

Teacher Workshop Curriculum



UNDERSTANDING AND LEARNING ABOUT STUDENT HEALTH

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UNDERSTANDING AND LEARNING ABOUT STUDENTS' HEALTH



Teacher Workshop Curriculum Outline:

***Goal:** To increase teachers' comfort with common topics of adolescent health and improve the interaction between the school and the School Based Health Clinic (SBHC.)*

Workshop One: Asthma—*Keeping Students Breathing Safe and In School*

- Definition of asthma
- Demographics of asthma in Washington Heights
- Symptoms of asthma--When To Be Worried
- Treatment of asthma--When To Refer To SBHC, When To Send To ER



Lesson Plan: Asthma:



Keeping students breathing safe and in school

Goal: *To develop an understanding of what asthma is as well as how to recognize, treat, and prevent asthma exacerbations.*

Introduction: Brief introduction of yourself and teachers. Briefly review lesson plan outline. (5 minutes)

Definition of asthma: (10 minutes) (Lung model/poster if available, elicit responses from teachers on what they think asthma is, then review handouts: *What is Asthma, What Happens During an Asthma Attack?*)

--Key points:

- *Asthma is chronic lung disease causing inflammation of the airways
- *Asthmatics have highly sensitive lungs that respond to various triggers
- *Triggers include exercise, viral infections/colds, allergens, cold weather, smoke
- *Asthma is a chronic disease, but manifested by acute attacks

Demographics of asthma nationally and specifically in Washington Heights: (10 minutes)

Review handout: *How Does Asthma Affect Our Students?*

--Key Points

- *Asthma is one of the most common chronic illnesses in children
- *Asthma is a leading cause of missed school days and hospitalizations in children
- *Washington Heights/Inwood has asthma rates far above the national average

Symptoms of asthma--When to be worried and What to Look For: (10 minutes) (Elicit possible symptoms from teachers, then review handouts: *Symptoms of Asthma, Asthma Emergency Plan*)

--Key points

- *Key symptoms include difficulty breathing, wheezing, chest tightness
- *Respiratory rate is important (normal respiratory rate is 12-20)
- *Explain accessory muscle use, retractions, nasal flaring
- *Severity of asthma attack can be assessed using different signs

Treatment of asthma (10 minutes) (Review handouts: *Treatment of Asthma, Asthma Action Plan.*)

--Key points

- *Every student with asthma should have inhaler readily accessible
- *Regardless of severity, should try 2 puffs of Albuterol inhaler
- *If student has moderate symptoms, should go to SBHC immediately
- *If student has severe symptoms, consider sending to ER (call SBHC immediately)
- *Review Asthma Action Plan
- *Review what the SBHC has in terms of asthma management

If time permits, Asthma Scenarios: Split up into small groups; each group given "asthma scenario" to discuss and then share discussion with entire workshop

Questions (5 minutes)

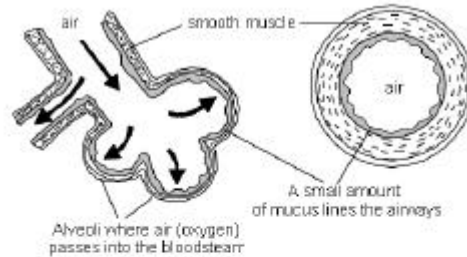


WHAT IS ASTHMA?

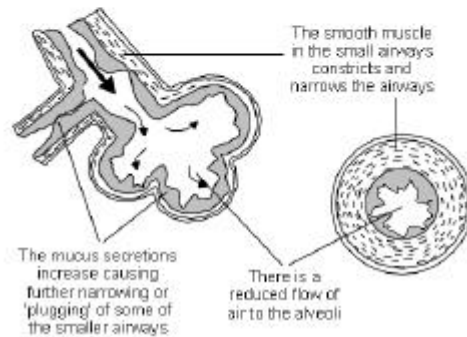


- Asthma is a **chronic** disease that affects the lungs and causes difficulty breathing
- Caused by inflammation and increased reactivity of the lungs to specific triggers
- Characterized by acute attacks with:
 - swelling of the airways (inflammation)
 - mucus build up in airways
 - tightening of muscles around the airways (bronchospasm)

1. NORMAL LUNG - cross section of small airways



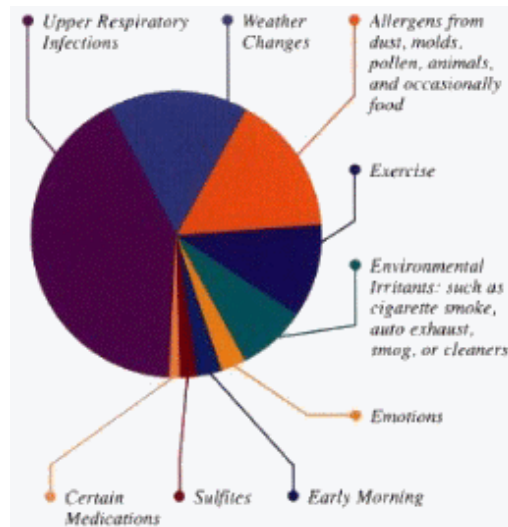
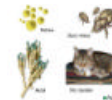
2. THE LUNG DURING AN ASTHMA ATTACK



www.patient.co.uk/showdoc/21692507/ - 27k

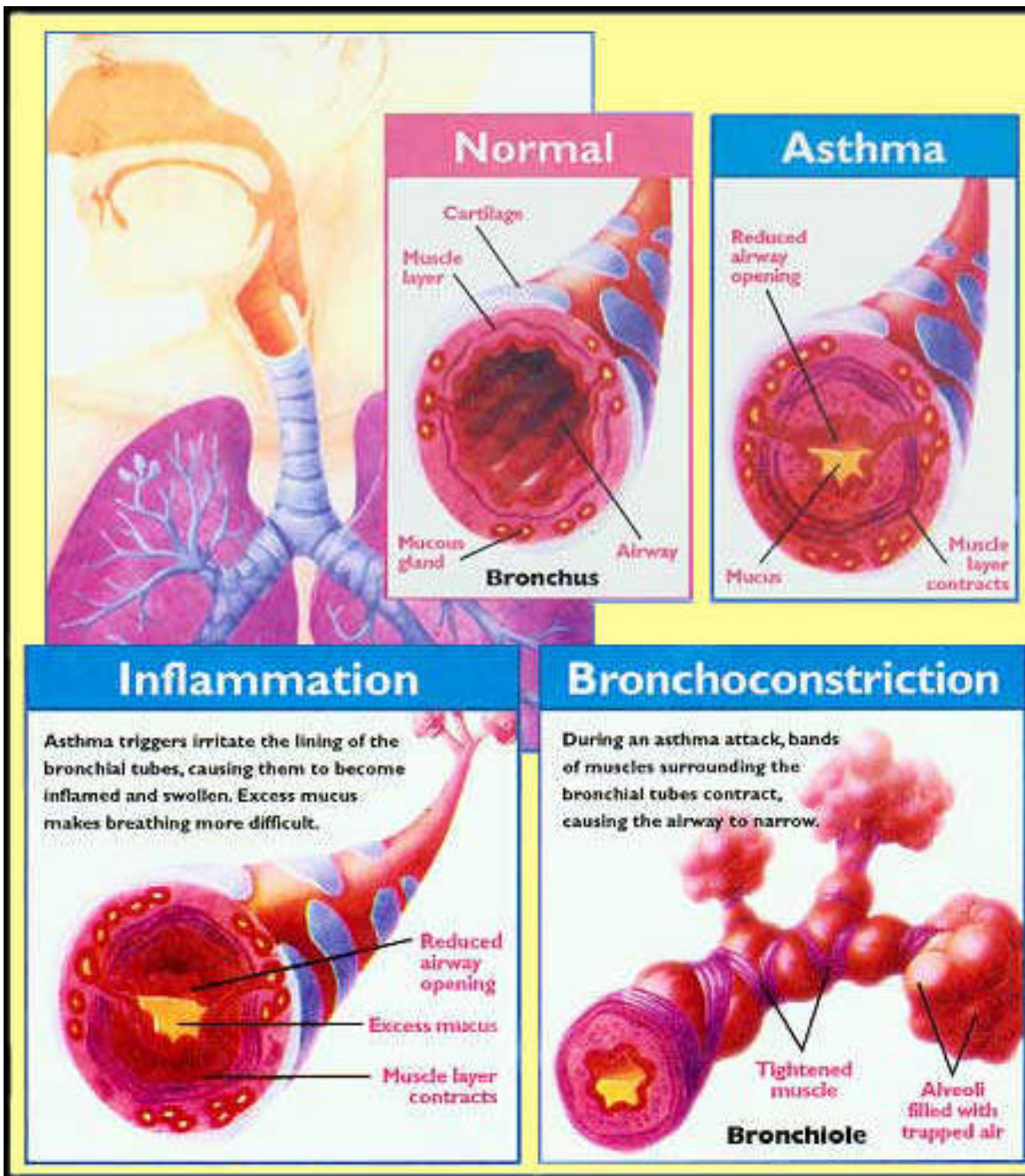


Asthma Attacks Are Triggered By:



www.carolinaasthma.com/images/edu/3.bmp

WHAT HAPPENS DURING AN ASTHMA ATTACK?



<http://www.moondragon.org/health/graphics/asthma1.jpg>



HOW DOES ASTHMA AFFECT OUR STUDENTS?



National Health Statistics from CDC¹:

- Asthma is one of the most common chronic illnesses among children in U.S.
- In 2006, 6.8 million (9.4%) school aged children found to have asthma
(Continues to increase; was 3.6% in 1980, 7.5% 1995)
- 3.1 million school aged children experienced asthma attack within past year
- Asthma is a leading cause of school absences for chronic disease; estimated to account for approximately 14 million days of school missed each year
- Asthma is the 3rd leading cause of hospitalization for children younger than 15
- Inner-city, low-income, and minority children have more ER visits, hospitalizations, and deaths as a result of asthma than the general population

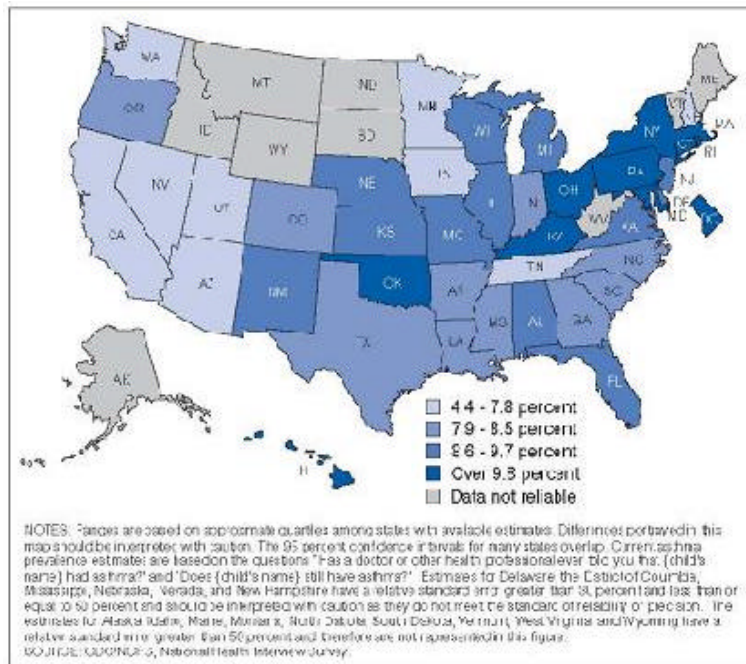


Figure 1. Current asthma prevalence among children 0-17 years of age, by state, annual average for the period 2001-2005

WASHINGTON HEIGHTS/INWOOD STATISTICS:

- There are an estimated 70,000 children under the age of 18 living in Washington Heights/Inwood²
- 14,000 (30%) of those children have asthma (approximately four times the national average)²
- Of those children with asthma, approximately 11% have visited the Emergency Room for asthma in the past year (data from 2004-2005).³

SYMPTOMS OF AN ASTHMA ATTACK:

¹ <http://www.cdc.gov/asthma/children.htm>

² www.nyp.org/news/hospital/936.html

³ <http://www.mcanonline.org/sites/ny.html>

NORMAL:

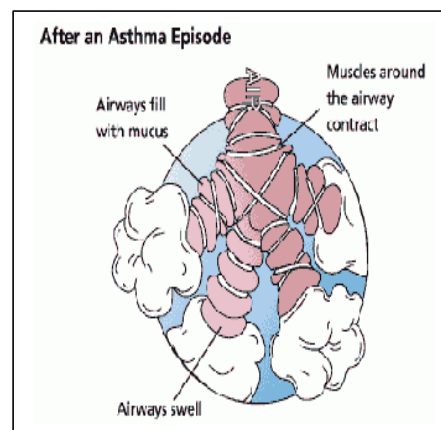
- Well appearing
- *Regular* physical activity
- Normal breathing rate and pattern
(normal respiratory rate is 12-20 breaths/min)
- No cough/wheezing
- Sleeps through entire night



ACUTE ASTHMA ATTACK

includes:

- Shortness of Breath
- Breathing fast (>20 breaths/min)
- Wheezing
- Chest tightness/pain
- Nostrils flaring
- Using other muscles to breathe
(between your ribs and in your chest)
- Difficulty speaking in full sentences
- Sitting forward/hunched over
- Coughing (at night or after physical activity)



www.pediatricfeeding.org/allergies.htm

SEVERITY OF ASTHMA ATTACK:

--Mild, Moderate or Severe

--Important in determining treatment

--See Next Handout—Asthma Emergency Plan for help with scoring asthma signs and determining severity of asthma exacerbation.

ASTHMA EMERGENCY PLAN

“Rule of Nine”

Adapted from *One Minute Asthma* (www.pedipress.com)

****Note: This is meant only as a guide/tool that can be used to help better assess the student’s asthma severity; any student having an asthma exacerbation should be sent to the SBHC immediately (with another person accompanying him/her.)****

Call 911 if you see **ANY ONE** of the following emergency signs:

- Trouble walking or talking
- Child is hunched over
- Child is struggling to breathe
- Lips or fingernails are gray or blue

After calling 911, call the office/SBHC and tell them to contact a parent or guardian.

IF EMERGENCY SIGNS ARE NOT PRESENT, but the child is coughing or having difficulty breathing, assess the severity of the asthma signs:

- Circle the score that applies to each symptom
- Total the score

Cough

- None **0**
- Less than 1 per minute **1**
- 1 – 4 per minute **3**
- More than 4 per minute **5**

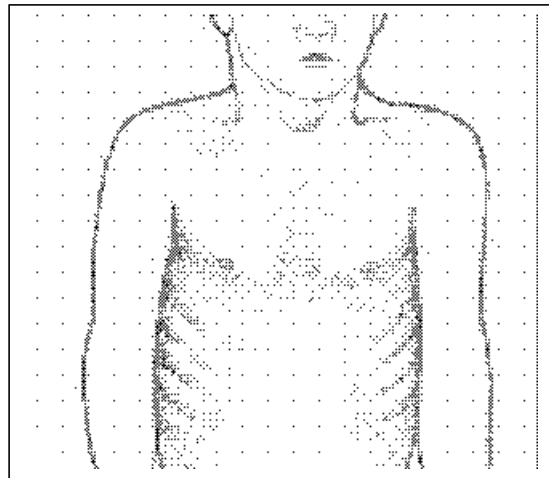
Sucking in of chest skin

- None **0**
- Barely noticeable **1**
- Obvious **3**
- Severe **5**

Wheeze

- None **0**
- End of exhale **1**
- Throughout exhale **3**
- Inhale and exhale **5**

TOTAL SCORE: _____



Total Score Key:

0 = Child is in Green Zone: Child’s asthma is under control

1-4 = Child is in High Yellow Zone: Child’s asthma is mild

5-8 = Child is in Low Yellow Zone: Child’s asthma is moderate

9 or more = Child is in Red Zone: Child’s asthma is severe

(from http://www.californiabreathing.org/childcare_staff.php)

From the *One Minute Asthma* Training. Copyright 2002. Pedipress, Inc. All rights reserved. May be copied by school nurse or district. Contact info@pedipress.com for commercial use or sale. Asthma Emergency Plan 1.7 030503

<http://www.pedipress.com/pdfs/School%20Emer%20Guide%203.2.pdf>



TREATMENT OF ASTHMA



I: Avoidance of triggers

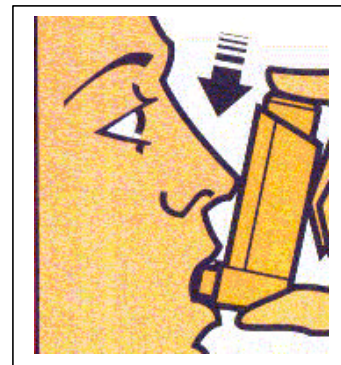
- **Keep classroom free from mold and dust (consider dust free chalk or dry erase boards if possible;) avoid having students with asthma clean chalkboard/erasers**
- **Ensure art/chemistry classrooms well ventilated to avoid spread of vapors to remainder of building**
- **Classroom animals? Try to minimize fur and dander**
- **As much as possible, maintain comfortable temperature**

II: Recognize early symptoms and act immediately

- **Have child sit in comfortable position**
- **Remain calm and speak calmly to child**
- **Remove any obvious triggers in immediate area**
- **Determine need for medication**
- **Don't hesitate to call for help**
- **Don't leave child alone; if send to SBHC, send someone with him/her**

III: Medications

- **Relief (Quick-Acting) medications:**
 - **Fast acting inhalers, such as Albuterol**
 - **Only used for acute attacks**
 - **Work immediately to open airway;**
 - **Short-acting**
- **Controller medications**
 - **Long acting inhalers such as Flovent, Pulmicort**
 - **Need to be taken EVERY DAY**
 - **DO NOT WORK in acute asthma attack situations**
 - **Work to decrease level of inflammation**
 - **Long acting**
- **ASTHMA ACTION PLAN! (See next handout)**



IV Education

- **Students**
- **Teachers/School Staff**
- **Parents**
- **Community**

Asthma Action Plan

Updated On: _____

[To be completed by Health Care Provider]

Name	Date of Birth	
Address	Emergency Contact/Phone	
Health Care Provider Name	Phone	Fax

Asthma Severity: Mild Intermittent Mild Persistent Moderate Persistent Severe Persistent

Asthma Triggers: Colds Exercise Animals Dust Smoke Food Weather Other

If Feeling Well

Every Day Medicines

Child feels good:

- Breathing is good
- No cough or wheeze
- Can work / play
- Sleeps all night



Peak flow in this area:
_____ to _____

MEDICINE:	HOW MUCH:	WHEN TO TAKE IT:

20 minutes before exercise use this medicine:

--	--	--

If Not Feeling Well

Take Every Day Medicines and Add these Rescue Medicines

Child has any of these:

- Cough
- Wheeze
- Tight chest



Peak flow in this area:
_____ to _____

MEDICINE:	HOW MUCH:	WHEN TO TAKE IT:

Call doctor if these medicines are used more than two days a week.

If Feeling Very Sick Get help from Doctor NOW!

Take These Medicines

Child has any of these:

- Medicine is not helping
- Breathing is hard and fast
- Nose opens wide
- Can't walk or talk well
- Ribs show



Peak flow below:

MEDICINE:	HOW MUCH:	WHEN TO TAKE IT:

SEEK EMERGENCY CARE or CALL 911 NOW if: Lips are bluish, Getting worse fast, Hard to breathe, Can't talk or cry because of hard breathing or has passed out

Health Care Provider Signature _____ Date _____

Patient Signature _____ Date _____



New York City Department of Health and Mental Hygiene
Michael R. Bloomberg, Mayor
Thomas R. Frieden, M.D., MPH., Commissioner
nyc.gov/health

New York City Childhood Asthma Initiative
Adapted from Finger Lakes Asthma Action Plan and NHLBI
01/03

WHITE - PATIENT COPY
YELLOW - SCHOOL/DAY CARE COPY
PINK - PROVIDER COPY

ASTHMA: SAMPLE SCENARIOS

If time permits at end of workshop, divide teachers into smaller groups. Each group will be given a sample scenario to discuss for a few minutes. Each group should then discuss their scenario as well as their thoughts with the remainder of the groups.

Scenario I: The parent of a student in your homeroom comes to you and says, “My child has asthma; should he be allowed to participate in gym.”

Key points:

- Students with **well-controlled** asthma should have no activity limitations
- Teachers should discuss with parent severity of student’s asthma as well as current medications
- Should also discuss common symptoms student has when having asthma attack
- Discuss with student that s/he should feel comfortable participating in gym, but should also feel comfortable “sitting out” if s/he is having difficulty with his asthma
- (Note: interesting that many famous athletes (including Jackie Joyner-Kersie, Emmitt Smith) have asthma)

Scenario II: A student comes to you and says, “My asthma gets worse when I am in your classroom.” What should you do?

Key points:

- Do not take it personally
- Most likely that there are certain “triggers” in your classroom to which the student is being exposed
- You should spend time looking for these (e.g. type of chalk, drafty windows, dust, animals, etc.)

Scenario III: You are on a field trip to the museum of natural history when a student comes to you and says, “I am having trouble with my asthma.” What do you do?

Key points:

- Make sure the student **and you** stay calm; have her sit down in comfortable position
- Ask the student if he/she has inhaler with him/her? If so, administer 2 puffs
- To the best of your ability, assess severity of student’s asthma attack.
- Do not hesitate to seek help/call 911 if you believe it is severe

Scenario IV: A student comes up to you and says, “My mom keeps telling me to take my asthma medication, but I feel great right now. I don’t have to take it, right?”

Key points:

- Two different types of asthma medication—quick relief (which student should **not** take every day) and controller (which student **should** take every day).