Breathe Easy®

ALLERGIES

Understand and Manage Your Allergies

Asthma.ca
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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 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.

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.

Allergies and asthma are two different conditions that are often related and share some of the same features. However, there are also important differences that will affect how you manage your condition(s). For basic information on how allergies can trigger asthma symptoms and tips on how to avoid these triggers, please see the *Triggers* booklet in the Breathe Easy® Series. If you have both allergies and asthma (or are the parent/caregiver of a child with asthma and allergies), this booklet, which is **Step 4** in the **Breathe Easy® Steps**, will provide more in-depth answers to the following questions about respiratory and non-respiratory allergies.

Good allergy management includes education, avoiding triggers, and using medications properly

Breathe Easy® Steps

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 the *Diagnosis* 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 this 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 twelve 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 are allergies and who gets them?

What are allergies?

An allergy is a reaction to a substance that is normally harmless. Our immune systems usually protect us against bacteria, viruses, and other invaders that can cause illness. But sometimes the immune system reacts to a substance that isn't typically harmful – things like pollen, animal dander, mould, or a particular food – by producing a molecule called an immunoglobulin E (IgE) antibody. Substances that provoke this IgE response are called "allergens," and they can get into your body in a number of different ways – for example:

- If you breathe them in (e.g., tree pollen in the air)
- If they get injected into your body (e.g., a bee sting, an injected medication)
- If you swallow them (e.g., food allergens, medications)
- If you touch them (e.g., latex gloves)

The best way to find out if you are allergic to something is to have an allergy assessment done. For more details on allergy testing, please see page 14 of this booklet.

How common are allergies?

In general, allergies are very common and are one of the most widespread chronic medical conditions that people live with. It's hard to be sure how many people have allergies, but we can get a hint by looking at the statistics for particular kinds of allergies.

According to the Canadian Allergy, Asthma and Immunology Foundation, one in every four or five Canadians (20 to 25% of the population) has allergic rhinitis (also referred to as "hay fever").

The rate of food allergies in the Canadian population is difficult to pinpoint, because not everybody who says they have a food allergy has been diagnosed by a doctor. However, our best estimates show that about 6 to 8% of Canadians have had one or more allergic reactions related to food – that's about one of every 13 Canadians.

Who gets allergies?

No one is born with an allergy, but you can have a genetic tendency to develop one. If both your parents have allergies, you have about a 75% chance of also developing them.

In general, children are more likely to be diagnosed with an allergy than adults are – most allergies first appear in childhood, and it's less common for people to develop allergies later in life. Some people find that they eventually outgrow some of their childhood allergies, even allergies that were once quite severe – this is particularly common with certain food allergies. However, other food allergies (e.g., peanuts, tree nuts, shellfish) tend to be lifelong. Some people who outgrow a childhood allergy have been known to have it reappear later.

What causes allergies?

There are many different types of substances (allergens) that can cause an allergic reaction. Here are some of the most common ones.

Common inhaled allergens

Respiratory allergies are allergic reactions that happen when an allergic person breathes in certain substances from the air. For people with allergies and asthma, inhaled allergens can often be the trigger for an attack of asthma symptoms. Some common types of inhaled allergens are:

Seasonal allergens, which are worse at a particular time of year:

- Pollen is carried by the wind on hot, windy days. The exact timing of high-allergen seasons will vary depending on the local climate, geographic location, and weather patterns, but in most regions of Canada it follows this general trend: tree allergens are most common in the spring, grass pollens in the summer, and ragweed pollens in the fall. You can find out the pollen counts in your region at the Weather Network on television or online at www.weather.ca. Visit www.asthma.ca for more information.

Perennial allergens; that is, allergens that are not linked to a particular season but are present in the environment all year:

- Dust mites are tiny insects that live in fibres on carpet, plush furniture, curtains, mattresses, pillows, and bedding. They eat flakes of skin and reproduce in warm and humid environments. Unfortunately, it is usually not altogether possible to eliminate dust mites from your home, but there are many helpful steps you can take to limit your exposure – see pages 30 through 35 of this booklet for more detail.

- Cockroaches are insects that live in some homes and workplaces, especially in areas like kitchens where there is plenty of food and water. As with dust mites, you don't have to see or touch them to have an allergic reaction – their saliva, body parts, and other allergens can float in the air or rest on surfaces you might touch. Cockroach allergens are a major asthma trigger for some people, especially in high-density neighbourhoods
- Mould is a type of fungus that produces spores that float in the air. It thrives in humid environments and lives off decaying plants and in the soil. The air is never free of mould, but you can prevent its growth by keeping your house clean and dry all year
- Animal (pet) allergens: People with pet allergies are generally allergic to the dander (flakes of shed skin), saliva, and urine, rather than the fur. These pet allergens are found in very small particles that can float in the air even if the animal is not present. Even after you get rid of a pet, the allergen can remain for months on furniture and in carpets. Animals can also carry pollen and mould on their fur from outside into the house
- Other substances or chemicals in the air such as smoke, fragrances/scents, and solvents can cause respiratory symptoms in many people. For a lot of people, these symptoms aren't a true allergic reaction; they are more related to these substances directly irritating the airways, which causes worsening of symptoms in people with asthma

Common ingested (swallowed) or injected allergens

It's also possible to have an allergic reaction to substances that we take into our bodies by swallowing them (e.g., foods) or having them injected into us (e.g., an insect bite/sting). For people with very severe allergies, these types of allergens are the most likely to cause a rapid, severe reaction called "anaphylaxis", which can cause death (more details on page 10). Even though these allergens are not inhaled into the lungs, they can sometimes cause or worsen respiratory symptoms in people with asthma. Some common allergens of this type are described below.

- Certain foods can cause a reaction that affects multiple systems in the body, including skin (e.g., itching, rashes, or hives), intestinal tract (e.g., abdominal pain, diarrhea, or vomiting), cardiovascular and, respiratory system. Food allergies can also cause anaphylaxis; a dangerous swelling of the airways that can lead to shortness of breath or fainting. If you think you have a food allergy, it's important to get tested and to talk to your doctor or healthcare team about ways to avoid your allergen(s). Health Canada has identified the following ten foods and additives as "high-priority" allergens that affect the largest number of people and cause the most serious symptoms:
  - Peanuts
  - Tree nuts
  - Milk
  - Eggs
  - Soy
  - Sesame
  - Wheat
  - Seafood (shellfish or fish)
  - Sulfites (a common additive in wine and dried food products)
  - Mustard

- For more information on anaphylaxis related to food allergies, please visit www.foodallergycanada.ca
- Medications can cause allergic reactions ranging from skin reactions (e.g., hives) to anaphylaxis. Although any kind of medication has the potential to cause an allergy, the risk is very low with most types, and most of the reactions that people will experience are not allergies but rather side effects of the drug itself. Some medications that more commonly cause allergies are certain types of antibiotics, acetylsalicylic acid (ASA or Aspirin®), NSAIDs (anti-inflammatory drugs), narcotics, and certain kinds of anticonvulsants
- Insect stings are not pleasant for anyone, but for people with insect allergies they can cause reactions ranging from severe itching and swelling to anaphylaxis
- Latex products, including balloons, rubber household gloves, rubber bands and more, are made from a fluid from rubber trees. A latex allergy may cause reactions ranging from skin irritation to anaphylaxis

How do allergies relate to asthma?

Asthma and allergies are related, but they are not the same thing. Since many of the underlying processes in the immune system are similar, having allergies increases your risk of having asthma. Likewise, if you already have asthma, you are at higher risk of also being diagnosed with allergies. For example, people with allergic rhinitis are at higher risk of asthma and vice versa, and those with atopic dermatitis have a higher prevalence of food allergy and asthma. But many people have allergies without having asthma, and many cases of asthma are triggered by non-allergic causes such as air pollution, cigarette smoke, or lung infections. For more information on non-allergic asthma triggers, please see the *Triggers* booklet.

For people with both asthma and allergies, there are several different ways that allergens and allergies can cause or worsen asthma symptoms:

- The most common allergic triggers of asthma symptoms are inhaled allergens, such as pollen, animal dander, dust mites, and mould. These can make asthma symptoms worse by increasing the inflammation in the airways and making them more sensitive
- Some types of allergens (most commonly food and medication allergens) can produce a rapid, severe allergic reaction, known as anaphylaxis (see page 12). One of the most common – and dangerous – symptoms of anaphylaxis is a sudden, severe tightening of the airways that is similar to a severe asthma attack.

What are the different symptoms and types of allergic reactions?

Allergies can produce different symptoms in different parts of the body, depending in part on the type of allergen and the way you are exposed. Even though symptoms can look and feel very different, they all generally happen in the same way; your body's reaction to the allergen causes swelling (inflammation) in the affected area.

Respiratory reactions:

Rhinitis

Rhinitis (sometimes called hay fever) is inflammation (swelling) of the lining in the nose. Many causes are not allergic but if you have allergic rhinitis, it could be caused by exposure to allergen(s) like ragweed, tree or grass pollen, animal dander, dust mites, or mould spores. Common symptoms of allergic rhinitis are itchy nose and throat, runny or stuffy nose, sneezing, and ear blockage. It often occurs along with **allergic conjunctivitis**, which is the term for watery, itchy, and red eyes due to an allergen. These types of allergies can be seasonal or may occur throughout the year (perennial).

Asthma

An allergic reaction in the lungs can cause asthma symptoms. Breathing an allergen into the lungs leads to inflammation and swelling which can cause coughing, wheezing, and shortness of breath. Although allergens are common asthma triggers, many people notice worsening of asthma symptoms from non-allergic triggers, such as infection, smoke, cold air, and exercise.

What are the different symptoms and types of allergic reactions?

Anaphylaxis:

Anaphylaxis is a severe, sometimes life-threatening event that requires immediate medical attention. It is caused by an allergy to a particular substance, with some of the most common triggers being certain foods (e.g., peanuts), bee stings, latex, and some medications.

Symptoms of anaphylaxis occur suddenly and may include any of the following:

- Skin symptoms, including hives, itchiness, flushing, and swelling
- Respiratory symptoms, including difficulty breathing (similar to a severe asthma attack), tightness or swelling of the throat, and/or hoarse voice
- Gastrointestinal symptoms, including nausea/vomiting, abdominal pain, and/or diarrhea
- General symptoms, including dizziness, fainting, low blood pressure, "feeling of doom," and in the final stages cardiac or respiratory arrest

People who have had a severe allergic reaction are at risk for future reactions. Even if your first reaction is mild, future reactions might be more severe, especially if you also have asthma.

If you have previously had, or are at high risk of an anaphylactic reaction, you should have an epinephrine injector with you at all times. Please see page 24 for more information and tips on epinephrine injectors. If you have asthma and a severe allergy, it is very important that your asthma is well controlled. Uncontrolled asthma increases the risk of severe reactions and death from anaphylaxis. For more on how to use asthma medications, please see the *Medications booklet*.

Gastrointestinal reactions:

These are allergies to things we swallow, such as foods or certain medications. These allergens often cause multiple reactions, producing symptoms in different parts of the body, including the stomach, intestines, or other parts of the gastrointestinal tract. The most common gastrointestinal allergy symptoms are:

- Abdominal cramps
- Nausea
- Vomiting
- Diarrhea

It's important to note that there are a lot of other causes – other than food allergies – that can lead to similar symptoms. So, having these symptoms isn't necessarily proof that you have a food allergy. If you think you have a food allergy, talk to your doctor or to your healthcare practitioners about further investigation, which may include testing for allergies (See page 14 for more details).

Skin reactions:

The skin is another very common site for allergic reactions to appear. Although some skin reactions happen after direct skin contact with an allergen, many times a skin reaction actually comes from an allergy to something you swallowed, like a food or medication. The most common allergic skin reactions are:

- Hives – swollen, itchy, red bumps that can appear suddenly
- Itchy and/or swollen areas of skin

How are allergies diagnosed?

Most of the time, people first suspect that they have an allergy because they experience an allergic reaction of some type. Your family doctor can help you figure out what caused the reaction. Allergy testing can confirm the cause of the reaction. Based on your symptoms and the history behind them, your family doctor might prescribe treatment or recommend that you also see an allergist (or immunologist), a type of doctor who specializes in diagnosing and treating allergic diseases.

The first thing your doctor will want to know is your history of your allergic reactions and what might have triggered them. One thing you can do to help with this is to keep a symptom diary. Any time you have a reaction that you think might be an allergy, try to take notes about what kinds of symptoms you had, when they appeared, what you think might have caused them, what steps you took (e.g., medications) to relieve them, and what happened afterwards. Recording this information will make it easier for your doctors to get a detailed view of your history and any patterns that might point to a possible allergic trigger.

Depending on the type and likely cause of your allergy, your family doctor and/or allergist may perform a number of different tests to figure out what you are allergic to and how serious your allergy is:

- The skin test is the most common type of allergy test. In this simple test, the doctor or nurse places a small amount of allergen just under, your skin. If you are allergic to a particular allergen, this small area of skin will develop a hive called a weal and get red and itchy. The skin test is often used to identify common allergens like dust mites, pet dander, pollen, moulds, and foods.

- Another option for allergy testing is a blood test that looks for the level of IgE antibodies (immunoglobulin E – an antibody involved in the allergic response) that you have for a specific food or environmental allergen. Your doctor might recommend this kind of testing if you can't have a skin test because of skin conditions, use of certain medications, or other reasons. In some other cases it is used along with skin tests to provide a more detailed understanding of your allergies
- If you suspect you have a food allergy, speak to your doctor about an assessment by an allergist who will perform the appropriate tests

What questions should I ask my allergist about allergy testing and diagnosis?

Here are some questions you may want to bring up with your allergist or family doctor if you are going to be tested for allergies:

- What type(s) of test will I undergo?
- What are the risks of these tests?
- If I'm still experiencing swelling/itching after a skin test, what can I do to relieve it?
- What happens next if the test doesn't show what I'm allergic to?

What treatments are available for my allergies?

Different approaches to treatment

There are many different types of treatments for allergies, based on the types of symptoms you have, how serious the symptoms are, what is causing the allergy, and what steps you are able to take to avoid contact with your allergen(s). In brief, treatments for allergies fall into three main categories:

- Medications or non-drug treatments that help relieve the symptoms but do not affect the allergic reaction directly (pages 18 and 19)
- Medications that reduce the intensity or length of the allergic reaction itself (pages 21 to 24)
- Therapies that aim to cure or significantly reduce the allergy over the long term (immunotherapy or desensitization) (pages 25 to 29)

Different types of medications

In addition to the different treatment approaches, there are also many different formats of allergy medications available. We will use the following icons to provide a quick reference of which medications are available in which forms:

Pill or liquid (syrup) medication

Nasal spray medication

Injected medication

Inhaled medication (puffer)

Skin lotion, cream, or spray

Eye drops

Sublingual medication (under the tongue)

Medications for allergies can also be sold:

Over the counter – available without a prescription either on the pharmacy shelves or by asking the pharmacist (behind the counter)

Prescription – requires a prescription from a healthcare professional

Treatments to relieve allergic symptoms

If you have milder allergic symptoms or need some extra relief in addition to other medications, there are several options available that treat just the symptoms, without acting directly on the allergic reaction itself.

Treatments for respiratory allergies

Decongestants

Decongestants are medications that help relieve a stuffy or runny nose. Because they relieve only the symptom (nasal congestion) but not the underlying allergy, they can be broadly used for both allergies and respiratory infections such as colds and flus. If you're using decongestant pills or syrups, it's important to read the label carefully as these medications can interact with some other drugs and cause problems in some people. Decongestant nasal sprays, drops, and gels can give you rapid relief of congestion, but they should only be used for three days. If you overuse them, you might get a condition called "rebound congestion" when you stop – major nasal congestion that isn't related to the original allergies or infections. We don't fully understand why rebound congestion happens, so it's best to try to prevent it from happening in the first place by using your medications as directed.

Saline sprays and washes

These non-drug options can also provide temporary relief of stuffy or runny noses but do not treat the allergy that caused the congestion.

Saline (salt water) nasal sprays are available that help moisturize the nasal passages, wash away pollen, and remove mucus. These can be especially helpful for young children and other people who prefer not to use medications. There are also several different devices available that allow you to gently wash out your nasal passages using warm salt water ("nasal irrigation").

Bronchodilators

If your allergic reactions involve symptoms of wheezing, coughing, and a feeling of tightness in the lungs, you might benefit from an inhaled bronchodilator that can relax the airways and help you breathe more easily. If you have already been diagnosed with asthma, you should already have used and be familiar with this type of medication. Please see the *Medications* booklet for more on inhaled bronchodilators and how to use them.

Treatments for gastrointestinal symptoms

The best way to avoid gastrointestinal allergy symptoms is to avoid your triggering food(s) or medication(s), if possible. However, there are some treatments that might help you with ongoing symptoms such as diarrhea, bloating, and nausea. Please talk to your doctor before using any of these remedies, or if you are continuing to experience gastrointestinal symptoms in spite of avoiding your trigger food(s).

- Antacids – to help with GERD/heartburn
- Anti-nausea medications
- Anti-diarrhea medications
- Laxatives – to help with constipation

Treatments for skin and eye reactions

Milder skin reactions can often be treated at home using approaches that target the itching, swelling, and redness. There are also several types of eye drops available over the counter that can provide relief from itchy/watery eyes due to allergies:

- Moisturizers to relieve dry/cracked skin
- Ice on the affected area to reduce swelling
- Corticosteroid creams (for skin)
- Non-prescription eye drops

Treatments that help control the allergic reaction

Many people find that the most effective treatments for allergic reactions are medications that work directly on the allergic reaction to reduce swelling and itching at the source, instead of those that just relieve symptoms. Depending on your specific symptoms and how serious they are, you may be able to find relief with over-the-counter products, or you may need your doctor to prescribe something stronger. There are many different products available and you may need to try several before figuring out which one works best for you.

Antihistamines

Antihistamines are one of the mainstays of allergy treatment. As the name suggests, they work by blocking the action of histamine; a chemical found in your blood that can cause you to experience an allergic reaction. There are many different antihistamine products available in over-the-counter and prescription strengths, and in several different formulations – pills, syrups, nasal sprays, and eye drops. Liquid formulations can be especially helpful for children with allergies. Some pill/liquid antihistamine medications are known to cause drowsiness, so be sure to read the label carefully and avoid doing activities that require you to be very alert if you are taking one of these medications.

Combination decongestant-antihistamine products

Combination products are available that use a decongestant and antihistamine together to provide rapid symptom relief, while also working on the underlying allergic reaction. As always, be sure to read the label and understand what's in your medication, and what the side effects might be (especially drowsiness).

Leukotriene receptor antagonists (LTRAs)

LTRAs are a medication that blocks certain chemicals involved in the allergic reaction. These medications are available as pills prescribed by your doctor. One of their major effects is to help relax the airway muscles if they tighten during an allergic reaction. For this reason, they may be particularly helpful for people who have both allergies and asthma, especially if their asthma is mainly triggered by allergic causes. They are also a treatment for allergic rhinitis.

Mast cell stabilizers

These medications attack another part of the allergic reaction to reduce inflammation and relieve symptoms. They may be especially useful for relieving allergic rhinitis (nasal congestion and sneezing) that is also accompanied by allergic conjunctivitis (watery/itchy eyes). Some products combine a mast cell medication with a corticosteroid (see page 25) to provide additional relief of inflammation.

Epinephrine

If you have severe allergies that put you at risk of an anaphylactic reaction, you should have an epinephrine injector accessible to you at all times. This medication is the first line of emergency treatment for an anaphylactic reaction. Some tips for using and storing an epinephrine injector:

- You and the people you spend the most time with (e.g., family members, co-workers, teachers) should know where the injector is and how to use it
- In the event of an anaphylactic reaction, you should use your epinephrine injector as soon as possible
- Any time you use your injector, you will need follow-up medical care, so call 911 and get someone to take you to the hospital emergency room right away
- For more information on how to use an epinephrine injector, pleases see the materials that came with your device and talk to your healthcare practitioners

Corticosteroids

Corticosteroids are a type of medication that can have a powerful effect to reduce inflammation at various places in the body. In asthma, they are one of the mainstays of long-term treatment – so if you have already been diagnosed with asthma, you are probably already using one of these medications. Corticosteroids are available in several different forms, depending on the location and severity of the allergy and asthma that they're intended to treat:

- Skin lotions and creams – milder forms are available over the counter; higher doses require a prescription
- Puffers (inhalers) – commonly used to treat asthma and other allergic symptoms in the lungs. For more details on inhaled corticosteroids and how to use the different types of puffers/inhalers, please see the *Medications* booklet
- Pills – usually reserved for more severe allergic reactions, such as extensive rashes or swelling

Common questions about corticosteroids

How do corticosteroids interact with the body?

Corticosteroids are closely related to hormones that your body naturally produces to fight inflammation in various body tissues. It's important to follow your doctor's instructions about how to use the medication and, especially how to stop taking it when your treatment is over.

With corticosteroids that you inhale into your lungs or apply to your skin, you are taking a very small dose of the medication that goes exactly to where it is needed. This means that the risk of producing side effects elsewhere in your body is very low, and you usually won't need to take any special steps when you stop using the medication.

If you are taking corticosteroid pills to deal with an allergic reaction, you will usually need to "taper off" the corticosteroid by gradually reducing the dose so that your body's own production returns back to normal.

What is the relationship between corticosteroids and other “steroids”?

Corticosteroids and anabolic steroids are two completely different medications. The term “steroid” in both names just means that one piece of their chemical structures is similar. The other parts of the two molecules are different from each other, so their effects on the body are likewise very different. In particular, corticosteroids do not produce the same kinds of side effects as anabolic steroids.

For some types of allergies, it can be possible to “cure” or greatly reduce the allergic reaction by helping your body become accustomed to the allergen. This type of treatment is called “immunotherapy” and is most effective for allergic rhinitis (hay fever, or pollen allergy) and some types of insect sting allergy. This approach is generally not used for food allergies or any allergy that produces an anaphylactic reaction.

The goal of immunotherapy is for your body to gradually get used to the substance and stop treating it as a foreign invader that needs to be attacked. Once you have been desensitized in this way, it may be possible to cut back on your use of allergy medications.

Immunotherapy is not usually used as the first line of defense against allergies. It is more commonly reserved for allergies that don’t respond well to other treatments or where it just isn’t possible to avoid the trigger allergen. It may also be particularly useful for people whose allergies regularly trigger serious asthma attacks.

Depending on the type of allergen, immunotherapy can be done as injections (allergy shots) or by placing a small tablet containing the allergen under the tongue (sublingual immunotherapy). If you are considering allergen immunotherapy, talk to your doctor about the pros and cons of both methods.

- Injected immunotherapy takes place over a series of sessions at your doctor’s clinic. Your doctor or a nurse will give you a small dose of your target allergen. At each subsequent visit, you will get a slightly higher dose than the last time. This approach can be used for a wider variety of triggering allergens, including pollens, pet dander, cockroach/dust mite allergens, and insect stings

- Sublingual immunotherapy involves placing a small tablet containing the allergen under the tongue. The first dose is done in your doctor's office. Then, if all goes well, the following doses can be taken at home, usually once a day. Unlike injected immunotherapy, the dose stays the same over time and does not increase. Sublingual immunotherapy is most commonly used for hay fever-type reactions to grass and ragweed pollens, but some other treatments will be available in the near future.

Because immunotherapy involves using small amounts of a specific allergen, it's important to know exactly which allergen is causing your symptoms. See pages 14 and 15 for a reminder of how allergy testing can pinpoint the substances that you are allergic to.

How can I reduce my exposure to respiratory allergens?

Respiratory allergies are among the most common allergy types and among the most troublesome for people who also have asthma. The best way to avoid getting allergic rhinitis or another respiratory reaction is to reduce the quantity of allergens in the air you breathe. Depending on which allergens trigger your symptoms, there are a number of practical steps you can take.

General tips for keeping indoor air clean

There are many different types of respiratory allergens that can float as small particles in your home's air – things like animal dander, pollen, dust mites, and mould spores. Research has shown that when we walk in our homes, tiny particles are stirred up from the floor and become suspended in the air. Within an hour, the larger and heavier particles will settle back down to the floor, while smaller particles that are invisible to the eye remain in the air. If you have an allergy to any of these airborne substances, breathing them in will probably produce allergic symptoms such as coughing, sneezing, watery eyes, or wheezing.

There are several general steps you can take to reduce the number of airborne allergens in your home:

- Try to stop them from entering the home in the first place; for example, by having all boots and shoes taken off and left at the door, or by keeping windows closed during pollen season
- Keep the surfaces in your home clean, especially the floor. Most airborne particles will eventually settle onto the floor or carpet until they are stirred up again. In terms of flooring types, hardwood or other smooth flooring is the easiest to keep clean, while getting all the allergens out of carpets is more difficult. However, you can still reduce the amount of allergens and your exposure to them by having your carpets properly cleaned
- Look for household products with the *asthma & allergy friendly*™ certification. Products with this label have been designed, tested, and certified to help people with allergies and asthma reduce their exposure to allergens and other triggers. The certification mark can be found on various brands of air filtration products, home appliances, and home improvement products such as paint and flooring. For more details please see www.asthmaandallergyfriendly.ca

  - In particular, look for a vacuum with the *asthma & allergy friendly* label. Most of these vacuums contain a HEPA (high-efficiency particulate air) filter, which is designed to catch very tiny particles and remove them from the air. Typical vacuums (without a HEPA-type filter) only catch larger particles and let the tiny particles pass through the vacuum and back into the air. This can stir up the dust, allergens, and mould spores in the air in your home for many hours. Using well-designed vacuum cleaners with a HEPA-type filter will help remove the smaller allergen particles from your home's air. Another way to reduce the amount of allergens passing through the vacuum and back into the air is to use a vacuum that vents outside the home (e.g., a central vac system).

How can I reduce my exposure to respiratory allergens?

More tips for reducing your exposure to specific allergens in the home: Bedrooms

Possible Trigger Source	Dust mites	Dander	Pollen	Moulds	Action	Done
Carpets	✘	✘	✘	✘	Replace carpets with wood, tile, or linoleum. Use small area rugs; these are easier to clean.	
Stuffed toys	✘	✘			Remove stuffed toys, or purchase toys that are certified *asthma & allergy friendly*. If you cannot wash stuffed toys in hot water, freeze the toy for 24 hours and wash in cool water to rinse out dead dust mites.	
Dust on surfaces	✘				Use a damp mop or rag to dust.	
Upholstered furniture	✘	✘			Replace all upholstered furniture with items that can be wiped clean.	
Window blinds	✘				Use a pull-down blind instead of horizontal blinds – it will collect less dust.	
Beds and mattresses	✘				Enclose your bed mattress, box spring, and pillows in zippered, dust mite-proof *asthma & allergy friendly* covers. Put tape over the zipper.	
Bedding	✘				Wash all bedding and blankets in hot water (60°C) once a week.	
Humid air	✘			✘	Use a dehumidifier or air conditioner to maintain relative humidity between 40 and 50%. Avoid excessive humidity in the bedroom.	
Dust raised when vacuuming		✘			Use an *asthma & allergy friendly* vacuum cleaner or a central vacuum system that vents outside.	
Pets		✘			Keep pets out of the house or at least out of the bedroom. Keep them in areas without upholstered furniture or carpet.	

More tips for reducing your exposure to specific allergens in the home: Living areas

Possible Trigger Source	Dust mites	Dander	Pollen	Moulds	Action	Done
Pets		✘			Do not get a pet if you know you have an allergy to that type of animal. If you already have a pet that you are allergic to, consider finding a new home for it if your allergy is severe, or look for ways to avoid contact with it if your allergy is less serious.	
Outdoor air			✘	✘	Keep windows closed in high-pollen, mould, and smog seasons. Use air conditioning.	
Carpets	✘	✘	✘	✘	Replace carpets with tile, wood, or linoleum.	
Carpets/floors	✘	✘			Vacuum frequently.	
House plants				✘	Minimize the number of house plants.	
Humid air	✘			✘	Use a hygrometer and keep humidity between 40 and 50%.	
Old, mouldy paper				✘	Throw away old newspapers and magazines.	

More tips for reducing your exposure to specific allergens in the home: Kitchen and bathroom

Possible Trigger Source	Dust mites	Dander	Pollen	Moulds	Action	Done
Mould in refrigerator				✘	Clean out the fridge before mould grows on food and fridge surfaces.	
Mould in refrigerator				✘	Clean fridge drainage tray monthly.	
Carpets	✘			✘	Do not use carpeting in the bathroom.	
Mould on bathroom surfaces				✘	Keep bathroom tiles, tub, toilet, and shower curtain clean and mildew-free.	
Mould on bathroom surfaces				✘	Vent the bathroom fan to the outside and use it when the shower is in use.	

More tips for reducing your exposure to specific allergens in the home: Basement, garage, and yard

Possible Trigger Source	Dust mites	Dander	Pollen	Moulds	Action	Done
Mould in wet basements				✘	Do not sleep in the basement.	
Plants			✘		Plant low-allergen garden plants and trees.	
Humid air	✘			✘	Keep relative humidity below 50%. Use a dehumidifier if needed. Only use a humidifier if necessary. If either is used, keep very clean.	
Furnace	✘	✘	✘	✘	Change the furnace filter regularly.	
Clothes drying			✘	✘	Dry clothes in a dryer that is vented to the outside. Pollen collects on clothes that are hung outside to dry.	
Yard waste			✘	✘	Have someone else mow your lawn, rake your leaves, or turn compost.	
Garbage cans				✘	Keep garbage cans clean.	
Indoor air	✘			✘	Clean and maintain air conditioner.	
Pollen			✘		Check pollen counts and Air Quality Health Index (AQHI), and avoid going outside if they are high. Consider avoiding going outside between 5:00 and 10:00 a.m., and on hot, windy days – pollen counts tend to be highest at these times.	
Carpets in basement	✘			✘	Do not put carpeting directly on concrete floors in the basement.	

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Asthma & Allergy HelpLine

1-866-787-4050

Whether you have lived with asthma all your life or you are newly diagnosed, whether you are a concerned caregiver or simply don't know where to find your answers, you can call our Asthma & Allergy HelpLine to get the help you need. Our free, bilingual call-back service will connect you with experienced and professional Certified Respiratory Educators (CREs) who can give you personalized and tailored advice and tips on managing asthma. Call our toll-free service today!

"I just want to say how much I appreciate your Asthma & Allergy HelpLine. When I found out my young son had asthma I felt so lost. We live in a small town where information is not easily available and the more I read on the Internet the more scared I became, but when I found your website and HelpLine, it meant so much to me. The CRE helped me understand more about triggers and controlling asthma without a lot of technical medical terms. Again, thanks so much for your help."

Asthma.ca™
Asthma Canada

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

Asthma.ca™
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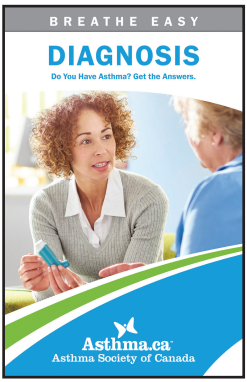
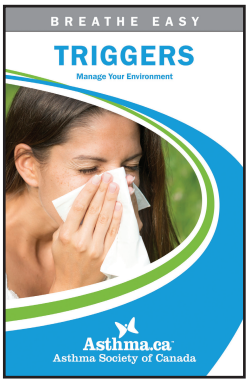
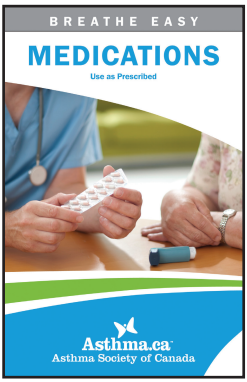
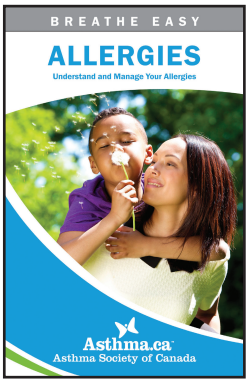
Your Breathe Easy® series:









For more information about Asthma Canada:

www.asthma.ca | 1-866-787-4050 | info@asthma.ca