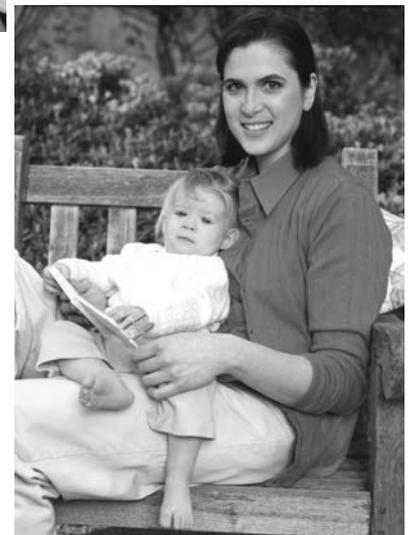




## How to Use Inhaled Medications for Asthma and COPD



This information is not intended to diagnose health problems or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult with your doctor. If you have questions or need more information about your medication, please speak to your pharmacist. Kaiser Permanente does not endorse any brand names; any similar products may be used.

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## How to use inhaled medication

Inhaled medications are an important part of asthma and chronic obstructive pulmonary disease (COPD) treatment. The medication goes directly into your lungs (where it is needed) so it is more effective and causes fewer side effects. The most common way to take inhaled medication is the **metered dose inhaler (MDI)**.

An MDI works best with a special device called a **spacer**. A spacer gets even more medicine to the lungs, so the medicine works better. Less medicine ends up in the mouth and throat, so there are fewer side effects. It is also easier to use an MDI with a spacer because you do not have to coordinate puffing with breathing. Most young children and some older adults cannot coordinate puffing with breathing. They must get a spacer to get any benefit from an MDI.

This booklet describes several types of inhalers:

**Inhaled steroids (also called controllers):** beclomethasone (QVAR), fluticasone (Flovent), mometasone (Asmanex).

These medicines help control the inflammation (swelling) that causes an asthma flare-up. You need to take them as prescribed for them to work. They do not relieve your symptoms right away.

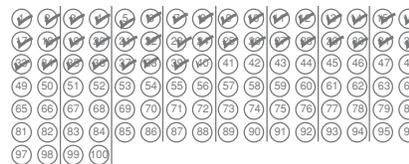
**Bronchodilators (also called relievers):** albuterol (Proventil, Ventolin), metaproterenol (Alupent, Metaprel).

These medicines can only help relieve the symptoms of an asthma flare-up or help reduce the effect of triggers, including exercise. Most people with asthma can not rely on just a reliever.

**If you use more than one inhaled medicine at a time, use the bronchodilator (reliever) first.**

This opens up the breathing tubes so the other medications can get to the lungs better. If you have questions about using inhaled medications, ask your doctor.

When the number of check marks equals the number of puffs in your inhaler, your inhaler is empty.



Another method is to divide the number of puffs in the canister by the number of puffs used each day. This will give you the number of days the medication will last. Mark this day on your calendar. When this day comes, replace your inhaler.

Inhaler	Number of puffs
albuterol	200
beclomethasone HFA	100
budesonide	200
cromolyn	112 or 200
fluticasone	120
ipratropium	200
mometasone	60 or 120
nedocromil	104
salmeterol	60

Some people try to float their inhalers in water to see how much medication is left. **This does not work!** We recommend that you use one of the counting methods above.

## How many puffs are left in the dry powder inhaler (DPI)?

The diskus contains 60 doses of medication. It has a dose indicator that counts down the number of doses as you use them. Doses 5 through 0 are in red to alert you to refill your prescription. When the “0” appears in the dose indicator, throw away the Diskus and begin a new one.

## How to use a metered dose inhaler without a spacer

**Caution: Using your inhaler without a spacer decreases the amount of medication that actually gets into your lungs. A spacer can also help prevent side effects.**

1. Remove the cap and hold the inhaler upright.
2. Shake the inhaler.
3. Tilt the head back slightly and breathe out.
4. Position the inhaler as shown in the picture with your mouth open wide. Hold the inhaler two fingers' width from your mouth. Always use a spacer with ipratropium (Atrovent) inhalers. Atrovent will cause blurred vision if it gets into the eyes.
5. Press down on the inhaler to release the medication as you start to breathe in slowly.
6. Breathe in slowly (3-5 seconds).
7. Hold your breath for 10 seconds to allow the medicine to reach deeply into your lungs.
8. Exhale.
9. Wait a few breaths between puffs. Put the protective cap on the mouthpiece of the inhaler when you are finished.
10. *Always* rinse your mouth after using inhaled steroids (for example, QVAR, Flovent, or Asmanex).
11. Review the instructions included with the packaging of your inhaler for more tips on proper use.

Open Mouth Technique

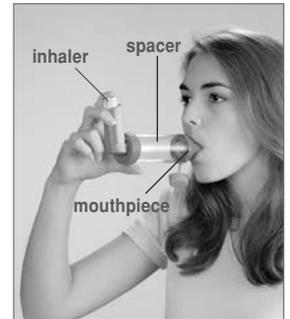


## How to use a metered dose inhaler and AeroChamber spacer

It is important to use the inhaler and spacer correctly in order to get the medication into your lungs. Ask your health care provider to check the way you or your child uses the inhaler and the spacer together.

Follow these steps or give these instructions to your child:

1. Stand up straight.
2. Take the cap off the inhaler.
3. Shake the inhaler well and insert it into the spacer.
4. Breathe out normally.
5. Place the mouthpiece of the spacer in your mouth between your teeth, with your tongue underneath. Make sure your lips make a tight seal around the mouthpiece.
6. Press down once on the medicine canister, releasing one "puff" or dose of medicine into the spacer. Do not release more than one puff at a time.
7. Breathe in slowly and deeply from the spacer. Fill your lungs with as much medicine and air as possible.
8. Take the spacer out of your mouth and hold your breath.
9. Slowly count to 10 while you hold your breath.
10. Breathe out slowly through your mouth.
11. If you are taking more than one puff of quick-relief medicine, it may help to wait at least one minute between puffs.
12. When you are done taking the medicine, take the inhaler out of the spacer and replace the cap on the mouthpiece of the inhaler. Be sure to rinse out your mouth with water if you are using an inhaled steroid (for example, QVAR, Flovent, or Asmanex).



## How many puffs are left in the metered dose inhaler?

An inhaler may discharge even when there is no medicine left. To find out when your inhaler will be out of medicine, make a check mark each time you take a puff.



### How to use a metered dose inhaler and AeroChamber with mask

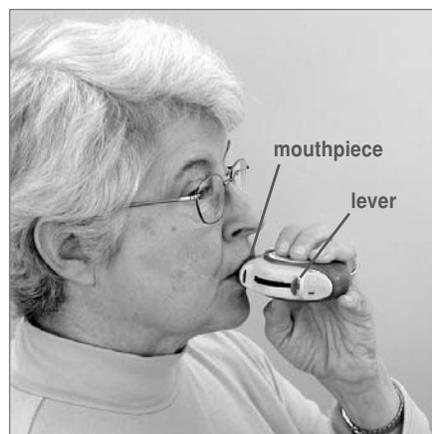
Young children, especially babies and toddlers, may have difficulty holding their breath. Using a spacer with mask allows the young child to breathe in several times in order to get an accurate dose of medicine.

1. Shake the inhaler and remove the inhaler cap.
2. Hold the inhaler upright and insert the inhaler into the spacer.
3. Place your infant or toddler comfortably on your lap. The back of your child's head should rest against your chest.
4. Place the mask spacer securely over your child's mouth and nose, making sure there is a good seal. The mask must fit snugly, with no gaps between the mask and the skin.
5. Press down on the inhaler to spray one puff of medication into the spacer.
6. Have your child breathe in and out normally for 6 breaths.
7. It is okay if your child cries. It takes a deep breath to cry.
8. If your child needs another puff of medication, wait one minute and repeat steps 4 & 5.
9. When your child is done taking the medication, take the inhaler out of the spacer and replace the cap on the mouthpiece of the inhaler.

### How to use dry powder inhalers (DPI)

Follow these steps or give these instructions to your child:

1. Stand up straight.
2. Release a dose of medicine into the inhaler chamber according to the instructions for your DPI. Do not release more than one dose at a time.
3. After you have released the medicine, be sure not to turn the DPI over. The medicine might fall out. Also, do not blow into the DPI.
4. Breathe out first and then put your mouth completely over the inhaler opening.
5. Breathe in the dry powder quickly and deeply.
6. Hold your breath for 10 seconds.
7. When you are done taking the medicine, close the inhaler.



### Caring for a dry powder inhaler

It is important to keep your dry powder inhaler clean and dry. Use a cloth to wipe the mouthpiece after each use and store your inhaler in a dry place.

## Cleaning and Care for the InspirEase®

1. Disconnect and clean the InspirEase® mouthpiece thoroughly with warm, running water. The InspirEase® is not dishwasher safe.
2. Shake off excess water.
3. Air dry on a clean towel and wait until it is dry before storing. The InspirEase® should not be stored near heat.
4. Do not clean the collapsible plastic bag. It should be replaced every 4 weeks or as needed.
5. The mouthpiece should be replaced every six months or when it no longer works correctly.

## How to use a metered dose inhaler with EZ Spacer

1. Pull open the handle on top of the collapsible plastic bag. Pull down and twist the reservoir bag gently to open the bag fully.
2. Slide the bar on the top to the right to extend the mouthpiece.



3. Shake the inhaler. This mixes the medication properly. Remove it from its plastic case.
4. Insert the inhaler into the hole next to the handle.
5. Instruct your child to gently breathe out.
6. Have your child put the mouthpiece in his/her mouth between their teeth and close their lips around it.
7. Press the inhaler once to deliver one puff of the medication.
8. Have your child breathe in slowly and deeply over 3-5 seconds. The EZ Spacer bag will collapse.
9. Have your child hold his/her breath for ten seconds or if your child is unable to hold his/her breath, have your child breathe in and out slowly five times.
10. Have your child resume normal breathing.
11. Repeat steps 5-9 when more than one puff is prescribed.
12. Always rinse your child's mouth after using inhaled steroids.

## How to use a metered dose inhaler with InspirEase®

Your child must be able to follow instructions to inhale through the mouth at the right time to use the InspirEase®. Usually children must be over 6 years of age.

1. Connect the mouthpiece to the bag by lining up the tabs with the opening in the bag. Push in and turn to lock.
2. Gently open the bag by untwisting and expanding.



3. Shake the inhaler. Remove it from its plastic case and insert it firmly into the plastic holder directly in front of the bag portion of the InspirEase®.

4. Have your child breathe out as much of his/her air as he/she can.
5. Have your child place the mouthpiece into his/her mouth, gripping it gently with lips and teeth.
6. Press down on the inhaler to release the medication into the bag.
7. Have your child breathe in slowly through the mouthpiece. If you hear a whistling sound, have your child breathe slower until no sound can be heard.
8. Have your child hold his/her breath while you count slowly to 5.
9. Have your child breathe out slowly into the bag, filling it with air.
10. Again, have your child breathe in slowly through his/her mouth; hold the breath for a count of 5 and breathe slowly out into the bag, causing it to fill again.
11. Have your child rest. Repeat steps 4-10 when more than one puff is prescribed.

## Common errors to watch for

- Forgetting to shake the canister
- Holding the inhaler upside down
- Breathing in through your nose
- Stopping inhalation when cold propellant hits the throat
- Failing to hold the breath
- Inhaling more than one puff with one breath
- Not keeping track of your medication
- Inhaling too fast

## Caring for a metered dose inhaler (MDI) and AeroChamber Spacer

- Hand wash the inhaler's plastic holder and the spacer with mild soap and warm water at least once a week.
- Let them air dry. (Take the canister out of the plastic holder before you wash it.)
- Do not put an inhaler or spacer in the dishwasher.

## Cleaning and Care for the E-Z spacer®

1. Clean the E-Z Spacer® by hand at least once a week. The E-Z Spacer® is not dishwasher safe.
2. Remove the bottom plate of the spacer by using your fingernail or twisting a coin in the slot.
3. Pull open the handle and slide the bar to the right to extend the mouthpiece. Pull down and twist the reservoir bag gently.
4. Immerse the spacer and end plate in a basin with water and mild detergent.
5. Clean the inside, outside and end plate.
6. Rinse the spacer and end plate in fresh water.
7. Shake off any excess water.
8. Air dry on a clean towel and wait until it is dry before storing. The E-Z Spacer® should not be stored near heat.