

Inhaler Use

For healthy breathing, we all need wide open air passages and a good volume of air to inhale and exhale. If, however, you are one of the millions of people in this country who suffer from asthma or other causes of bronchospasm, healthy breathing is often more variable for you than for those individuals who do not have these conditions. To help relieve your symptoms and improve the airflow to your lungs, your provider may prescribe the use of inhaler medications. Inhaler medications are the most practical and effective way of restoring free breathing.

Metered dose inhalers (MDI) are small, portable devices that deliver medication in an aerosol form so it can be inhaled. The medication is dissolved or suspended in a liquid contained in a small canister. The canister fits into a plastic device, the mouth-piece, that releases a set amount of medication, or a metered dose.

MEDICATION

Three types of medication can be delivered with MDIs:

- **Bronchodilators:** Medications that relax the muscles around the bronchial tubes and make breathing easier -- immediately.
- **Corticosteroids:** Medications that decrease inflammation and swelling in the airways.
- **Cromolyn:** Medication that reduces inflammation and reactions in the airways

THINGS YOU NEED TO KNOW

- If you are taking more than one inhaled medication, it is important to take them in the correct order. Be sure to discuss this with your provider. Bronchodilating medications are usually taken first, since their action is to open airways. This allows other types of medications to more effectively reach the areas of the lung, where they work.
- Corticosteroids and Cromolyn are taken about 5-10 minutes after the bronchodilating drugs. Use of these drugs alone, when you are experiencing tightness, wheezing, or shortness of breath, does not normally produce relief and can be irritating to airways that are in spasm. These medications, however, may reduce the frequency and severity of acute attacks, if taken on a regular basis.
- Many patients become overly concerned about using inhaled steroids. However, these medications are relatively free of systemic side effects. Inhaler medications prescribed by your physician are not habit-forming, do not lose effectiveness from continued use, and are safe when used as prescribed. It is, however, essential for you to know how to properly use this device to obtain the full benefits from the drug.

TIPS ON INHALERS

- Take only the recommended number of puffs prescribed by your provider.
- Gargle with water or mouthwash after using steroid-type medication. Gargling helps prevent hoarseness and fungal infections in the mouth and throat.
- The mouthpiece of inhalers should be cleaned at least weekly with warm soapy water. First, remove the metal canister by pulling it up firmly. Air dry completely before reassembling.

- Avoid the use of over-the-counter inhalants. Most of these contain epinephrine, which is effective for only a short time and may cause rebound bronchospasm.
- Check expiration dates.

SPACERS

- If you find it difficult to precisely coordinate inhalation and activation of the inhaler, you may benefit from the use of a spacer. When attached to the MDI, the spacer acts as a holding chamber from which the aerosolized medication can be inhaled without the need for precision timing. Because of the delay, the large aerosol particles partially evaporate and become smaller before they enter the airways, allowing them to go farther down the respiratory tract.
- The major advantage of using a spacer is that more of the medication can reach the lungs and, thus, increase the effectiveness of the medication. Also, when spacers are used with corticosteroids, it reduces the incidence of oral candidiasis (thrush) and hoarseness. Spacers also eliminate gagging and spasm due to the forceful impact of the spray on the back of the throat. Talk with your provider if you think a spacer will help you with inhaler use.

USING THE INHALER

- Put the inhaler together.
- Shake the canister rigorously to mix the medication. Inadequate mixing may result in a less than full dose being delivered.
- Remove the cap from the mouthpiece.
- Hold the canister with your index finger on top and your thumb on the bottom.
- Position the canister mouthpiece about 1 1/2 - 2 inches in front of your mouth. Do not place the mouthpiece in your mouth with your lips closed around it. You may also wish to use a spacer, which is a tube 5-10 inches long. You may purchase a professionally manufactured spacer or use a paper towel tube or a piece of rolled paper as a substitute.
- Exhale gently and completely through your mouth.
- Inhale slowly and deeply with your mouth open, while depressing the top of the canister with your index finger. Timing is important, so do not activate the inhaler until you have started to breathe in.
- Close your mouth; hold your breath for at least 10 seconds, or as long as you can, comfortably. Breathe normally after exhaling.
- If two puffs are prescribed, wait 1 minute before taking the second one. This allows the first puff to dilate the airways, allowing the second puff to penetrate more deeply into the bronchial tree.

This method of using an MDI is the most effective because it allows the solution particles to be properly dispersed, so more medication reaches the lungs. Closing your lips around the mouthpiece can cause a large portion of the medication to adhere to the tissues of the mouth and throat. This will decrease the beneficial effect of the medication, and may cause irritation of the mouth and tongue.



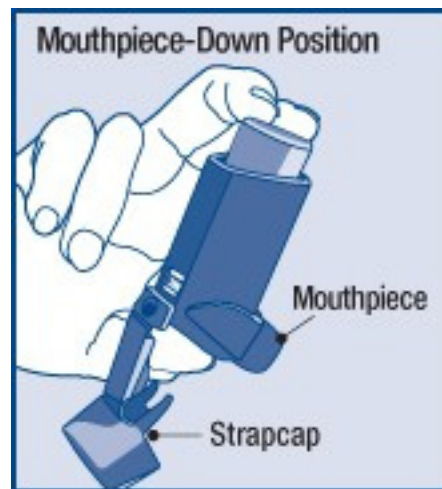
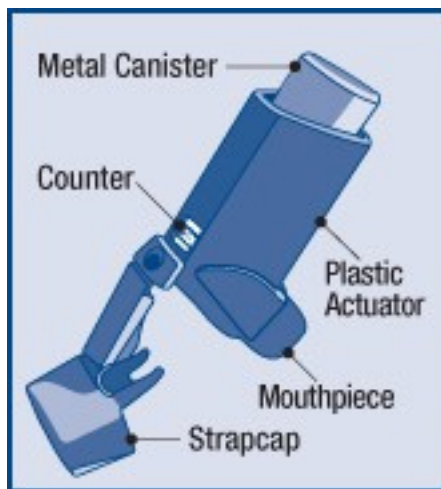
Place mouthpiece about 1-1/2" to 2" away from your mouth.



Breathe out fully. Inhale slowly and deeply through an open mouth, while pressing down on canister.



Close your mouth; hold your breath for 5 to 10 seconds. Exhale, breath normally.



YOU SHOULD NOTIFY YOUR PROVIDER IF:

- You are not experiencing relief from your MDI, or the relief is too short -- only one or two hours.
- You are experiencing increasing shortness of breath that is not relieved by your MDI.
- You are experiencing weakness, increased heart rate, shakiness, insomnia, nervousness, headaches, nausea or vomiting.
- You are low on your medication supply.
- You have any other concerns or questions about your condition.
- If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

References:

- "Expert Panel Report II: Guidelines for the Diagnosis and Management of Asthma", pp. 4-15, 2/97.
"One-Minute Asthma: What You Need to Know", by Thomas F. Plaut, M.D., pp. 37-39, 1998.
The University of Illinois, 1999.

**CONTACT HEALTH & WELLNESS IF YOU HAVE ANY
ADDITIONAL QUESTIONS OR CONCERNS.**



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