COMMONWEALTH OF KENTUCKY
CABINET FOR HEALTH AND FAMILY SERVICES

January 2006

Volume 1, Issue 2

Pediatric Asthma

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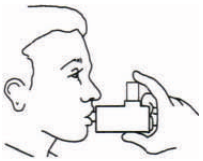
How To Use Your Metered-Dose Inhaler The Right Way

Using an inhaler seems simple, but most patients do not use it the right way. When you use your inhaler the wrong way, less medicine gets to your lungs. (Your healthcare provider may give you other types of inhalers.) For the next 2 weeks, read these steps aloud as you do them or ask someone to read them to you. Ask your healthcare provider or nurse to check how well you are using your inhaler. **Use your inhaler in one of the two ways pictured below .**

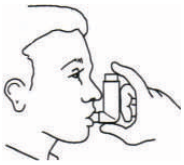
Steps for Using Your Inhaler

Getting ready	1. Take off the cap and shake the inhaler
	2. Breathe out all the way
	3. Hold your inhaler the way your healthcare provider said (A or B below)
Breath in slowly	4. As you start breathing in **slowly** through your mouth, press down on the inhaler **one** time. (If you use a holding chamber, first press down on the inhaler. Within 5 seconds, begin to breathe in slowly.)
	5. Keep breathing in **slowly**, as deeply as you can
Hold your breath	6. Hold your breath as you count to 10 slowly, if you can
	7. For inhaled quick-relief medicine (beta$_2$-agonists), wait about 1 minute between puffs. There is no need to wait between puffs for other medicines

A. Use a spacer/ holding chamber. These come in many shapes and can be useful to any patient



B. Put the inhaler in your mouth. Do not use for steroids.



Clean Your Inhaler as Needed:

Look at the hole where the medicine sprays out from your inhaler. If you see "powder" in or around the hole, clean the inhaler. Remove the metal canister from the L-shaped plastic mouthpiece. Rinse only the mouthpiece and cap in warm water. Let them dry overnight. In the morning, put the canister back inside. Put the cap on.

Know When to Replace Your Inhaler

For Medicines You Take Each Day (an example):

Say your new canister has 200 puffs (number of puffs is listed on canister) and you are told to take 8 puffs per day.

8 puffs per day)200 puffs in canister
25 days

So this canister will last 25 days. For example, If you started using this inhaler on May 1, replace it on or before May 25. You can write the date on your canister. **For quick-relief medicine take as needed** and count each puff. Do not put your canister in water to see if it is empty. This does not work.

What is a Peak Flow Meter?

As part of your asthma action plan, you may use a hand-held device called a peak flow meter at home to measure lung function. To use it, you take a deep breath and blow hard into a tube to find out how fast you can blow out. This gives you a peak flow number. You will need to find out your "personal best" peak flow number by recording the peak flow number daily for a few weeks until your asthma is under control. The highest number you get during that time is your personal best peak flow. Then you can compare future peak flow measurements to your personal best peak flow, and that will show if your asthma is staying under control or not.

Your healthcare provider will tell you how and when to use your peak flow meter and how to use your medication based on the results. You may be asked to use your peak flow meter each morning to keep track of how well you are breathing. The peak flow meter can help warn of a possible asthma attack even before you notice symptoms. If your peak flow meter shows that your breathing is getting worse, you should follow your action plan. Take your quick relief or other medication as your doctor directed. Then you can use the peak flow meter to see how your airways are responding to the medication.

How do I Use a Peak Flow Meter?

1. Stand up or sit up straight.
2. Slide indicator to base of meter.
3. Take in deep breath.
4. Place mouthpiece in mouth and seal lips around it.
5. Blow out as hard and fast as you can (one quick blow).
6. Repeat process 2 more times.
7. Select highest number of the 3 efforts.
8. Record this number on your peak flow diary or on a graph.

How do I determine what a “normal” Peak Flow rate is for me?

There are three zones of measurements that are commonly used to interpret Peak Flow Rates. It is easy to relate the three zones to the traffic light colors: green, yellow, and red. In general, a normal Peak Flow Rate can vary as much as 20 percent. **Take your measurements and the Action Plan (page 3) to your healthcare provider for further treatment recommendations and assistance in filling out the Action Plan.**

See page 3 for more information about the zone measurements and Action Plan. Additional copies of the Action Plan can be given to school, babysitter, or any other caregiver for reference.

Asthma Action Plan

Asthma Action Plan for _____ Date _____

Healthcare Provider's Name _____ Phone Number _____

Hospital/Emergency Room Phone Number _____

GREEN ZONE: Doing Well

- No cough, wheeze, chest tightness, or shortness of breath during the day or night
- Can do usual activities

And, if a peak flow meter is used,

Peak flow: more than _____
(80% or more of my best peak flow)

My best peak flow is:_____

Take These Long-Term-Control Medicines Each Day (include an anti-inflammatory)

Medicine	How much to take	When to take it

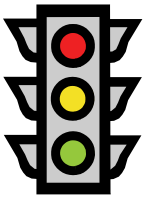
Before Exercise ❒ _____ ❒ 2 or ❒ 4 puffs 5 to 60 minutes before exercise

YELLOW ZONE: Asthma is Getting Worse

- Cough, wheeze, chest tightness, or shortness of breath, or
- Waking at night due to asthma, or
- Can do some, but not all, usual activities

OR

Peak flow:_____to_____
(50% - 80% of my best peak flow)



Add: Quick-Relief Medicine-and keep taking your GREEN ZONE medicine

_____ ❒ 2 or ❒ 4 puffs, every 20 minutes for up to 1 hr
(short-acting beta$_2$-agonist) ❒ Nebulizer, once

If your symptoms (and peak flow, if used) *return to GREEN ZONE* after 1 hour of above treatment:

❒ Take the quick-relief medicine every 4 hours for 1 to 2 days.
❒ Double the dose of your inhaled steroid for _____ (7-10) days.

OR

If your symptoms (and peak flow, if used) *do not return to GREEN ZONE* after 1 hour of above treatment:

❒ Take:_____ ❒ 2 or ❒ 4 puffs or ❒ Nebulizer
(short-acting beta$_2$-agonist)

❒ Add:_____ mg. per day for _____(3-10) days
(oral steroid)

❒ Call your healthcare provider ❒before / ❒ within _____ hours after taking the oral steroid.

RED ZONE: Medical Alert!

- Very short of breath, or
- Quick-relief medicines have not helped, or
- Cannot do usual activities, or
- Symptoms are same or get worse after 24 hours in Yellow Zone

OR

Peak flow: less than _____
(50% of my best peak flow)

Take this medicine:

❒ _____ ❒ 4 or ❒ 6 puffs or ❒ Nebulizer
(short-acting beta $_2$-agonist)

❒ _____ mg.
(oral steroid)

Then call your healthcare provider *NOW*. Go to the hospital or call for an ambulance if:

- You are still in the red zone after 15 minutes AND
- You have not reached your healthcare provider.

DANGER SIGNS

- Trouble walking and talking due to shortness of breath
- Lips or fingernails are blue

- Take ❒ 4 or ❒ 6 puffs of your quick-relief medicine AND
- Go to the hospital or call for an ambulance (_____)

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Use of Spacers

Asthma users using a metered – dose inhaler may be advised by their healthcare provider to use a spacer to improve the delivery dose of your medication. Spacers can be significantly helpful for children with asthma or individuals who have a difficult time with breathing in while pressing the inhaler.

Inhalation of your medication can be enhanced by spacers to allow the medication to go into the lungs where it is needed rather than into the throat. Most types of spacers will fit into the end of an inhaler device.

Spacers equipped with holding chambers and one way valves prevents your medication from escaping through the air and allows you to breathe in your dose of medication at your own pace.

Metered-dose inhalers are easier to use with spacers, although, they may be somewhat bulky and difficult to carry with you.

It is recommended that for best results in using your inhaler or spacer to carefully follow instructions by your healthcare provider.

This information is for educational purposes, it is not intended to replace medical advice from your healthcare provider. Please consult your healthcare provider for advice about a specific medical condition.