

## ASTHMA DEVICES

*This information sheet is for your general information and is not a substitute for medical advice. You should contact your doctor or other healthcare provider with any questions about your health, treatment or care.*

### What is the aim of asthma treatment?

The asthma patient must be able to:

1. live a normal life and use his/her medication correctly
2. use his/her inhaler and spacer (if given) correctly and effectively
3. measure his/her own peak flow correctly
4. attend school/work regularly
5. take part in sport
6. live as normal a physical and emotional life as possible.

### Peak-flow meters

The peak-flow meter is a tool that you can use at home to monitor and control your asthma, thereby enabling you to adjust your medication when needed or to seek medical advice.

A peak-flow meter measures the peak expiratory flow rate that correlates with how open the airways are. The meter will help you determine when your asthma is well-controlled and you are symptom free. Your doctor needs to train you in the correct use of your peak-flow meter and you need to have an action plan for when your asthma worsens.

#### *How to use the peak-flow meter*

- Peak-flow readings should be recorded while you're standing.
- The reading should be zero before taking a measurement.
- Take a deep breath.
- Place the peak-flow meter in your mouth and seal it by putting your lips around the mouthpiece.
- Blow as hard and as fast as possible.
- Now check your measurement.
- Repeat this process three times.
- Take the best possible reading and record it in your asthma diary.

## Inhalers

### **What is a metered-dose inhaler (MDI)?**

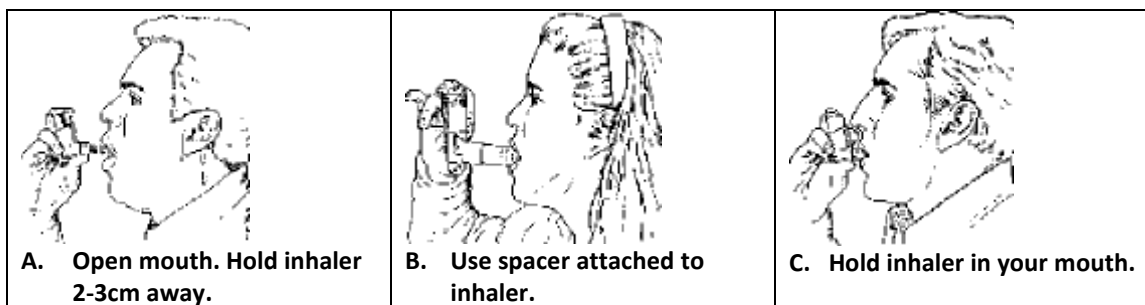
An MDI is a device that helps deliver a specific or metered amount of medication in aerosolised form to your lungs. It is commonly used to treat asthma, chronic obstructive pulmonary disease (COPD) and other respiratory conditions.

Each inhaler consists of a pressurised canister of medication and a mouthpiece. When pressing down on the inhaler, a mist of medicine that you inhale (breathe in) into your lungs is released. Correct use of your inhaler is important so that the correct amount of medication is delivered to your lungs to ensure the best control or effective relief of symptoms.

#### *How do I use an MDI correctly?*

1. Remove the cap and hold the inhaler upright.
2. Shake the inhaler.
3. Tilt your head back slightly and exhale (breathe out).
4. Hold the inhaler as shown in the pictures below. A or B are the most effective, but C is acceptable for people who are unable to manage A or B.
5. Spacers are useful for all patients, especially young children and older adults (see picture B).
6. Press down on the inhaler to release the medicine as you start to breathe in slowly.
7. Breathe in slowly for three to five seconds.
8. Hold your breath for 10 seconds to allow medicine to go deeply into your lungs.
9. Repeat puffs as directed. Wait one minute between puffs to allow the second puff to enter the lungs.



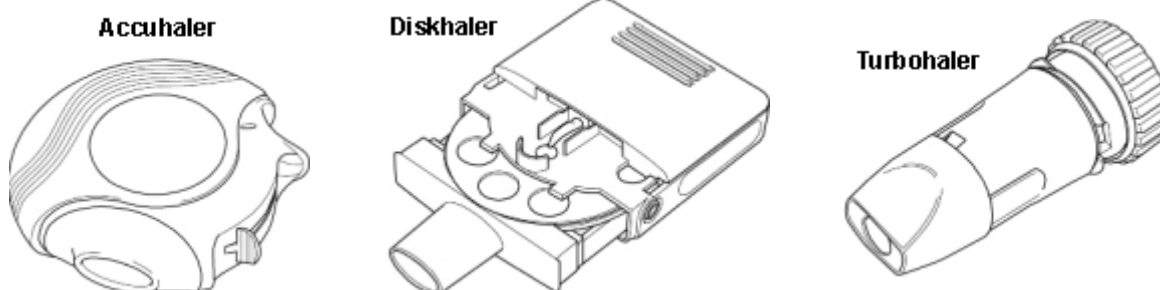


**Breath-activated metered-dose inhalers (MDIs)** are an alternative to the standard MDI. You don't have to push the canister to release a dose. Instead, you trigger a dose by breathing in at the mouthpiece. These types of MDIs require less coordination than the standard MDI; they also tend to be slightly bigger than the standard MDI.

**Dry-powder inhalers**

These types of inhaler do not have a gas propellant to 'squirt' the medicine out of a canister. Instead, each dose contains a tiny amount of medicine in powder form that you suck into your lungs. Various devices are available. Each has a different method of providing the correct amount of powder for each dose.

Types of dry-powder inhalers:



Inhaled dry-powder capsules are used differently. To use a dry-powder inhaler, close your mouth tightly around the mouthpiece of the inhaler and breathe in quickly. You need to breathe in fairly hard to get the powder into your lungs.

**Spacer devices**

- Spacer devices are used with pressurised MDIs.
- There are various types of devices.
- The spacer between the inhaler and the mouth holds the medicine like a reservoir when the inhaler is pressed.
- A valve at the mouth-end ensures that the medicine is kept in the spacer until you breathe in. When you breathe out, the valve closes.

**Instructions**

1. If your dose is more than one puff, take one puff at a time.
2. Start breathing in from the mouthpiece as soon as possible after firing the 'puff' into the device.
3. Breathe in and out a few times before the next puff.
4. Shake the inhaler before firing each puff.
5. Try to hold your breath for a few moments each time you breathe in.
6. Check that the valve opens and closes with each breath.



'Static charge' can build up on the inside of the plastic chamber. This can attract particles of medicine and reduce the output when the spacer is used. To prevent this, wash the plastic spacer before first use and thereafter about once a month with water and dishwashing liquid. Let it air-dry without rinsing or wiping.

**Talk to your doctor if you have any questions regarding correct use of medication.**

**References**

1. ALLERGY SOCIETY OF SOUTH AFRICA (ALLSA).
2. UPTODATE patient information.

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