

## Inhaled Medicines



### Training

Staff administering inhaled medication should receive appropriate basic training beforehand. This is important to ensure that inhalers are used correctly to ensure residents receive their doses correctly.

Further information and demonstration videos can be found on the Coventry and Rugby Area Prescribing Committee website: <http://www.coventryworksapc.nhs.uk/Patient-Information/Respiratory>

### Storage

All inhalers must be stored in a cool, dry place and out of direct sunlight.

'Reliever' inhalers (or when required inhalers) can be kept with the resident if they are able to administer themselves, either next to their bed or within easy reach in case of urgency.

'Preventer' inhalers should be kept in the locked medicines trolley. If the resident self administers their medicines, this should be kept in a locked cupboard in their room.

### Ordering

All inhalers must be supplied in an original pack and labelled directly – not on the box.

Depending on the dose of the inhaler will depend on how frequently they need to be ordered.

For example:

- Two puffs TWICE a day = 112 doses (**ONE** 120 dose inhaler per month)
- One puff TWICE a day = 56 doses (**ONE** 120 dose inhaler every other month)

Always check how many doses an inhaler contains and how often the resident uses it before ordering.

Some inhalers already have a counter on the device to help you keep track and to know when a dose has been administered.

*Please refer to the CRCCG 'Protocol for recording the administration of inhaled medicines' to help count the number of doses that have been given. This can be found online at*

[www.coventryrugbyccg.nhs.uk/mmtcarehomes](http://www.coventryrugbyccg.nhs.uk/mmtcarehomes) under Medication Admin/MAR Record Keeping.

### Devices

Inhalers are available in two types of device: metered dose inhalers (MDIs) and dry powder inhalers (DPIs). MDIs are much more effective and easier to use with a spacer. If a resident struggles with co-ordination, DPIs can sometimes be more beneficial. Contact the resident's GP or pharmacist for advice.

'Reliever' inhalers contain medicine to relax the airways and are used to relieve shortness of breath and wheezing. They should work within a few minutes and can be used as frequently as needed.

'Preventer' inhalers contain medicine that reduces inflammation in the airways and prevents asthma attacks. They must be used regularly to help prevent shortness of breath and wheezing.

Inhalers should be cleaned regularly, in accordance with manufacturer instructions. Only the plastic casing from a MDI should be rinsed thoroughly under warm running water. The metal canister should not get wet. The mouthpiece of a DPI should be wiped with a dry cloth once a week. Do not use water on a DPI.

## Administration

If a resident is prescribed both a 'reliever' and a 'preventer' inhaler, it is important that the 'reliever' is used first on the occasions when both need to be used. This will help to open the airway passages and allow the 'preventer' medicine to get down into the lungs more effectively.

To correctly administer an inhaler:

1. Ensure the resident is sat upright and is ready and able to receive their dose. The resident's head should be at 90° and not have their chin tucked into their chest or their head tilted backwards.
2. If the inhaler is an MDI, the resident should breathe out first then take a slow, steady breath in.
3. If the inhaler is a DPI, the resident should breathe out first then take a quick, deep breath in.
4. If you see mist coming from the top of the inhaler, from the sides of the mouth or nostrils, the resident is not inhaling the dose correctly.
5. After using a 'preventer' inhaler, the resident should rinse their mouth with water. This will help reduce any side effects they may experience such as sore mouth/throat, hoarse voice and minimise the risk of them developing oral thrush.

*Please refer to Appendix 1 for a step by step guide for both types of device.*

## Aerochambers/Spacers

It is good practice to use a spacer with a MDI as this ensures a more effective dose is given.

If using for the first time, the spacer should be washed in hot, soapy water and left to air dry. The spacer should then be washed like this on a monthly basis. Always leave spacers to air dry.

When using a spacer, the resident should place their mouth over the mouthpiece of the spacer, press the canister of the inhaler and breathe in and out of the mouthpiece five times. This should be repeated for every dose needed.

## Nebulisers

It's a good idea to clean a nebuliser every day if used regularly. After each use, the mask, mouthpiece and chamber should be disconnected, disassembled and washed in warm soapy water. The components should be left to air dry.

Components such as mouthpieces, masks and tubing and the nebuliser's chamber should be changed regularly, at least every three to four months.

To avoid cross infection, you should never use other people's mouthpieces, masks or tubing.

A different mouthpiece or mask and tubing should be used for antibiotics if nebulised antibiotics are prescribed alongside other nebulised medication.

References: <https://www.asthma.org.uk/advice/inhalers-medicines-treatments/using-inhalers> <https://www.blf.org.uk/support-for-you/nebulisers/cleaning>  
<http://www.patient.co.uk/health/Inhalers-for-Asthma.htm> [http://www.netdoctor.co.uk/health\\_advice/facts/howtousemeter.htm](http://www.netdoctor.co.uk/health_advice/facts/howtousemeter.htm)

Murphy, A., (2016)[Poster] *Inhaler device technique – 7 steps to success*, University Hospital of Leicester, NHS Trust

Appendix 1

# Inhaler device technique – 7 steps to success

- 1 Prepare inhaler (e.g. remove the mouthpiece cover)
- 2 Load (prepare) dose (e.g. shake the inhaler)
- 3 Breathe out gently as far as is comfortable, not into the inhaler
- 4 Put the mouthpiece in your mouth and close your lips around it

5 Breathe in, which should be **SLOW and STEADY** (aerosols) or **QUICK and DEEP** (dry powder inhalers)

- SABA (short-acting beta<sub>2</sub>-agonist)
- SAMA (short-acting muscarinic antagonist)
- LABA (long-acting beta<sub>2</sub>-agonist)
- LAMA (long-acting muscarinic antagonist)
- LAMA/LABA combination
- ICS (inhaled corticosteroid)
- ICS/LABA combination

Inhale SLOW and STEADY

Inhale SLOW and STEADY (aerosols)

<ul style="list-style-type: none"> <li>Ventolin® Evohaler® (Salbutamol MDI)</li> <li>Airomir® (Salbutamol MDI)</li> <li>Salamol® Easi-Breathe® (Salbutamol breath-actuated)</li> <li>Airomir® Autohaler® (Salbutamol breath-actuated)</li> <li>AirSalb® (Salbutamol MDI)</li> </ul>	<ul style="list-style-type: none"> <li>Atrovent® (Ipratropium MDI)</li> </ul>	<ul style="list-style-type: none"> <li>Serevent® Evohaler® (Salmeterol MDI)</li> <li>Vertine® (Salmeterol MDI)</li> <li>Atimos® Modulite® (Formoterol MDI)</li> <li>Striverdi® Respimat® (Clobuteterol SMI)</li> </ul>	<ul style="list-style-type: none"> <li>Spiriva® Respimat® (Tiotropium SMI)</li> </ul>	<ul style="list-style-type: none"> <li>Spiolto® Respimat® (Tiotropium/ Olodaterol SMI)</li> </ul>	<ul style="list-style-type: none"> <li>Clenil® Modulite® (Beclomethasone MDI)</li> <li>Qvar® (Beclomethasone extra-fine particle MDI)</li> <li>Qvar® Autohaler® (Beclomethasone extra-fine particle breath-actuated)</li> <li>Qvar® Easi-Breathe® (Beclomethasone extra-fine particle breath-actuated)</li> <li>Alvesco® (Ciclesonide MDI)</li> <li>Flixotide® Evohaler® (Fluticasone propionate MDI)</li> </ul>	<ul style="list-style-type: none"> <li>Fostair® (Beclomethasone extra-fine particle/ Formoterol MDI)</li> <li>Flutiform® (Fluticasone propionate/ Formoterol MDI)</li> <li>Seretide® Evohaler® (Fluticasone propionate/ Salmeterol MDI)</li> <li>Sirdupla® (Fluticasone propionate/ Salmeterol MDI)</li> <li>Symbicort® (Budesonide/ Formoterol MDI)</li> </ul>
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Inhale QUICK and DEEP

Inhale QUICK and DEEP (dry powder inhalers)

<ul style="list-style-type: none"> <li>Ventolin® Accuhaler® (Salbutamol DPI)</li> <li>Salbutamol® Easyhaler® (Salbutamol DPI)</li> <li>Salbutin® Novolizer® (Salbutamol DPI)</li> <li>Bricanyl® Turbohaler® (Terbutaline DPI)</li> </ul>	<ul style="list-style-type: none"> <li>Foradil® Aerolizer® (Formoterol DPI)</li> <li>Oxis® Turbohaler® (Formoterol DPI)</li> <li>Formoterol® Easyhaler® (Formoterol DPI)</li> <li>Serevent® Accuhaler® (Salmeterol DPI)</li> <li>Onbrex® Breezhaler® (Indacaterol DPI)</li> </ul>	<ul style="list-style-type: none"> <li>Spiriva® HandiHaler® (Tiotropium DPI)</li> <li>Eklira® Genuair® (Acclidinium DPI)</li> <li>Seebri® Breezhaler® (Glycopyrronium DPI)</li> <li>Incruse® Ellipta® (Umeclidinium DPI)</li> </ul>	<ul style="list-style-type: none"> <li>Anoro® Ellipta® (Umeclidinium/ Vilanterol DPI)</li> <li>Dualdir® Genuair® (Acclidinium/ Formoterol DPI)</li> <li>Ultibro® Breezhaler® (Indacaterol/ Glycopyrronium DPI)</li> </ul>	<ul style="list-style-type: none"> <li>Beclomethasone® Easyhaler® (Beclomethasone DPI)</li> <li>Budelin® Novolizer® (Budesonide DPI)</li> <li>Pulmicort® Turbohaler® (Budesonide DPI)</li> <li>Flixotide® Accuhaler® (Fluticasone propionate DPI)</li> <li>Asmanex® Twisthaler® (Mometasone DPI)</li> <li>Budesonide® Easyhaler® (Budesonide DPI)</li> </ul>	<ul style="list-style-type: none"> <li>Symbicort® Turbohaler® (Budesonide/ Formoterol DPI)</li> <li>DuoResp® Spiromax® (Budesonide/ Formoterol DPI)</li> <li>Seretide® Accuhaler® (Fluticasone propionate/ Salmeterol DPI)</li> <li>Relvar® Ellipta® (Fluticasone furoate/ Vilanterol DPI)</li> <li>AirFluSal® Forspiro® (Fluticasone propionate/ Salmeterol DPI)</li> <li>Fostair® NEXThaler® (Beclomethasone extra-fine particle/ Formoterol DPI)</li> </ul>
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- 6 Hold your breath for up to 10 seconds or as long as possible, then breathe out slowly
- 7 Repeat if needed. Replace mouthpiece cover after use

- Licensed for use in Asthma
  - Licensed for use in COPD
  - Routinely prescribed off-licence for use in COPD
- Abbreviations  
MDI: metered dose Inhaler  
SMI: soft mist inhaler  
DPI: dry powder inhaler

Author: Professor Anna Murphy, University Hospital of Leicester, NHS Trust. Date of preparation: October 2016. Details correct at date of publication. Please see summary of characteristics for full indications and prescribing information. This poster includes newer and commonly used maintenance inhaler therapies. This poster has been funded by an educational grant from Boehringer Ingelheim, who have paid for design and printing costs. Boehringer Ingelheim have had no input into the content.

