

Managing Asthma During Physical Activity

Presented by
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Training Objectives

Participants will:

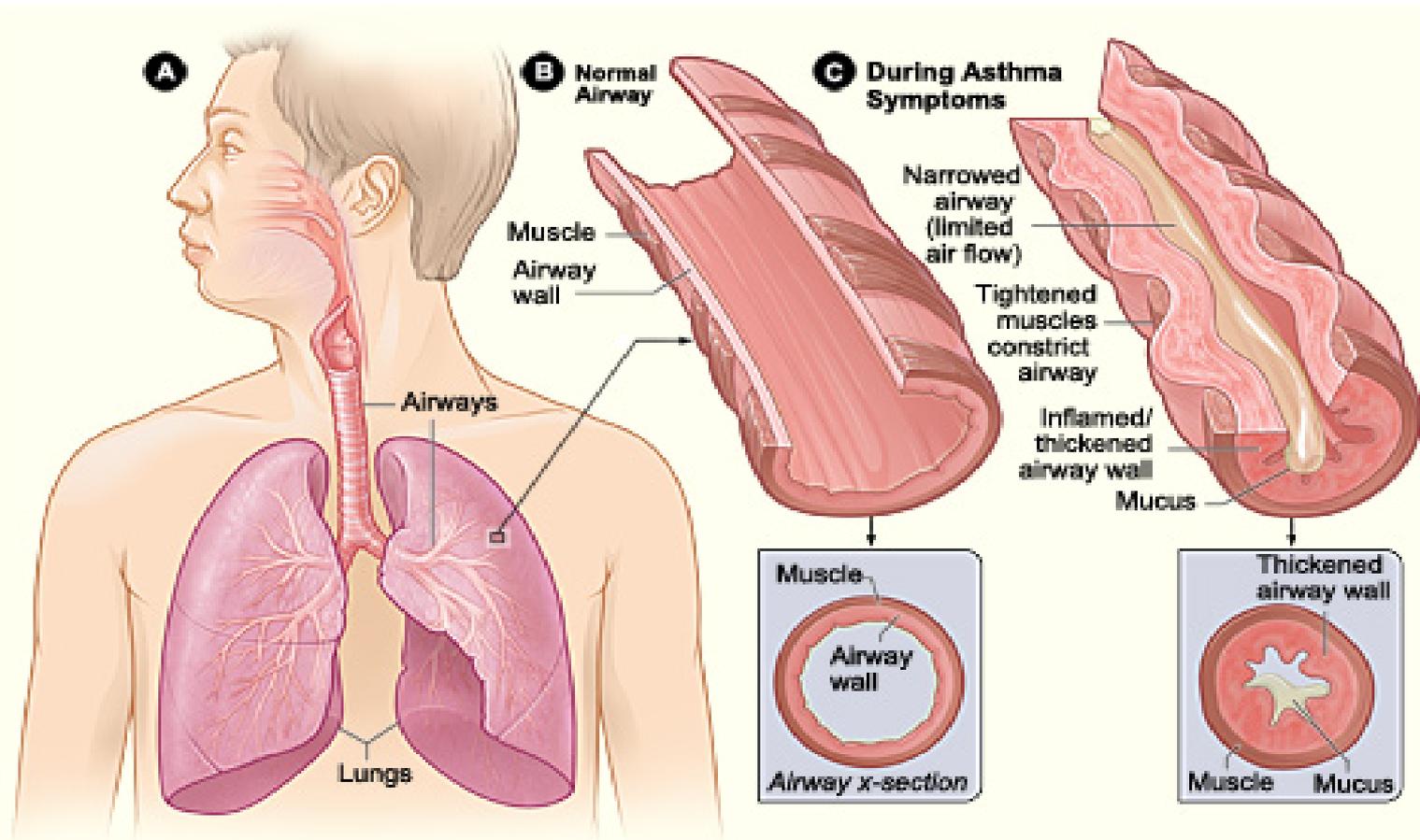
1. Understand the basics of asthma and asthma management.
2. Identify best practices for asthma management in the school environment.
3. Identify roles for physical activity leaders in student asthma management at school.
4. Identify ways to modify physical activity for students with asthma when necessary.



Benefits of effective asthma management in school settings

- Supportive learning environment for students with asthma
- Reduced absences
- Reduced disruption in the classroom
- Appropriate emergency care
- Full student participation in physical activities

Asthma Basics



Asthma Triggers

- Allergens
 - Pollen, animal dander, dust mites, cockroaches, and mold
- Irritants
 - Cold air, perfume, pesticides, strong odors (ex. paint or cleaning products), weather changes, cigarette smoke, and chalk dust
- Respiratory infections
 - Bronchitis, the flu, or a cold
- Physical Activity
 - Physical education classes, especially in cold weather can exacerbate
- Emotional Response
 - Laughing or crying can also trigger an asthma episode or attack

Managing Asthma

- Taking medication exactly as prescribed.
- Monitoring students with asthma.
- Recognizing early warning signs of an asthma episode.
 - Coughing, shortness of breath, and increasing breathing rate.
- Intervening with proper therapy when early signs are recognized.
- Forming a partnership among the student, parent(s) or guardian(s), the physician, and school staff.

Reducing asthma episodes helps reduce long-term lung damage.

Student Asthma Action Plan

Asthma Action Plan

For: _____ Doctor: _____ Date: _____
 Doctor's Phone Number _____ Hospital/Emergency Department Phone Number _____

GREEN ZONE

Doing Well

- No cough, wheeze, chest tightness, or shortness of breath during the day or night
- Can do usual activities

And, if a peak flow meter is used,

Peak flow: more than _____
 (90 percent or more of my best peak flow)

My best peak flow is: _____

Before exercise

Take these long-term control medicines each day (include an anti-inflammatory).

Medicine	How much to take	When to take it
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Before exercise	<input type="checkbox"/> _____ <input type="checkbox"/> 2 or <input type="checkbox"/> 4 puffs	5 to 60 minutes before exercise

YELLOW ZONE

Asthma Is Getting Worse

- Cough, wheeze, chest tightness, or shortness of breath, or
- Waking at night due to asthma, or
- Can do some, but not all, usual activities

-Or-

Peak flow: _____ to _____
 (50 to 79 percent of my best peak flow)



First Add: quick-relief medicine—and keep taking your GREEN ZONE medicine.

_____ 2 or 4 puffs, every 20 minutes for up to 1 hour
 (short-acting beta₂-agonist) Nebulizer, once



Second If your symptoms (and peak flow, if used) return to GREEN ZONE after 1 hour of above treatment:

Continue monitoring to be sure you stay in the green zone.

-Or-

If your symptoms (and peak flow, if used) do not return to GREEN ZONE after 1 hour of above treatment:

Take: _____ 2 or 4 puffs or Nebulizer

(short-acting beta₂-agonist)

Add: _____ mg per day For _____ (3–10) days

(oral steroid)

Call the doctor before/ within _____ hours after taking the oral steroid.

RED ZONE

Medical Alert!

- Very short of breath, or
- Quick-relief medicines have not helped, or
- Cannot do usual activities, or
- Symptoms are same or get worse after 24 hours in Yellow Zone

-Or-

Peak flow: less than _____
 (50 percent of my best peak flow)

Take this medicine:

_____ 4 or 6 puffs or Nebulizer
 (short-acting beta₂-agonist)

_____ mg
 (oral steroid)

Then call your doctor NOW. Go to the hospital or call an ambulance if:

- You are still in the red zone after 15 minutes AND
- You have not reached your doctor.

DANGER SIGNS ■ Trouble walking and talking due to shortness of breath

■ Lips or fingernails are blue

■ Take 4 or 6 puffs of your quick-relief medicine AND

■ Go to the hospital or call for an ambulance _____ NOW!
 (phone)

Comprehensive Asthma Management Plan

- Identified staff person(s) to coordinate the program
- A confidential list of students with asthma
- Policies and procedures for administering medications, including protocols for emergency response
- Actions for staff members to perform in the asthma management plan
- Professional development for staff and students about asthma
- Written asthma action plan on file for every student with asthma
- A strong family-physician-school partnership



Roles of all Staff

- **Help children with asthma and their families manage asthma**
- **Look for children with uncontrolled, or undiagnosed, asthma**
- Teach staff, students, and families about asthma
- Keep the environment clear of asthma-provoking substances

Role of the PE Instructor or Coach

- Follow the student's asthma action plan
- Be sure student's medications are available for exercise activities that take place at school, after school, or at school sanctioned events off campus
- Always have students participate in warm-up and cool-down activities
- Keep student's quick relief medications readily available

Role of the PE Instructor or Coach

- Establish good communication among parent(s)/guardian(s), students, health care providers, and school staff
- Encourage exercise and participation in sports, but also recognize and respect the student's limits
- Notify the school nurse when you suspect poorly controlled asthma in a student

Peak Flow Meter

A peak flow meter is a portable, inexpensive, hand-held device used to measure how air flows from your lungs in one “fast blast.” In other words, the meter measures your ability to push air out of your lungs.

Who Can Benefit From Using A Peak Flow Meter?

- Many healthcare providers believe that people who have asthma can benefit from the use of a peak flow meter. If you need to adjust your daily medication for asthma, a peak flow meter can be an important part of your asthma management plan.



Source: American Lung Association <http://www.lung.org/lung-disease/asthma/taking-control-of-asthma/measuring-your-peak-flow-rate.html>

Exercise-Induced Asthma (EIA)

- Episodes are triggered by rapid breathing of cold or dry air which occurs with exercise.

Color	Peak Flow Reading	Physical Activity Notes
Green	80-100%	Full participation
Yellow	50-80%	<ul style="list-style-type: none">• student should take rescue inhaler as prescribed• modified participation• Inquire about pre-medication• Increase warm-up and cool-down periods, etc., per student's Asthma Action Plan
Red	less than 50%	<p>Medical Alert:</p> <ul style="list-style-type: none">• student should take rescue inhaler as prescribed• may require emergency protocol• check student's Asthma Action Plan• no physical activity• if student improves after taking medication as prescribed, include student in activities such as time- or scorekeeper

SOURCE: American Lung Association. *Asthma-Friendly School Initiative Toolkit*.

<http://cshca.wpengine.netdna-cdn.com/wp-content/uploads/2011/08/ALA.Asthma-Friendly-Schools-Toolkit.pdf>

First Aid for Exercise-Induced Asthma

If, during physical activity, you notice that a student is having trouble breathing, coughing frequently, or wheezing, it may be asthma:

- **STOP the student's activity** and encourage the student to sit and rest
- **Call 911** immediately if student requests or is in severe distress
- Follow the designated **asthma management plan** (IHP if available, or school protocol)



SOURCE: American Lung Association. *Asthma-Friendly School Initiative Toolkit*.

<http://cshca.wpengine.netdna-cdn.com/wp-content/uploads/2011/08/ALA.Asthma-Friendly-Schools-Toolkit.pdf>

First Aid for Exercise-Induced Asthma (continued)

If, during physical activity, you notice that a student is having trouble breathing, coughing frequently, or wheezing, it may be asthma:

- Follow the school protocol to **notify the school nurse** (or other designated staff) if medication is not available or if symptoms are not resolved within 5-10 minutes after using the inhaler
- **Never** leave a child with breathing problems **alone**
- If asthma episode is resolved, students may **resume activity** when they are ready, according to their asthma management plan
- Follow the school protocol to **inform parents** of and document the event



SOURCE: American Lung Association. *Asthma-Friendly School Initiative Toolkit*.

<http://cshca.wpengine.netdna-cdn.com/wp-content/uploads/2011/08/ALA.Asthma-Friendly-Schools-Toolkit.pdf>

Physical Education and Activity Components

- Encourage full participation
- Manage physical activity for students with asthma
- Assure ready access to medication
- Provide options for modified activity

Adaptive Physical Education

Adaptive Physical Education (APE) is a direct service that can be provided to a student with special needs or other health issues such as asthma. APE is an adapted, or modified, physical education program designed to meet the individualized gross motor needs, or other disability-related challenges, of an identified student.

Adaptations or modifications can be made in four areas:

- Instruction
- Rules
- Equipment
- Environment



Resources

- Free Student Asthma Action Plans for your district
<http://www.rampasthma.org/info-resources/asthma-action-plans/>
- American Lung Association: *Asthma-Friendly School Initiative Toolkit*
<http://cshca.wpengine.netdna-cdn.com/wp-content/uploads/2011/08/ALA.Asthma-Friendly-Schools-Toolkit.pdf>
 - This is a one-stop shop for all your district's asthma management needs. Resources included: sample letters to parents/guardians, sample letters to physicians, asthma action plans, education materials (e.g., using a Peak Flow Meter, checklists, sample emergency response posters).
- EPA Indoor Air Quality (IAQ)
http://www.epa.gov/iaq/schools/actionkit_text.html
- Health Insurance Options for low-income families
<http://www.dmhc.ca.gov/healthplanscoverage/helpfortheuninsured.a>

SPX



Thank you!

Questions?

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