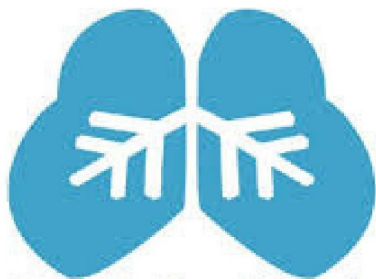


INFORMATION BY:
THE NATIONAL INSTITUTES OF HEALTH



How to Use...

Inhalers and Nebulizers



National Asthma Education
and Prevention Program (NAEPP)

***Convened by the
National Institutes of Health***

CONTENTS: HOW TO USE...

Meter-Dose
Inhaler

Dry Powder
Inhaler

Nebulizer

Peak Flow
Meter



Meter-Dose Inhaler

What Is a Meter-Dose Inhaler:

A metered-dose inhaler is a device that sprays a pre-set amount of medicine through the mouth to the airways. To keep your asthma under control, it is important to take your medicine as prescribed by your doctor or other health care professional and to use the proper technique to deliver the medicine to your lungs. If you don't use your inhaler correctly, you won't get the medicine you need.

How to Clean a Metered-Dose Inhaler and Spacer/VHC:

Keep your inhaler and spacer/VHC clean so they can work properly. Read the manufacturer's instructions and talk to your doctor, pharmacist, or other health care professional about how to clean your inhaler and spacer/VHC (each brand is different). When cleaning your inhaler and spacer/VHC, remember:

- Never put the medicine canister in water.
- Never brush or wipe inside the spacer/VHC.

Here are general steps for how to use and clean a metered-dose inhaler. Be sure to read the instructions that come with your inhaler. Ask your doctor, pharmacist, or other health care professional (such as nurse practitioner, physician assistant, nurse, respiratory therapist, or asthma educator) to show you how to use your inhaler. Review your technique at each follow-up visit.

- 1** Take off cap. Shake the inhaler. Prime (spray or pump) the inhaler as needed according to manufacturer's instructions (each brand is different).
- 2** If you use a spacer or valved holding chamber (VHC), remove the cap and look into the mouthpiece to make sure nothing is in it. Place the inhaler in the rubber ring on the end of the spacer/VHC.
- 3**
- 4** Stand up or sit up straight.
- 5** Take a deep breath in. Tilt head back slightly and blow out completely to empty your lungs.
Place the mouthpiece of the inhaler or spacer/VHC in your mouth and close your lips around it to form a
- 6** As you start to breathe in, press down firmly on the top of the medicine canister to release one "puff" of medicine. Breathe in slowly (gently) and as deeply as you can for 3 to 5 seconds.
- 7** Hold your breath and count to 10.
- 8** Take the inhaler or spacer/VHC out of your mouth. Breathe out slowly.
- 9** If you are supposed to take 2 puffs of medicine per dose, wait 1 minute and repeat steps 3 through 8.
- 10** If using an inhaled corticosteroid, rinse out your mouth with water and spit it out. Rinsing will help to prevent an infection in the mouth.



Dry Powder Inhaler

What Is a Dry Power Inhaler:

A dry powder inhaler delivers pre-set doses of medicine in powder form. The medicine gets to your airways when you take a deep, fast breath in from the inhaler. To keep your asthma under control, it is important to take your medicine as prescribed by your doctor or other health care professional and to use the proper technique to deliver the medicine to your lungs. If you don't use your inhaler correctly, you won't get the medicine you need.

What Is a Dry Powder Inhaler:

- Wipe the mouthpiece at least once a week with a dry cloth.
- Do Not use water to clean the dry powder inhaler

Here are general steps for how to use and clean a dry powder inhaler. Be sure to read the instructions that come with your inhaler. Ask your doctor, pharmacist, or other health care professional (such as nurse practitioner, physician assistant, nurse, respiratory therapist, or asthma educator) to show you how to use your inhaler. Review your technique at each follow-up visit.

- 1** Remove cap and hold inhaler upright (like a rocket). If the inhaler is a Diskus®, hold it flat (like a flying saucer).
- 2** Load a dose of medicine according to manufacturer's instructions (each brand of inhaler is different; you may have to prime the inhaler the first time you use it). Do not shake the inhaler.
- 3** Stand up or sit up straight.
- 4** Take a deep breath in and blow out completely to empty your lungs. Do not blow into the inhaler.
- 5** Place the mouthpiece of the inhaler in your mouth and close your lips around it to form a tight seal.
- 6** Take a fast, deep, forceful breath in through your mouth.
- 7** Hold your breath and count to 10.
- 8** Take the inhaler out of your mouth. Breathe out slowly, facing away from the inhaler.
- 9** If you are supposed to take more than 1 inhalation of medicine per dose, wait 1 minute and repeat steps 2 through 8.
- 10** When you finish, put the cover back on the inhaler or slide the cover closed. Store the inhaler in a cool, dry place (not in the bathroom).
- 11** If using an inhaled corticosteroid, rinse out your mouth with water and spit it out. Rinsing helps to prevent an infection in the mouth.



Nebulizer

What Is a Nebulizer:

Here are general steps for how to use and clean a nebulizer. Be sure to read the instructions that come with your nebulizer. Ask your doctor, pharmacist, or other health care professional (such as nurse practitioner, physician assistant, nurse, respiratory therapist, or asthma educator) to show you how to use your nebulizer. Review your technique at each follow-up visit.

How to Clean a Nebulizer:

After Each Treatment:

- Wash hands well.
- Wash the medicine cup and mouthpiece or mask with warm water and mild soap. Do **not** wash the tubing.
- Rinse well and shake off excess water. Air dry parts on a paper towel.

Once a Week:

- Disinfect nebulizer parts to help kill any germs. Follow instructions for each nebulizer part listed in the package insert. Always remember:
- Do not wash or boil the tubing.
 - Air dry parts on a paper towel.

Between Uses:

- Store nebulizer parts in a dry, clean plastic storage bag. If the nebulizer is used by more than one person, keep each person's medicine cup, mouthpiece or mask, and tubing in a separate, labeled bag to prevent the spread of germs.
- Wipe surface with a clean, damp cloth as needed. Cover nebulizer machine with a clean, dry cloth and store as manufacturer instructs.

Here are general steps for how to use and clean a nebulizer. Be sure to read the instructions that come with your nebulizer. Ask your doctor, pharmacist, or other health care professional (such as nurse practitioner, physician assistant, nurse, respiratory therapist, or asthma educator) to show you how to use your nebulizer. Review your technique at each follow-up visit.

- 1 Wash hands well.
- 2 Put together the nebulizer machine, tubing, medicine cup, and mouthpiece or mask according to manufacturer's instructions.
- 3 Put the prescribed amount of medicine into the medicine cup. If your medicine comes in a pre-measured capsule or vial, empty it into the cup.
- 4 Place the mouthpiece in your mouth and close your lips around it to form a tight seal. If your child uses a mask, make sure it fits snugly over your child's nose and mouth. Never hold the mouthpiece or mask away from the face.
- 5 Turn on the nebulizer machine. You should see a light mist coming from the back of the tube opposite the mouthpiece or from the mask.
- 6 Take normal breaths through the mouth while the machine is on. Continue treatment until the medicine cup is empty or the mist stops, about 10 minutes.
- 7 Take the mouthpiece out of your mouth (or remove mask) and turn off the machine.
- 8 If using an inhaled corticosteroid, rinse mouth with water and spit it out. If using a mask, also wash the face.

Peak Flow Meter

What Is a Peak Flow Meter:

Peak flow meters are devices used to measure how well air is moving through your lungs.



GREEN ZONE: 80%–100% of personal best - Take daily long-term control medication, if prescribed.



YELLOW ZONE: 50%–79% of personal best - Add quick-relief medication(s) as directed and continue daily long-term control medication, if prescribed. Continue to monitor.



RED ZONE: Less than 50% of personal best - Add quick-relief medication(s) as directed. Get medical help now.

Here are some general steps for how to use a peak flow meter. Be sure to read the instructions that come with your peak flow meter. Ask your doctor, pharmacist, or other health care professional (such as nurse practitioner, physician assistant, nurse, respiratory therapist, or asthma educator) to show you how to use your peak flow meter. Review your technique at each follow-up visit.

- 1** Always stand up. Remove any food or gum from your mouth.
- 2** Make sure the marker on the peak flow meter is at the bottom of the scale.
- 3** Breathe in slowly and deeply. Hold that breath.
- 4** Place mouthpiece on your tongue and close lips around it to form a tight seal (do not put tongue in the hole).

- 5** Blow out as hard and fast as possible.
- 6** Write down the number next to the marker. (If you cough or make a mistake, do not write down that number. Do it over again.)
- 7** Repeat steps 3 through 6 two more times.
- 8** Record the highest of these three numbers in a notebook, calendar, or asthma diary.

*Compare the highest number with the peak flow numbers on your written asthma action plan. Check to see which zone the number falls under and follow the plan's instructions for that zone.



Recording peak flows at the same time daily will give you the most consistent numbers.

How to Find Your Personal Best or Usual Peak Flow:



- Follow the steps to take your peak flow daily for 2 to 3 weeks when your asthma is under good control. Record the highest number each day.
- Take peak flow at the same time every day. Peak flows are lowest in the early morning and highest between noon and 5 p.m. Recording peak flows at the same time daily will give you the most consistent numbers.
- The highest number during this period of time will be your personal best number.

Your doctor or other health care professional may also want you to take your peak flow before and after using your quick-relief medicine. Follow his or her instructions.

Find a new personal best with each new peak flow meter (different meters can give different numbers).

Find a new personal best for children every 6 months to allow for growth changes.

**Thank You For
Your Interest!**

**For any questions, and more information, visit
our website:**

<https://indianactsi.org/community/initiatives/indiana-joint-asthma-coalition/>



**Community Health
Partnerships**

Indiana Clinical and Translational
Sciences Institute

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