

Helping people breathe easier



**Asthma.ca**<sup>TM</sup>

Asthma Society of Canada

Achieve Symptom-Free Asthma... We Can Help!®

Your Asthma Basics series:

1 Diagnosis    2 Triggers    3 Medications    Kids

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For more information from the Asthma Society of Canada:

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# Medications

Asthma Basics #3

Use as  
**prescribed**



## Questions? We have answers

We are the Asthma Society of Canada and we care about your lung health. We provide answers to Canadians so they can breathe easier. The goal of asthma management is to keep asthma symptoms under control by reducing inflammation in your airways. You can help control your symptoms by avoiding asthma triggers and by using your asthma medications as prescribed.

This booklet is **Step 3** in the Asthma Basics Steps. It will assist you in understanding what your medication does, how to take it properly and why an action plan is important.

This booklet is for adults with asthma or parents with a child with asthma, and will address the following questions:

- ≈ What is good asthma control?
- ≈ What are the different kinds of asthma medications?
- ≈ What are the benefits and side effects of using asthma medications?
- ≈ Which medication do I use every day?
- ≈ Which inhaler do I use in an emergency?
- ≈ Am I using my inhaler properly?
- ≈ Where can I find an asthma educator?
- ≈ What is an Asthma Action Plan and how do I get one?

**Good asthma management includes education, avoiding triggers, using asthma medications properly and following a written action plan**



## Asthma Basics Steps

We developed the Asthma Basics Steps to help you learn about good asthma control. Use these steps to guide your discussions with your doctor, pharmacist and asthma educator.

### Step 1 Diagnosis

- Talk to your doctor about your breathing difficulty
- Your doctor confirms you have asthma and may do tests
- Find out about asthma, what it is and how it can be controlled
- This step is discussed in the booklet called **Diagnosis**

### Step 2 Triggers

- Find out what makes your asthma worse by keeping a diary and getting allergy tests
- Once you know what your allergic and non-allergic triggers are, you learn how to avoid them
- This step is discussed in the booklet called **Triggers**

### Step 3 Medication

- Your doctor may prescribe anti-asthma medication
- Learn what your medication does and how to take it properly
- Learn how a written action plan can help you manage your asthma
- This step is discussed in this booklet called **Medications**

### Step 4 Education

- Learn as much as possible. Ask your pharmacist and doctor lots of questions
- Read informational materials and visit [www.Asthma.ca](http://www.Asthma.ca) and [www.Asthma-Kids.ca](http://www.Asthma-Kids.ca) to learn more
- Call the Asthma Society if you need help locating an asthma educator 1-866-784-4050

### Step 6 Ongoing management

- Discuss your asthma every six months with your doctor, even if you are well
- Take lung function tests every year to make sure your asthma is well controlled
- Tell other health care professionals that you have asthma

### Step 5 Asthma action plan

- When your asthma is well-controlled, talk to your doctor about your medication needs and any changes in your environment
- Work with your doctor to get a written asthma action plan that you can use for asthma management at home
- Visit [www.Asthma.ca](http://www.Asthma.ca) for a sample action plan to take to your doctor

Follow the Asthma Basics Steps to achieve good asthma control



## Good asthma control

### Use this list to monitor your asthma control on a regular basis

You have good asthma control if you:

- ≈ Are not coughing, wheezing or short of breath most days
- ≈ Are able to exercise and feel okay
- ≈ Are sleeping through the night without waking up because of coughing, wheezing or chest tightness
- ≈ Have a normal spirometry test
- ≈ Do not need to use your reliever inhaler 4 or more times a week (except for one dose per day before exercise)

The interactive quiz *"How Do You Feel Today?"* at [www.Asthma.ca](http://www.Asthma.ca) can also help you figure out if you have good asthma control.



Good asthma control means being able to participate in strenuous activity

### Reasons for poor asthma control

If your asthma is poorly controlled, it might be because:

- ≈ You are not using your inhalers properly. Show your doctor or pharmacist how you use your inhalers
- ≈ You are being exposed to a trigger. Determine what things make your asthma worse, and stay away from them. Read the Asthma Basics Booklet called *Triggers* for information about things that can make your asthma worse. Talk to your doctor about allergy tests
- ≈ You are not using your controller medication regularly. Use your controller medication every day
- ≈ You may have something other than asthma, such as an infection, and may need a different dose or medication. Talk to your doctor about other things that can cause breathing difficulties

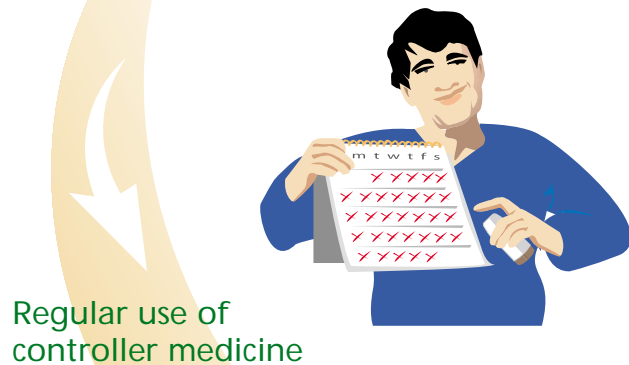
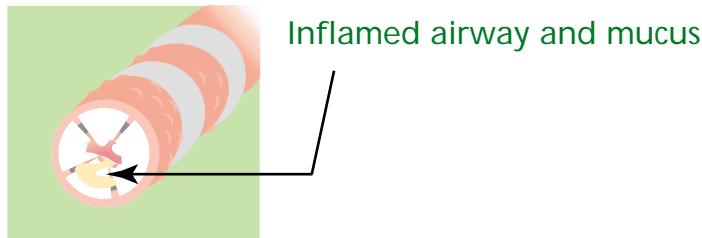


One indicator of poor asthma control = needing your reliever inhaler 4 or more times a week because of breathing problems

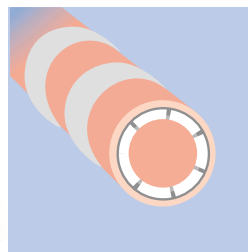


## Controller medications

Having asthma means having long-term inflammation in your airways. Avoiding your asthma triggers by modifying your environment is the best way to help reduce this swelling (see the Asthma Basics Booklet called **Triggers**), but it is often not enough to achieve and maintain good asthma control. Regular use of a controller medication, will treat the persistent inflammation of the airways.



Regular use of controller medicine



Normal airway = normal function

## Controllers: Inhaled Corticosteroids

Inhaled corticosteroids have an anti-inflammatory effect on the airways. They are referred to as "*controller*" or "*preventer*" medications. When used regularly, inhaled corticosteroids reduce inflammation and mucus in the airways, making the lungs less sensitive to triggers.

Everyone with asthma, including mild asthma, benefits from regular use of inhaled corticosteroids. They are the best defense against possible long-term lung damage.

When your asthma is poorly controlled, your doctor may prescribe an inhaled corticosteroid. It can take days or weeks for the inhaled corticosteroid to reduce the inflammation in your airways, so be patient. The longer you are using it, the less you will need to use your reliever medication. Inhaled corticosteroids are not for the relief of sudden-onset asthma symptoms.

When you are feeling better, **do not** stop taking the inhaled corticosteroid. Instead, talk to your doctor about adjusting the dose. The inhaled corticosteroid is keeping your asthma under control. If you stop taking it, the inflammation will return.

The common side effects of inhaled corticosteroids are hoarse voice, sore throat and mild throat infection called thrush (yeast infection). Sore throat and thrush are commonly caused by poor inhaler technique. Show your doctor, asthma educator or pharmacist how you use your inhaler. You may need a spacer if you are using a metered dose inhaler (puffer). Rinsing out your mouth with water after every dose of inhaled corticosteroids will also help reduce these side effects.

See page 14 for more on side effects of corticosteroids.

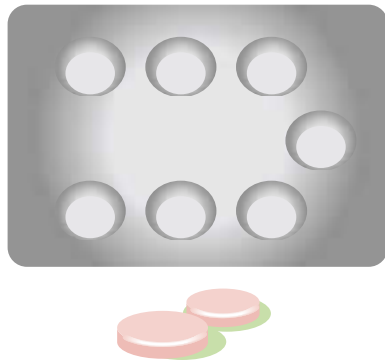
**Inhaled corticosteroids are the best option for treating asthma and should be used on a regular basis**



## Other Controllers

### Leukotriene receptor antagonists (LTRAs)

LTRAs work by blocking a chemical reaction that can lead to inflammation in the airways. Although not the preferred first choice therapy, LTRAs can be tried when an inhaled corticosteroid cannot, or will not, be used, or if the dose cannot be increased. LTRAs do not contain steroids, come in a tablet form and have few side effects.



If your asthma is not well controlled with one controller medication, another may be added to your current treatment. Continue taking your inhaled corticosteroid while taking the "add on" medications; the medications are meant to work together. See [www.Asthma.ca](http://www.Asthma.ca) for further details about controller medications.

Using another controller with your inhaled corticosteroid may be required to gain control of your asthma

### Long-acting inhaled beta<sub>2</sub>-agonists (LABAs)

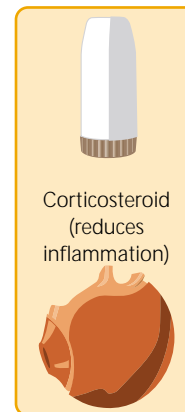
LABAs dilate the airway for up to 12 hours and are used **with** inhaled corticosteroids. You may be given the inhaled corticosteroid and the LABA in two separate inhalers. If this happens, make sure you use both.

Manufacturers have combined two controller medications into one inhaler. These inhalers are referred to as "*Combination Medications*". Combination Medications contain both a LABA **and** an inhaled corticosteroid. The bronchodilator, the LABA, opens your airways, making it easier for you to breathe. The inhaled corticosteroid reduces inflammation in your airways.

Some of the side effects of Combination Medications include hoarseness, throat irritation, and rapid heart beat.

### Combination medication

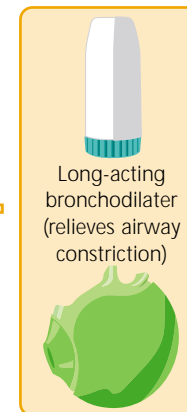
First choice therapy



Corticosteroid  
(reduces inflammation)



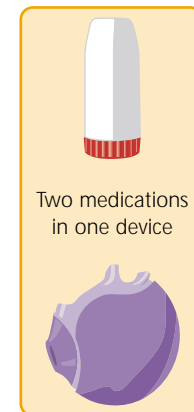
Add-on therapy



Long-acting bronchodilator  
(relieves airway constriction)



Combination therapy



Two medications  
in one device



## Reliever Medication

Short-acting bronchodilators are called "*relievers*" or "*rescue medications*". Bronchodilators do nothing to reduce the inflammation in the airway. They provide temporary relief of bronchospasm by relaxing the muscles that have tightened around the bronchiole tubes. Most bronchodilators open the airway and help restore normal breathing within 10 to 15 minutes. The effect lasts for about 4 hours.

**Use your reliever only when you have asthma symptoms.** Carry it with you at all times and use it when necessary. Note how often you need to use your reliever. If you need it 4 or more times a week for relief your asthma is not well controlled.

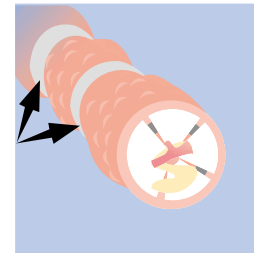
Talk to your doctor about how often you use your reliever inhaler. Your doctor may prescribe one or more controller medications or may change the dose or type of controller that you are currently using to get the asthma under control.



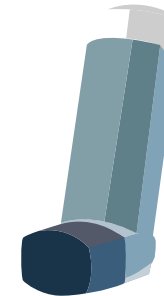
Reliever inhalers provide immediate relief of asthma symptoms. Tell your doctor if you need your reliever 4 or more times per week

Relievers can be used for short-term prevention of exercise-induced asthma. If this is prescribed for you, take the dose 10 to 15 minutes **before** exercising.

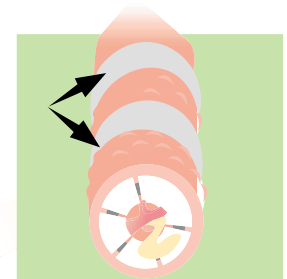
Some of the side-effects of short-acting bronchodilators are headache, shaky hands (tremor), nervousness and fast heartbeat. There have been some reports of "*hyperactivity*" related to these medications.



Muscles around airway tighten



Reliever



Muscles relaxed



## Medication: Questions & answers

### What is the difference between corticosteroids and anabolic steroids?

Some athletes misuse anabolic steroids to build muscle. Corticosteroids are the steroids used to treat asthma. Corticosteroids do not build muscle or enhance performance. Corticosteroids are hormones that your body naturally produces. When your doctor prescribes an inhaled corticosteroid, he is giving a very small amount of this same hormone, to reduce the amount of inflammation in the airways.

### Are my asthma medications addictive?

No. Some people worry that the more asthma medication they take or the longer they take it, the more they will need it. This is not the case. Asthma medications are not addictive.

### Should I just put up with my asthma instead of taking medication?

Many people do not take their medications because they think they can tolerate their asthma symptoms. Their poorly controlled asthma may lead to:

- ≈ Decreased quality of life (exercise, sleep)
- ≈ Higher risk of severe, life-threatening asthma attacks
- ≈ Permanent damage to the lungs

### My doctor wants me to use a corticosteroid inhaler. Why not give me a corticosteroid tablet?

The dose of the corticosteroid inhaler is in micrograms, which is one millionth of a gram. Corticosteroids in a tablet form are in grams, a **much** higher dose than in the inhaler. Where ever possible, the least amount of medication is used. Corticosteroid tablets are used when a larger dose is needed to get the asthma under control.

### I only have mild asthma. I don't have any asthma attacks. Do I still have to take daily medications?

Mild asthma may still cause regular symptoms, limit your quality of life and cause long-term inflammation in your airways that may lead to permanent damage of your lungs. So, people with *"mild, persistent"* asthma will most likely be treated with a low dose of daily controller medication. Six out of ten people with asthma have poor asthma control and do not take their symptoms seriously. If you are having regular asthma symptoms, then your asthma is not well controlled, and you are at risk of having a severe asthma attack.



### Should I take my asthma medication when I'm pregnant?

It is very important for your baby's health to maintain excellent asthma control throughout the pregnancy. Asthma medications are well tolerated in pregnancy but it is a good idea to discuss all your medications with your doctor. Do not smoke and avoid all places where you are exposed to smoke.

### I am feeling better. Should I stop taking my medications?

When your asthma is under control talk to your doctor about adjusting the dose of your medications. **Do not stop taking your controller medications.** If you do, the airway inflammation may return.





## Medication: Questions & answers

### Can "alternative" therapies help my asthma?

There is no evidence of any benefit from the unconventional therapies for asthma, such as acupuncture, chiropractic, homeopathy, naturopathy, osteopathy and herbal remedies. If you decide to use unconventional therapies, tell your doctor and keep taking your asthma medications.

### Are there medications I should avoid?

Some medications can trigger asthma symptoms. Aspirin (ASA) can trigger asthma attacks in 20% of adults. Make sure all health professionals that you visit know that you have asthma (e.g., dentist, specialist, pharmacist). Before starting a new medication, always ask if it is okay for people with asthma to use.

### I heard that corticosteroids could cause weak bones and growth suppression. Is this true?

Inhaled corticosteroids are the most effective prescribed medication for most patients with asthma. **Inhaled** corticosteroids at the doses they are currently recommending for asthma have **not** been shown to cause weak bones, growth suppression, weight gain and cataracts. Inhaled corticosteroids are much less likely to cause these side effects, but they can cause throat irritation and hoarseness. When corticosteroids are taken in higher doses, such as in a tablet form, for long periods of time, they can cause weak bones and growth suppression.

### How do I know that inhaled corticosteroids won't cause health problems in the longer term?

When you decide to take any medication, you must weigh the possible risks of taking medication against the benefits. Low amounts of inhaled corticosteroids are generally considered to be the best option and are used by many people for asthma control.

### Are there controller medications that do not have steroids in them?

Leukotriene receptors antagonists (LTRAs) do not contain steroids. They come in a tablet form and have few side effects.



Find more information about asthma medication at [www.Asthma.ca](http://www.Asthma.ca)



Inhalers: Questions & answers

### Why is the inhaler used for the treatment of asthma?

Inhaled asthma medications go directly to the site of inflammation and constriction in the airways instead of travelling through the bloodstream to get there. Inhaled medications are the preferred therapy for asthma. Inhaled medications only work if they get to the airways, so learn how to use your inhaler properly (see pages 18 to 21). Visit [www.Asthma.ca](http://www.Asthma.ca) for more information about inhalers.

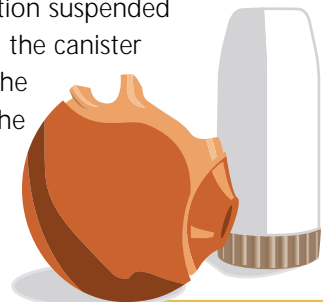
### Am I using my inhaler correctly?

Many people do not use their inhalers properly, so the medication does not reach their airways. It is very important that you show your doctor, pharmacist or asthma educator how you use your inhaler to make sure the medication is getting to your lungs, where it's needed.

### What is the difference between a dry powder and an aerosol inhaler?

An aerosol inhaler, or pressurized metered dose inhaler (pMDI), is a canister filled with asthma medication suspended in a propellant (pages 18 & 19). When the canister is pushed down, a measured dose of the medication is pushed out as you breathe it in. Pressurized metered dose inhalers are also commonly called "puffers".

Dry powder inhalers contain a dry powder medication that is drawn out of the device and into your lungs when you breathe in (pgs 20 & 21).



Dry powder inhalers

### What is a spacer?

Some people have difficulty using the MDI properly. A spacer can help. It is a tube that attaches to the MDI so that you breathe the medication in from the tube instead of directly from the MDI. The result? Better delivery of the medication to your lungs (see page 18).

### Should I be using a spacer?

The spacer helps you to have a better delivery of the medication into your airways. A pharmacist, respiratory therapist, asthma educator or doctor, can assess how you use your MDI and will recommend the best device for you.

It is recommended that children use a spacer device with their MDI.



Spacer and pressurized metered dose inhaler

Poor inhaler technique leads to poor drug delivery into the lungs. Make sure you are using your inhaler properly – just ask!

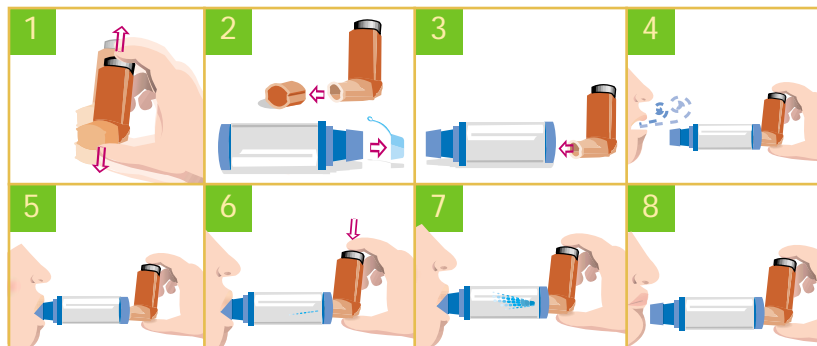


## MDI and spacer

The Asthma Society recommends that anyone, of any age, using an MDI should consider using a spacer. Spacers are available for purchase from pharmacies.

To use your MDI with a spacer:

- 1 Shake the inhaler well before use (three or four shakes)
- 2 Remove the cap from your inhaler, and from your spacer, if it has one
- 3 Put the inhaler into the spacer
- 4 Breathe out, **away** from the spacer
- 5 Bring the spacer to your mouth, put the mouthpiece between your teeth and close your lips around it
- 6 Press the top of your inhaler once
- 7 Breathe in **slowly** until you've taken a full breath  
If you hear a whistle sound, you are breathing in too fast  
**Slowly** breathe in
- 8 Hold your breath for about ten seconds, then breathe out



## MDI (puffer)

You should follow the instructions packaged with your medication. The following is one way to use your inhaler.

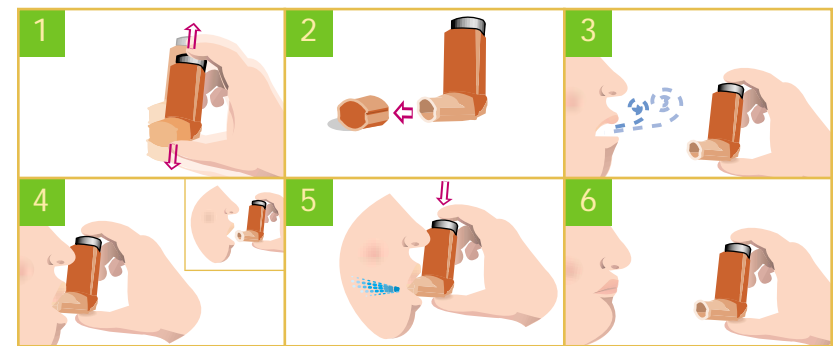
To use your MDI without a spacer:

- 1 Shake the inhaler well before use (three or four shakes)
- 2 Remove the cap
- 3 Breathe out, **away** from your inhaler
- 4 Bring the inhaler to your mouth. Place it in your mouth between your teeth and close your mouth around it.
- 5 Start to breathe in **slowly**. Press the top of your inhaler **once** and keep breathing in **slowly** until you've taken a full breath
- 6 Remove the inhaler from your mouth, and hold your breath for about ten seconds, then breathe out

If you need a second puff, wait 30 seconds, shake your inhaler again, and repeat steps 3-6.

Always write down the number of puffs you've taken so that you can anticipate when you need to refill your prescription.

Store all MDI's at room temperature.







Asthma education

Certified asthma educators are healthcare professionals who are specially trained in asthma and education techniques. Call the Asthma Society at 1 866 787-4050 to find out where the nearest asthma education centre is.



the Asthma Society's website



the Asthma Society's website for children

Other Resources:

- Canadian Medic Alert Foundation [www.medicalert.ca](http://www.medicalert.ca)
- Canadian Network for Asthma Care [www.cnac.net](http://www.cnac.net)
- Anaphylaxis Canada [www.anaphylaxis.org](http://www.anaphylaxis.org)

# Sample Asthma Action Plan

DESIGNED BY FAMILY PHYSICIAN AIRWAYS GROUP OF CANADA

Name \_\_\_\_\_ Date \_\_\_\_\_  
 Doctor \_\_\_\_\_ Doctor's phone # \_\_\_\_\_  
 Triggers \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Symptoms \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Best peak flow \_\_\_\_\_

Green = Well controlled asthma

- Needing Reliever inhaler less than 4 times a week
- Enjoying usual exercise
- No cough or wheeze at night
- No days off work / school

Controller medicine \_\_\_\_\_

Feel free to use your Reliever medicine before exercise

Reliever medicine \_\_\_\_\_

Peak flow range \_\_\_\_\_  
(85-100% Predicted Best)

Yellow = Loss of adequate control of asthma

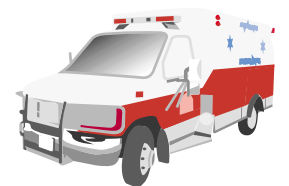
- Needing Reliever 4 or more times a week
  - Cough or wheeze at night more than 1 night a week
  - Unable to do usual activities due to Asthma
  - Getting a "cold"
  - Feel free to use Reliever medicine before exercise
- Controller medicine \_\_\_\_\_  
 Take \_\_\_ puffs \_\_\_ times a day of your \_\_\_\_\_ until peak flow returns to normal or symptoms are gone for \_\_\_ days in a row  
 Increase Reliever to every \_\_\_ hrs  
 Take \_\_\_ Prednisone for \_\_\_ days

Peak flow range \_\_\_\_\_  
(60-85% Predicted Best)

If you enter the yellow zone—contact your Doctor's Office

Red = Go to nearest emergency room

- Cannot speak
- Shortness of breath at rest
- Reliever inhaler does not work
- You know from past experience that this is a severe attack



Take 2 puffs of your reliever every 10 minutes while travelling to the hospital or waiting for help.

Do not attempt to drive yourself—seek help!

Peak flow range \_\_\_\_\_  
(< 60% Predicted Best)



## Your Asthma Action Plan

An Asthma Action Plan is a strategy that you can use to manage your asthma when it gets out of control. Studies have shown that having a written agreement with your doctor helps you manage your asthma at home. Take this sample action plan with you to your doctor to start a discussion.

### Notes to myself

- Ask my pharmacist, doctor, or asthma educator to watch how I use my inhaler
- Find out when my inhaler is empty
- Find out when my inhaler medication expires
- Talk to my doctor about an Asthma Action Plan
- Find out where the nearest asthma educator is by going to [www.Asthma.ca](http://www.Asthma.ca) or calling 1 866 787 4050

### Questions to ask my doctor

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_
5. \_\_\_\_\_  
\_\_\_\_\_



The **Asthma Basics Booklet Series** was developed to provide Canadians with asthma, current and accurate information about asthma management. This booklet has been developed and reviewed by experts in the field of asthma care and certified asthma educators. The author, reviewers and sponsors encourage you to discuss this information with your doctor, pharmacist and asthma educator.

The information in this booklet is not intended to substitute for expert medical advice or treatment' it is designed to help you make informed choices. Because each individual is unique, a physician must diagnose conditions and supervise treatments for each individual health problem.

## Acknowledgments

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The **Asthma Society of Canada** will review and update this booklet in the future. Your feedback is welcome. Please email your comments to Melva Bellefountaine, Director of Programming at [info@asthma.ca](mailto:info@asthma.ca)