

# MY S.M.A.R.T. ASTHMA BOOKLET



Name: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

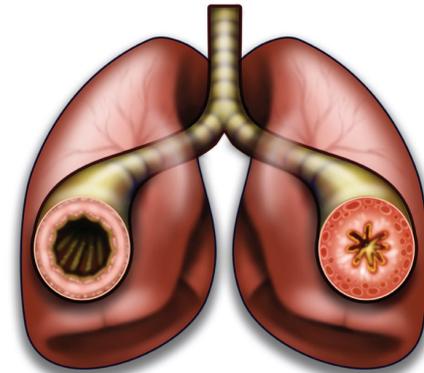


**Children's Mercy**  
KANSAS CITY

# WHAT IS ASTHMA?

## WHAT IS ASTHMA?

- Asthma is a lung disease.
- The airways in the lungs get very small.
- It is hard for air to move through very small airways.
- It is hard to breathe.

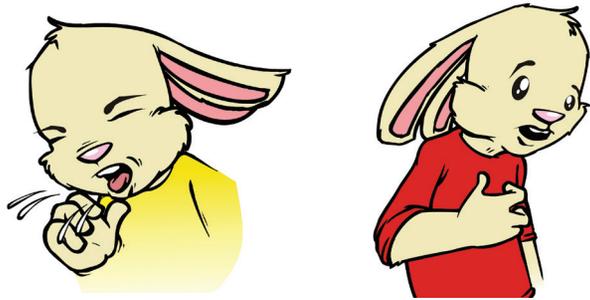


Asthma is often passed down through the family.



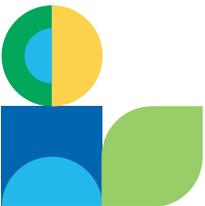
# ASTHMA SIGNS AND SYMPTOMS

Very small airways cause asthma signs and symptoms.



## Check your asthma signs and symptoms

✓	Cough
✓	Wheeze
✓	Tight chest
✓	Fast breathing
✓	Other: _____



# CONTROL YOUR ASTHMA SIGNS AND SYMPTOMS

## Asthma Goals

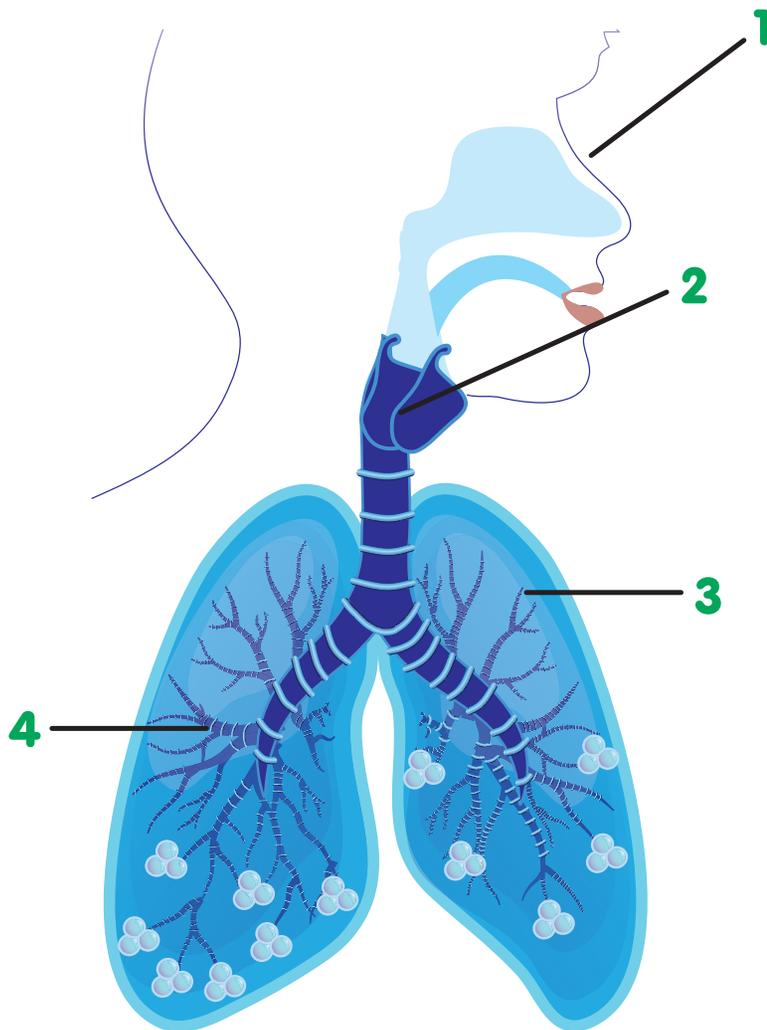
✓	<b>Able to play without asthma signs and symptoms.</b>
✓	<b>Asthma signs and symptoms during day</b> 2 or less times a week.
✓	<b>Asthma signs and symptoms at night</b> 2 or less times a month.
✓	<b>Coming to hospital or emergency department for asthma</b> 2 or less times a year.

✓ Check your asthma control often.



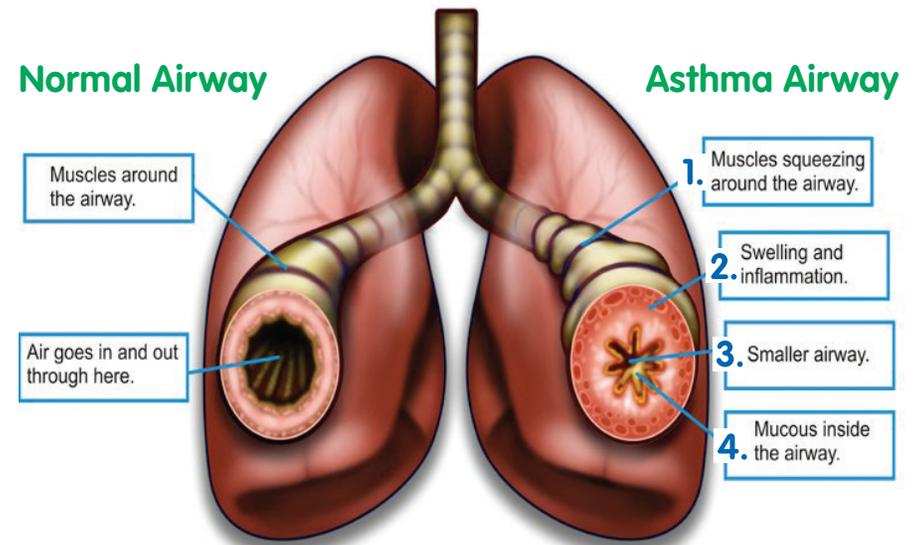
## INSIDE LUNGS

1. We breathe through our nose and mouth.
2. The air goes into large airways.
3. Large airways branch into smaller airways.
4. Muscle bands wrap around the airways.



## WHAT CAUSES ASTHMA SIGNS AND SYMPTOMS?

Asthma airways are sensitive or easily bothered.



What happens to the airway?
1. Muscle squeeze
2. The inside swells
3. Airway gets small
4. Mucous fills the airway

**CAUSES**  
→

Asthma signs and symptoms
Cough
Wheeze
Tight chest
Fast breathing

## WHAT MAKES YOUR ASTHMA SIGNS AND SYMPTOMS BETTER?

### Types of asthma medicines

- **S.M.A.R.T. Inhaler**  
This is a quick reliever and controller in one inhaler. Relaxes muscles around the airway **AND** controls swelling and mucous in your airways.
- **Emergency Medicine**  
Brings back control of serious symptoms.



## WHAT IS S.M.A.R.T. ASTHMA TREATMENT?

### S.M.A.R.T. = Single Maintenance and Reliever Therapy

**S.M.A.R.T.** inhalers have a quick reliever and controller medicine in one inhaler.

#### The controller medicine:

- Controls swelling and mucous in the airways.
- Prevents asthma symptoms.

#### The quick reliever medicine:

- Relaxes muscle squeezing on the outside of the airways.
- Works fast to stop asthma symptoms.



## S.M.A.R.T. ASTHMA TREATMENT

### Important things to know:

- There may be times when you use your inhaler more often. Your doctor will help you decide when.
  - » A cold or virus.
  - » Weather changes.
- Use your inhaler with a spacer.
- Check your counter on the inhaler often.
- Rinse your mouth after using the inhaler.
- Your provider may give you an albuterol inhaler to use at school or in emergencies.
- If you do not have your S.M.A.R.T. inhaler:
  - » Use your albuterol inhaler for symptoms.
  - » Call your provider to get another S.M.A.R.T. inhaler.



## FAQs

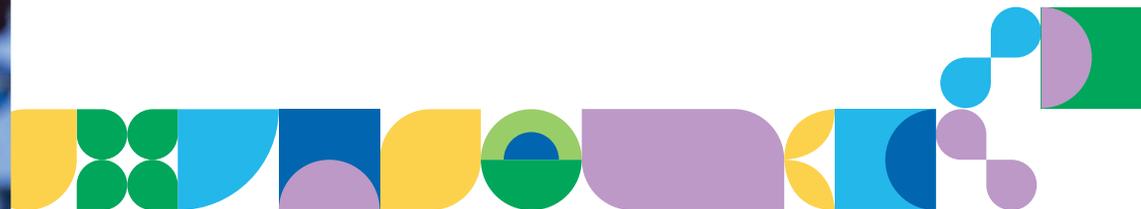
### Frequently Asked Questions

**My asthma bothers me when I exercise. Will my S.M.A.R.T. inhaler work for that?**

- Yes. Use the S.M.A.R.T. inhaler 10-15 minutes before exercise to prevent symptoms.

**I can only refill my S.M.A.R.T. inhaler once a month. What if I use up my inhaler before I can get a refill?**

- Refill your inhaler every month until you have 2 inhalers at home. Now you will have an extra inhaler for times when it is needed most.
- Talk to your provider if:
  - » You do not have 2 S.M.A.R.T. inhalers OR
  - » You are running out of medicine.



## S.M.A.R.T. INHALER

Circle the S.M.A.R.T. inhaler you use at home.



Dulera<sup>®</sup> **SP**  
(mometasone and  
formoterol)



Symbicort<sup>®</sup> **SP**  
(budesonide and  
formoterol)

To prime your inhaler—see Priming Inhalers on page 30.

**SP** Use a spacer with this inhaler—see Spacer section starting on page 26.

Some children may need another asthma medicine like:



Spiriva<sup>®</sup>  
(tiotropium)

OR



Montelukast



Inhaler photos courtesy of Allergy & Asthma Network.

## EMERGENCY MEDICINE



Use to bring back control of serious symptoms.

### Pill or liquid

- Prednisolone
- Orapred
- Prednisone

See page 23 for more details.



# WHAT MAKES SYMPTOMS WORSE?

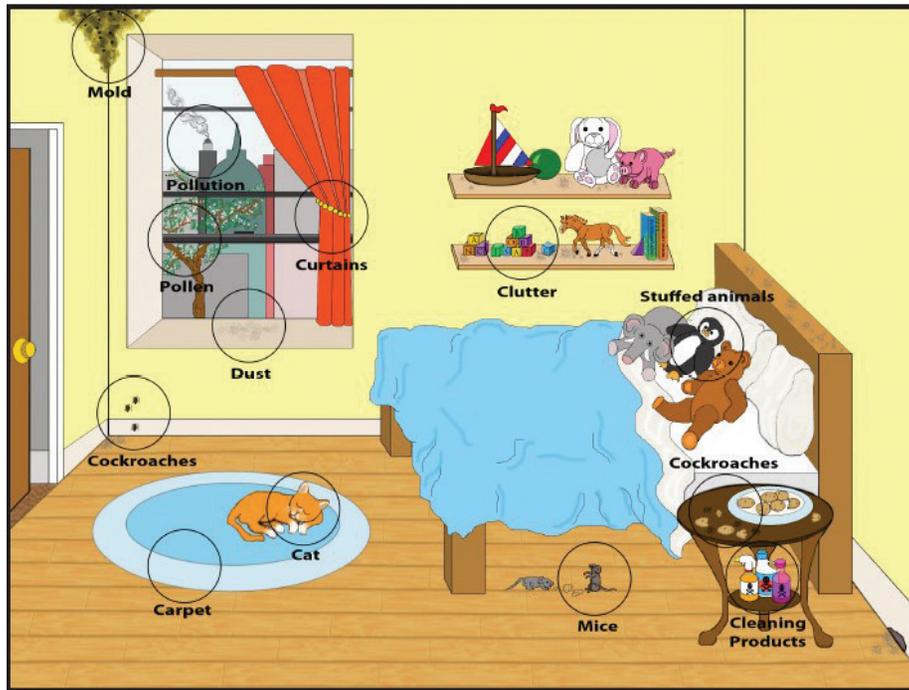
**Triggers** can start asthma signs and symptoms.

## ✓ Check Asthma Triggers

✓		<p><b>Cold or virus</b></p> <ul style="list-style-type: none"> <li>• This is the most common asthma trigger.</li> <li>• Treat cough and wheeze during a cold with asthma medicines.</li> </ul>
✓		<p><b>Exercise</b></p> <ul style="list-style-type: none"> <li>• Warm up before exercise.</li> <li>• Cool down after exercise.</li> <li>• Use albuterol or S.M.A.R.T. inhaler before exercise as needed.</li> </ul>
✓		<p><b>Weather</b></p> <ul style="list-style-type: none"> <li>• Cold weather—Wear scarf over nose and mouth.</li> <li>• Hot weather—Use air conditioning.</li> </ul>
✓		<p><b>Outdoor pollen</b></p> <ul style="list-style-type: none"> <li>• Keep windows closed.</li> <li>• Stay indoors.</li> <li>• Wash clothes and hair after being outside.</li> </ul>
✓		<p><b>Strong emotions</b></p> <ul style="list-style-type: none"> <li>• Calm child down.</li> <li>• Use quick reliever or S.M.A.R.T. inhaler as needed.</li> </ul>

✓		<p><b>Mold</b></p> <ul style="list-style-type: none"> <li>• Keep house dry.</li> <li>• Use exhaust fans.</li> <li>• Keep humidity less than 50%.</li> </ul>
✓		<p><b>Dust</b></p> <ul style="list-style-type: none"> <li>• Wash linens in hot water.</li> <li>• Vacuum with HEPA filter.</li> <li>• Change furnace filters.</li> <li>• Wipe dust with a damp cloth.</li> </ul>
✓		<p><b>Smoke/Vape</b></p> <ul style="list-style-type: none"> <li>• Try to quit.</li> <li>• Do not smoke/vape in the home or car.</li> <li>• Smoke/vape outside and wear a cover-up.</li> </ul>
✓		<p><b>Strong smells</b></p> <ul style="list-style-type: none"> <li>• Use fragrance-free cleaners.</li> <li>• Do not use strong smelling air fresheners or perfumes.</li> </ul>
✓		<p><b>Cockroaches</b></p> <ul style="list-style-type: none"> <li>• Keep home free of clutter.</li> <li>• Do not leave dishes in sink overnight.</li> <li>• Keep home dry.</li> <li>• Take trash out every night.</li> </ul>
✓		<p><b>Animals</b></p> <ul style="list-style-type: none"> <li>• Keep out of bedrooms and off furniture.</li> <li>• Bathe pets weekly.</li> </ul>

## REDUCE YOUR EXPOSURE TO TRIGGERS IN THE HOME



- Don't bring food in bedroom.
- Keep pets out of bedroom.
- Caulk holes and cracks in walls and corners.
- Remove carpets and rugs from bedroom.
- Wipe dust off regularly with a damp cloth.
- Remove dust collecting items from bedroom.
- Use zipper-encased, allergy free bedding.
- Replace curtains with shades or blinds.
- Don't smoke inside the house.
- Keep windows closed during allergy season.
- Keep humidity under 50%.
- Use only HEPA vacuums and air purifiers.
- Use 'green' cleaning supplies or water and vinegar.
- Put away stuffed animals and toys in a box.

List developed by the Asthma Literacy Project for the South Bronx Asthma Partnership.

## HEALTHY HOME CHECKLIST

- Was your house built before 1980?
- Do you have carpeting or rugs?
- Are there any odors that do not go away?
- Do you notice damp, water leaks or stains?
- Do you notice mice, rats or cockroaches?
- Is there smoking inside your home?
- Is it hard to get rid of dust?
- Do you use sprays or foggers for pests?

**If you answered YES to any of the questions please contact:**

Environmental Health Program at (816) 302-8565, or visit the website: [childrensmercy.org/ceh](http://childrensmercy.org/ceh).



# WHAT IS A S.M.A.R.T. ASTHMA ACTION PLAN?

# S.M.A.R.T. ASTHMA ACTION PLAN

An **Asthma Action Plan** is a tool to help manage asthma signs and symptoms at home.

Keep asthma action plan where you can find it:

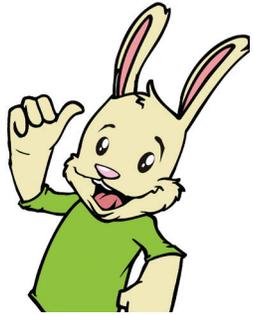
- Hang up on refrigerator.
- Take a picture and keep in your phone.

Patient Info: **Asthma Action Plan**  

When WELL	Asthma Getting WORSE	Asthma Symptoms Are SEVERE
<p>I do not have asthma symptoms (cough, wheeze, problems breathing).</p> <p>I can play and sleep without symptoms.</p>	<p>I am sick with a cold.</p> <p>I am having worsening symptoms.</p>	<p>I am finding it hard to breathe.</p> <p>I have used my SMART inhaler more than _____ in one day.</p>
<b>Actions to Take</b>	<b>Actions to Take</b>	<b>Actions to Take</b>
<p>My SMART inhaler is...</p> <p>I will take my SMART inhaler with a spacer:</p>	<p>Continue GREEN ZONE medications.</p> <p>I will take my SMART inhaler:</p> <p><b>AND</b></p> <p>I will take 2 puffs of my SMART inhaler as needed for asthma symptoms (cough, wheeze, or tight chest).</p> <p>If I used my SMART inhaler more than _____ in one day, I will go to RED ZONE.</p> <p>Make an appointment to see my asthma provider.</p>	<p>Take my emergency medicine.</p> <p><b>Seek EMERGENCY Care</b></p> <p>Call your asthma provider or the Children's Mercy nurse triage line at 816-234-3188.</p> <p><b>Go to the ER or call 911 if:</b></p> <ul style="list-style-type: none"><li>• Pulling at the ribs or neck.</li><li>• Lips or fingernails are blue.</li><li>• Struggling to breathe.</li><li>• You are very concerned about your child's breathing.</li></ul>
Comments:	Comments:	Comments:

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# ASTHMA ACTION PLAN ZONES



## GREEN ZONE

- I do not have asthma symptoms (cough, wheeze or problems breathing).
- I can play without symptoms.
- I can sleep without symptoms.



## YELLOW ZONE

- I have a cold.



## RED ZONE

- Pulling in at the ribs or neck.
- Lips or fingernails are blue.
- Struggling to breathe.
- Concerned about your breathing.

## GREEN ZONE

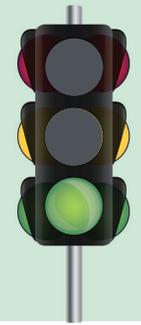


### What is it?

- I **DO NOT** have asthma symptoms.
- Feeling great.

### Actions to take

- If on my asthma action plan, I will take my S.M.A.R.T. inhaler everyday.
- If my asthma symptoms begin, I will take my S.M.A.R.T. inhaler 2 puffs.



## YELLOW ZONE



### What is it?

- Asthma signs and symptoms are starting.
- Starting to get a cold or virus.

### What is my first sign of a cold? Check here:

✓	Runny nose
✓	Sore or scratchy throat
✓	Tummy hurts
✓	Tired more than normal
✓	Other:

### Actions to take:

- Continue my Green Zone medicines.
- I will take 2 puffs of my S.M.A.R.T. inhaler when I have asthma symptoms.
- If I am not better in 2 weeks, I will talk to my provider.
- If I use my S.M.A.R.T. inhaler more than the max daily dose listed on my asthma action plan, I will go to the **RED ZONE**.

## RED ZONE



### What is it?

- I have used my S.M.A.R.T. inhaler more than the max dose listed on my asthma action plan.
- I am finding it hard to breathe.

### Action to take

- If on my asthma action plan, I will take emergency medicine **NOW**.

### Next

Seek emergency care. A caregiver should:

- **Call your asthma provider or the Children's Mercy nurse triage line at (816) 234-3188.**
- **Go to the ER or call 911 if:**
  - » Pulling in at the ribs or neck.
  - » Lips or fingernails are blue.
  - » Struggling to breathe.
  - » Concerned about your breathing.

# UNDERSTANDING THE ASTHMA ACTION PLAN

## Take the Asthma Action Plan Quiz

(Answers are at the bottom of the page.)

**You wake up at night with cough and wheeze.**

What is the first thing you should do?

- A. Use your emergency medicine.
- B. Use your S.M.A.R.T. inhaler.
- C. Take a drink of water.

---

**You have the first signs of a cold and you used your S.M.A.R.T. inhaler for worsening symptoms.** What zone are you in?

- A. Green Zone.
- B. Yellow Zone.
- C. Red Zone.

---

**You used the max dose of your S.M.A.R.T. inhaler for the day and you are still having asthma symptoms.** What zone should you go to now?

- A. Green Zone
- B. Yellow Zone
- C. Red Zone

Answers: 1=B 2=B 3=C

# SPACERS

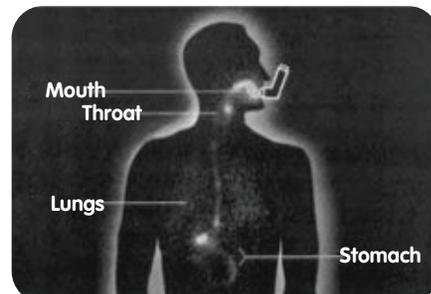


## SPACERS

### Why use a spacer with an inhaler?

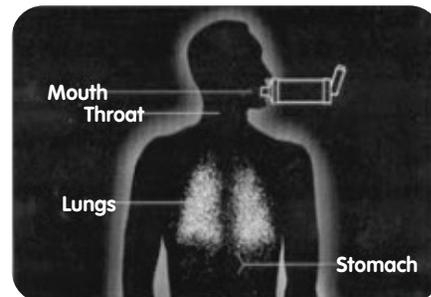
#### Inhaler alone

When an inhaler is used alone, medicine ends up in the mouth, throat, stomach and lungs.



#### Inhaler used with spacer device

When an inhaler is used with a spacer device, more medicine is delivered to the lungs.



- Always use a spacer with your inhaler.
- Children under the age of about 10 should use a mask with the spacer.



Scan this QR code for a video version of how to use a spacer.

"Comparative respiratory deposition of 99m Tc labeled particles of albuterol using a metered dose inhaler, a metered dose inhaler with Aerochamber® spacer and OptiChamber® spacer in healthy human volunteers using gamma-scintigraphy," R. Beihn, PhD, Scintiprox, Inc., Indianapolis, IN and D. Doherty, MD, Dept. of Pulmonology, University of Kentucky Medical Center, Lexington, KY, 1997.

Images kindly provided by Respironics HealthScan, Inc.

Allies Against Asthma, Cap Center for Pediatric Research, 855 W. Brambleton Ave., Norfolk, VA 23510, (757) 668-6435

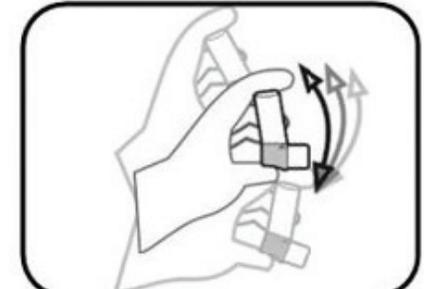
## HOW TO GIVE ASTHMA MEDICINE WITH SPACER AND MASK

### Spacer with mask

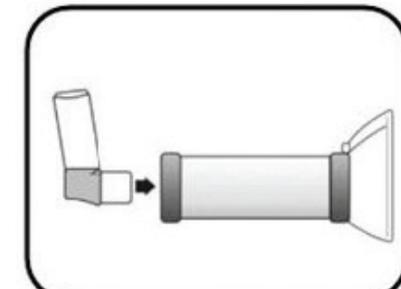
Use a spacer with the inhaler. More medicine will go into the lungs.



1. Sit with your child in your lap.



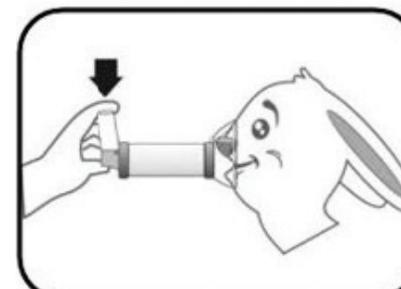
2. Shake the inhaler.



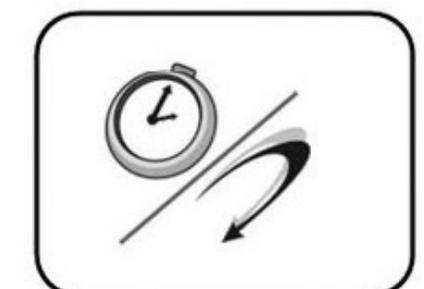
3. Remove cap from the inhaler. Place inhaler into spacer.



4. Seal the mask over the nose and mouth.



5. Push down on the inhaler. Release 1 puff into the spacer.

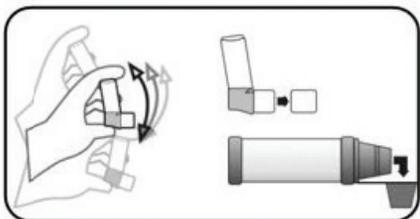


6. Hold mask on face for 5-10 breaths. Remove mask from face. Wait about 30 seconds. Repeat steps 1-6 for each puff.

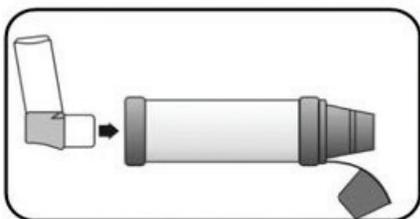
# HOW TO GIVE ASTHMA MEDICINE WITH SPACER AND MOUTHPIECE

## Spacer with mouthpiece

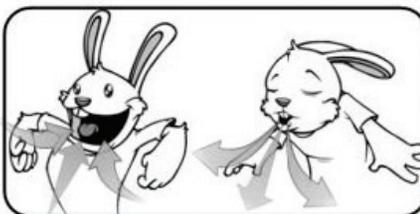
Use a spacer with the inhaler. More medicine will go into the lungs.



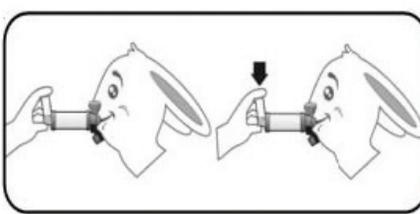
1. Shake the inhaler. Remove the caps from the inhaler and spacer.



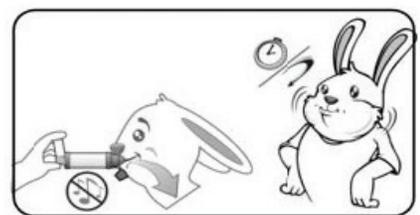
2. Place the inhaler into the back of the spacer.



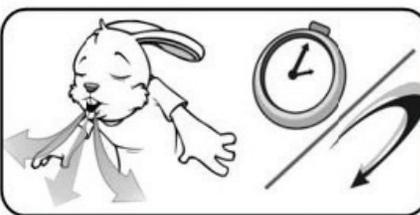
3. Take a deep breath and let it all the way out.



4. Seal lips around the mouthpiece. Push down on the inhaler to release 1 puff into the spacer.



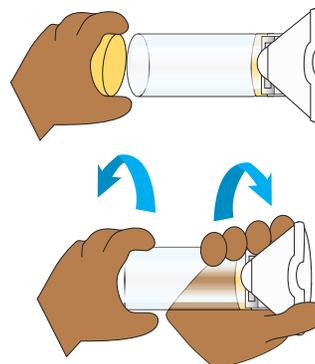
5. Breathe in slowly through the mouth. Hold breathe for 10 seconds. The whistle sound means the breath is too fast. Slow down.



6. Let out your breath. Wait about 30 seconds. Repeat steps 1-6 for more puffs.

# CLEANING SPACER

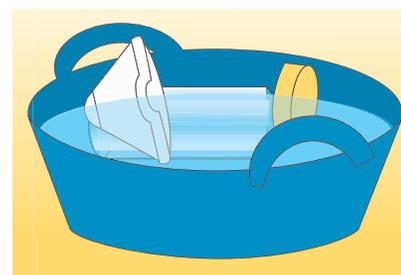
Some spacers may be cleaned in the dishwasher. Please read cleaning instructions for your spacer.



1. Remove the back piece. Twist chamber to remove the front piece.



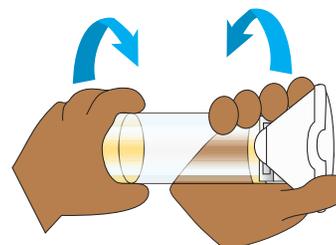
2. Soak all parts in warm water and liquid dish soap. Move gently. **DO NOT** scrub inside.



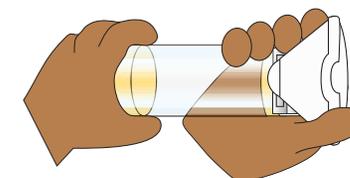
3. Rinse.



4. Air dry standing up. **DO NOT** rub dry.



5. Fit the front piece on the end of the chamber. Twist until locked.



6. Center the notch on the back piece with the line on the chamber. Press back piece firmly in place.

## PRIMING INHALERS

Priming an inhaler means to spray it into the air before taking a dose. Follow the directions below to make sure you are getting the right amount of medicine with each puff.

Name	How to prime	
<b>Ventolin<sup>®</sup></b> (albuterol)	First time: Spray 4 times in air.	If not used in 2 weeks or dropped, spray 4 times in air.
<b>ProAir<sup>®</sup></b> (albuterol)	First time: Spray 3 times in air.	If not used in 2 weeks, spray 3 times in air.
<b>Proventil<sup>®</sup></b> (albuterol)	First time: Spray 4 times in air.	If not used in 2 weeks or dropped, spray 4 times in air.
<b>Xopenex<sup>®</sup></b> (levalbuterol)	First time: Spray 4 times in air.	If not used in 3 days, spray 4 times in air.
<b>Symbicort<sup>®</sup></b> (budesonide and formoterol)	First time: Spray 2 times in air.	If not used in 7 days or dropped, spray 2 times in air.
<b>Dulera<sup>®</sup></b> (mometasone and formoterol)	First time: Spray 4 times in air.	If not used in 5 days, spray 4 times in air.



**Check** dose counter and expiration date on inhalers prior to giving medication

# ASTHMA CONTROL

# CHECK ASTHMA CONTROL OFTEN

✓	<b>Able to play without asthma signs and symptoms.</b>
✓	<b>Asthma signs and symptoms during day</b> 2 or less times a week.
✓	<b>Asthma signs and symptoms at night</b> 2 or less times a month.
✓	<b>Coming to hospital or emergency department for asthma</b> 2 or less times a year.

Contact your asthma provider if you do not check all of the boxes. (See page 34)



# TRACK ASTHMA CONTROL AT HOME

## Track symptoms every day using an Asthma Diary.

To print out an **Asthma Diary**, go to: [childrensmercy.org/asthma](http://childrensmercy.org/asthma) and select **asthma control**.

## Track symptoms once a month using an Asthma Control Test

To print out an **Asthma Control Test**, go to: [childrensmercy.org/asthma](http://childrensmercy.org/asthma) and select **asthma control**.

## ASTHMA HEALTH PROVIDERS

Partner with your health provider to assess asthma control.

### Primary care provider

Provider: \_\_\_\_\_

Phone number: (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

### Other asthma provider

Provider: \_\_\_\_\_

Phone number: (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

### My next appointment is:

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Location: \_\_\_\_\_

### Always bring these items to asthma visit:

- Medicines
- Diary
- Action Plan

## LEARN MORE ABOUT ASTHMA

Try our free S.M.A.R.T. asthma class online

Visit [childrensmercy.org/asthma](https://childrensmercy.org/asthma) and click on "Free Online S.M.A.R.T. Asthma Class" or scan this QR code.

For asthma facts and fun, visit [childrensmercy.org/asthma](https://childrensmercy.org/asthma) or scan this QR code.





[childrensmercy.org/asthma](https://childrensmercy.org/asthma)



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