

Metered dose inhaler with holding chamber (spacer) and mask

What is a metered dose inhaler (MDI)?

An MDI, or inhaler, is a device that has asthma medicine in it. It delivers the medicine into the lungs. The MDI needs to be used in a certain way or it will not work.

What is a holding chamber (spacer)?

A holding chamber, or spacer, is a plastic tube with a mask or mouthpiece. It connects to the MDI. The spacer helps more of the medicine get into the lungs where it can help your child. If your child uses the MDI without a spacer, a lot of the asthma medicine can stick to the tongue and throat instead of going to the lungs. This “wastes” the medicine and decreases how well it works.



MDI with spacer and mask

How should my child use an MDI with spacer and mask?

Follow the directions from your child’s respiratory therapist, nurse or doctor closely. Read the directions on the medicine, MDI and spacer labels carefully before use. Some guidelines to follow include:

1. Wash your hands well with soap and water for at least 20 seconds.
2. Have your child stand or sit up straight.
3. Take off the cap. Shake the inhaler well. (If it is a new inhaler or has not been used for several days, read the manufacturer’s instructions for how to prime the inhaler first.)
4. Attach the inhaler to the spacer.
5. Cover your child’s mouth and nose with the mask. If your child fights the mask, have another person gently hold their arms.
6. Press down on the inhaler to spray the medicine into the spacer.
7. Keep the mask in place until your child takes 6 or 7 deep breaths.
 - The number of breaths needed to remove all the medicine can vary based on the size of the child.
 - Small babies may need to take 6 to 10 breaths to empty the spacer.

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MDI with holding chamber (spacer) and mask, continued

- If counting breaths is a problem, slowly count to 10.
8. Remove the mask.
 9. If the doctor prescribed more than 1 puff, wait at least 1 minute between puffs. Shake the MDI before each puff and repeat steps 5 thru 8.
 10. If the MDI contains a steroid, wipe your child's face with soap and water to remove any remaining medicine after using the device.
 - If possible, also rinse your child's mouth with water.
 - Babies and children who are too young to rinse their mouths can drink a liquid of their choice after using the MDI.

How should I use the mask with my child?

Giving asthma medicine should be a positive time for you and your child. Some ideas you can use to help your child get used to the mask include:

- Tell your child why they need to use the spacer and mask.
- Make a game of it. One idea is to have your child pretend they are an astronaut on a space ship.
- Give your child lots of praise when they use the mask, even for a short time.

Almost all children, even toddlers, can learn to use a spacer and mask. If you find your child always fights the mask as it is placed over the nose and mouth – **stop** and do not force the treatment.

If your child still cannot use the mask, let the doctor know **right away**. Your child may be able to use a nebulizer machine instead.

How can I keep track of how much medicine is left?

Many inhalers come with a dose counter. If yours does not have one, be sure to keep track of how much asthma medicine your child uses. Some ways that may help include:

- Count the number of doses your child uses each day, and write it on a calendar. This is the best way to keep track.
 - Mark what day you start using a new inhaler. Then you can keep track of the number of doses left.
 - Compare the number of doses used with the number of doses on the canister. Most canisters tell you how many doses they have in them.
 - For example: if your child uses 4 puffs each day from a 200-puff canister, get it refilled in 45 to 50 days.
- Place a blank label on the inhaler. Place a “✓” (check mark) on the label after each puff until you reach the number of puffs listed on the canister.

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- Write a refill date on the canister each time you get a new MDI at the drug store. If your child uses about the same number of doses each day, you will know to get a refill at about the same time each month. This only works if your child does not use the inhaler for extra rescue doses.

Do **NOT** float your canister in water to see if it sinks or floats. This is **NOT** accurate and may lead to not having medicine when your child needs it.

Be sure to refill your child's prescription before the canister runs out. An inhaler never feels like it is getting empty. You must keep up with the number of puffs used, including puffs used to prime the inhaler.

How should I clean the spacer and mask?

- Rinse the spacer and mask as needed with warm, running water.
- Clean them 1 time each week with warm water and soap.
- Allow the spacer and mask to air dry between uses.
- Do not clean or dry the inside of the spacer with a cloth or fabric. This can create an electric charge on the inside of the spacer. The charge will decrease the amount of medicine that goes to your child's lungs.
- One time each week, rinse the mouthpiece (boot) that holds the canister with warm running water. Do not soak it. When placing the canister back into the dried boot, prime it with 1 puff.
- See the manufacturer's instructions for more details.

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.

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