

METERED DOSE INHALERS

All metered dose inhalers (**MDIs**) come with specific instructions. It is very important to follow these instructions carefully. Asthmatic individuals and/or their caretakers should request their pharmacist give a demonstration on the use of their inhalers. Technique should be reviewed at follow-up visits. The MDIs used to deliver albuterol, beclomethasone, cromolyn, fluticasone, ipratropium, nedocromil, salmeterol and terbutaline are all very similar. The following directions apply to all of these inhalers:

- 1.Shake the inhaler well immediately before each use.
- 2.Remove the cap from the mouthpiece. If the cap is not on the mouthpiece, the mouthpiece opening should be checked for the presence of foreign objects before each use.
- 3.Make sure the canister is not empty by keeping track of inhalations as they are taken. It may be advisable to keep track of the doses taken on a home made chart. Also on the market is a device that a patient can insert on his/her inhaler to keep track of the number of puffs taken. For maintenance medications taken daily, you can divide the number of inhalations per canister (written on the canister and/or in the patient information dispensed with the medication) by the number of puffs to be taken each day to calculate how many days it will last. This will help you determine when you should get a refill.
- 4.Test spray the inhaler (called priming) before its first use or if it has not been used for more than four weeks. (Thereafter, this is not necessary.)
- 5.Breathe out through the mouth to empty the lungs.
- 6.Place the mouthpiece in the mouth, keeping the tongue below it. Alternatively, the inhaler may be positioned 1 or 2 inches away from a wide open mouth
- 7.While breathing in deeply and slowly through the mouth, press down firmly and fully on the top of the metal canister with your index finger.
- 8.Continue to inhale as fully as you can then try to hold your breath for 5-10 seconds. Before exhaling out, remove the inhaler from your mouth and release your finger from the canister.
- 9.Wait 60 seconds and shake the inhaler again. Repeat these steps for each inhalation prescribed by your doctor. The inhaler will not function properly if you use it sooner than 60 seconds.
- 10.Replace the mouthpiece cap after each use.
- 11.Cleanse the inhaler thoroughly and frequently. Remove the metal canister and clean the plastic case and cap by rinsing thoroughly in warm, running water at least once a day. After thoroughly drying the plastic case and cap, gently replace the canister into the case with a twisting motion and replace the cap.
- 12.Discard the canister after you have used the labeled number of inhalations. The correct amount of medication cannot be assured after this point.

Proper Use of Inhalers

Metered Dose Inhalers (MDI)

- Remove the cap and hold the inhaler upright.
- Shake the inhaler.
- Tilt your head back slightly and breathe out.
- Hold the inhaler 1 to 2 fingers away from your mouth as you inhale press canister down to release the medicine and breathe slowly over 3 to 5 seconds. (If easier, seal your lips around the mouth piece of the inhaler, making sure that you do not block the inhaler with your tongue). Hold your breath for as long as you can preferably ten seconds to allow drug to be absorbed.
- If your doctor prescribed more than one puff of medicine, repeat this procedure. Wait one minute between puffs to allow the second puff to get into the lungs better.

Dry Powder Inhalers (DPI)

- Load a dose into the device as directed.
- Hold the inhaler level with the mouthpiece facing you.
- Tilt your head back slightly, and breathe out slowly and completely without straining or breathing into your DPI (moisture from your breath can clog the inhaler valve.)
- Place your mouth over the mouthpiece and seal your lips around it making sure that you do not block the inhaler with your tongue.
- Breathe in quickly and deeply (over two to three seconds) through your mouth to activate the flow of medication.
- Remove the inhaler from your mouth. Hold your breath for 10 seconds (or as long as is comfortable), and then breathe out slowly against pursed lips. This step is very important. It allows the medication to get deeply into your lungs.
- Some medications require that you rinse your mouth after use.

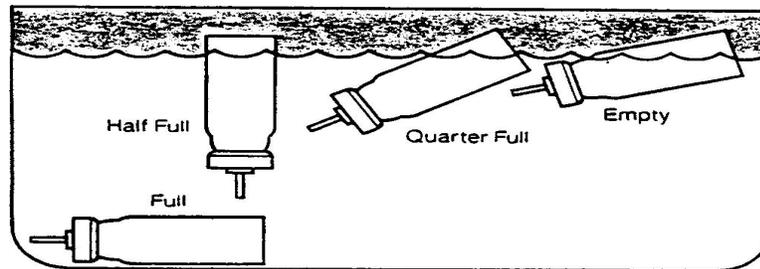
Spacers and Holding Chambers

Many young children and some adults have a difficult time coordinating their inhalation with the action necessary to trigger a puff from a metered dose inhaler (MDI). Such individuals can benefit from the use of a spacer. Studies show that a greater percentage of medication is deposited into lower airways, as opposed to the throat, following use of an MDI with a large volume spacer. Those with holding chambers and one-way valves to prevent medication escaping into the air have the advantage of allowing the asthmatic to breathe nearer to his or her own pace while still inhaling effective doses of medication. At least one version of a large volume spacer with holding chamber and one-way valve is available with a mask that comes in sizes to fit infants, children and adults.

SIMPLE METHOD TO ESTIMATE CONTENT LEVEL OF INHALER for non HFA Inhalers

Procedure

Fill the sink or a large bowl with water. Remove the canister from the delivery unit, and drop the canister in the water. The position the canister takes in the water indicates the amount of medication remaining (see diagram)



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The information provided is not intended to cover all possible uses. This information is generalized and not intended as specific medical advice. If you have questions about the use of your prescription, please contact your prescriber.