

Managing Asthma in Our Schools

Video Viewer Guide

Developed in partnership with



B R E A T H E
the lung association

Contents

Overview	3
Learning Objectives	3
Key Messages	4
Identify each student with asthma and understand their needs as outlined in their Individual Student Asthma Management Plan.....	4
Ensure each student with asthma has easy access to their reliever inhaler.....	5
Recognizing and managing asthma symptoms and asthma attacks	5
Steps to take when a student is having asthma symptoms.....	6
Students who have both asthma and anaphylaxis	7
Emergency management for students who have both asthma and anaphylaxis.....	8
Reflective Questions	9
Concepts for Extending Learning	10
Obligations under Ryan’s Law	10
Asthma and physical activity	11
Reducing exposure to school asthma triggers	12
Viral infections.....	12
Allergens.....	12
Irritants.....	13
Air pollution	13
All about asthma	13
Signs and symptoms	14
Asthma medications	14
Relievers	15
Controller Medications.....	15
Asthma triggers.....	16
Level of asthma control	16
Inhaler devices and how to use them	17
Metered dose inhalers (MDIs)	17
How to Use an MDI with a Spacer with Mouthpiece.....	17
How to Use an MDI	18
Dry powder inhalers (DPIs).....	19
Diskus®	19
Turbuhaler®	19
Asthma in Schools Resources	19
The Lung Association Resources	19
Ophea Resources.....	20
Other Resources.....	20
References	20

Overview

Ryan's Law (Ensuring Asthma Friendly Schools) was passed in the Ontario legislature on May 5, 2015. This legislation requires every school board to provide a safe school environment for students with asthma in the province of Ontario. The Individual Student Asthma Management Plan must be completed (also referred to as the individual student Plan of Care). Students are allowed to carry their asthma reliever inhaler on them (students under 16 years of age require parent/guardian permission).

The Lung Association- Ontario (TLA) has partnered with the Ministry of Education and Ophea to develop resources for students and school staff on recognizing and managing asthma symptoms and attacks.

The Video Viewer Guide is a support resource for teachers and school staff, to accompany Ophea's **Managing Asthma in our Schools** video (https://www.ophea.net/asthma_in_schools).

Asthma is a chronic lung disease that affects the airways (breathing tubes) and can sometimes make it hard to breathe. It affects one in five children in Ontario. Asthma can be fatal without proper management and access to medications. In recognition of the fact that children and youth with asthma spend a large part of their time at school, Ryan's Law (Ensuring Asthma Friendly Schools), was enacted in May 2015.

Ryan's Law requires every Ontario school board to develop an asthma policy and implement procedures that help to protect students who have asthma. The obligations for school boards and school staff are listed in the **Obligations under Ryan's Law** section of this Guide.

The health and safety of students with medical conditions is essential to promoting well-being, and requires a partnership between all members of the school community, students and their families and health-care providers. School staff play an important role in helping students with asthma manage their condition while at school.

We have prioritized the learnings in this Viewer Guide, with the highest priorities in the "Need to Know" section and the second priorities in the "Good to Know" section.

"Need to Know" Learning Objectives

After reviewing the video in conjunction with this video viewer guide, you will be able to:

- Know how to identify each student with asthma and be familiar with their needs as identified in their Individual Student Asthma Management Plan (ISAMP);
- Know how to determine where each student's reliever inhaler is located, and when their reliever inhaler is required;
- Recognize asthma symptoms and asthma attacks and know what to do when they occur;
- Understand how to administer a metered dose inhaler (MDI) reliever inhaler with and without a spacer device; and
- Understand the emergency management steps for students who have both asthma and anaphylaxis.

Key Messages

Identify each student with asthma and understand their needs as outlined in their Individual Student Asthma Management Plan (also referred to as Plan of Care)

Each school shall annually identify which students in their schools have asthma, preferably during school registration:

- Principals shall work with parents/guardians and students (if age-appropriate) on developing an Individual Student Asthma Management Plan (ISAMP) for each student with asthma
- Parents/guardians and the student with asthma (if age-appropriate) should complete the relevant sections of the ISAMP and bring the form to the school principal, and also should ensure the information is kept up-to-date

The ISAMP provides guidance on managing each student with asthma. Review the completed ISAMP with parents/guardians and students (if age appropriate). Seek permission to post the ISAMPs in accessible visible locations in the classrooms.

The ISAMP includes:

- Student's emergency contacts
- Student's asthma triggers
- Where student's asthma medications are kept and when their use may be required
- Signed parent/guardian consent for student to carry their asthma medication
- Signature of health-care provider to confirm recommendations of the plan (optional)
- Signature of the school principal to indicate review of plan

INDIVIDUAL STUDENT ASTHMA MANAGEMENT PLAN

School Board Logo

Place Student Photo Here

Student Name _____ Date of Birth _____
Ontario Education Number _____ Age _____
Grade _____ Teacher _____

Emergency Contacts (list in priority of contact):

	Name	Relationship	Daytime Phone	Alternate Phone
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____

KNOWN ASTHMA TRIGGERS

Cats/dust/pet hair Physical activity/exercise Pet dander Cigarette smoke Pollen Mold
 Dust Cold weather Strong smells Allergies (specify): _____
 Anaphylaxis (specify allergy): _____ Other (specify): _____
Asthma trigger avoidance instructions: _____

RELIEVER INHALER USE AT SCHOOL AND DURING SCHOOL-RELATED ACTIVITIES

A reliever inhaler is a fast-acting medication (usually blue in colour) that is used when someone is having asthma symptoms. The reliever inhaler should be used:

When student is experiencing asthma symptoms (e.g., trouble breathing, coughing, wheezing).
 Other (explain): _____

Use reliever inhaler _____ (Name of Medication) _____ in the dose of _____ (Number of Puffs)

Spacer (valved holding chamber) provided? Yes No

Place a check mark beside the type of reliever inhaler that the student uses:

Subutamol (e.g. Ventolin) Aromis Ventolin Bricanyl Other (specify): _____

Page 1 of 3

Visual sample of the ISAMP document

Ensure each student with asthma has easy access to their reliever inhaler

Schools must ensure each student has quick and easy access to their fast-acting reliever inhaler. The reliever inhaler is usually blue in colour. Schools must allow students to carry their reliever inhaler with permission from their parent/guardian. Students 16 years of age and older do not require parent/guardian permission to carry their reliever inhaler.

Location of student's reliever inhaler(s) should be indicated in the ISAMP. Some students may also have a spare inhaler kept at their school.



Example of a reliever inhaler

Recognizing and managing asthma symptoms and asthma attacks

School staff play an important role in helping students manage asthma while at school. School staff and those in regular contact with students should know how to recognize and manage asthma symptoms which when left untreated could lead to an asthma emergency (attack).

It is important to note that asthma symptoms are individual. However common symptoms include:

- wheezing (whistling sound from inside the chest)
- difficulty breathing
- chest tightness
- coughing

If a student experiences asthma symptoms regularly, or has difficulty participating in physical activity, it is important to communicate this with their parent/guardian and to the student, if age appropriate. This is often a sign that their asthma is not well controlled and that a visit with their health-care provider may be necessary.

Ryan's Law stipulates that if a school employee has reason to believe that a student is having an asthma attack, the employee may administer or help administer an asthma reliever inhaler.

Steps to take when a student is having asthma symptoms:

TAKE ACTION

If **any** of the following occur:

- Continuous coughing
- Trouble breathing
- Chest tightness
- Wheezing (whistling sound in chest)

Student may also be restless, irritable and/or very tired.

STEP 1: Immediately use fast-acting reliever inhaler (usually a blue inhaler). Use a spacer if provided.

STEP 2: Check symptoms. Only return to normal activity when all symptoms are gone.

If symptoms get worse or do not improve within 10 minutes, this is an **emergency** - follow steps below.

ASTHMA EMERGENCY

If **any** of the following occur:

- Breathing is difficult and fast
- Cannot speak in full sentences
- Lips or nail beds are blue or gray
- Skin on neck or chest sucked in with each breath

Student may also be anxious, restless and/or very tired.

STEP 1: **Immediately** use fast-acting reliever inhaler (usually a blue inhaler). Use a spacer if provided.

CALL 911 for an ambulance. Follow 911 communication protocol with emergency responders.

STEP 2: If symptoms continue, use reliever inhaler every 5-15 minutes until medical help arrives.

While waiting for medical help to arrive:

- ✓ Have student sit up with arms resting on a table (**do not** have student lie down unless it is an anaphylactic reaction).
- ✓ **Do not** have the student breathe into a bag.
- ✓ Stay calm, reassure the student, and stay by his/her side.
- ✓ Notify parent/guardian or emergency contact.

It is important to notify the parent/guardian that an asthma attack occurred so that they can monitor the asthma at home and follow up with their health-care provider.

Order the [Managing Asthma Attacks poster](#). This poster should be displayed in various school locations such as the front office, gym, washrooms, and main lobby.

Students who have both asthma and anaphylaxis

Students who have both asthma and anaphylaxis have a greater risk of dying. Anaphylaxis is a severe life-threatening allergy that requires immediate treatment. Anaphylactic shock is an extreme overreaction of the body's immune system to an allergen.

Anaphylaxis can affect many parts of the body:

- Skin (hives, swelling, itching, warmth, redness, rash)
- Upper airway (nose, throat)
- Lower airway (windpipe, lungs)
- Stomach and intestines (digestive)
- Heart and circulation (cardiovascular)

Symptoms of anaphylactic shock are:

- Swelling
- Difficulty breathing
- Abdominal cramps
- Vomiting
- Diarrhea
- Coma
- Death

Causes of anaphylaxis include:

- Food (the most common cause)
- Insect stings
- Medications
- Latex
- Physical activity

The most common food allergens (allergies) are:

- Peanuts
- Tree nuts (e.g., almonds, Brazil nuts, cashews, hazelnuts, macadamia nuts, pecans, pine nuts, pistachio nuts, walnuts)
- Seafood (e.g., crustaceans, fish, shellfish)
- Milk
- Eggs
- Soy
- Wheat
- Sesame seeds
- Mustard

Emergency management for students who have both asthma and anaphylaxis

Some students have both asthma and anaphylaxis. If a student is having an anaphylactic reaction, or if you are not sure if it is an asthma attack or an anaphylactic reaction, follow **The 5 Emergency Steps** to treat anaphylaxis:



Epinephrine auto-injector

1. Give epinephrine (e.g., EpiPen®) at the first signs of an allergic reaction.
2. Call 9-1-1 or your local emergency medical services and tell them that a student is having an anaphylactic reaction.
3. A second dose of epinephrine can be given as early as 5 minutes after the first dose if there is no improvement in symptoms.
4. Student must be brought to the nearest hospital right away (ideally by ambulance), even if symptoms are mild or have stopped. The reaction could get worse or come back after using epinephrine. Student should stay in the hospital to be observed (generally about 4 hours).
5. Call the emergency contact person (e.g., parent/guardian).

(Adapted from foodallergycanada.ca/about-allergies/anaphylaxis – accessed: August 1, 2017)

**** If asthma symptoms are present at any time, also give the student their fast-acting reliever inhaler (usually a blue inhaler) ****

Learn how to use an EpiPen® at <http://www.epipen.ca/en/about-epipen/how-to-use>.

Asthma attacks and anaphylactic reactions are preventable with proper management and education.

Reflective Questions

1. What is Ryan's Law?
2. What are the components of Ryan's Law?
3. What are my obligations under Ryan's Law?
4. What is my school board and school doing to ensure Ryan's Law is implemented?
5. What steps can be taken to help students with asthma stay safe at school and when off-site at school outings?
6. How do I know which students have asthma?
7. What information needs to be included in the Individual Student Asthma Management Plan? Who fills it out? When and how often is it updated? Where should it be kept?
8. How would you know if a student is having asthma symptoms or an asthma attack?
9. What steps do I take to help a student who is having asthma symptoms or an asthma attack?
10. A fast-acting reliever inhaler, which is usually a blue inhaler, is a very important emergency asthma medication. In the event of an asthma emergency, how would you know where a student's reliever inhaler is located?
11. According to Ryan's Law, as a teacher am I allowed to give or assist a student with asthma to take reliever inhaler (puffer)? Does the Good Samaritans Act apply to Ryan's Law?
12. Has viewing the video changed the way you think about students with asthma?
13. There are many misconceptions and myths about asthma. Should students with asthma be able to participate in physical activity? Is there any situations when a student with asthma should be stopped from doing any physical activity and why?
14. How do you administer a reliever inhaler to a student with and without a spacer?
15. When a student has both anaphylaxis and asthma and the student has a reaction and you are not sure if its asthma or anaphylaxis, what should I administer?
16. If I want more information on asthma, where can I find it?

Concepts for Extending Learning

(Good to Know)

Obligations under Ryan’s Law

Ryan’s Law requires every Ontario school board to develop an asthma policy and implement procedures that help to protect students who have asthma.

Ryan’s Law obligations:

- Annually identify which students in their schools have asthma, preferably every year during school registration. Principals shall work with parents/guardians and students (if age-appropriate) on developing an Individual Student Asthma Management Plan (ISAMP) for each student with asthma (also referred to as Plan of Care).
- Communicate to school staff, employees and others in regular contact with students, which students have asthma and the recommendations for supporting them, which are detailed in the student’s ISAMP
- Allow students to carry their asthma reliever inhaler (students under 16 years of age require parent/guardian permission)
- Reduce student exposure to asthma triggers such as pollen, dust, mould, pet allergens, cleaning products, scents and renovations/building repairs
- Maintain a file with up-to-date information for each student with asthma that contains their ISAMP and other notes from health-care providers
- Provide regular training to school staff/employees and those in regular contact with students about how to recognize and manage asthma symptoms and asthma attacks, such as annual viewing of **Managing Asthma in Our Schools** video.

The ISAMP provides guidance on managing each student with asthma. Parents/guardians and the student with asthma (if age-appropriate) should complete the relevant sections of the ISAMP and bring the form to the school principal, and also should ensure the information is kept up-to-date. School principals and school staff should review the completed ISAMP with parents/guardians and students (if age appropriate). Seek permission to post the ISAMPs in accessible visible locations in the classrooms.

The ISAMP includes:

- Student’s emergency contacts
- Student’s asthma triggers
- Where student’s asthma medications are kept and when their use may be required
- Signed parent/guardian consent for student to carry their asthma medication
- Signature of health-care provider to confirm recommendations of the plan (optional)
- Signature of the school principal to indicate review of plan

Ryan's Law stipulates that if a school employee has reason to believe that a student is having an asthma attack, the employee may administer asthma medication.

Specifically, Ryan's Law states:

Employees of a board may be preauthorized to administer medication or supervise a pupil while the pupil takes medication in response to an asthma exacerbation, if the school has the consent of the parent, guardian or pupil. If an employee has reason to believe that a pupil is experiencing an asthma exacerbation, the employee may administer asthma medication, even if there is no preauthorization to do so.

The Bill provides that no action or other proceedings for damages shall be commenced against a board employee for an act or omission done or omitted in good faith. The Bill preserves common law duties.

[Accessed at http://www.ontla.on.ca/bills/bills-files/41_Parliament/Session1/bozora.pdf August 1, 2017]

[View Ryan's Law](#)

Asthma and physical activity

Regular physical activity is an important part of a healthy life. When asthma is well-managed, it does not usually limit a student's ability to participate in physical activity. Physical activity at school may include Daily Physical Activity (DPA), phys-ed class, recess, intramurals or interschool athletics.

All students need to be physically active, including those with asthma. However, physical activity should not be forced if the student knows that some distress is likely to occur or if the student is already experiencing asthma symptoms.

Exercise-induced asthma symptoms may occur during or after physical activity.

Physical activity is more likely to trigger asthma symptoms when it is performed:

- in cold weather
- in hot, humid weather
- when air quality is poor
- when a student with asthma has a cold or the flu

Steps can be taken to enable participation. Strategies exist to help reduce the student's risk of having asthma symptoms during physical activity:

- Some students may need to use their reliever inhaler 10-15 minutes prior to physical activity to help prevent the onset of asthma symptoms
- Provide a gradual warm-up before an activity and a cool-down afterwards
- Slowly increase the intensity of the activity to reduce the chances of having asthma symptoms
- Ensure easy access to each student's reliever inhaler throughout the activity

Students with asthma may need to do physical activity indoors under these outdoor conditions:

- Very hot or cold temperature
- High levels of air pollution—find current and forecast air quality health index (AQHI) readings at www.airqualityontario.com or in the local news media
- High levels of outdoor allergens (pollen, mould)—find pollen reports at www.weather.ca or in the local news media

A student who is already experiencing asthma symptoms should not begin any physical activity.

If symptoms develop during physical activity, the student should:

- Stop the activity
- Take their reliever inhaler (follow the steps as outlined in their ISAMP)
- Sit and rest, ideally in an environment without their triggers

Symptoms should improve within 5-10 minutes of taking their reliever inhaler. If their symptoms completely go away, the student can then resume the activity.

If a student with asthma has difficulty participating in physical activity, it is important to communicate this with their parent/guardian and to the student, if age appropriate. This is often a sign that their asthma is not well controlled and that a visit with their health-care provider may be necessary.

Reducing exposure to school asthma triggers

It is important for each school to identify and reduce exposure to asthma triggers. Helping students to avoid exposure to their triggers is an important way to help prevent asthma symptoms. It is also important to consider any trigger exposures that may occur when off-site on school outings.

Here are some examples of common school asthma triggers and strategies that can help.

Viral infections

- To help prevent the spread of viral infections, encourage frequent hand washing and have available an alcohol-based hand sanitizer for use when a sink is not accessible
- Encourage the flu shot for students and school staff
- Encourage students and staff to stay at home when they feel sick

Allergens

- Do not have pets in the school
- Monitor local pollen reports (e.g., www.weather.ca, local news media)
- Pollen levels tend to be highest on sunny, dry, windy days. Consider moving outdoor activities indoors if the pollen levels are high.

- When pollen levels are high, consider closing windows and using air conditioning (if available) to reduce the amount entering the school
- Ensure any plumbing leaks or moisture issues are fixed promptly and any mouldy items cleaned or discarded
- Ensure any rodent or insect infestations are managed

Irritants

- Uphold the Smoke-Free Ontario Act. Make sure students, staff and visitors do not smoke on school property.
- Use scent-free markers and dust-free chalk
- Use non-toxic art supplies (e.g., paint, glues)
- Discourage staff, students and volunteers from using scented products
- Use non-toxic, low-odour cleaning products
- Schedule building repairs and cleaning when students and staff are least likely to be exposed. Cleaning is best completed during after school hours.

Air pollution

- Find current and forecast air quality health index (AQHI) readings at www.airqualityontario.com or in the local news media
- Use the AQHI Categories and Health Messages table for guidance for “At Risk Population” (e.g., students with asthma)
- When the AQHI is high, consider moving outdoor activities indoors, closing windows, and using air conditioning (when available) to reduce the amount of pollution entering the school
- Encourage anti-idling policies for all vehicles on or next to school property

All about asthma

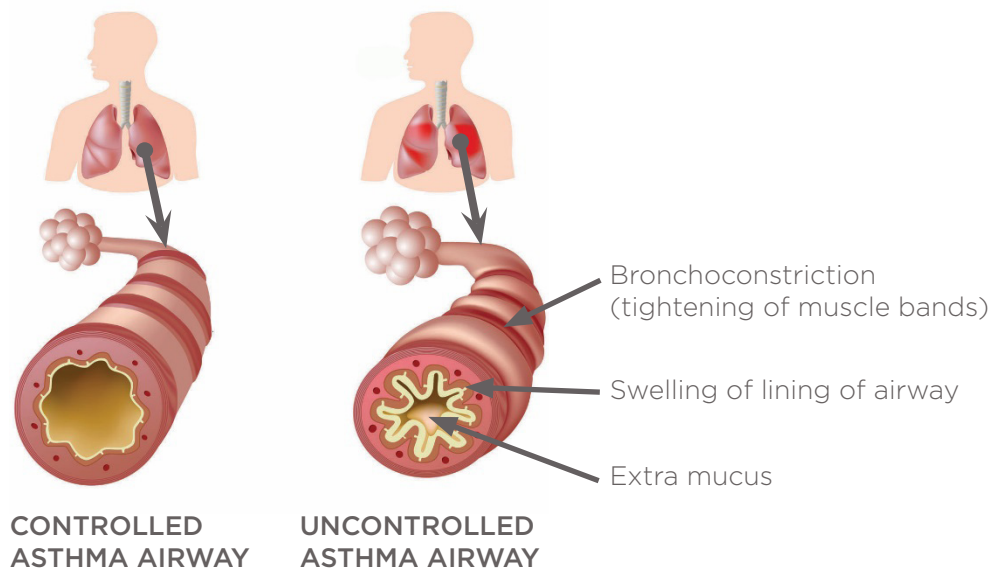
Asthma is a chronic lung condition that affects the airways (breathing tubes). Since asthma symptoms come and go, it is often dismissed as not very serious. In fact, asthma is the leading cause of hospitalization a significant cause of school and work absenteeism for children in Ontario.¹

Asthma can be controlled. However, asthma can be fatal without proper management and access to medication. In 2013, 259 Canadians died from asthma (100 in Ontario).²

When someone has asthma, the flow of air in and out of the lungs can get blocked for the following reasons:

- The lining of the airways can become inflamed and swollen
- Extra mucus (phlegm or sputum) can build up in the airways
- Airways are wrapped in tiny muscle bands that are extra-sensitive to certain things (triggers). These muscle bands can tighten up (constrict), blocking the flow of air. This is called “bronchoconstriction”.

Controlled Asthma Airway vs. Uncontrolled Asthma Airway



Signs and symptoms

Students with asthma have sensitive airways. When they are exposed to certain triggers, such as colds or flu viruses, physical activity, allergens or irritants, the airways can narrow causing symptoms such as difficulty breathing.

The most common symptoms of asthma are:

- wheezing (whistling sound from inside the chest)
- difficulty breathing
- chest tightness
- coughing

Asthma medications

There are two main types of asthma medications:

- Relievers
- Controllers

Students should be aware that inhalers are medications and like other medications, they should not be shared.

Relievers

Fast-acting reliever inhalers are usually blue in colour and provide quick relief of asthma symptoms by opening up the airways. Reliever inhalers work within 5-10 minutes to make breathing easier. Side effects of reliever inhalers can include hand tremors (jitters or shaking) and a fast heart rate.



Example of a reliever inhaler

Reliever inhalers are life-saving medications for asthma, comparable to epinephrine auto-injectors for anaphylaxis, and should therefore be treated similarly. It takes only minutes for the airways to narrow enough to cause severe breathing difficulties. Each student with asthma should have easy access to their reliever inhaler, including when off-site on school outings. Some students may be unable to use their reliever inhaler on their own and may require assistance.

Every school must permit students to carry their asthma medication with parent/guardian permission. Students 16 years of age and older do not require parent/guardian permission to carry their asthma medication. Most students seven years of age and older are capable of learning how and when to use their reliever inhaler. Some students may also have a spare inhaler at their school.

School staff and those in regular contact with students play an important role in supporting students in accessing their asthma medication. School staff are often the first to notice an increase in asthma symptoms in a student or an increase in the use of a reliever inhaler, indicating a loss of asthma control. If a student requires the reliever inhaler more than three times per week, this may be a sign that their asthma is not under control. It is important to communicate this with the parent/guardian and to the student, if age-appropriate. This is often a sign that their asthma is not well controlled and that a visit with their health-care provider may be necessary.

When well controlled at home and fully supported at school, asthma should not generally interfere with a student's attendance, performance or participation in school activities.

Controller Medications

Controller medications work more slowly than reliever inhalers and not in the same way. **Therefore, controller medications are not used to provide quick relief from asthma symptoms.** Controller medications are usually taken daily to control asthma by reducing the swelling in the airways. They are usually taken at home in the morning and at night, so generally not taken to school.

A student may need to take a controller medication at school in either of these circumstances:

- The student is participating in an overnight activity
- The student needs to take their controller medication more often than twice a day (morning and night)

Asthma triggers

Students with asthma have airways that are more sensitive to things in the environment. These are called “triggers” because they trigger asthma symptoms by narrowing the airways.

The things that trigger symptoms vary among students. Triggers take time to develop and can also change over time.

There are two types of asthma triggers:

- Allergens: e.g., pets, dust mites, mould, pollen, cockroaches
- Irritants: e.g., viral infections (colds, flu), air pollution, smoke, chemical odours, scents, cold air, hot humid air, exercise

Triggers commonly found in and around schools include:

- Mould (indoor, outdoor)
- Pollen (trees, grasses, weeds)
- Marker and crayon odours
- Scented products (e.g., perfumes, deodorant, cleaning supplies)
- Dust and strong smells from renovations (e.g., paint fumes)
- Musty, dusty gym mats
- Dust from carpets and drapes
- Pet allergens
- Exhaust fumes from idling cars and school buses

Level of asthma control

Over 50 per cent of individuals do not have good control of their asthma.³ When asthma is managed properly, it can be kept under good control with minimal interference in daily activities.

Signs that a student does not have their asthma under control include:

- Using reliever inhaler (usually a blue inhaler) more than three times per week
- Experiencing asthma symptoms (e.g., wheezing, difficulty breathing, chest tightness, coughing) more than three days per week
- Unable to participate fully in physical activity or school activities due to asthma
- Missing school due to asthma

School staff may be the first to see when a student’s asthma is not under control. It is important to follow the ISAMP and notify the parent/guardian so that they can monitor the asthma at home and follow up with their health-care provider.

Inhaler devices and how to use them

Reliever inhalers come in two different types of devices:

- Metered dose inhaler (MDI)
- Dry powder inhaler (DPI)

Metered dose inhalers (MDIs)

Metered dose inhalers (MDIs), also referred to as puffers, deliver the medication in the form of an aerosol spray. It sprays a cloud of medication when pressed, which is subsequently inhaled. Students using an MDI should always use a spacer, which is a holding chamber with a one-way valve. The spacer makes it easier to use the MDI and increases the amount of medication that gets into the lungs. The MDI is the most common type of inhaler seen in schools.



Metered dose inhaler (MDI) being used with a spacer

How to Use an MDI with a Spacer with Mouthpiece

Note: *If you are using the inhaler for the first time, or if it has not been used for a few days, check the instructions given with the device to see if you need to prime (prepare) it before use.*

1. Remove the cap from the inhaler and the spacer.
2. Shake the inhaler well 5-6 times before each puff.
3. Keep the inhaler upright and insert the mouthpiece into the back of the spacer.

4. Breathe out all the way.
5. Holding the spacer with one hand, place the spacer mouthpiece between the teeth and seal with the lips.
6. As you start to inhale slowly, press the inhaler canister down with your other hand to release a puff of medication into the spacer. Continue to breathe in slowly all the way.
7. Take spacer out of your mouth and hold your breath for 5-10 seconds.
[If you cannot take a slow deep breath in, breathe in 2-3 times as deeply possible while keeping good seal on the spacer mouthpiece].
8. If you need another puff, wait 30-60 seconds, then repeat steps 2-7.
Note: Check manufacturer's instructions as they may vary slightly for each device.
9. When finished, put the cap back on the inhaler and spacer.

How to Use an MDI

Note: If you are using the inhaler for the first time, or if it has not been used for a few days, check the instructions given with the device to see if you need to prime (prepare) it before use.

1. Remove the cap from the inhaler.
2. Shake the inhaler well 5-6 times before each puff.
3. Breathe out all the way.
4. Hold the inhaler upright. There are two ways to use the inhaler:
 - a. Closed mouth- place the mouthpiece between your teeth and form a good seal with your lips, or
 - b. Open mouth- hold the mouthpiece 2-3 finger widths in front of your open mouth.
5. As you start to inhale slowly, press the inhaler canister down to release a puff of medicine. Continue to breathe in slowly all the way.
6. Hold your breath for 5-10 seconds.
7. If you need another puff, wait 30-60 seconds, then repeat steps 2-6.
Note: Check manufacturer's instructions as they may vary slightly for each device.
8. When finished, put the cap back on the inhaler.

- [How to Use an MDI with a Spacer \(fact sheet\)](#)
- [How to Use an MDI with a Spacer \(video\)](#)
- [How to Use an MDI \(fact sheet\)](#)
- [How to Use an MDI \(video\)](#)

Dry powder inhalers (DPIs)

Dry powder inhalers (DPIs) are different than the MDIs in that they don't deliver the medication through an aerosol spray, but rather from a powder that must be forcefully inhaled. The DPI cannot be used with a spacer. The most common DPI inhalers seen at school are the Diskus[®] and Turbuhaler[®].

Diskus[®]

- [How to Use a Diskus[®] \(fact sheet\)](#)
- [How to Use a Diskus[®] \(video\)](#)

Turbuhaler[®]

- [How to Use a Turbuhaler[®] \(fact sheet\)](#)
- [How to Use a Turbuhaler[®] \(video\)](#)

Videos on how to use the inhalers: lungontario.ca/inhalervideos.

Find various resources, including inhaler device instructions at lungontario.ca/resources.

Asthma in Schools Resources

The Lung Association Resources

For school resources go to www.ryanslaw.ca:

- [Individual Student Asthma Management Plan](#)
- Managing Asthma Attacks poster

The Lung Association Lung Health Information Line: **1-888-344-LUNG** (5864)

- Monday–Friday 8:30am–4:30pm Eastern Time
- Staffed by health-care professionals trained as certified respiratory educators

[Order The Lung Association resources: lungontario.ca/resources](http://lungontario.ca/resources)

Inhaler devices: lungontario.ca/inhalervideos

Ophea Resources

Order Ophea resources (www.ophea.net/order):

- Creating Asthma Friendly Schools Essentials Kit
- Creating Asthma Friendly Schools Community Awareness Kit
- Creating Asthma Friendly Schools Manual

- Creating Asthma Friendly Environments for Children and Youth Manual
- Managing Asthma in our Schools video (https://www.ophea.net/asthma_in_schools)
- www.asthmafriendly.ca

Other Resources

Food Allergy Canada - Anaphylaxis

(<http://foodallergycanada.ca/about-allergies/anaphylaxis>)

How To Use EpiPen®

(<http://www.epipen.ca/en/about-epipen/how-to-use>)

Ryan's Law

(http://www.ontla.on.ca/bills/bills-files/41_Parliament/Session1/bo2ora.pdf)

References

1. Government of Ontario Website: <http://www.health.gov.on.ca/en/pro/programs/cdpm/asthma.aspx> (accessed: August 22, 2017)
2. Statistics Canada. Table 102-0530 - Deaths, by cause, Chapter X: Diseases of the respiratory system (J00 to J99), age group and sex, Canada, annual (number), CANSIM (database). (accessed: August 23, 2017)
3. FitzGerald JM, Boulet L-P, McIvor RA, Zimmerman S, Chapman KR. Asthma control in Canada remains suboptimal: The Reality of Asthma Control (TRAC) study. Canadian Respiratory Journal : Journal of the Canadian Thoracic Society. 2006;13(5):253-259.