

Asthma: Practical Tips For P.E. & H.E. Teachers



*Developed and provided by: The Minnesota Department of Health Asthma Program
2004*



How Many Kids Have Asthma?

- Approximately 2.5 students in a class of 30 are likely to have asthma
- National Asthma Prevalence for those under 18 years of age is 8.7 % ¹

Asthma:

- ✍ Accounts for 14 million lost school days annually³
- ✍ Is the most common chronic disease causing absence from school²
- ✍ Is the leading cause of hospitalizations (chronic) among children under 15²
- ✍ 1 in 13 school children have asthma¹
- ✍ 6.3 million children under 18 have asthma¹

¹ Asthma Prevalence, Health Care Use, and Mortality, 2000-01, National Center for Health Statistics, CDC

² Asthma in Children Fact Sheet, American Lung Association, June 17, 2003

³ Surveillance for Asthma - United States, 1980-99, MMWR Surveillance Summaries, CDC, March 29, 2002

Student Asthma Deaths

 5 Minnesota students died of asthma in 2002¹

 33% of all identified school related asthma deaths (1990 - 2003) occurred during a school sporting event or during PE class²

¹ Minnesota Center for Health Statistics

² Centers for Disease Control, 2004

Health/Physical Education Staff Asthma Survey Results

 According to a Minneapolis Public School survey
(2002)

- 76% of respondents observed and/or assisted student/s with asthma problems in the past year (55% multiple times)
- 51.5% of respondents reported being uncomfortable assisting with asthma episodes

HS Health/Physical Education Staff Asthma Survey Results

Students carrying and using inhalers

- 91% of P.E. teachers have seen students carry and use inhalers before P.E. class
- 68% observed students going to the health office before P.E. class
- 100% observed inhaler use during P.E.
- 24% observed students using someone else's inhaler
- 77% observed students going to the health office or using their inhaler after P.E. class for asthma symptoms

So What Does All This Mean?



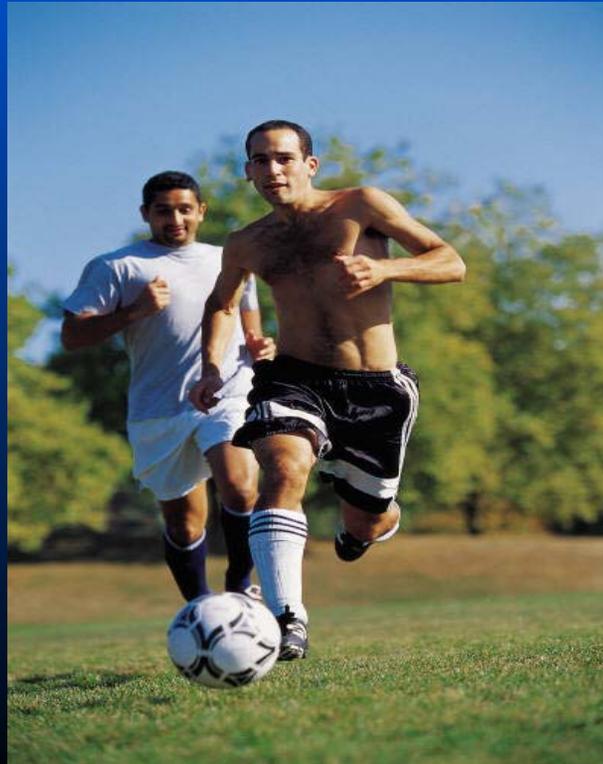
The Good News



- Asthma can be controlled!
- Children and teens who have asthma are just like any other child or teen!
- Children and teens who have asthma can play sports just like any other child or teen!

The Goal Of Asthma Management

“Children should live happy, healthy, physically active lives, without asthma symptoms slowing them down “



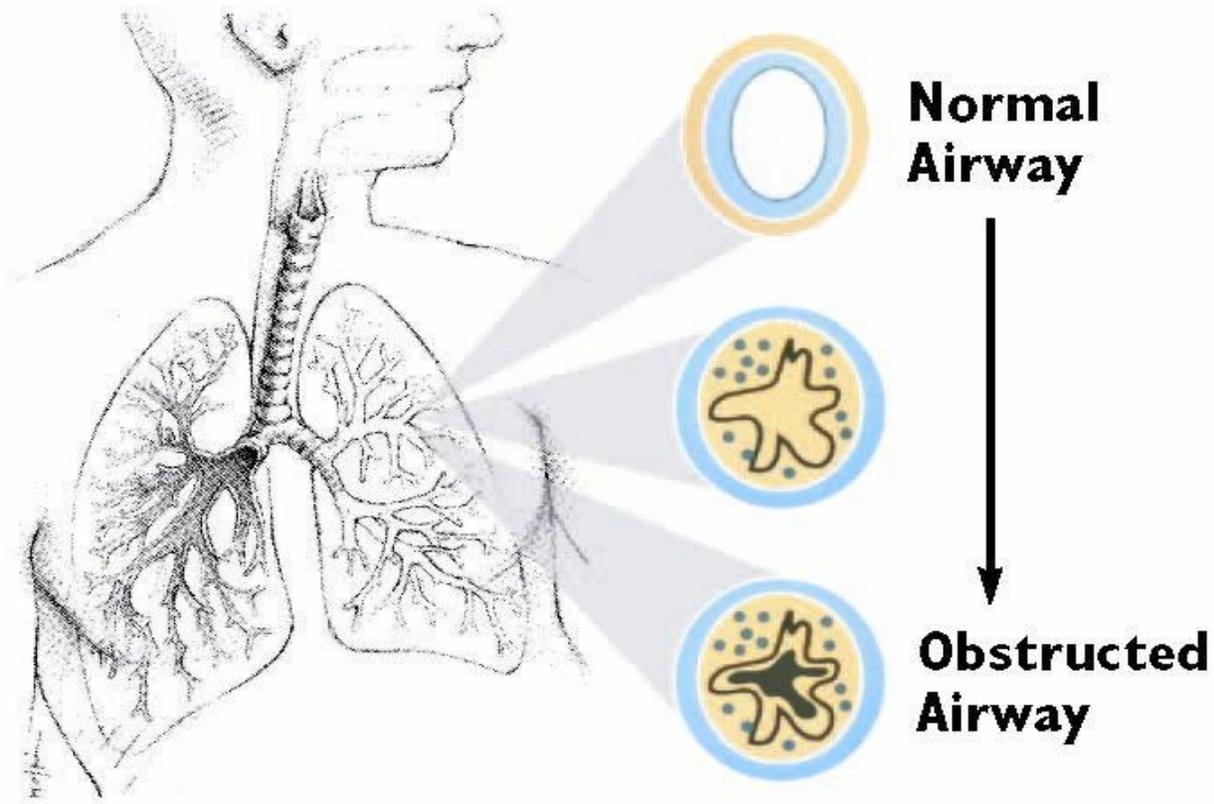
What Is Asthma?

Asthma is a chronic disease that causes:

- ✓ Tightening of the muscles surrounding the airways (Bronchoconstriction/spasm)
- ✓ Swelling of the small airways (bronchioles)
- ✓ Over production of sticky mucus in the airways

Airway Obstruction

Asthma Episodes



Common Symptoms Of Asthma

-  Frequent cough, especially at night
-  Shortness of breath or rapid breathing
-  Chest Tightness
-  Chest pain
-  Wheezing
-  Fatigue
-  Behavior changes

Every Child Is Unique!



- ✍ Wheezing and coughing are the most common symptoms *-but-*
- ✍ No two children will have the exact same symptoms or the same trigger
- ✍ Every child who has a diagnosis of asthma should have access to a rescue inhaler!
- ✍ Every child who has asthma should have an asthma action plan (AAP)

Asthma Episodes (Attacks)



What's An "Episode"?

-  An asthma episode occurs when a child is exposed to a trigger or irritant and their asthma symptoms start to appear
-  This can occur suddenly without a lot of warning, or brew for days before the symptoms emerge
-  Episodes are preventable by avoiding exposure to triggers and taking daily controller medications (if prescribed)

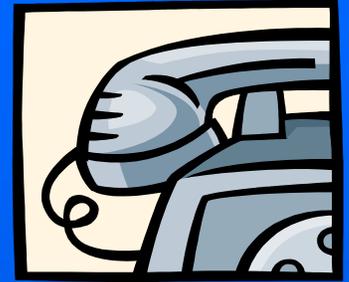
How Do I Handle An Asthma Episode On The Field Or Gym?

1. Remain calm and reassure the child
2. Check the child's asthma action plan or emergency card for actions
3. Give “rescue or reliever” medications if ordered and available (some students carry their own asthma inhalers with them)

Handling An Episode cont..

4. Have the child sit up and breathe slowly- in through the nose, out through pursed lips slowly
5. Have the child sip room temperature water/ fluids
6. Contact the school nurse, parent or guardian as necessary - AND-
7. Do not leave the child unattended

Call 911 if..



- ✍ Lips or nail beds are bluish
- ✍ Child has difficulty talking, walking or drinking
- ✍ Quick relief or “rescue” meds (albuterol) is ineffective or not available
- ✍ Neck, throat, or chest muscles are pulling in (retracting)
- ✍ Nasal flaring occurs when inhaling
- ✍ Obvious distress
- ✍ Altered level of consciousness/confusion
- ✍ Rapidly deteriorating condition

Exercise Induced Asthma



What Is Exercise Induced Asthma (EIA)?

-  Tightening of the muscles around the airways (bronchospasm)
-  Distinct from allergic asthma in that it does NOT cause swelling and mucus production in the airways
-  Can be avoided by taking pre-exercise medications and by warming up/cooling down

EIA - What Happens?

- ✍ Symptoms include coughing, wheezing, chest tightness and shortness of breath
- ✍ Symptoms may begin during exercise and can be worse 5 to 10 minutes after exercise
- ✍ EIA can spontaneously resolve 20 to 30 minutes after starting
- ✍ Can be avoided by doing the following:

Preventing Exercise Induced Asthma (EIA)

- ✓ Make sure your students have an Asthma Action Plan -Keep it with you on a clipboard (outside)
- ✓ Athletes/students should use reliever (Albuterol) 15 -30 minutes before strenuous activity begins
- ✓ Do warm-up (5-10 minutes) and cool-down exercises before and after activities

Preventing Exercise Induced Asthma cont..

- ✓ Check outdoor ozone/air quality levels
www.aqi.pca.state.mn.us/hourly/
- ✓ Avoid exercising outdoors in very cold/hot weather
- ✓ If unsure if a student should exercise, send him/her to the health office for peak flow measurements before exercise is allowed
- ✓ Do not allow other students to tease or berate the child having asthma symptoms

Working With Exercise Induced Asthma

- ✓ If a student is complaining of breathing difficulty- BELIEVE IT and take action!
- ✓ Allow the student to continue to play only when you know their breathing is normal again
- ✓ Inform the school nurse of breathing difficulties and request the child see a doctor to be checked
- ✓ Assign someone to stay with the child off the field/gym etc. while the event continues
- ✓ Never encourage a child to “tough it out” when having asthma symptoms

Steps P.E. or H.E. Teachers Can Do

- ✓ Notify the school nurse, 2 weeks prior to the mile run or any other strenuous event
- ✓ Ask the school nurse to identify students with asthma or other conditions affected by exercise
- ✓ Keep the school nurse in the loop regarding how students who have asthma are performing during gym classes or during special events

Steps P.E or H.E Teachers Can Do

cont...

- ✓ Notify classes ahead of time when activities involving strenuous exercise are planned
- ✓ Recommend pre-exercise medication for those with asthma as needed
- ✓ Notify parents and students when the mile (or similar activity) run is planned via school newsletters or special mailed notices

Improved Athletic Performance

-  Students whose asthma is controlled perform as well as those without asthma
-  Any student with asthma who is already “the best” can improve when they’re breathing better!
-  More oxygen to the lungs means better performance on and off the field!



Some Examples Of Pro's Who Have Asthma:

-  Isiah Thomas - NBA
-  Dominique Wilkins - NBA
-  Gary Roberts - NHL
-  Donnell Bennett - NFL
-  Amy Van Dyken - Olympic Gold Medallist
(swimming)
-  Jackie Joyner-Kerse - Olympic Gold Medallist
(track & field)
-  Greg Louganis - Olympic diver

Medications



Two Categories Of Medications

✓ Controller Medications

- Taken every day to prevent swelling in the lungs

✓ Reliever or Rescue Medications

- Taken only when needed to relieve symptoms
- Or to prevent exercise induced asthma from developing (taken before strenuous exercise)

Reliever Or “Rescue” Medications

- ✓ Should be taken 10-15 minutes before strenuous or aerobic activity begins when a student has exercise induced symptoms
- ✓ Taken when needed to relieve symptoms
- ✓ Should be immediately accessible at every sporting event
- ✓ PE/HE staff must be aware that an athlete is using this medication
- ✓ Should be taken using a spacer or holding chamber (MDI)

How Students Can Keep Their Asthma In Good Control

- ✓ Get & use an Asthma Action Plan
- ✓ Know symptoms and Peak Flow readings for each of the green-yellow-red zones
- ✓ Take “controller” medicine daily
- ✓ Avoid exposure to triggers
- ✓ Find a health care provider you trust and go in for asthma check-ups at least twice a year
- ✓ Tell your PE/HE teacher and classmates about your asthma

The image shows a sample Asthma Action Plan form. It is titled 'ASTHMA ACTION PLAN' and 'HCMC'. The form is divided into three color-coded zones: Green, Yellow, and Red. Each zone has specific instructions for medication use and when to call a doctor. The form also includes fields for the patient's name, primary care provider, and a section for signatures and dates.

GREEN ZONE "All Clear!"
Breathing is easy. Peak Flow Range is 80-100% of personal best. Controller medicines. When to take it. Spacer used. When to take it. Student may carry and use this medicine at school after checking in with the School Nurse.

YELLOW ZONE "Caution!"
Breathing is hard. Peak Flow Range is 50-79% of personal best. Add the following reliever medicines to keep an asthma episode from getting bad. Reliever medicine. When to take it. If you are in the YELLOW ZONE for more than 12-24 hours, call your doctor. If your breathing symptoms get worse, call your doctor. Student may carry and use this medicine at school after checking in with the School Nurse.

RED ZONE "STOP! Medical Alert!"
Breathing is not getting better. Peak Flow Range is 0-49% of personal best. Take these medicines until you talk with the doctor. Reliever medicines. When to take it. If your symptoms do not get better and you can't reach your doctor, go to the emergency room or call 911 immediately.

Take Home Messages

- ✓ Kids with asthma can participate in exercise/sports without restrictions
- ✓ If a student is having trouble participating, their asthma may not be in good control
- ✓ Students having difficulty should be allowed to rest
- ✓ If students are having symptoms with activity, encourage them to use rescue inhalers before the event
- ✓ If you have a concern about an student, talk with the school nurse, child and the parents
- ✓ Encourage flu shots annually and regular (2x/year) asthma check-ups with their physician or nurse practitioner

Successful Asthma Management Requires Everyone's Cooperation

 Teachers

 Medical Providers

 Parents

 Coaches

 Students

 All School Personnel

**Talk with your school Nurse to find out
what you can do to help manage asthma in
your school**