

Appendix L

Sample Management of Asthma Protocol

Teachers should be familiar with their school board's and school's asthma policy/protocol as per Ryan's Law, 2015 (Ensuring Asthma Friendly Schools).

Asthma: Definition, Symptoms

Asthma is a chronic inflammatory disease of the airways in the lungs. Inflammation in the airways makes the lungs more sensitive to substances in the environment, typically termed "asthma triggers." When people with asthma are exposed to their triggers, they may experience a narrowing of the airways (resulting from the contraction [squeezing] of the airway muscles), increased airway inflammation, and extra mucus production, making breathing more difficult. Narrowing of the airways causes people to experience asthma symptoms.

Asthma symptoms include:

- difficulty breathing;
- coughing;
- wheezing (whistle sound);
- chest tightness; and
- shortness of breath.

Not all people with asthma have the same triggers. Triggers can bring on an asthma attack, which can be life-threatening if left untreated. Physical activity is a common asthma trigger in children and youth. Exposure to other common asthma triggers can occur during physical activity and steps should be taken to reduce exposure to:

- extremes in weather (cold, hot, wind, high humidity);
- poor air quality;
- dusty gym mats;
- high pollen days (trees, grasses, flowers, weeds);
- mould (found in decaying leaves, water-damaged areas, areas around swimming pools and skating rinks); and
- strong smelling cleaning products (chlorine and ammonia based products).

Asthma Medication at School (Reliever Inhaler)

Students with asthma need a reliever medication inhaler easily accessible at all times and must take it as prescribed by their doctor. This medication provides quick relief from asthma symptoms.

Students should carry their own inhaler medication with them. Students under 16 years of age must have his/her parent/guardian permission to carry his or her asthma medication.

Exercise-Induced Asthma (EIA)

Vigorous and/or aerobic activity is a common asthma trigger and can narrow the airways. This is due to the cooling and drying of the airways that results when breathing occurs through the mouth (versus the nose) at a rapid rate. For students with asthma, this fast-paced breathing triggers the muscles in the airway to contract causing airway narrowing and the

experience of asthma symptoms. Exercise-induced asthma symptoms (coughing, wheezing, trouble breathing) can start several minutes into the activity and up to 30 minutes after completion of the activity. Asthma symptoms from exercise are often due to poorly managed asthma, and a visit to a health care provider may be required. Exercise-induced asthma is more commonly experienced when physical activity is performed:

- in cold weather environments;
- in conjunction with an upper respiratory infection (cold);
- with sustained running;
- during high pollen count days; or
- during poor air quality days.

With good control of asthma and a warm up, most students with asthma will not have trouble being physically active. If a student experiences exercise-induced asthma symptoms, the reliever inhaler should be used to reverse or relieve the symptoms. Students who repeatedly experience exercise-induced symptoms should talk to their doctor for treatment strategies to allow for full participation. For some students, their doctor will advise them to take the reliever inhaler 10-15 minutes before starting the physical activity. For students identified with asthma, the teacher is to check the student's Asthma Management Plan for specific information to support the student's full participation and/or have a conversation with the student's parent/guardian to learn about the student's asthma.

Physical Activity and Students with Asthma

Physical activity is part of a healthy lifestyle. Typically, students with asthma can participate in physical activity similar to students without asthma. The following strategies support students with asthma to participate in physical activity.

- Students should not start or initiate a physical activity if symptoms are being experienced. If this is the case, the student, should use his/her reliever inhaler and, only when symptoms are completely resolved, the student may initiate the physical activity.
- Ensure a slow warm up has occurred before activities requiring sustained exertion (aerobic function).
- Be aware of potential asthma triggers in the area (poor air quality, high pollen, strong smells (paint, new carpets/flooring, etc) and remove the student from triggers.
- Encourage the student to wear a scarf or facemask in cold weather to help warm and humidify the air.
- Move planned outdoor activities to well-ventilated indoor sites if there are extreme weather conditions (cold, hot, humidity, wind), high pollen counts, or poor air quality.
- Check pollen levels in your community at www.theweathernetwork.ca and air quality forecasts and smog alerts at www.airqualityontario.com.
- Have parents/guardians inform staff of modifications or considerations for participating physical activity.
- Notify parents/guardians if the student is not able to fully participate in physical activity because of asthma symptoms; this can be a sign of poorly controlled asthma that needs to be followed-up with their health care provider.

Strategies for Managing an Asthma Attack

- If the student starts having asthma symptoms after starting physical activity, have him/her stop the activity and take the reliever inhaler (two puffs given one puff at a

time, with 30 seconds between puffs). When the student is fully recovered, s/he may resume the activity.

- If the symptoms are not relieved within 10 to 15 minutes after using the reliever inhaler, repeat the two puffs of the reliever medication, contact the parents and do not allow him/her to return to the activity.
- If the student's asthma symptoms do not improve, or worsen after giving the reliever inhaler, this is an emergency situation and 911 should be called. Follow the steps outlined in the Ontario Lung Association's Managing Asthma Attacks poster to help identify and treat an asthma emergency.

Managing Asthma Attacks

TAKE ACTION	
<p>If any of the following occur:</p> <ul style="list-style-type: none"> • Continuous coughing • Trouble breathing • Chest tightness • Wheezing (whistling sound in chest) <p>Student may also be restless, irritable and/or very tired.</p>	<p>Step 1: Immediately use fast-acting reliever inhaler (usually a blue inhaler). Use a spacer if provided. </p> <p>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.</p>
EMERGENCY	
<p>If any of the following occur:</p> <ul style="list-style-type: none"> • 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 <p>Student may also be anxious, restless and/or very tired.</p>	<p>Step 1: Immediately use fast-acting reliever inhaler (usually a blue inhaler). Use a spacer if provided. </p> <p> Call 911 for an ambulance. Follow 911 communication protocol with emergency responders. </p> <p>Step 2: If symptoms continue, use reliever inhaler every 5-15 minutes until medical help arrives.</p>
<p>While waiting for medical help to arrive:</p> <ul style="list-style-type: none"> ✓ 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 student breathe into a bag. ✓ Stay calm, reassure the student, and stay by his/her side. ✓ Notify parent/guardian or emergency contact. 	

This publication is available in Accessibility for Ontarians with Disabilities Act (AODA) electronic format at www.on.lung.ca/resources.

To learn about asthma call The Lung Association Lung Health Information Line at **1-888-344-LUNG (5864)** or visit www.on.lung.ca

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Resources

For more information and to order resources designed to increase the skills and knowledge of educators about asthma management in schools visit teachingtools.ophea.net/supplements/asthma-education-initiative. For more asthma information and resources and to order or download copies of the Managing Asthma Attacks poster visit onlung.ca.