

## Correct Inhaler Techniques and Common Mistakes

Commonly used inhaler devices for delivery of controller or preventer medications include the pressurised Metered Dose Inhaler (pMDI) and two dry powder inhalers i.e. the Turbuhaler and the Accuhaler.

In order to gain maximum benefit from these inhalers, they need to be used correctly. However, the steps involved in doing so are different for each inhaler.

When pMDIs are used to deliver controller or preventer medications, they should be used with a spacer device in order to reduce side-effects and improve delivery to the airways.

Correct Use	Common Mistakes
<p>pMDI</p> <ol style="list-style-type: none"> <li>1. Remove cap and shake inhaler.</li> <li>2. Breathe out gently.</li> <li>3. Put mouthpiece in mouth and at start of inspiration (which should be slow and deep), press canister down and continue to inhale deeply.</li> <li>4. Hold breath for 10 seconds, or as long as possible then breathe out slowly.</li> <li>5. If more puffs are needed, wait for a few seconds before repeating steps 2-4.</li> </ol>	<p>The mostly common error associated with the use of pMDIs is that the patient doesn't take a slow deep breath at the same time as pressing the canister down.</p>
<p>Turbuhaler</p> <ol style="list-style-type: none"> <li>1. Unscrew and lift off white cover. Hold Turbuhaler upright and twist grip around and back as far as it will go. You should hear a click</li> <li>2. Breathe out as much air as possible gently and away from the mouthpiece, put mouthpiece between lips and breathe in as deeply as possible. Even when a full dose is taken there may be no taste</li> <li>3. Remove the Turbuhaler from mouth and hold breath for about 10 seconds.</li> <li>4. For a second dose, repeat these steps.</li> </ol>	<p>The most common errors associated with Turbuhaler misuse include:</p> <ol style="list-style-type: none"> <li>1. not keeping the device upright while loading the dose,</li> <li>2. not exhaling as much air as possible and away from the mouth piece.</li> </ol>
<p>Accuhaler</p> <ol style="list-style-type: none"> <li>1. Hold the outer casing of the Accuhaler in one hand whilst pushing the thumb grip away until a click is heard</li> <li>2. Hold Accuhaler with mouthpiece towards you, slide lever away until it clicks. This makes the dose available for inhalation and moves the dose counter on</li> <li>3. Holding Accuhaler level, breathe out as much air as possible, gently away from the device, put mouthpiece in mouth and suck in steadily and deeply</li> <li>4. Remove Accuhaler from mouth and hold breath for about 10 seconds</li> <li>5. To close, slide thumb grip back towards you as far as it will go until it clicks</li> <li>6. For a second dose repeat sections 1-5</li> </ol>	<p>The most common errors associated with Accuhaler misuse include:</p> <ol style="list-style-type: none"> <li>1. not exhaling as much air as possible and</li> <li>2. not exhaling away from the mouth piece</li> </ol>

## **New Woolcock research finds majority of people use asthma medications incorrectly – pharmacists as educators can improve asthma outcomes**

New research has shown that up to 90 per cent of people on asthma medications are using their inhalers incorrectly leading to poor asthma control, increased hospital visits and increased cost of treatment.

The study then went on to show how a brief educational chat with a pharmacist about inhaler technique and stickers on the medication can lead to improved asthma control in the patients.

Woolcock Institute of Medical Research spokesperson, Associate Professor Helen Reddel said, “Pharmacists and other health care professionals need to effectively show patients how to use inhalers correctly and to promote the importance of inhaler technique on patient outcomes,” she said.

“By educating pharmacists on correct technique and then putting in place an easy system for them to relay this knowledge, our research was able to demonstrate a real effect on patient behaviour.

“The inhaler technique intervention took an average of 2.5 minutes per visit, which is short enough to be feasible during routine dispensing procedures,” she said.

The research carried out by Dr Iman Bashedi of the Faculty of Pharmacy is the first to report on the effect of inhaler technique education alone on asthma outcomes.

All pharmacists who took part in the study attended a general workshop about asthma, inhaled medications and peak flow meter technique. However only pharmacists in the active group were trained to assess and teach dry powder inhaler technique, with the aid of a simple education tool.

The active group pharmacists then delivered interventions to patients at four visits over six months.

An additional component of the intervention was the use of innovative stickers applied to the outside of inhalers to remind patients about the correct technique. Stickers were personalised to highlight each patient’s most problematic steps with their inhaler. They were updated at each visit.

At six months improvement in inhaler technique score was significantly greater in the active group, and asthma severity was significantly improved.

Professor Reddel explains the findings of the study reinforce the need for regular assessment and education about inhaler technique.

“The inhaler labels provided a simple visual aid, acting as both a daily reminder of correct technique and as visit-by-visit evidence of progress.

“For people with asthma to obtain the full benefit of medication they must not only use their preventer inhaler regularly, which is itself a challenge, but do so correctly.

“Pharmacist education represents an inexpensive yet effective way of improving asthma control in the community.

“If the results of this study are confirmed in broader populations, this simple pharmacist intervention should be instituted as a routine part of the dispensing of inhaled asthma medications”, Associate Professor Helen Reddel concluded.

The research was published in this month’s edition of the Patient Education and Counselling Journal.

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