at home or at the health-care provider's office to measure how well you are breathing. By using a peak flow meter at home every day, you can identify breathing problems early, sometimes before you even notice any symptoms. A peak flow meter helps you and your health-care provider recognize early signs of an asthma flare. It also helps measure how severely an asthma attack is affecting you.

There are many different kinds of peak flow meters. Each has a mouthpiece for breathing into, a marker that moves up a meter depending on how quickly you can exhale, and a series of measures. You may need to experiment with a few different peak flow meters to find the device that suits you best. In addition to manual devices described here, there are also electronic, digital peak flow meters available.

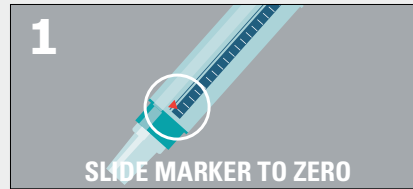


How to Use a Peak Flow Meter

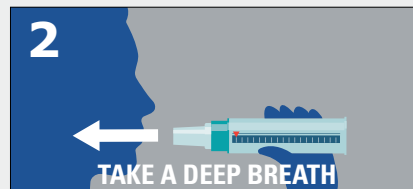
Be sure to measure your peak flow (all three tests) in the morning and evening. Generally, peak flow is lowest in the morning and highest between noon and 5:00 PM. Try to measure your peak flow at the same time every day for best results. Remember to take your completed Asthma Diary worksheets to your regular doctor/clinician visits to help your provider assess your condition.

Keeping Track of Your Personal Best Peak Flow

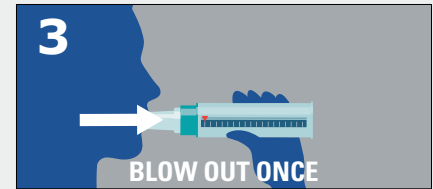
Periodically, and when you change your peak flow meter, you will need to track your personal best peak flow number to help you and your doctor/clinician monitor your ongoing asthma health. Your personal best peak flow number is the highest number you measure doing peak flow meter tests twice a day for 2 weeks when your asthma is under control. Good control is when you feel good and do not have any asthma symptoms. Children will need to reestablish their personal best peak flow number every 6 months as their lungs continue to grow.



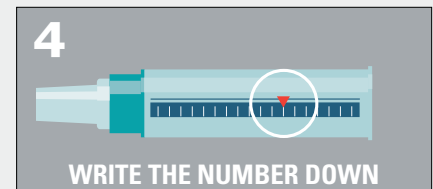
STEP 1: Slide the marker down as far as it will go to set it to zero.



STEP 2: Stand up. Holding the peak flow meter near your mouth, take as deep a breath as possible.



STEP 3: Place the meter into your mouth and close your lips around it to form a seal. Keep your tongue away from the hole and be sure to keep your fingers away from the markings. Blow out once as hard and fast as you can.



STEP 4: Don't touch the marker. Write down the number where the marker landed on the scale. If you cough or make a mistake, do not write down the number. Just do the test over again.

STEP 5: Repeat steps 1 to 4 two more times for a total of three measures. Make sure to reset the marker to zero at the beginning of each test. Write down the number for each test on the Asthma Diary worksheet included in the pocket at the back of this guide. Your peak flow is the highest of the three numbers.

How to Take Your Asthma Medications



Most asthma medications come as sprays or powders that are delivered using an inhaler. When you inhale the medication, it goes right into the airways of the lungs, directly where it is needed.

The most familiar type of asthma inhaler is the metered-dose inhaler, or MDI, a pressurized device that releases medication in a fine spray for you to inhale. One enhanced delivery device (Respimat®) is similar, with a softer mist.

Small children and others may also use a nebulizer to deliver their medication. This machine breaks liquid medicine into a mist that can be inhaled slowly.

Using an MDI

MDIs look the same on the outside, but each brand operates and needs to be maintained differently. Check the patient instruction sheet that came with your inhaler for details on using, cleaning, priming (getting ready to use), and maintaining the device.

Priming

When the MDI is new or hasn't been used in a while, the ingredients may separate. Priming, or releasing one or more sprays into the air, helps ensure the dose you inhale has the right amount of medication. Consult your patient instruction sheet for priming instructions, especially if you don't use your medication every day.

Counting Doses

Even the most perfectly timed inhalation won't do you any good if there's no medicine left in the inhaler. That's why it's important to count each dose and priming spray and replace the inhaler after using the labeled number of sprays. Many MDIs now have dose counters built in. If yours does not, use your Asthma Diary to keep track of doses used. Don't rely on how the inhaler "feels." Due to the many ingredients that make up the medication spray, the MDI may continue to spray or feel full when shaken long after the active medication has been used up.



Optimal Inhalation Technique

Studies show that many patients do not use their inhaler properly, and therefore do not get the expected and needed full dose of medication. You must inhale the spray quickly enough to prevent it from landing on your tongue or inside your cheek, yet slowly enough to let it get deep into your lungs.

Many people, especially children, have trouble doing this correctly. A common solution is to use a spacer or valved holding chamber (VHC). Available by prescription, these devices are designed to improve the delivery of the medication to the lower airways as well as decrease two common side effects of medication delivery: thrush (candidiasis) and hoarseness (dysphonia).

A valved holding chamber attaches to the MDI and has a one-way valve designed to allow the patient to load the chamber with the medication and inhale it when ready or over several breaths. It can be used with a mask attachment for young children and others.



A spacer is an open tube placed on the mouthpiece of the MDI to increase the distance between the MDI and the patient's mouth and to direct the medicine through the chamber. Patients must still coordinate their breathing with the inhaler actuation.

To make your breathing better, you **MUST** take your medicine as explained below. Following these instructions puts more of the medicine into your lungs. This will help you breathe easier and feel better.

Ask your health-care provider or pharmacist to show you how to place your inhaler into or in front of your mouth and how to coordinate your inhalation with the spray. Also ask how many doses of medicine your MDI contains when it is full. If it does not have a built-in dose counter, keep track of how many doses you use so you can refill your prescription before you run out of medicine. Before using your MDI, please read the instructions that came with it, and follow the priming and cleaning directions carefully.

Instructions for Using an MDI Without a Holding Chamber



STEP 1: Take the cap off your MDI. Check for and remove any dust, lint, or other objects. Shake the MDI well, if instructed in your patient information.



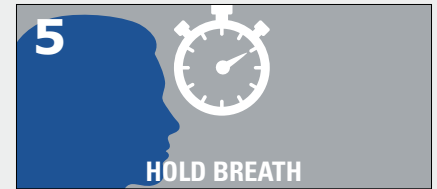
STEP 2: Sit up straight or stand up. Exhale fully, emptying your lungs as much as possible.



STEP 3: Hold the inhaler upright with the mouthpiece at the bottom and the top pointing up. Position it in or in front of your mouth as instructed by your health-care provider or the medication's patient instruction sheet. Some recommend holding the inhaler 1 to 2 inches away from your open mouth; others recommend putting the MDI mouthpiece between your teeth and closing your lips tightly around it. Be sure to keep your tongue out of the way of the spray.



STEP 4: Begin to inhale slowly, then activate the inhaler a split-second later. If you wait too long, you won't have enough breath left to inhale the medicine deep into your small airways. Continue inhaling slowly for 3-5 seconds or until your lungs are full.



STEP 5: Hold your breath for 10 seconds. If you cannot hold your breath for 10 seconds, hold your breath for as long as you can.



STEP 6: If you need to take another puff of medicine, wait 1 minute. After 1 minute, shake the MDI again if patient instructions recommend it, and repeat steps 2 through 5.



STEP 7: Recap the MDI. If your medicine is a corticosteroid, rinse your mouth with water after you have taken your last puff of medicine. Make sure you spit the water out – **DO NOT SWALLOW IT.**

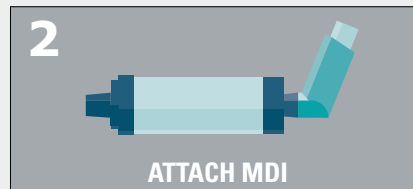
Instructions for Using an MDI With a Holding Chamber

To make your breathing better, you **MUST** take your medicine as explained below. Following these instructions puts more of the medicine into your lungs. This will help you breathe easier and feel better.

Ask your health-care provider or pharmacist to show you how to place your inhaler into or in front of your mouth and how to coordinate your inhalation with the spray. Also ask how many doses of medicine your MDI contains when it is full. If it does not have a built-in dose counter, keep track of how many doses you use so you can refill your prescription before you run out of medicine. Before using your MDI, please read the instructions that came with it, and follow the priming and cleaning directions carefully.



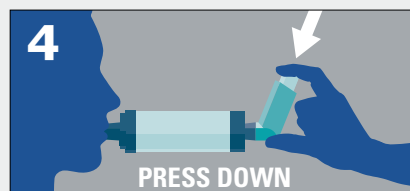
STEP 1: Take the cap off your MDI. Check for and remove any dust, lint, or other objects. Shake the MDI well, if patient instructions recommend it.



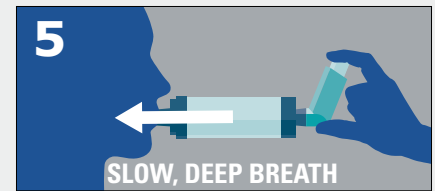
STEP 2: Attach the MDI to the holding chamber.



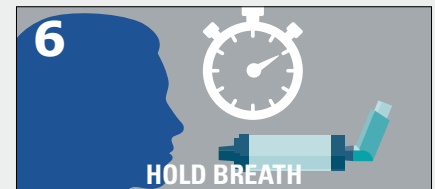
STEP 3: Sit up straight or stand. Exhale fully, emptying your lungs as much as possible.



STEP 4: Put the mouthpiece of the holding chamber in your mouth. Close your lips around the mouthpiece and make a tight seal. Press down on the MDI. This puts one dose of medicine into the chamber. **NEVER** load more than one dose into the chamber.



STEP 5: Take a **SLOW, DEEP** breath through your mouth. Breathe in as much air as you can. Try to fill up your lungs completely.



STEP 6: Remove the mouthpiece from your mouth and hold your breath for 10 seconds. If you cannot hold your breath for 10 seconds, hold your breath for as long as you can.



STEP 7: If you need to take another dose of medicine, wait 1 minute. After 1 minute, shake the inhaler again if patient instructions recommend it, and repeat steps 3 through 6.



STEP 8: Remove the MDI from the chamber and recap both devices. If your medicine is a corticosteroid, rinse your mouth with water after you have taken your last puff of medicine. Make sure you spit the water out – **DO NOT SWALLOW IT.**

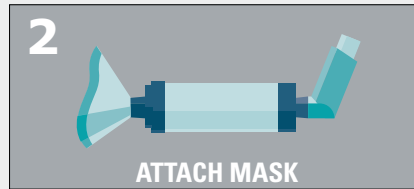
Holding chambers with masks are often recommended for children with asthma, but are used by adults as well. To make breathing better, patients **MUST** take the medicine as explained below. Following these instructions puts more of the medicine into the lungs, helping patients breathe easier and feel better.

Ask your health-care provider or pharmacist how many doses of medicine your MDI contains when it is full. If it does not have a built-in dose counter, keep track of how many doses of medicine you use so you can refill the prescription before running out of medicine. Before using the MDI, read the instructions that came with it and follow the priming and cleaning directions carefully. The mask and holding chamber should also be washed according to manufacturer's instructions.

Instructions for Using an MDI With a Holding Chamber and Mask



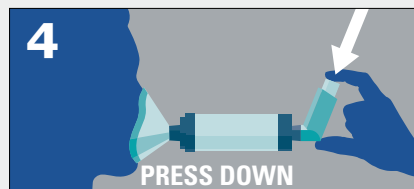
STEP 1: Take the cap off your MDI. Check for and remove any dust, lint, or other objects. Shake the MDI well, if patient instructions specify.



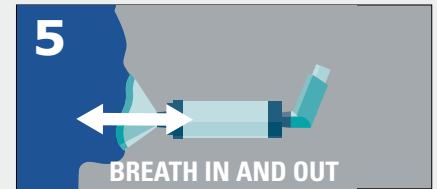
STEP 2: Attach the mask to the holding chamber, if it's not a single unit, and insert the MDI into the chamber.



STEP 3: The user should sit up straight or stand. Place the mask over the user's nose and mouth. The mask should fit firmly enough so none of the medicine can escape.



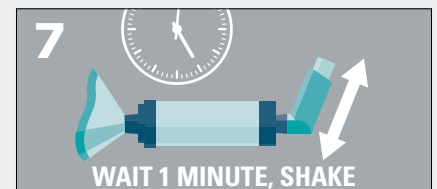
STEP 4: Press down on the MDI. This puts one dose of medicine in the chamber.



STEP 5: Have the user breathe in and out normally for six breaths, to inhale the full dose of medicine. The chamber's one-way valve will prevent breath from going back into the chamber. You can monitor the user's breathing by watching the valve open and close. Do not remove the mask until the sixth breath is completed.



STEP 6: Remove the mask from the user's face.



STEP 7: If the patient needs to take another puff of medicine, wait 1 minute. After 1 minute, shake the MDI again if patient instructions specify and repeat steps 3 through 6.



STEP 8: Remove the MDI from the chamber and recap both devices. If the medicine is a corticosteroid, user's should rinse their mouth with water after the last puff of medicine. Make sure to spit the water out – **DO NOT SWALLOW IT.**

Coping With an Asthma Attack



Recognizing the symptoms of an asthma attack early may help you prevent it from happening.

First, be sure you know the **danger signs** of a serious asthma attack:

- Severe shortness of breath (gasping for air)
- Can't talk well (not being able to speak in a full sentence)
- Having trouble walking
- Lips or fingernails turn blue

If you experience these danger signs, you are having a major asthma attack.

Go to the emergency room or call 911 immediately!

You also need to know the signs and symptoms for less severe asthma attacks, including:

- Coughing, sneezing, itchy throat
- Tight chest, wheezing
- Shortness of breath
- Waking up at night
- Fast heartbeat and/or breathing
- Headache

When you feel an attack coming, follow these three steps:

1. Get away from the trigger that started your attack.
2. Take your quick-relief medicine as soon as you notice symptoms, then follow your Asthma Action Plan.
3. If you still have wheezing and shortness of breath, contact your health-care provider or get emergency help.

Many people with asthma are so used to poor breathing that they don't recognize the problem. It's best to go by the Rules of Two® – signs that your treatment plan is not working. Contact your health-care provider if:

- You have asthma symptoms more than TWO days a week.
- Your asthma wakes you up TWO or more times a month.
- You refill your quick-relief bronchodilator prescription more than TWO times a year.

(NOTE: The Rules of Two® is trademarked by Baylor Health Systems.)



When to See an Asthma Specialist

- If you continue to experience symptoms that disrupt sleep or everyday activities, even after following your management plan, then a visit to a specialist (an allergist or pulmonologist) may be in order. The National Institutes of Health asthma guidelines recommend seeing a specialist if any of the following apply:
- You have had a life-threatening asthma episode.
- You are not responding to treatment after 2 to 4 weeks.
- You have persistent asthma symptoms, limited physical activity and frequent flares.
- You need continuous high-dose inhaled corticosteroids or more than two courses of oral corticosteroids in 1 year.
- You need additional testing, such as allergy tests, complete spirometry breathing tests, rhinoscopy, or bronchoscopy.
- You are being considered for immunotherapy.
- You have conditions that complicate your asthma, such as severe hay fever, sinusitis, GERD, or exercise-related breathing problems.
- You require additional education on complications of therapy or allergen avoidance at home, school, or work.



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Other patient education guides available from the CHEST Foundation in print and on our website:
www.chestnet.org/patienteducation



Additional Resources:

www.allergyasthmanetwork.org
www.lung.org

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