

# Asthma Care

## Notebook



Kids deserve the best.



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# Asthma Overview

## What is asthma?

Asthma is a disease that affects the lungs. It can last a lifetime. Even if asthma symptoms are not active, asthma is still there. There is no cure for asthma, but there are many things that can be done to help control it.

It is important to keep asthma in good control. When asthma is in good control the lungs are healthy and breathing is easier. With good control there will be:

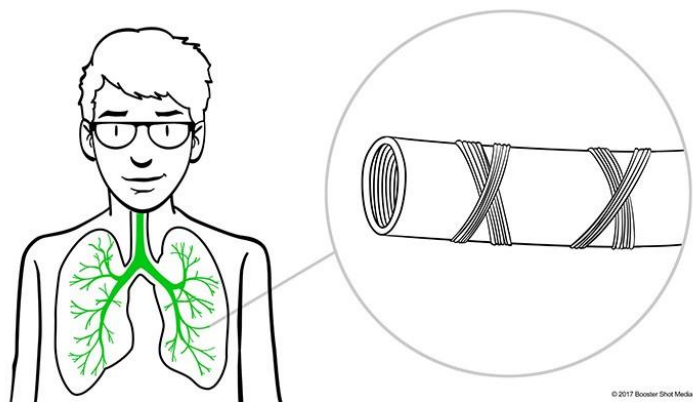
- Fewer asthma symptoms
- Fewer missed school or work days
- Fewer visits to the emergency room
- The ability to be more active

For more information, go to page 4.

**How does asthma affect the lungs?** The lungs are made up of many tiny airways. The airways carry air in and out of the lungs.

When an asthma attack happens:

- The airways become swollen
- The airways make more mucous
- Muscles around the airways squeeze tight

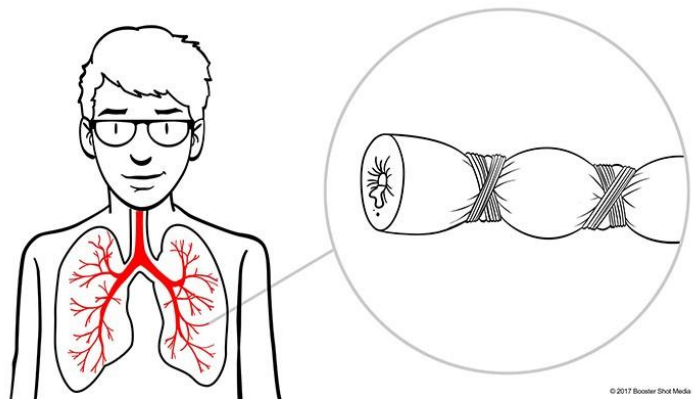


Normal airway: Air moves freely and breathing is easy

## What are the signs and symptoms of asthma?

When asthma begins to flare or act up, it is harder to breathe. You may start to cough or wheeze, or your chest may feel tight. These symptoms may get worse. This is often called an asthma attack.

For more information, go to page 6.



Asthma airway: Air not moving freely and breathing is hard

### What can cause asthma symptoms or make symptoms worse?

**Triggers** are things that can cause asthma symptoms or make symptoms worse. Triggers can be things like smoke, allergies, illness, or strong smells. Avoiding triggers can reduce the chance of an asthma attack and may decrease the need for more medicine.

For more information, go to page 8.

### How do asthma medicines help?

Asthma medicines help the lungs stay healthy. There are two main types of asthma medicine:

- **Controller medicine.** This medicine helps decrease the swelling in the airways. It works slowly and needs to be taken every day.
- **Rescue medicine.** This medicine helps relax the muscles around the airway. It works quickly and should be taken when asthma symptoms occur. Sometimes your doctor will recommend taking the medicine before gym class, activity or exercise.

For more information, go to page 12.

### How are asthma medicines given?

Most asthma medicines need to get into the lungs to work. There are several ways to get asthma medicine to the lungs:

1. Metered Dose Inhaler (inhaler or pump)
2. Dry Powdered Inhaler
3. Nebulizer
4. Liquids or pills taken by mouth



Special tools or devices are used to help get asthma medicine into the lungs.

- **Spacers** are used with metered dose inhalers. It helps slow down the speed of the medicine so it can get into the lungs and not to other parts of the body.
- **Nebulizers** turn liquid medicine into a mist that can be breathed into the lungs.

For more information, go to page 15.

### What is an asthma management plan?

An asthma management plan is a special plan the health care team will make with you. This plan tells you what to do when your breathing is good and what to do when asthma flares up or acts up.

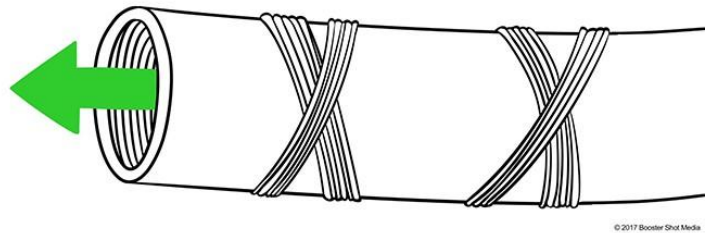
For more information, go to page 17.

**You are a very important part of the health care team.** Together with the help of the team, asthma can be controlled.

# What is Asthma?

## How does asthma affect the lungs?

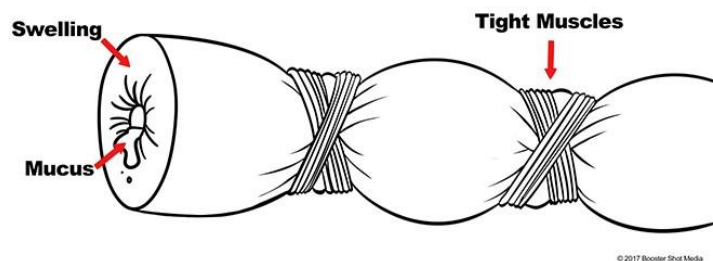
The lungs are made up of many tiny tubes. These tubes are called bronchioles. The bronchioles carry air in and out of the lungs. In a normal airway, air moves freely through the bronchioles and breathing is easy.



Normal airway: Air moves freely and breathing is easy

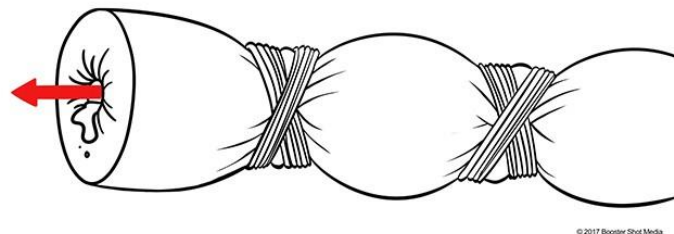
When asthma is not under good control, three things change in the airways that make it hard to breathe:

- The airways become swollen. The walls thicken and make the airways smaller.
- The airways make more mucous. Mucous is a thick liquid that your body makes. Mucous normally protects the nose, throat, and airways. When you have asthma, your body makes too much mucous. This mucous can plug the airways.
- Muscles around the airways squeeze tight. Your airways have muscles around them that are usually loose. When you have asthma, these muscles can tighten.



Asthma airway has swelling, mucus, and tight muscles

These three things all make the airways smaller. When the airways get smaller it is hard to get air in and out. This can cause wheezing, coughing and trouble breathing.



Asthma airway: Air not moving freely and breathing is hard

## Signs and symptoms of asthma:

When asthma is not well-controlled, symptoms may include:

### Cough

- An asthma cough is usually dry and The cough is not just from a cold. As often happen at night or after running hard. The cough does not go away.
- The cough is caused by the muscles around the airways.

### Wheezing

- Wheezing is a high-pitched sound.
- Wheezing is caused when your body has to push hard to get the air out of the lungs.

### Chest tightness

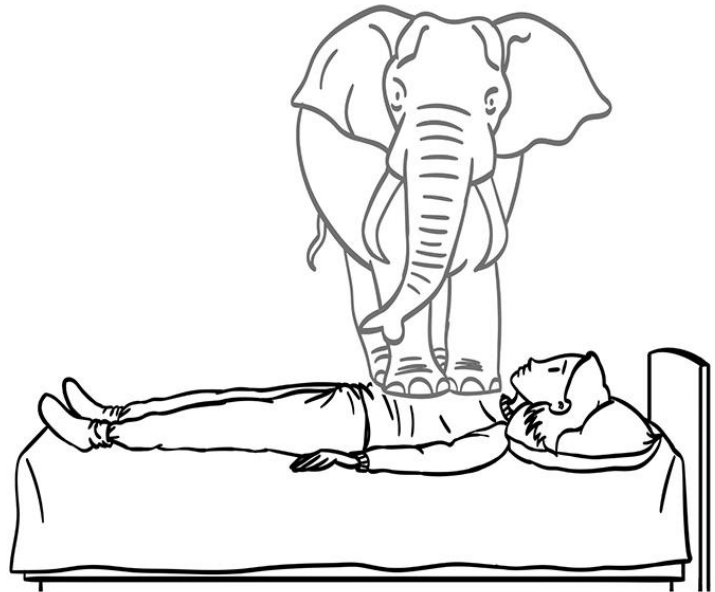
- People with asthma often feel like their chest is tight or heavy when their asthma is not under

good control. People feel that they can't get a good breath in because their chest is too tight. This may also feel like an elephant standing on your chest.

- Chest tightness is caused by the swelling in the airway and the muscles squeezing.

### Trouble being active

- Regular daily activities like exercising, playing, sports or even walking up stairs can be hard to do. Children will often have to stop playing because it is hard to breathe.
- Decreased activity is caused by not being able to breathe easily.



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Chest pain in asthma can feel like an elephant standing on your chest



When these symptoms are happening, you need to call the doctor because this means asthma is not under good control. Medicine doses may need to be changed or new medicine added.

# Signs and Symptoms of an Asthma Attack



An asthma flare-up (attack) is when signs of asthma gets worse.

There are **early signs** and **emergency signs** of an asthma attack. It is important to start quick relief medicine (rescue) medicine as soon as early signs begin. These **early signs** are:

- Cough
- Wheeze
- Tight or heavy chest
- Cough at night
- Playing less

Follow your asthma management plan for which medicines to use. If medicine is not started the asthma attack could get more severe.

If Emergency signs start, call your doctor or go to the urgent care/ emergency room right away.

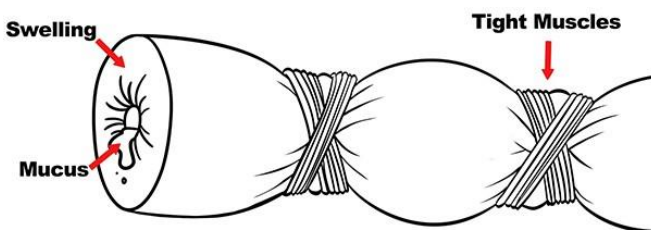
These **emergency signs** are:

- Rescue medicine is not working.
- Breathing is faster or harder and keeps getting worse.
- Nose opens wider (flares).
- The skin between the ribs pulls in. This is called retractions.
- Trouble walking, talking, or sleeping
- Coughing without stopping

## What happens during an asthma attack?

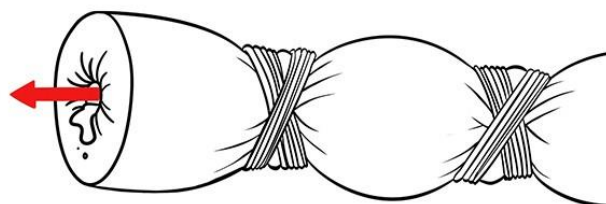
During an asthma flare-up or attack, three things get worse in the airways inside the lungs:

- The airways become swollen. The walls thicken and make the airways smaller.
- The airways make more mucous. Mucous is a thick liquid that your body makes. Mucous normally protects the nose, throat, and airways. When you have asthma, your body makes too much mucous. This mucous can plug the airways.
- Muscles around the airways squeeze tight. Your airways have muscles around them that are usually loose. When you have asthma, these muscles can tighten.



Airway during asthma attack has swelling, mucus, and tight muscles

These three things all make the airways the airways smaller, which are what causes wheezing, more coughing, and trouble breathing.

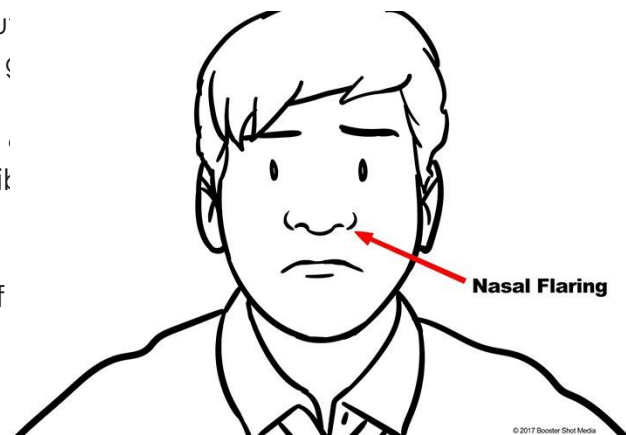


Airway during asthma attack:  
Air not moving freely and breathing is hard

The body is working hard to get air in and out. There are signs when the body is working to get air in and out:

- The nose opens wider (flares) to get more air in.
- The skin between the ribs pulls in, so the ribs stick out. This is called retractions.

There are early signs and emergency signs of an asthma attack. It is important to start quick relief medicine (rescue) medicine as soon as early signs begin. Follow your asthma management plan. If medicine is not started the asthma attack could get more severe.



Nose flares to get more air in during asthma attack

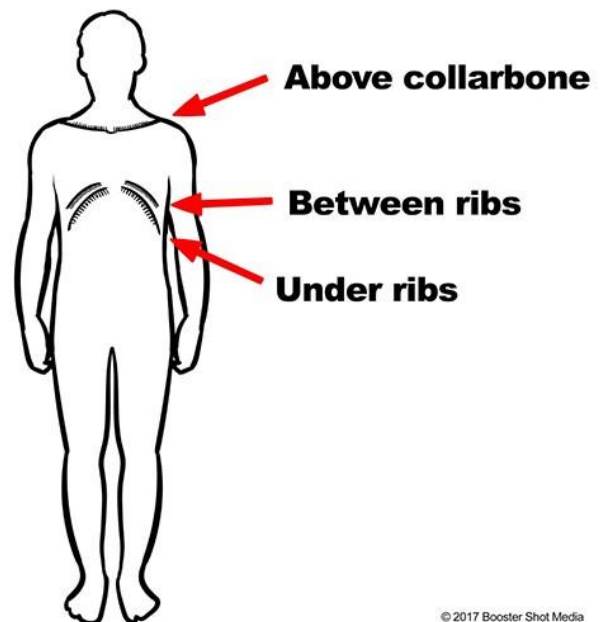
### Why do asthma attacks happen?

Often something triggers an asthma attack such as:

- Colds
- Allergies
- Something around you (cleaners, animals, dust, mold, or weather changes)
- Cigarette smoke
- Exercise

### Treatment of an asthma attack

- Use your quick relief (rescue) medicine (albuterol or levalbuterol).
- Follow your asthma management plan.
- If symptoms don't get better and you are still having severe symptoms, call your doctor or go to urgent care or the emergency room.
- After seeing the doctor, a stronger medicine may be needed.



Skin around the ribs pulls in during an asthma emergency

Your doctor will help you get good control of your asthma. With good control, asthma attacks do not happen often.

# Asthma Triggers

Triggers are things that can cause asthma symptoms or make asthma worse. Triggers can be things like smoke, allergies, illness or strong smells. Avoiding triggers can reduce the chance of an asthma attack and may decrease the need for more medicine.

Stay away from these asthma triggers to prevent symptoms:

**Allergies:** An allergen is something that bothers some people but not all. Allergens are breathed into the lungs where they cause swelling and asthma attacks. You and your doctor may decide that allergy testing is an option for you.

Allergy tests help find what may be causing allergy symptoms. Knowing what causes an allergic reaction can help avoid these triggers. Allergy tests are often done to evaluate:

- Triggers for asthma patients
- Environmental allergies, like hay fever

**Smoke:** Do not smoke. It is bad for everyone. If you can smell the smoke, then it is hurting your lungs.

- Do not smoke in or let others smoke in your house or car.
- Avoid secondhand smoke. Ask family members to stop smoking.
- If you are a smoker, ask for help.



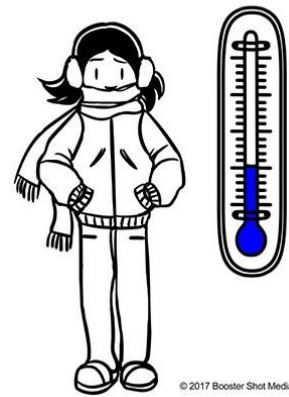
Make smoke (examples: campfires, incense, candles, and smudging). These things can trigger an asthma attack.

**Colds and Viruses:** Colds can make asthma worse.

- Follow your asthma action plan.
- Take asthma medicine.
- Wash hands often.
- Get a flu shot every year.

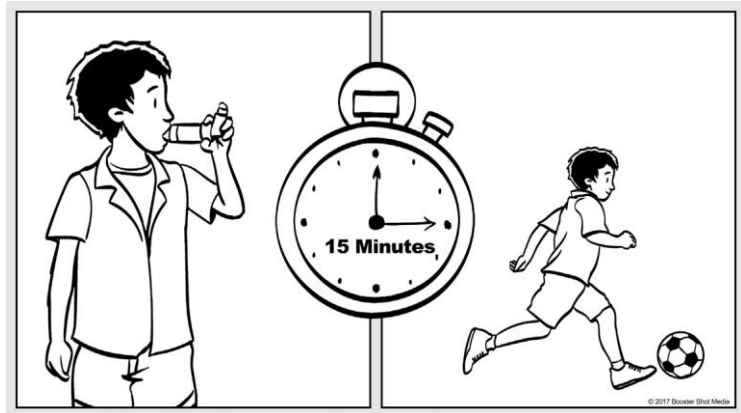
**Weather Changes:** Asthma symptoms may be worse if it gets really cold or really hot outside.

- Cover nose and mouth with a scarf on cold days.
- Stay indoors in air conditioning on hot and humid days.



**Exercise/Being Active:** It is important to be active even if you have asthma. You should be able to do all the things people your age can do. When asthma is in control you will be able to be more active, but sometimes being active can make symptoms worse.

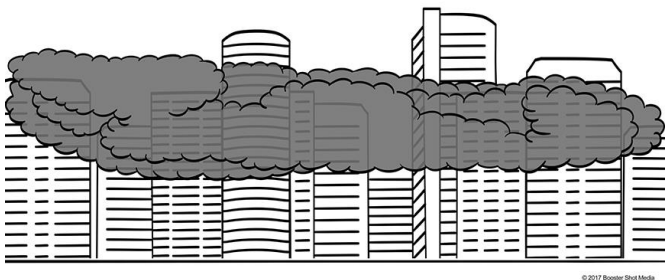
- Start activity slowly. Warm up for 10 minutes before activity.
- Talk to your provider or nurse about taking asthma medicine before activity. Taking medicine before activity can keep asthma symptoms away during exercise.
- If you cannot be as active as you want or you are limiting your child's activity, talk to your doctor.



If needed, take asthma medicine 15 minutes before you exercise or are active

**Strong Smells/Sprays:** Strong smells can make asthma worse.

- Strong smells include: Sprays or liquids used for cleaning, deodorants, perfumes, hair sprays, paints, diffusers, candles and campfires.
- Open windows when using cleaning products, and stay out of the room for two hours.



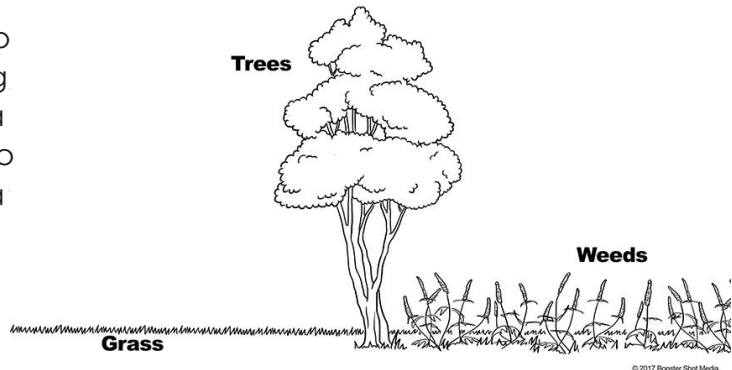
**Air Pollution:** Poor air quality can make asthma worse.

- Check air quality online or in the newspaper.
- Do not exercise outside on poor air quality days.
- Stay inside. Look for air-conditioned places.

**Allergies:** An allergen is something that bothers some people but not all. Allergens are breathed into the lungs where they cause swelling and asthma attacks. You and your doctor may decide that allergy testing is an option for you.

**Pollen:** Grass, trees and weeds make p  
Allergens include tree pollen in spring summer and ragweed and molds in fa

- Try to keep windows closed & air co
- Try to do outdoor activities in the a when the pollen counts are lower.
- Ask your doctor if you need to add or increase your medicine before the allergy season starts.



**Animal Dander:** All pets with fur or feathers make dander.

- Dander is protein found in skin flakes, urine, poop, saliva and hair.
- The best thing to do is keep furry or feathered pets out of your home.



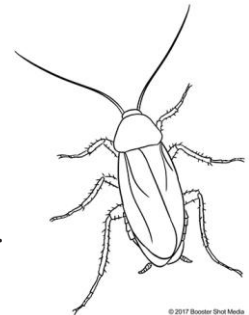
**Dust mites:** Dust mites are found in many places and can make it hard to breathe.

- Cover pillows, mattress, and box springs in a special dust-proof cover.
- Wash all bedding weekly in hot water with soap.



**Cockroach:** Dead cockroach bodies and droppings mix with house dust and can be inhaled.

- Seal entryways.
- Keep food in closed containers.
- Do not use roach bombs to kill the roaches. Use roach motels instead.



**Molds:** Mold grows in moist areas where lights are low. You can find it in the bathroom, basement, under sinks, in potted plants and along windowsills.

- Clean moldy surfaces with a cleaner that has bleach in it.
- Reduce indoor humidity if possible.
- Fix leaky sinks, pipes, tubs or toilets.

Allergy tests help find what may be causing symptoms. Knowing what triggers an allergic reaction can help avoid these triggers. Allergy tests are often done to evaluate:

- Triggers for asthma patients
- Environmental allergies, like hay fever.



My asthma symptoms are:

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My asthma triggers are:

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# Asthma Medicines

Although there is no cure for asthma, medicines are the **best** way to control and treat asthma. Medicines taken the right way help control asthma with few side effects. Understanding how each medicine works helps keep asthma in good control.

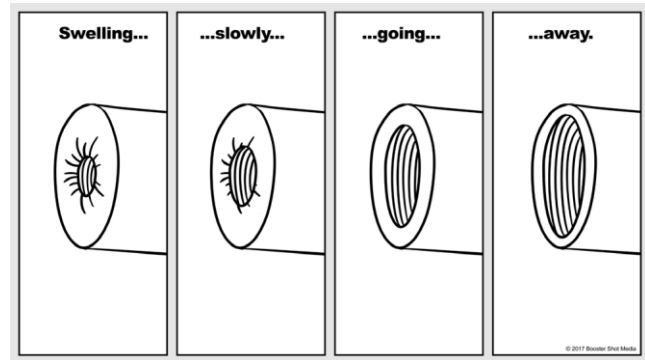
There are two types of asthma medicines. Each type works a different way. The types are called: **Daily Control Medicine** and **Quick Relief (Rescue) Medicine**

## Daily Control Medicine (Preventative/Controller)

Daily control medicine helps to decrease the swelling in the airway and keep the airway open. This makes it easier to breathe.

### Important facts about daily control medicine:

- Use this medicine every day even if there are not asthma symptoms.
- When these medicines are used every day, the symptoms of asthma will decrease. The chances of having an asthma attack will also decrease.
- These medicines do not work quickly. It may take a few days to a few weeks for any effects to be noticed.
- When these medicines are taken every day, a quick relief medicine should not be needed more than two times a week. There may be times when quick



Daily control medicine makes it easier to breathe by decreasing swelling

relief medicine may be needed more than twice a week such as illness or exercise.

### There are three main kinds of daily control medicine:

1. Inhaled corticosteroids
2. Combination medicine
3. Leukotriene modifiers

#### 1. Inhaled Corticosteroids

(Common names are Flovent, Qvar, or Budesonide)

- This medicine comes as an inhaler or a liquid for a nebulizer.
- This medicine decreases swelling and mucous in the airway

#### Special instructions

- Do not stop taking this medicine without talking to your doctor.
- Can cause irritation of the mouth and throat. Rinse your mouth after using the medicine to prevent this.

## 2. Combination medicine (Corticosteroids and Long Acting Beta Agonists) (Common names are Advair, Dulera)

- This medicine comes as an inhaler.
- The corticosteroid works to decrease and prevent both swelling and mucous in the airway. The long-acting beta agonist is used to open the airways in the lungs by relaxing the muscles around the airways.

### Special instructions

- Do not increase or stop this medicine without talking to your doctor.
- Can cause irritation of the mouth and throat. Rinse your mouth after using the medicine to prevent this.

## 3. Leukotriene Modifiers (Common names are Montelukast or Accolate)

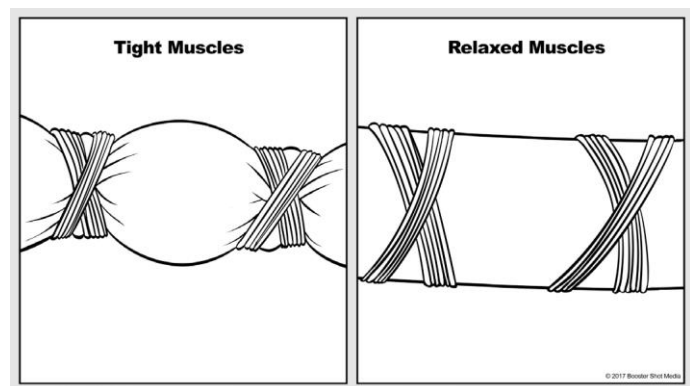
- This medicine comes as a pill that you chew or swallow.
- It blocks the immune system from causing airway swelling.
- It also helps with swelling and mucous in the nose caused by allergies.

### Special instructions

- Works best if taken before bed.

## Quick Relief (Rescue) Medicine- (albuterol and levalbuterol)

- Quick relief medicine help relax the muscles that are squeezing around the airways. This helps make it easier to breathe.
- Use this medicine right away when asthma symptoms start.
- This medicine begins to work very quickly. Asthma symptoms should



Quick relief (rescue) medicine relaxes muscles around the airway

be better in 5-10 minutes after taking the medicine.

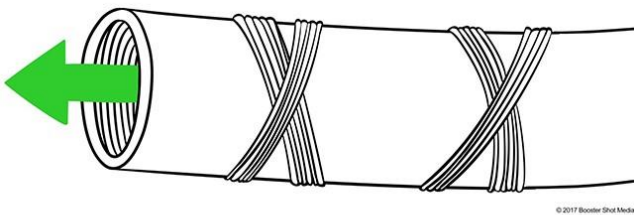
- The medicine will work in the body for up to 4 hours.
- Quick relief medicine should only be taken for asthma symptoms or before activities. If this medicine is used too often it can be dangerous.

### Special Instructions

- Some people have restlessness, nervousness, shaking hands, fast or pounding heart beat when they take quick relief medicines. The use of a spacer can decrease these symptoms.

### Steroid Medicines by Mouth:

- This medicine comes as a liquid, melting tablet or pill.
- When an asthma attack happens, extra medicine may be needed to help with the swelling and mucous.
- This type of medicine should not be used very often. It should only be used when asthma symptoms are very bad.
- When steroids are used right away, the swelling should stop quickly. They take 6-8 hours to start working.



With the right medicines, air moves freely and breathing is easy

- Sometimes the doctor will give instructions to slowly decrease the medicine dose. This means taking less and less medicine every day until it is stopped. Doctors call this a steroid taper.
- These are not the kind of steroids that people use to build muscle.

### Special Instructions:

- Some people get more energy when this medicine is taken, have trouble settling down, or trouble sleeping. Some children have more behavioral problems with this medicine. Take this medicine earlier in the day to prevent sleep problems.
- If steroids are needed more than one time a year, asthma is not in good control. See a doctor or asthma specialist because extra medicines may be needed.

### Common Questions About Asthma Medicines

#### Why does each medicine have two names?

Most asthma medicines have two names: a brand name and drug name. A good example of these is Proair® (brand name) and albuterol (drug name).

It is very common for doctors to talk about both the brand names and drug names. This can be confusing, so ask the doctor to mention the other name of the medicine if there are any questions.

#### What changes in growth can happen from controller asthma medicines?

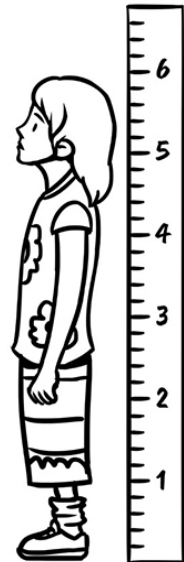
Inhaled asthma controllers can slow growth in children at any dose. Although this side-effect may seem concerning, the usual height difference is only ~1 centimeter, or around 1/3rd of an inch.

#### Are there any natural medicines that help asthma?

There are no natural medicines that have been found to work for asthma. Talk to your doctor if you are using any natural medicines.

#### Should cough medicines be used for asthma?

No. Cough medicines do not control asthma and should not be used. Instead, use asthma quick relief medicine to treat a cough.



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# Asthma Medicine Devices

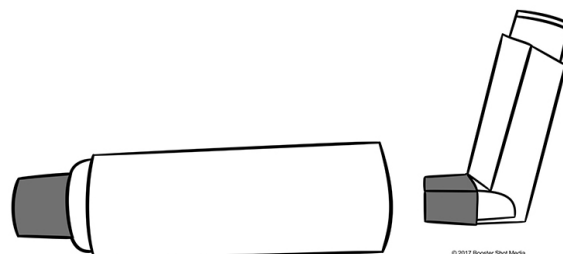


Most asthma medicines need to get into the lungs to work. It is very important that you know how to use the asthma medicines the right way. You can ask the pharmacist, nurse, or doctor to show you.

There are 4 devices that can be used to take as

## 1. Metered Dose Inhaler (MDI)- commonly called a pump or puffer

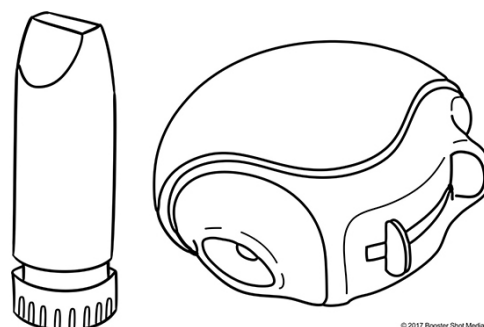
- A metered dose inhaler holds medicine inside of a can.
- The medicine is mixed with a safe gas that pushes the medicine out very fast.
- The medicine comes out in the form of a mist which can be breathed into the lungs.
- When the inhaler is pumped, it gives just the right amount of medicine with each pump.
- **A spacer should always be used when taking this medicine.**
- An inhaler can travel with you when you leave home.



**Spacers** are always used with metered dose inhalers. It helps slow down the speed of the medicine so it can get into the lungs and not to other parts of the body.

## 2. Dry Powdered Inhaler (DPI)

- A dry powdered inhaler holds powdered medicine inside of it.
- The medicine comes out in the form of a powder, which can be breathed into the lungs.
- When the inhaler is ready to use, it gives just the right amount of medicine.
- In order to get the medicine in the lungs, you have to breathe in deep and fast.
- A spacer should not be used when taking this medicine.
- An inhaler can travel with you when you leave home.



### 3. Respimat® Soft Mist Inhaler (SMI)

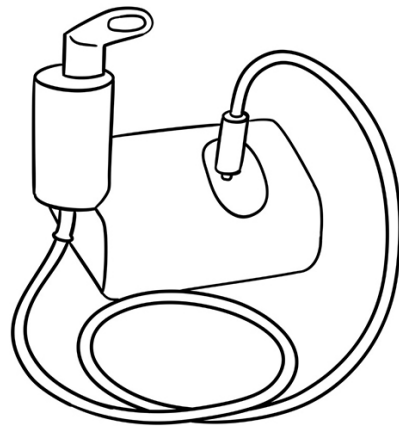
- A Soft Mist Inhaler holds water-based medicines inside of a can.
- The medicine comes out of the inhaler as slow mist and looks like a cloud.
- There are no extra chemicals in the medicine to help it get to the lungs.  
When the inhaler is activated, just the right amount of medicine comes out.
- A spacer should not be used when taking this medicine.
- An inhaler can travel with you when you leave home.

#### Special instructions:

- Make sure to keep track of the number of doses left in an inhaler. Some inhalers have a counter, and some do not. If the MDI does not have a dose counter, keep track of how many puffs are used each time the inhaler is used.
- Do not keep the inhaler in very hot or very cold temperatures.
- Use the inhaler only as directed by the doctor.
- Do not let children play with a metered dose inhaler or a spacer.
- One spacer can be used for all of your metered dose inhalers.
- A spacer should last at least one year.

### 4. Nebulizer

- A nebulizer mixes air with a liquid medicine to make a mist.
- The mist is breathed into the lungs with a mask or a mouthpiece.
- A nebulizer requires electricity or a battery.
- It takes 10 to 15 minutes to take the medicine with a nebulizer.
- Nebulizers do not work better than inhalers with a spacer.



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# Asthma Management Plan



An asthma management plan is a plan that the doctor will make for you. This plan will help you know what to do when asthma is in control and when asthma symptoms start to act up.

The asthma management plan will help you know:

- What medicines are needed every day
- Early signs of an asthma problem
- What to do when asthma symptoms begin
- What to do when asthma symptoms get worse
- When to call the doctor

**The plan is split into three colored zones: green, yellow, and red.**

**Green.** Green means "GO." Asthma is in good control and there are no asthma symptoms. Follow these steps:

1. Take daily control medicine every day even if there are no asthma symptoms.
2. Take rescue medicine 15 minutes before exercise or sports if needed.

**Yellow.** Yellow means asthma symptoms are starting to act up. Symptoms like coughing, runny nose, wheezing or chest tightness might be starting.

1. Start quick relief medicine right away to keep symptoms from getting worse.
2. Continue to take the green zone daily control medicines.
3. Call the doctor if you are in the yellow zone for more than 24 hours.
4. Follow any special instructions given by the doctor.

**Red.** Red means danger. It has become very hard to breathe. Take immediate action.

1. Increase the quick relief medicine as instructed in the plan and call the doctor right away.
2. If the doctor cannot be reached, go to the emergency room or call 911.

**Asthma management plans are important tools to share with schools and daycare providers.**

This is an example of an asthma action plan:

GREEN ZONE	GO – DOING WELL!
<ul style="list-style-type: none"> <li>Breathing is good</li> <li>No cough or wheeze</li> <li>Can do normal activities</li> </ul>	<p><u>Step 1:</u> Always use a spacer with your metered dose inhaler Daily Control Medicine</p> <p><u>Step 2:</u> If exercise triggers your asthma, take the following medication(s) 15 minutes before exercise or sports Quick relief (rescue) inhaler</p>
YELLOW ZONE	CAUTION! GETTING WORSE! AVOID ASTHMA TRIGGERS!
<ul style="list-style-type: none"> <li>Coughing</li> <li>Cold symptoms</li> <li>Wheeze</li> <li>Tight chest</li> <li>Cough at night</li> </ul>	<p><u>Step 1:</u> ADD quick relief medications Quick relief (rescue) inhaler</p> <p><u>Step 2:</u> Keep taking Green Zone medications as prescribed <u>Step 3:</u> If you are in the YELLOW ZONE more than 24 hours or your symptoms are getting worse, follow <b>RED ZONE</b> instructions</p>
RED ZONE	EMERGENCY!! GET HELP NOW!! TAKE IMMEDIATE ACTION!! DANGER!!
<ul style="list-style-type: none"> <li>Medicine is not working</li> <li>Breathing is hard and fast</li> <li>Nose opens wider</li> <li>Ribs sticking out</li> <li>Trouble walking, talking or sleeping</li> </ul>	<p><u>Step 1:</u> Take this quick relief medicine NOW! Quick relief (rescue) inhaler</p> <p><u>Step 2:</u> Call your health care provider (doctor or nurse) NOW!</p> <p>IF YOU ARE UNABLE TO CONTACT YOUR DOCTOR OR NURSE, GO TO THE EMERGENCY ROOM OR CALL 911 RIGHT AWAY!</p>



Ask your doctor for an  
**asthma management plan**

# Goals of Good Asthma Control



**When asthma is in good control, these goals can be reached:**

- No asthma symptoms during the day or night
- No limits in activities or play
- No missed school or work
- Fewer attacks or flares
- No emergency room or hospital visits for asthma
- Decreased need for quick relief medicine

The rules of two are good to follow to make sure asthma is in control.

- Quick relief medicine should not be needed more than **two times a week** during the day.
- Quick relief medicine should not be needed more than **two times a month** during the night.
- Quick relief medicines should not need to be refilled more than **two times a year**.
  - o Quick relief medicine may be needed more in illness or before exercise.

If these asthma goals are not being met, talk to the doctor.

Keep track of these asthma symptoms before the next visit to the doctor.

- Daytime symptoms
- Nighttime symptoms
- Number of times quick relief medicine is needed during a week
- Number of visits to the ER or hospital

**How is asthma controlled?**

- There is no cure for asthma, but there are many things that can be done to help control it. With the help of an asthma team, asthma can be controlled. A goal for asthma care is to become free of symptoms most of the time.
- Good asthma control can mean a better quality of life.
- Asthma is controlled best by:
  - o Understanding more about asthma
  - o Knowing and avoiding triggers
  - o Taking medicines as prescribed. This means taking controller medicines every day even when there are no asthma symptoms.
  - o Recognizing when asthma is getting worse and knowing what to do
  - o Following the asthma action plan
  - o Going to follow up visits with doctors and nurses

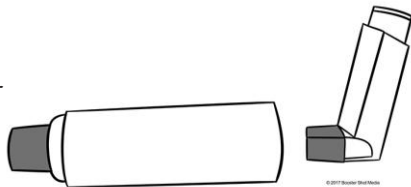
# Using a Metered Dose Inhaler (MDI) with a Spacer

## Metered Dose Inhaler (MDI)

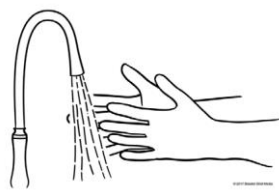
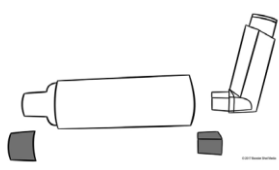


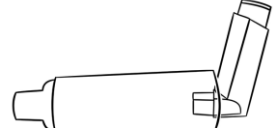
Commonly called a pump or puffer

- When the inhaler is pumped, it gives just the right amount of medicine with each pump.
- A spacer should always be used when taking this medicine.
- An inhaler can travel with you when you leave home.

**Spacers** should always be used with metered dose inhalers. It helps slow down the spray so it can get into the lungs and not to other parts of the body.



## Preparing to use an inhaler with a spacer:

<b>Step 1: Wash your hands!</b>	
<b>Step 2: Remove the cap from the mouthpiece of the metered dose inhaler</b>	
<b>Step 3: Look in both ends of the spacer for any objects that don't belong there</b>	
<b>Step 4: Shake the MDI</b>	
<b>Step 5: Put the mouthpiece of the MDI into the end of the spacer</b>	

## Using an inhaler with a spacer:

<p><b>Step 1:</b> Take a deep breath in and blow the air out of your lungs</p>	
<p><b>Step 2:</b> Put the mouthpiece of the spacer in your mouth and wrap your lips around tightly</p>	
<p><b>Step 3:</b> Squeeze one puff of the inhaler into the spacer</p>	
<p><b>Step 4:</b> Breathe in slowly through the mouthpiece until you can't breathe in anymore (if you hear a noise from the spacer, take a slower breath)</p>	
<p><b>Step 5:</b> Remove the spacer from your mouth, close your mouth, and hold your breath for 10 seconds</p>	
<p><b>Step 6:</b> Blow the air out of the lungs</p>	
<p><b>Step 7:</b> Repeat steps 1 to 6 for every puff you take</p>	

## How to clean a spacer:

- Remove the inhaler from the spacer.
- If possible, take the pieces of the spacer apart.
- Soak (do not scrub) the pieces of the spacer in warm soapy water for 10 minutes.
- Rinse the spacer with warm water to remove any leftover soap.
- Let all the parts dry completely before putting the spacer back together.
- Wash at least once a week.

## Special instructions:

- One spacer can be used for all of your metered dose inhalers. You do not need a separate spacer for each inhaler.
- A spacer should last at least one year.
- Check your medicine to make sure it is not expired.

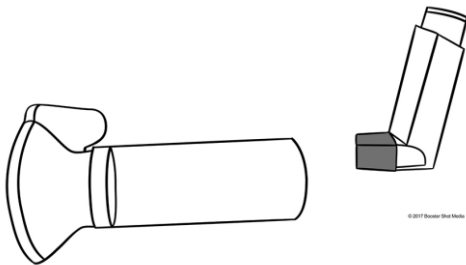
# Using a Metered Dose Inhaler (MDI) with a Spacer and a Mask

## Metered Dose Inhaler (MDI)

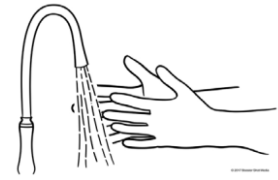
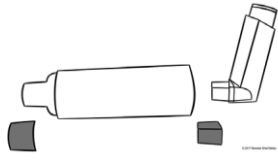
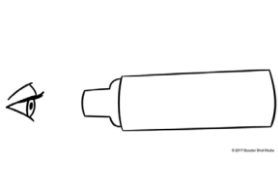
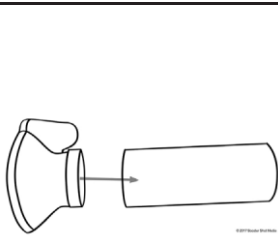
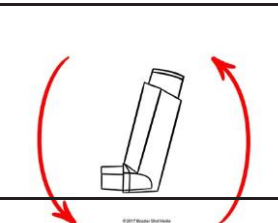
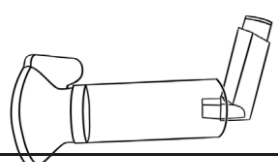
Commonly called a pump or puffer

- When the inhaler is pumped, it gives just the right amount of medicine with each pump.
- A spacer should always be used when taking this medicine.
- An inhaler can travel with you when you leave home.

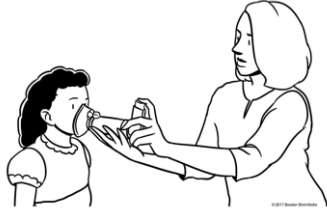



Spacers are always used with metered dose inhalers. It helps slow down the speed of the medicine so it can get into your lungs.



## Preparing to use a MDI with a spacer and a mask:

<b>Step 1: Wash your hands!</b>	
<b>Step 2: Remove the cap from the mouthpiece of the metered dose inhaler</b>	
<b>Step 3: Look in both ends of the spacer for any objects that don't belong there</b>	
<b>Step 4: If the spacer does not already have a mask attached, put the mask on the mouthpiece of the spacer</b>	
<b>Step 5: Shake the MDI</b>	
<b>Step 6: Put the mouthpiece of the MDI into the end of the spacer</b>	

## Using an inhaler with a spacer and a mask:

<b>Step 1:</b> Gently put the mask over the child's nose and mouth. Lightly press the mask against the face so no air can escape. A good seal is needed for the medicine to get into the lungs.	
<b>Step 2:</b> Squeeze one puff of the inhaler into the spacer	
<b>Step 3:</b> Keep the mask on the child's face and watch the child breathe 6 to 10 breaths.	
<b>Step 4:</b> Repeat steps 1 to 4 for every puff you take.	

### How to clean a spacer:

- Remove the inhaler from the spacer.
- If possible, take the pieces of the spacer apart.
- Soak (do not scrub) the pieces of the spacer in warm soapy water for 10 minutes.
- Rinse the spacer with warm water to remove any leftover soap.
- Let all the parts dry completely before putting the spacer back together.

### Special instructions:

- One spacer can be used for all of your metered dose inhalers. You do not need a separate spacer for each inhaler.
- A spacer should last at least one year.

## Notes



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