

Asthma and COPD: How to Use a Metered Dose Inhaler (MDI)

What is an MDI?

A metered dose inhaler, or MDI, is a small, hand-held device that delivers inhalable medication in fixed, measured amounts (metered doses). The medication itself is stored in a pressurized canister that fits inside the MDI. MDIs are sometimes called "puffers" — they make a quiet puffing sound as you press down on the canister and the medication sprays out.

An MDI is commonly used to deliver medication that treats asthma and chronic obstructive pulmonary disease (COPD). You need to use your MDI correctly to pull the medication deep into your lungs — and to make sure you're getting the most good from your medication.

Your doctor may recommend a **spacer** with your MDI to help you get more of the medication deep into your lungs. A spacer is a special tube that attaches to the inhaler. A spacer can be used with a **mouthpiece** (best for most patients) or **mask** (for young children or others who have difficulty using the mouthpiece).

Cleaning your inhaler and spacer

Clean your inhaler and spacer at least once a week to keep medication from building up on them.

Clean the inhaler thoroughly. Different inhalers need to be cleaned in different ways — always follow the specific instructions that come with your inhaler. The steps below apply to a variety of inhalers:

- 1 Remove the metal canister and cleanse the plastic case and cap by rinsing thoroughly in warm, running water. Be sure to clear medication build-up from the spray nozzle.
- **2** Thoroughly dry the plastic case and cap.
- **3** Gently replace the canister in the case with a twisting motion, and put the cap back on the mouthpiece.



Clean the spacer before the first use and weekly after that. All spacers need to be cleaned regularly. Check the packaging information of your spacer. Different spacers have slightly different instructions for cleaning.

Is your inhaler empty? How to tell

- Many MDIs have counters. Each time you use your inhaler, the counter goes down — so when you get to 000, stop using the inhaler and start using a new one.
- If your inhaler doesn't have a counter, you'll need to track the puffs yourself. Shaking it or "puffing" it won't tell you an inhaler will still feel full or puff even when the medication is gone. Trying to float the canister won't work either. The only way to know how much medication is left is to track your doses. Use a permanent marker to make a hash mark for each puff. When your marks match the number of doses listed on the canister, it's time to start using a new inhaler.

MDI Tips

- Many perhaps most people have trouble coordinating the "press and breathe" actions when using an open-mouth technique. This means the medication may not reach deep into the lungs. The solution? Use a spacer whenever you can.
- If you're using an inhaler with a steroid, rinse your mouth with water after each use.

How to use an MDI (a metered dose inhaler)

- 1 Remove the cap from the inhaler, and from the spacer if necessary.
- 2 If necessary, prime the inhaler (squirt a puff into the air). Check the package insert for specific instructions. Some MDIs don't need to be primed but others need one, two, or more priming puffs.
- **3** If you're using a spacer, insert the inhaler into the rubber end of the spacer.
- 4 Shake the inhaler well immediately before each puff to mix and warm the contents.
- **5** Breathe out.



If you're using a spacer with a mouthpiece

- 6 Place the mouthpiece fully into the mouth between the teeth, holding the inhaler upright and closing the lips around the mouthpiece.
- **7** Press the canister down to release a puff of medication.
- 8 Breathe in deeply and slowly for 3 to 5 seconds through your mouth.
- **9** Hold your breath for 10 seconds.
- 10 Remove the spacer from your mouth and breathe out slowly.
- 11 Repeat steps 4 through 10 for each inhalation prescribed by your doctor.



If you're using a spacer with a mask

- Place the mask over the child's mouth and nose, with the inhaler upright. Maintain the seal between the face and mask.
- **7** Press the canister down to release a puff of medication.
- Encourage the child to breathe in deeply and slowly for
 3 to 5 seconds when possible.
- 9 Maintain the seal for 5 breaths (or at least 2 breaths) while the child breathes in, then remove the mask from the face.
- 10 Repeat steps 4 through 9 for each inhalation prescribed by the doctor.



If you're using the open-mouth technique

- 6 Position the canister mouthpiece about 1½ to 2 inches in front of your OPEN mouth. Do not place the mouthpiece in your mouth with your lips closed around it.
- 7 Start breathing in deeply and slowly — for 3 to 5 seconds — through your mouth while pressing the canister down to release a puff of medication.
- **8** Hold your breath for 10 seconds, then breathe out slowly.
- **9** Repeat steps 4 through 8 for each inhalation prescribed by your doctor.

The right medication...the wrong way?

If your symptoms don't improve with medication, it might be because you're not using the device properly.

For example, if you aren't using your inhaler correctly, most of the medication will end up in your mouth and throat, instead of in your lungs.

To make sure you're getting the most from your lung medication:

- Always follow the instructions for your specific brand of inhaler.
- Have your doctor or asthma educator check to make sure you're using your device correctly.