

## Asthma Devices 101

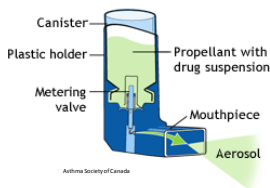
Theresa Blount, BSN, RN, AE-C  
Coordinator, Pediatric Asthma Program  
Vidant Medical Center

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### Objectives

- Demonstrate use of asthma devices and how to optimize medication delivery.
- Discuss cleaning and maintenance of devices.

### Metered Dose Inhalers (MDIs)



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### Meter Dose Inhalers

- Check inhaler for expiration date
- Shake the inhaler 5 times before each use
- Prime the inhaler when using for the first time and if not used after 10-14 days
- Use spacer when indicated
- Rinse mouth after use
- Always refill before empty
- Clean mouthpiece of the inhaler
- Allergy & Asthma Network has poster with priming and cleaning information

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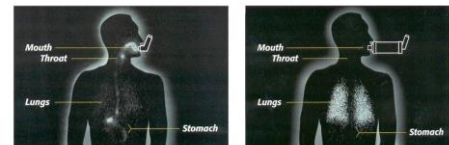
### Spacers

- A spacer (holding chamber) is a tool used with a metered dose inhaler.
- When used correctly, spacers help more medicine get into the lungs.
- Spacers come in different sizes and shapes for all ages.



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### Why Use a Spacer?



#### 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.

"Comparative respiratory deposition of  $^{99m}Tc$  labeled particles of adjusted using a metered dose inhaler, a standard dose inhaler with Anochamber® spacer and OptiChamber® spacer in healthy human volunteers using gamma scintigraphy." E. Balas, PhD, Scanticon, Inc., Indianapolis, IN and D. Delaney, MD, Dept. of Pulmonology, University of Kentucky Medical Center, Lexington, KY, 1997.

Images kindly provided by Engstromics HealthCare Inc.  
Aller. Against Asthma, Center for Pediatric Research, 855 W. Brownstown Ave., Northville, TN 37150, 737-666-6432

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## Facemask Spacers



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## Using Facemask Spacer

- Remove cap from inhaler.
- Shake inhaler and insert into back of spacer.
- Apply mask covering nose and mouth with gentle pressure to form seal.
- Press inhaler once then breathe in and out 5-6 times and repeat for each puff as prescribed.
- Keep stored in sealable bag.
- Clean per instructions only as needed.

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## Mouthpiece Spacers



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## Using Mouthpiece Spacer

- Remove cap from inhaler and spacer.
- Shake inhaler and insert into back of spacer.
- Take big breath in and out then insert mouthpiece in mouth forming good seal.
- Press inhaler once and take in slow, deep breath. Hold until the count to 10 then slowly breathe out.
- Keep stored in sealable bag.
- Clean per instructions only as needed.

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## Nebulizer

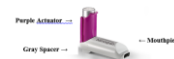
- Place nebulizer on sturdy surface and plug in.
- Pour prescribed medication into medication cup and replace cap.
- Connect mask or mouthpiece to medication cup.
- Connect tubing to nebulizer and medication cup.
- If using a mask, position securely and comfortably. If using a mouthpiece, place it between teeth and seal lips around it.
- Take slow deep breathes and breathe out slowly.
- Continue treatment until medication is gone. The nebulizer will make a sputtering noise and the medication cup will be empty.
- Turn off machine. Disconnect medication cup from tubing. Soak medication cup, mask and mouthpiece in a solution of 1 part distilled white vinegar to 3 parts hot tap water for one hour. Rinse with warm water. Allow parts to air dry and store in a sealed bag.



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## Built in Spacer

- Pull purple actuator out of the gray spacer.
- Snap into an "L" shape making sure the purple actuator and gray spacer match up.
- Deep breathe in and out through away from mouthpiece.
- Put mouthpiece in mouth to form tight seal. While breathing in, fully depress the metal canister of medicine for at least 1 second. Continue to breathe for 3 more seconds.
- Hold breath for 10 seconds then breathe out gently away from mouthpiece.
- If a second dose is needed, repeat steps 4-7.
- Snap the purple actuator back to the straight position
- Gently push purple actuator back into gray spacer.



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## Dry Powder Inhalers (DPIs)

- Dry powder inhaler does not have a propellant.
- It is self-actuated or breath-actuated.
- No spacer used.

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## Breath-Actuated Inhaler

- Hold Respiclick upright then open cap fully until hear “click”.
- Breathe out through your mouth away from mouthpiece.
- Put mouthpiece in your mouth forming a tight seal. Take in a deep, steady breath. Hold breath for 10 seconds then breathe out gently away from mouthpiece.
- Close cap.
- If a second dose is needed, repeat steps 2 - 5.
- No washing, shaking or priming needed. No spacer device is required for this inhaler.



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## Diskus

- Hold Diskus in one hand. Place thumb on thumb grip. Push thumb grip away until you hear a “click”.
- Hold Diskus with mouthpiece towards you; slide lever away until you hear a “click”.
- Place mouthpiece in your mouth and take in a deep, steady breath. Hold your breath for 10 seconds then gently blow out away from mouthpiece.
- To close, slide thumb grip back towards you as far as it will go until you hear a “click”.



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## Flexhaler

- Hold Flexhaler upright, twist off white cover.
- Do not shake.
- Prime two (2) times before first use. Twist grip back and forth until it clicks.
- To load a dose, hold Flexhaler upright with mouthpiece on top and twist the grip back and forth until it clicks.
- Deep breath in and out. Put mouthpiece in mouth forming a tight seal. Take in a deep, steady breath. Hold breath for 10 seconds then breathe out gently.
- If a second dose is needed, repeat steps 4 & 5.
- Put cover on.



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## Twisthaler

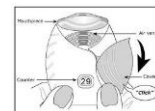
- Hold main body of Twisthaler upright, with the pink base at bottom.
- Remove white cap. Medicine is loaded and ready.
- Arrow should be pointing toward the counter window.
- Deep breath in and out. Keep level and put mouthpiece in mouth to form a tight seal. Take in deep, steady breath.
- Hold your breath for 10 seconds then breathe out.
- Replace cap, turning it until you hear a click.
- If another dose is required, repeat steps 2-6.
- Cap locks when the device is empty.



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## Ellipta

- Slide the cover down to reveal the mouthpiece. should hear a “click”.
- Deep breath in and out through mouth away from mouthpiece.
- Put mouthpiece in mouth forming a tight seal. Do not block the air vent with fingers.
- Take in a deep, steady breath. Hold breath for 3-4 seconds then breathe out gently away from mouthpiece.
- Close cover.



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### Peak Flow Meters



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### Peak Flow Meters

- Devices that measure the amount of air that can be blown out of the lungs.
- Peak flow meters can detect changes in the lungs hours, even days, before symptoms appear.
- Predicted peak flow numbers are based on a combination of your height, your gender, your age and your normal values when you are not having symptoms.
- The colored zones on the peak flow can help determine how your overall management plan is working, when to take your medicine, and when to call the doctor.
- Effort dependent.

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### Asthma Action Plan

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### Authorization for Medication Form

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### Content Information

- Please refer to pharmaceutical information for proper use, dosing, priming, and cleaning.

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### Contact Information

Theresa Blount, BSN, RN, AE-C  
 Coordinator, Pediatric Asthma Program  
 Vidant Medical Center  
 Phone: 252-847-6835  
 Email: [tblount@VidantHealth.com](mailto:tblount@VidantHealth.com)

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