

## Patient decision aid

### Inhalers for asthma

Information to help people with asthma and their healthcare professionals discuss their options for inhaler devices.

It is suitable for use by people aged 17 years and over.

#### About this patient decision aid

Asthma affects the airways and can make it difficult to breathe. It may cause symptoms such as chest tightness, wheeziness or coughing.

Inhalers are devices that deliver a medicine into the lungs to help with the symptoms of asthma. There are different types of medicines available. Your healthcare professional will discuss with you which medicine is recommended for you. Once you know which medicine you are using, this patient decision aid will help you and your healthcare professional decide which inhaler you might like to try.

Different types of inhalers are available. Most asthma medicines are available in more than 1 type of inhaler.






















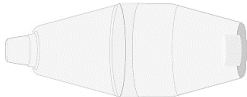

The National Institute for Health and Care Excellence (NICE) says everyone should be able to choose the inhaler they find easiest to use. NICE also says that everyone should have the way they use their inhaler checked regularly. If needed, people should be given advice on how to improve their technique.

If you have asthma, you may find it useful to read details about all options. This can help you and your healthcare professional decide which inhaler will suit you best.

## What are the options?

- **Breath-actuated metered dose inhaler (BAI)**
- **Dry powder inhaler (DPI)**
- **Pressurised metered dose inhaler (pMDI)**
- **pMDI plus a spacer.** A spacer is an attachment that can help increase the amount of medicine that reaches the lungs compared to using a pMDI on its own. Some people find they can use a pMDI easier with a spacer.
- **Soft mist inhaler (SMI)**, also called the RespiMat. Soft mist inhalers have not been included in this patient decision aid because at present, only 1 medicine for asthma is available in this kind of inhaler; it is called tiotropium. Tiotropium is only recommended for some people whose asthma has not been controlled with usual treatments, and for asthma it only comes as an SMI. Your healthcare professional will be able to advise you if tiotropium is an option for you. They will explain how the inhaler works and you can click [here](#) or use this link <https://bit.ly/inhalervids> to view a video on how to use it.

Soft mist inhalers do not contain a propellant, so they have a lower carbon footprint than pMDIs. They can be recycled at some local pharmacies. See [page 13](#) of this decision aid for more information on recycling.

<b>Inhalers</b>	<b>Examples</b> (other inhalers may be available). Click  to view a video on how to use the inhaler or use this link <a href="https://bit.ly/inhalervids">https://bit.ly/inhalervids</a> to find the Asthma UK webpage where all the videos can be found.		
<b>Breath-actuated metered dose inhaler (BAI)</b>	Easi-Breathe®  	Other BAIs include: Autohaler®  , K-haler®	
<b>Dry powder inhaler (DPI)</b>	Accuhaler®  	Easyhaler®  	Ellipta®  
	Turbohaler®  	NEXThaler®  	Spiromax®  
	Other DPIs include: Aerolizer, Forspiro®  , Twisthaler®, Novolizer®		
<b>Pressurised metered dose inhaler (pMDI)</b>	 		
<b>pMDI plus spacer</b> (multiple breath)  (single breath and hold) 	Volumatic® 	Other spacers include: A2A spacer®, Able Spacer®, Antistatic Space Chamber Plus® devices, DispozABLE, OptiChamber® Diamond, Pocket Chamber®, Space Chamber Plus® devices, Vortex®	
	AeroChamber® Plus 		



All images and videos reproduced with kind permission from Asthma UK. All videos can be viewed at: [www.asthma.org.uk/advice/inhaler-videos](http://www.asthma.org.uk/advice/inhaler-videos).

All inhalers may come in different colours to those shown.

## Using this patient decision aid

Your healthcare professional will help you use this patient decision aid.

The patient decision aid contains a number of sections:

1. **Options table (page 5):** First, there is a table you can fill in to show how you feel about different aspects of using inhalers. This will help focus the discussion on what is important to you.
2. **Flowchart (page 6):** Then, there is a flowchart that will help you decide which inhaler, or inhalers, you may find the easiest to use. Your healthcare professional will help you with the different breathing techniques. At the end of the flowchart, you will be given a choice of inhalers that you are likely to find the easiest to use. We suggest you and your healthcare professional focus on choosing between these inhalers.
3. **Summary (page 7 to 8):** This is followed by a summary of some different factors related to using inhalers and how they compare with each other. This section is followed by more detailed information on some of the factors. If looking at this page on a screen, you can click on  in the left column to go straight to the detailed information on a particular factor. If you have a printed copy, go to the page number shown for the detailed information.
4. **Detailed information (page 9 to 13):** From page 9 onwards, you can read all the detailed information in full. From the detailed information, you can click on  in the left column to return to the summary page.

Inhalers made by different manufacturers may have different instructions. **It is important that you always follow the instructions in the information leaflet that comes with the inhaler.**

You can fill in this table with your healthcare professional to show how you feel about each of the factors included in this patient decision aid. Thinking about this will help you and your healthcare professional focus your discussion on what is important to you. Write down anything else you want to discuss at the bottom of the table.

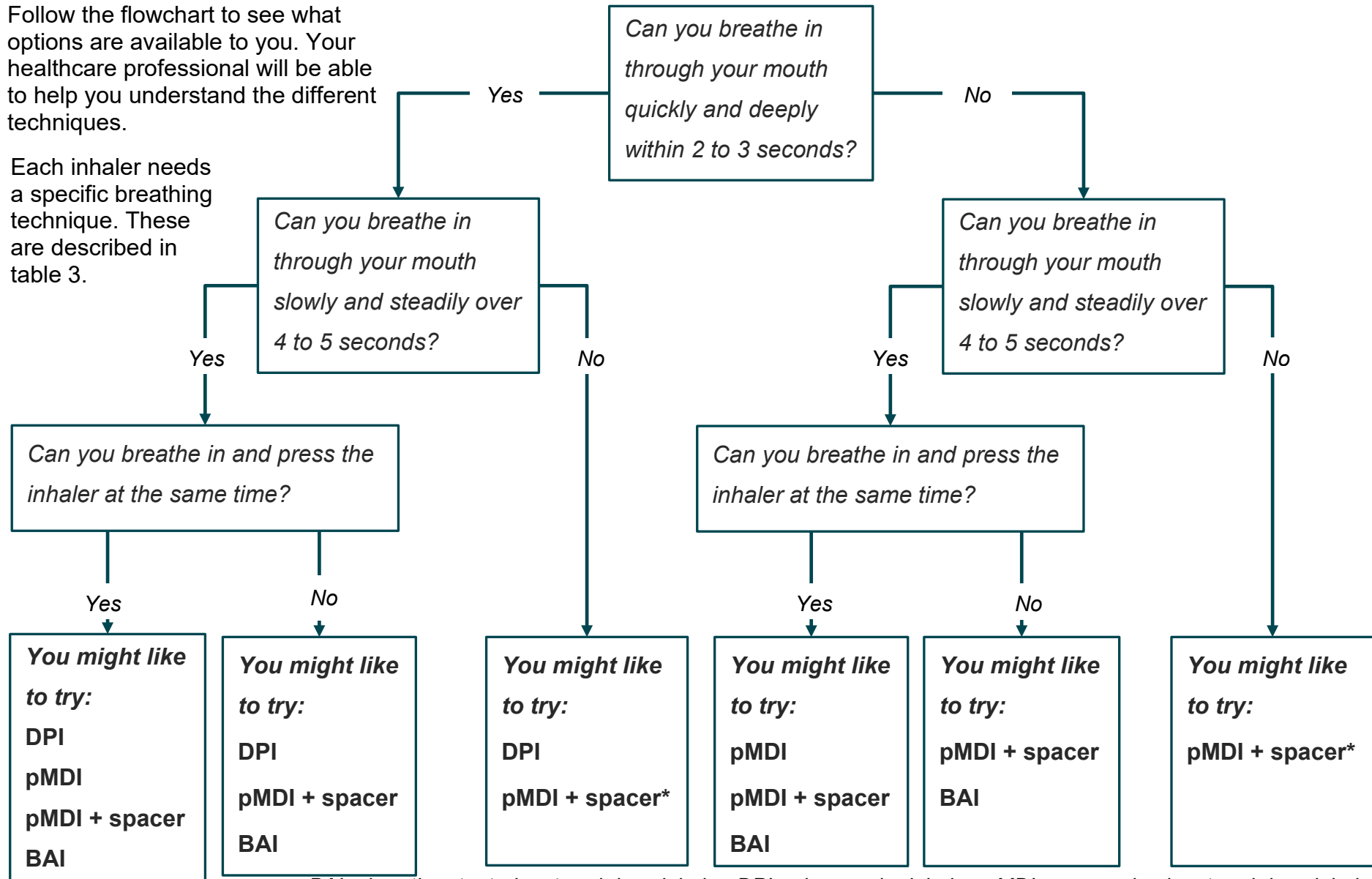
	How important is this to me?			
	Very important	Important	Not important	Not at all important
Being able to use the inhaler correctly and easily				
Being able to tell how many doses are left in my inhaler				
Having to clean the inhaler frequently				
Being able to carry the inhaler around with me				
That my inhaler has a low carbon footprint				

Other things I want to ask:

## 2: Flowchart – how to use the inhalers

Follow the flowchart to see what options are available to you. Your healthcare professional will be able to help you understand the different techniques.


Each inhaler needs a specific breathing technique. These are described in table 3.



*BAI – breath-actuated metered dose inhaler; DPI – dry powder inhaler; pMDI – pressurised metered dose inhaler  
\* using multiple breath technique*





### 3. Summary

A summary of how the different options compare to each other.

Summary	BAI	DPI	pMDI	pMDI with spacer
<b>How do I need to be able to breathe to use the inhaler?</b>	Breathe in through your mouth, slowly and steadily over 4 to 5 seconds	Breathe in through your mouth, quickly and deeply over 2 to 3 seconds	Breathe in through your mouth, slowly and steadily over 4 to 5 seconds	Breathe in through your mouth, slowly and steadily over 4 to 5 seconds <b>or</b> , breathe in and out through your mouth, slowly and steadily
<b>How is the medicine released?</b>	The medicine is released as you breathe in	The medicine is released as you breathe in	The medicine is contained in a canister. It is released when you press the canister	The medicine is contained in a canister. It is released when you press the canister
<b>Do I need to breathe in and press the inhaler at the same time?</b>	No	No	Yes	No
<b>Will I be able to tell how many doses are left?</b>  Pg. 9	Sometimes but not always	Yes	Sometimes but not always	Sometimes but not always
<b>Make sure you order a new inhaler before the old one runs out. Return old inhalers to a pharmacy for disposal or recycling</b>				

*BAI – breath-actuated metered dose inhaler; DPI – dry powder inhaler; pMDI – pressurised metered dose inhaler*

### 3. Summary



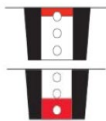
Summary 2	BAI	DPI	pMDI	pMDI with spacer
<p><b>Do I need to clean it?</b></p> <p> Pg. 10</p>	Yes, the plastic casing needs cleaning	Yes, the mouthpiece needs cleaning	Yes, the mouthpiece and plastic casing needs cleaning	Yes, the mouthpiece, plastic casing and the spacer all need cleaning
<p><b>How big is it?</b></p> <p> Pg. 11</p>	It is larger than a pMDI but may fit into your pocket	It is larger than a pMDI but may fit into your pocket	It is small and usually fits into your pocket	The pMDI is small and usually fits into your pocket. The spacer is bigger and cannot fit into your pocket
<p><b>What is the carbon footprint of the inhaler?</b></p> <p> Pg. 12</p>	It contains propellant, so it has a higher carbon footprint than a DPI	It does not contain propellant, so it has a lower carbon footprint than the other inhalers	It contains propellant, so it has a higher carbon footprint than a DPI	It contains propellant, so it has a higher carbon footprint than a DPI
<p><b>Can it be recycled?</b></p> <p> Pg. 13</p>	Yes, at some local pharmacies	Yes, at some local pharmacies	Yes, at some local pharmacies	<p><b>pMDI:</b> Yes, at some local pharmacies</p> <p><b>Spacer:</b> This cannot currently be recycled</p>

*BAI – breath-actuated metered dose inhaler; DPI – dry powder inhaler; pMDI – pressurised metered dose inhaler*




## 4. Detailed information

Further information on how the different options compare to each other

	BAI	DPI	pMDI	pMDI with spacer
<p><b>How do I know when to replace the inhaler?</b></p> <p> Click to return to summary</p>	<p>Some BAIs have a counter to tell you how many doses you have left.</p> <p>If your BAI does not have a counter, you need to monitor how many doses you have taken. Read some advice on how to do this <a href="#">here</a>, or see the end of the document (page 14).</p>	<p>A DPI has a counter telling you how many doses you have left or an indicator that changes colour when it needs replacing.</p>   <p>Indicator showing inhaler needs replacing</p> <p>In some cases, you have to insert a capsule into the device first. In this case, you can count the number of capsules you have left.</p>	<p>Some pMDIs have a counter to tell you how many doses you have left.</p> <p>If your pMDI does not have a counter, you need to monitor how many doses you have taken. Read some advice on how to do this <a href="#">here</a>, or see the end of the document (page 14).</p> <p>If your pMDI does not have a counter, you need to monitor how many doses you have taken. Read some advice on how to do this <a href="#">here</a>, or see the end of the document (page 14).</p>	<p>Some pMDIs have a counter to tell you how many doses you have left.</p> <p>If your pMDI does not have a counter, you need to monitor how many doses you have taken. Read some advice on how to do this <a href="#">here</a>, or see the end of the document (page 14).</p> <p>If you keep your spacer clean it should last up to a year. But if you use it every day it may need to be replaced sooner. If you are unsure, ask your pharmacist.</p>
<p><b>Make sure you order a new inhaler before the old one runs out. Return old inhalers to a pharmacy for disposal or recycling.</b></p>				


*BAI – breath-actuated metered dose inhaler; DPI – dry powder inhaler; pMDI – pressurised metered dose inhaler*

## 4. Detailed information

	BAI	DPI	pMDI	pMDI with spacer
<p><b>How do I keep the inhaler clean?</b></p> <p> Click to return to summary</p>	<p>The plastic casing that holds the canister needs to be cleaned regularly.</p> <p><b>Never put the metal canister that contains the medicine into water.</b></p>	<p>Wipe the mouthpiece with a dry cloth only.</p> <p><b>Never use water to clean your DPI.</b></p>	<p>The mouthpiece and plastic casing that holds the canister needs to be cleaned regularly. Follow the instructions in the patient information leaflet.</p> <p><b>Never put the metal canister that contains the medicine into water.</b></p>	<p><b>Inhaler:</b> The mouthpiece and plastic casing that holds the canister needs to be cleaned regularly.</p> <p><b>Never put the metal canister that contains the medicine into water.</b></p> <p><b>Spacer:</b> If you keep your spacer clean it will last longer and be more effective. Clean the spacer regularly. The instruction leaflet tells you how often to clean it. Use warm water and mild detergent, such as washing up liquid. Rinse and allow to air dry. Do not dry with a cloth or towel.</p>


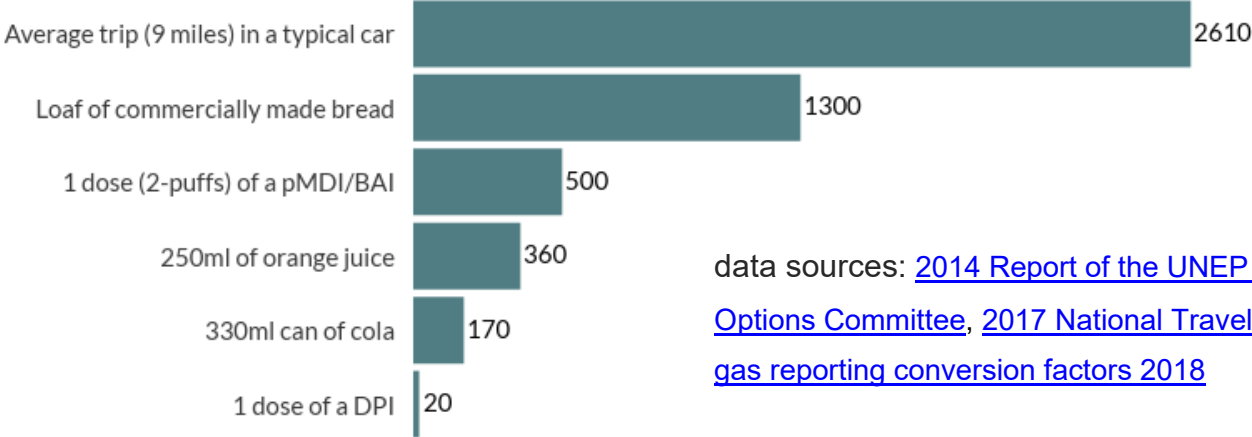
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## 4. Detailed information

	BAI	DPI	pMDI	pMDI with spacer
<p><b>How big is the inhaler?</b></p> <p> Click to return to summary</p>	<p>The inhaler is small but it is usually bigger than a pMDI. It may fit into your pocket.</p>	<p>The inhaler is small but it can be bigger than a pMDI. It may fit into your pocket.</p>	<p>The inhaler is small and easy to carry. It usually fits into your pocket.</p>	<p>The inhaler is small and easy to carry. It usually fits into your pocket. Spacers come in different sizes, but they are usually larger and take up more room.</p> <p>If you need to use your inhaler during the day and you are unable to use a pMDI without a spacer, you need to make sure you always have your spacer with you. Or you may need to consider a different type of inhaler.</p>

*BAI – breath-actuated metered dose inhaler; DPI – dry powder inhaler; pMDI – pressurised metered dose inhaler*

## 4. Detailed information

	BAI	DPI	pMDI	pMDI with spacer														
<b>What is the carbon footprint of the inhaler?</b>	BAIs contain propellant. This means they have a higher carbon footprint than DPIs.	DPIs do not contain propellant. This means they have a lower carbon footprint than the other inhalers.	pMDIs contain propellant. This means they have a higher carbon footprint than DPIs.	pMDIs contain propellant. This means they have a higher carbon footprint than DPIs.														
 Click to return to summary	<p>Some inhalers contain propellants, known as hydrofluorocarbons (HFCs). HFCs do not have an effect on the ozone layer. However, they are powerful greenhouse gases and can contribute to global warming. This is referred to as their carbon footprint, measured in carbon dioxide equivalents (g CO<sub>2</sub>eq). The bigger the carbon dioxide equivalent, the bigger the impact on global warming.</p> <p><b>Estimated carbon footprint comparison (g CO<sub>2</sub>eq)</b></p>  <table border="1"> <thead> <tr> <th>Activity</th> <th>Carbon Footprint (g CO<sub>2</sub>eq)</th> </tr> </thead> <tbody> <tr> <td>Average trip (9 miles) in a typical car</td> <td>2610</td> </tr> <tr> <td>Loaf of commercially made bread</td> <td>1300</td> </tr> <tr> <td>1 dose (2-puffs) of a pMDI/BAI</td> <td>500</td> </tr> <tr> <td>250ml of orange juice</td> <td>360</td> </tr> <tr> <td>330ml can of cola</td> <td>170</td> </tr> <tr> <td>1 dose of a DPI</td> <td>20</td> </tr> </tbody> </table> <p>data sources: <a href="#">2014 Report of the UNEP Medical Technical Options Committee</a>, <a href="#">2017 National Travel Survey</a> &amp; <a href="#">Greenhouse gas reporting conversion factors 2018</a></p>				Activity	Carbon Footprint (g CO <sub>2</sub> eq)	Average trip (9 miles) in a typical car	2610	Loaf of commercially made bread	1300	1 dose (2-puffs) of a pMDI/BAI	500	250ml of orange juice	360	330ml can of cola	170	1 dose of a DPI	20
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## 4. Detailed information



Used pMDI canisters still contain propellants that are powerful greenhouse gases and can contribute to global warming. All inhalers, including used pMDI canisters, should be returned to a pharmacy to dispose of in an environmentally safe way. If there is no recycling scheme they can be placed in the pharmacist's normal pharmaceutical waste bins

For more information on safe recycling of medicines, see [www.recyclenow.com/what-to-do-with/medicines-0](http://www.recyclenow.com/what-to-do-with/medicines-0)

Spacers cannot currently be recycled

Inhalers made by different manufacturers may have different instructions. **It is important that you always follow the instructions in the information leaflet that comes with the inhaler.**

## How to work out when to replace your inhaler if it does not have a counter or indicator

The packaging that the inhaler comes in will tell you how many doses, or puffs, are in the inhaler. Different inhalers contain a different number of doses. You can calculate how long your inhaler will last by dividing the number of doses in the inhaler by the number of puffs you are taking each day or each week.

For example, if you are taking your inhaler daily and you have been told to take 2 puffs twice a day, you are using 4 puffs each day. If your inhaler contains 200 doses, your inhaler will last you 50 days (200 divided by 4), which is approximately 7 weeks.

If you are only using the inhaler when you need it ('as required'), you can work out how long it will last you in the same way but you need to monitor how many puffs you are taking each week. For example if you use your inhaler around twice each week and you take 2 puffs each time, you are using 4 puffs each week. If your inhaler contains 200 doses (200 divided by 4), your inhaler will last you around 50 weeks.

If you have used your inhaler more often than usual, it will run out sooner. If you haven't used your inhaler in a while the instruction leaflet may advise you to test your inhaler by releasing puffs into the air. Count these puffs when working out how long the inhaler will last.

Take note of your inhaler's expiry or 'use by' date. Make sure you replace your inhaler before the expiry or 'use by' date, even if there is some medicine left. This is particularly important if you don't need to use your inhaler very often.

If you are unsure, ask your pharmacist for advice.



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