

B r e a t h e E a s y ®

DIAGNOSIS

Do You Have Asthma? Get the Answers.



Asthma.ca
Asthma Canada



The **Breathe Easy® Series** was developed to provide Canadians with current and accurate information about asthma management. This booklet has been developed and reviewed by experts in the field of asthma care and by Certified Asthma/Respiratory Educators. The authors and reviewers encourage you to discuss this information with your doctor, pharmacist, asthma educator, and other healthcare providers.

The information in this booklet is not intended to substitute for expert medical advice or treatment; it is designed to provide reliable information to help you manage your condition. Because each individual is unique, a physician must diagnose conditions and supervise treatments for each individual health problem.

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We are proud to have the endorsement of the **Family Physician Airways Group of Canada**.



FPAGC

FAMILY PHYSICIAN AIRWAYS GROUP OF CANADA
Regroupement canadien des médecins de famille en santé respiratoire

Asthma Canada will continue to update this booklet in the future. Your feedback is welcome. Please email your comments to info@asthma.ca.

Questions? We have answers

Our vision at Asthma Canada is to empower every child and adult in Canada with asthma to live an active and symptom-free life.

Asthma is a lung condition that can lead to emergency room visits, hospitalizations, and sometimes death. Science continues to make great progress in understanding asthma so that, with proper care, visits to the hospital can be reduced and most people with asthma can have optimal asthma control and live symptom-free lives. Approximately 300 Canadians die from asthma every year, but death from well-controlled asthma is rare and preventable.

This booklet is **Step 1** in the **Breathe Easy® Steps**. It will help you understand how doctors make the diagnosis, and it will help you ask the right questions so you can get the best care possible.

This booklet is for adults with asthma and parents/caregivers of children with asthma who are searching for answers to the following questions:

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We developed the Breathe Easy® Steps (next page) to help you learn about good asthma control.

We developed the Breathe Easy® Steps to help you learn about optimal asthma control. Use these steps to guide your discussions with your doctor, pharmacist, asthma educator, and other healthcare providers.

Step 1 Diagnosis

- Talk to your doctor about your breathing difficulty
- Your doctor conducts tests to confirm whether you have asthma
- Find out about asthma, what it is, and how it can be controlled
- This step is discussed in this booklet

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, learn how to avoid them
- This step is discussed in the *Triggers* booklet
- Additional information about allergies and their treatment are discussed in the *Allergies* booklet

Step 3 Medications

- Your doctor may prescribe asthma controller medication
- Learn what your medication does and how to take it properly
- Learn how a written Asthma Action Plan can help you manage your asthma
- This step is discussed in the *Medications* booklet



Step 4 Education

- Learn as much as possible. Ask your healthcare providers any questions you have
- Read informational materials and visit www.asthma.ca to learn more
- Call the Asthma Canada to speak to a Certified Asthma/Respiratory Educator at 1-866-787-4050, or email info@asthma.ca

Step 5 Asthma Action Plan

- When your asthma is well controlled, talk to your healthcare providers about your medication needs and any changes in your environment
- Work with your healthcare providers to get a written Asthma Action Plan that you can use for asthma management at home
- Visit www.asthma.ca for a sample Asthma Action Plan to take to your healthcare provider

Step 6 Ongoing Management

- Discuss your asthma with your healthcare provider every six months (or every 12 months if your asthma is well-controlled)
- Your healthcare provider will decide how often to perform lung function tests, based on the intensity of your symptoms and how well controlled your asthma is — these can vary over time
- Ask your healthcare provider about getting vaccinated against infections like the flu and pneumonia that can affect your lungs and make asthma symptoms worse
- Tell other healthcare professionals that you have asthma

Follow the Breathe Easy® Steps to achieve optimal asthma control.

What is asthma?

Doctors define asthma as “a *chronic inflammatory disease of the airway*”. This means that there is swelling and mucous inside the breathing tubes in your lungs. The word “*chronic*” means that this swelling is there, to some degree, all the time. Inflammation can lead to swelling and narrowing of the airway, which may make breathing more difficult.





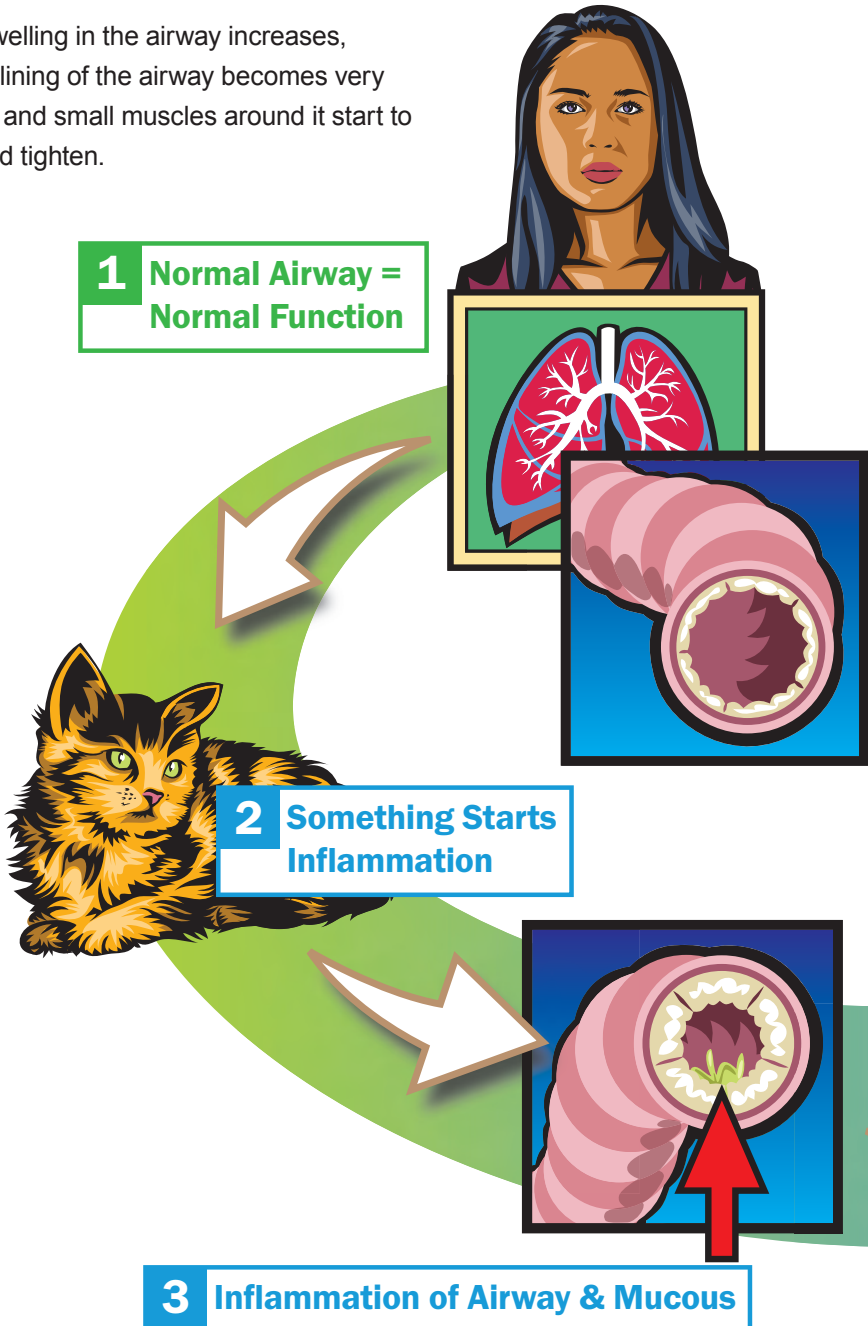
As the swelling in the airway increases, the lining of the airway becomes very sensitive and small muscles around it start to twitch and tighten. Doctors call this “*bronchoconstriction*”. Bronchoconstriction can happen without swelling, but inflammation usually occurs first.

Inflammation can slowly increase over time, so slowly that you might not notice it. If nothing is done to stop the swelling, it will lead to blockage or bronchoconstriction and, potentially, life-threatening breathing problems. Fortunately, there are ways to avoid asthma triggers, and safe medications that prevent this situation.

Symptoms you might experience can include any or all of the following: shortness of breath, chest tightness, wheezing, sputum production, and cough. These symptoms usually occur as sudden, recurring attacks, after which the symptoms can persist for some time before disappearing. If left untreated, asthma can cause permanent structural changes in your airways called “airway remodelling,” which is why it is important to get asthma under control and keep treating it over the long term.

What is asthma?

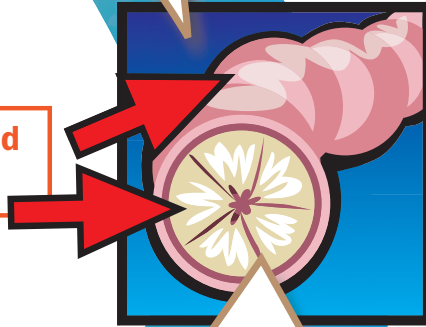
As swelling in the airway increases, the lining of the airway becomes very sensitive and small muscles around it start to twitch and tighten.





6 Emergency Room Visit

5 Muscles Around Airway Tighten



4 If Inflammation is Not Treated

What makes asthma worse?

Asthma may worsen after contact with something in the environment that causes the airways to swell (these causes are called triggers). Triggers can include:

- Contact with things that you are allergic or sensitive to
- Contact with certain chemicals at home or work
- GERD (gastroesophageal reflux disease) — also called acid reflux
- Rhinitis – inflammation in the nose



Signs and symptoms



The common signs and symptoms of poorly controlled asthma are:

- Coughing
- Wheezing
- Chest tightness
- Shortness of breath
- Trouble sleeping because of breathing difficulty
- Being unable to take part in physical activities

You may have all of these signs and symptoms, or only a few. Not everyone wheezes, and many people just cough. These signs and symptoms come and go and are usually triggered by something in the environment or by not taking prescribed medication correctly. For some people, symptoms may occur seasonally — for example, in the spring when there is a lot of pollen in the air. Visit www.asthma.ca and read the Asthma Canada's *Triggers* booklet to find out more about what makes asthma worse.

How is asthma diagnosed?



**Only your doctor can
diagnose asthma**

Symptoms observed upon physical exam, medical, and family history may support a diagnosis of asthma. Your doctor may be able to confirm that you have asthma with a simple breathing test called *spirometry* (see page 11). Spirometry measures how much air you have in your lungs and how fast you can blow it all out. However, sometimes normal spirometry does not rule out asthma, so other tests may be needed.

Other lung conditions have similar symptoms, which your doctor may have to rule out.

It is important to talk to your doctor about all of your concerns and to ask any questions you may have. Something you think is not important may be useful in pinpointing the problem. Use the checklist at the end of this booklet to help you prepare for a discussion with your doctor.

**Talk to your doctor about your
questions and concerns**

Diagnostic tests



How is a spirometry test performed?

You will be asked to:

1. Take a deep breath in and then blow out as hard and fast as you can until you can't blow out any more
2. Do the test several times, until the best result is recorded
3. Take some puffs of a bronchodilator medication like salbutamol
4. After 15 minutes, do the test again, to see if the medication helps your breathing

If your results are much better after taking the medication, you may have asthma. Your healthcare provider will explain your results.

Infants and small children under 5 to 6 years old usually cannot do the spirometry test, so their asthma is diagnosed based on signs and symptoms (including symptoms during playtime), family history, history of allergies, and their response to asthma medications.

Some people who have asthma will have a normal spirometry test. If this is the case, you may be asked to take another test to confirm your diagnosis of asthma, like a methacholine challenge or exercise test.

These tests may be repeated in the future at your doctor's discretion.

How is a methacholine challenge test performed?

This test is called a '*challenge test*' because, if you have asthma, a low dose of methacholine will cause your airways to tighten. This is a safe and commonly used test. You will be asked to:

- Do the spirometry test (see page 11)
- Breathe in a small amount of methacholine through a mask
- Do the spirometry test again

You will be asked to breathe in different doses of methacholine starting at the lowest dose and gradually increasing the dose until a response is detected. The lower the dose of methacholine that makes it difficult to breathe out, the more sensitive your airways are and the more likely it is you have asthma.

If you cannot blow very well after the methacholine test, your healthcare provider will give you a bronchodilator medication to reverse the tightening in your airways.

How is the exercise challenge test performed?

If you have breathing problems only when you exercise, your healthcare provider may ask you to take an exercise test. You will be asked to:

- Perform a spirometry test while at rest
- Run/walk on a treadmill or pedal on a bike for 6–8 minutes
- Repeat the spirometry test immediately after the exercise

If you have exercise-induced asthma (EIA), your spirometry test result will be lower after exercise. There is treatment for EIA that will allow you to keep active or play sports.

What is well-controlled asthma?

Good asthma control

After your physician has confirmed that you have asthma, you will need to learn how to control it. Good asthma control is important to prevent serious flare-ups. This means that you should:

- Not have any breathing difficulties on most days
- Not use your reliever medication four times or more in a week
- Be able to exercise without coughing, wheezing or chest tightness
- Sleep through the night without coughing, wheezing or chest tightness
- Not miss work or school because of asthma
- Have a normal or near-normal breathing test, including peak flow and peak flow variability (determined by your healthcare provider)





Poor asthma control

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

- Not taking your asthma medication as prescribed. See the *Medications* booklet
- Not using the right asthma medication for you. See the *Medications* booklet
- Not using the right inhaler technique. See the *Medications* booklet
- Exposed to a trigger or have a comorbidity that is causing breathing problems. See the *Triggers* booklet

Talk to your healthcare provider if your asthma is not well controlled

Answers to frequently asked questions

I have a persistent cough. Could it be asthma?

Coughing can be a symptom of asthma, especially in children. However, cough is also a symptom associated with many other conditions such as whooping cough and postnasal drip.

Will my asthma get worse?

If asthma is poorly controlled, repeated bouts of inflammation can cause scarring and irreversible narrowing of the airway. With poorly controlled asthma, damage to the airway happens over time and cannot be reversed. It is important to get an accurate diagnosis and start proper asthma treatment as soon as possible to reduce inflammation and prevent scarring. It is a good idea to discuss your asthma with your healthcare provider on a regular basis.

Why is my asthma worse at night or early in the morning?

At these times of day, natural hormones in our bodies are normally at lower levels, making asthma symptoms more likely. Allergies to dust mites, feathers, or down, which are commonly present in mattresses, duvets, and pillows, may also cause your asthma symptoms to be worse at night. See the *Triggers* booklet for more information about allergens, and discuss nighttime and early morning symptoms with your healthcare provider.

Why do I get asthma symptoms when I laugh or cry?

If laughing or crying causes symptoms, this is probably a sign that your asthma is not well controlled, and the level of swelling or irritation in your airways is higher than it should be. When your asthma is controlled properly, you should not have symptoms when you laugh or cry.

Should I avoid exercise because of my asthma?

Having asthma does not mean that you cannot exercise. If you have any limitations in your ability to exercise because of your asthma, it may be because your asthma is not being controlled properly. See your healthcare provider about getting your asthma under control. If you have asthma symptoms, check with your healthcare provider before starting a new exercise program. For more information about exercise and asthma, please refer to *Breathe Easy®: A Guide for Being Active and Healthy with Asthma*, available at www.asthma.ca.

What is exercise-induced asthma (EIA)?

Many people with asthma have difficulty breathing when they exercise, or they experience symptoms after exercise. It doesn't have to be this way. Getting your asthma under control before you exercise will help you perform at your best. If your asthma is under control but you have symptoms 5 to 10 minutes after you start exercising, you may have EIA, also known as exercise-induced bronchospasm (EIB). Take an exercise challenge test to find out (see page 12). Asthma should not limit your activities. If it does, talk to your healthcare provider about it.

Do allergies affect my asthma?

Asthma attacks and symptoms can be caused by different allergic and non-allergic triggers. Allergies to things you might inhale from the air, such as pollen, pet dander, or moulds, can cause inflammation of your airways and make your asthma worse. Please refer to the *Triggers* booklet for more information about how allergies can trigger asthma attacks, and refer to the *Allergies* booklet for more in-depth information about various types of allergies and their treatment.

Who can help me manage my asthma?

Your healthcare providers will diagnose and manage your asthma. The key members of your asthma care team include your doctor and your pharmacist. Other members of your care team may include your asthma educator and your respiratory therapist. Talk honestly with your healthcare providers about your asthma control and any problems or concerns you have. Your doctor may refer you to an allergist to find out if you have any allergies and what your triggers (allergens) are.

Should I see a lung specialist or allergist?

Your healthcare provider may send you to a specialist if:

- You are still having problems with your asthma even though you are taking your medications as directed
- Your asthma may be caused by your home or work environment (occupational asthma); skin testing can help identify potential allergic triggers
- You have been admitted to the hospital for your asthma
- You are experiencing side effects from your asthma medications

Where can I learn more about asthma?

- Read all the *Breathe Easy® Booklets*
- Ask your healthcare providers questions
- Call Asthma Canada to speak to a Certified Asthma/Respiratory Educator at 1-866-787-4050, or email info@asthma.ca
- Visit www.asthma.ca to learn more

How can I plan for my healthcare provider visit?

Being able to communicate well with your healthcare providers will help you receive the best care possible. Healthcare providers see many patients every day and have limited time with each patient. They can better care for someone who is prepared.

Your healthcare providers may tell you to do several things, but these things might not work in your day-to-day life. Remember that your healthcare providers will not understand your daily challenges unless you tell them. Be straightforward and honest when you talk with your healthcare providers, so that they can help you figure out the steps you should take. For more information about understanding the Canadian healthcare system, please refer to *Breathe Easy®: Self-Advocacy Guide for Canadians with Asthma*, available at www.asthma.ca.

You should discuss your asthma control with your healthcare providers at every visit

Plan ahead for your healthcare appointment

1. Talk to your healthcare providers. Give yourself time to go through all your questions so you don't feel rushed. Schedule 15 minutes with your doctor to ensure that you have enough time to discuss your concerns.
2. Prepare what you will say. It is not easy to remember everything, so write it down.
3. If you are uneasy, bring someone you trust with you for confidence.
4. Don't be afraid to ask questions.

What should I tell my healthcare providers?

You should mention any asthma attacks or symptoms you have experienced since your last visit. In particular, you should tell them if you:

- Have missed school or work because of your asthma
- Are waking up at night with asthma symptoms
- Needed to use your blue puffer (reliever) medication four or more times a week
- Have been unable to exercise, or have had attacks/symptoms during or after exercise (or playtime, for children)
- Have experienced side effects of medication
- Cannot access medications

What is an Asthma Action Plan?

An *Asthma Action Plan* is a written document that you and your healthcare team design together. It consists of concrete advice on what to do about any level of symptoms. Studies have shown that having a written plan with your healthcare provider helps you manage your asthma at home.

Can I get an Asthma Action Plan?

Yes! For more on Action Plans, including a sample plan you and your healthcare team can adapt for your personal needs, please see the *Medications* booklet.

Ask lots of questions

Here are some questions you might ask your healthcare practitioner:

- Are you sure I have asthma?
- What makes my asthma worse?
- Is it okay to keep playing a sport?
- How can I tell when my asthma is getting worse?
- What should I do if I have an asthma attack?
- Is there an asthma educator in my community whom I can go to?
- Is my asthma well controlled?
- If my asthma is not well controlled, why do you think that is, and what can I do about it?

Checklist

Fill in this checklist and show it to your healthcare providers. It will help your healthcare providers evaluate your breathing difficulties.

Past medical history

- Lung disease
- Hay fever (rhinitis)
- Seasonal allergies
- Eczema
- Hives
- Heartburn
- Anaphylaxis
- Polyps (growths) in the nose
- Food allergies
- Unable to breathe through nose
- Workplace exposure to inhaled substances
- Other lung problems: _____

Family history (mother, father, sister, brother)

- Asthma
- Eczema
- Hay Fever
- Allergies
- Other lung problems: _____

Signs and symptoms

Do you cough or wheeze, or have shortness of breath or chest tightness? If so, when?

- Day
- Night
- Exercise or Play

Are there times of the year when your breathing is worse?

- Yes
- No
- When _____

Have your breathing difficulties caused you to miss work or school?

- Yes
- No

Have you ever been admitted to the hospital for breathing difficulty?

- Yes
- No

Have you ever been to the emergency department for breathing difficulty?

- Yes
- No

Environment

Do you have any pets?

Yes

No

If yes, what kind of (pet)? _____

Do you, or did you ever, smoke?

Yes

No

If so, how many per day? _____

For how long? _____ (years)

If you have quit, how long ago? _____ (years)

If you have not quit smoking, do you want to quit?

Yes

No

Does someone who lives with you smoke?

Yes

No

Do you cough or wheeze, or have shortness of breath or chest tightness, during the week, but not on weekends when away from work or school?

Yes

No

What is your job (occupation)?

What activities do you avoid doing because of breathing difficulty?

Do you ever have breathing difficulty when in cold air or during exercise?

Yes

No

When did your breathing difficulties start?



You Deserve an Active Life

Take Control



To get involved with Asthma Canada or for more information:

1.866.787.4050

Online: www.asthma.ca | Email: info@asthma.ca

For more than 40 years, Asthma Canada has proudly served as the national voice for Canadians living with asthma and respiratory allergies; empowering patients with evidence-based information to improve their quality of life.

Helping People Breathe Easier



Your Breathe Easy® series:



For more information about Asthma Canada:

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