

# INHALER DEVICES IN ASTHMA

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For more information on asthma please visit  
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- Asthma is caused by inflammation of the breathing tubes (airways or bronchi). Inflammation causes swelling of the airways which then become very narrow. During an asthma attack the muscles around the airways go into spasm and can close completely. (See leaflet "What is asthma?").
- Airway inflammation and muscle spasm are best treated by breathing medicine into the airways.
- In this information sheet the best ways of delivering the medicines to the airways are discussed.

## Why inhale medicine into the airways?

- It makes good sense to breathe the medicine into the airways of the lungs because this is where the problem is.
- Breathing the medicines into the airways is safe and faster because:
  - The medicine is delivered to where the problem is and starts to work quickly.
  - Only a tiny amount of the medicine is needed.

## Know your controller and reliever

Besides for knowing the correct technique of using your medicine, you need to know how your controller and reliever pumps work differently in the airways. You must use your controller every day whether you feel sick or not in order to reduce the swelling in the airways. Relievers are the emergency treatment to open up your airways when they are even tighter / more closed than usual. They help to make you feel better for a short while, but they do not treat the swelling in the airways.

## Who can inhale medicines?

- People of all ages can inhale medicines, even small children and babies.

- Different devices and techniques may be needed with different people.

## DEVICES AVAILABLE

**ASTHMA PUMP** (metered dose inhaler / MDI) is the cheapest and most frequently used. To be used without a spacer, you need to co-ordinate your breathing with the pressing of the pump. An asthma pump contains a liquid medicine. When the pump is pressed it releases a spray of medicine through the mouthpiece which must be inhaled. CFC (chlorofluorocarbon) and HFA (hydrofluoroalkane) are gasses that push the spray from the pump. Pumps have changed over from CFC to HFA, but the active medicine remains the same. CFC pumps are now banned because of the effect on the environment, but CFC inhalers have never harmed anyone's lungs. The new HFA pumps can taste and feel different.

**SPACERS** are used with asthma pumps. They are plastic containers with a hole on one side for the pump to fit in. They improve delivery of the spray to the lungs and decrease the (small) risk of side effects like thrush. If you use a spacer you don't have to co-ordinate your breathing with pressing the pump. A spacer will be needed in children under 8 years and may help even older children and adults. There are many different spacers available on the market. Please make sure both of your asthma pumps fit into the spacer as some of them have different size holes! Care for your spacer by washing it in a warm liquid detergent e.g. Sunlight Soap, without rubbing or rinsing it and allowing it to drip-dry over a number of hours.

**FACEMASKS** fit over the front of the spacer and cover the mouth and the nose. It may be needed in very young infants and babies under 4 years

**BREATH ACTIVATED INHALERS** e.g. Qvar autohaler and **DRY POWDER INHALERS** e.g. Accuhaler, Turbuhaler, Handihaler, Novolizer, Revoliser D P Haler, etc. To use these inhalers, a child needs to be able to pull the breath in quickly to get the medicine into the lungs instead of the mouth. Because the medicine is automatically released while breathing in, you don't have to co-ordinate your breathing with your pressing of the pump, but you do have to be able to breathe in very quickly.

**NEBULISERS** are machines that blow air through a liquid medicine to make a mist that is then breathed in. It is a good method of delivering asthma medication to the very young or the elderly. In other patients, using an asthma pump and a spacer is as effective as using a nebuliser, so home nebulisers are usually not recommended. In hospitals and clinics, nebulisers are used in an emergency for very severe attacks because they run off oxygen instead of air like home nebulisers.

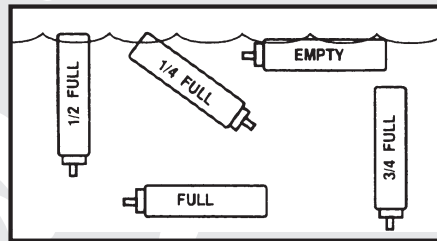
### TECHNIQUE IS IMPORTANT

The way you use your pump is as important as which medications you are on. Please bring your pumps (and spacers) with you to every visit, so that your doctor or nurses can see how you use it and make sure that all the medicine is reaching your lungs. The following tips are really important!

- Always shake the pump before giving every dose of medicine
- If you use 2 puffs, give some time to breathe the spray in, then remove the pump from the spacer or your mouth and shake it again. Only then give the second puff.
- Always keep the dust cover on the pump
- Check the expiry date and keep away from

very hot or cold places

- You can check how much medicine is left by putting the canister into water



### DIFFERENT AGES USE DIFFERENT TECHNIQUES

- For children who use a mask (less than 4 years), the mask must fit firmly on the face so that none of the spray leaks out the sides. They must breathe in and out at least 5 times to get all the spray into their lungs.
- For children who use a spacer but no mask (4 to 7 years), the mouthpiece of the spacer must be placed in the mouth. The lips must seal gently around it and the teeth and tongue must be out of the way. The child should breathe slowly but deeply in and out 3 to 5 times to get all the spray into the lungs.
- Older children and adults may also use a spacer. The lips must seal gently around it and the teeth and tongue must be out of the way. First breathe all the air out of your lungs. When ready, press the pump to release the spray and after a slight pause breathe all the spray slowly and deeply into the lungs.
- If you don't use a spacer, shake the pump, remove the cap and breathe out gently. Place your lips firmly around the pump with the teeth and tongue out of the way. At the start of a slow and deep inspiration press the canister down and continue to inhale deeply. Hold your breath for 10 seconds or as long as possible.

Rinse out your mouth or brush your teeth after using your controller pump.

Asthma cannot be cured but can be controlled so that those affected are able to live normal lives enjoying full involvement in sport and all other activities.

Know your controller and reliever medicines and use the controller every day.

The way you use your pump is as important as which medications you are on.

Bring your pumps (and spacers) with you to every visit, and ask your doctor or nurses to check your inhaler technique.



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