

# Staff Training on Asthma



## Understanding Asthma and How It Can Be Managed at School

This presentation is made possible by a grant from:

# Training Objectives

- Describe the effects of asthma on students
- Discuss how to reduce asthma triggers
- Discuss how to be prepared to manage asthma at school
- Describe how to recognize and respond to asthma episodes
- Discuss how to read a student asthma plan

# Overview

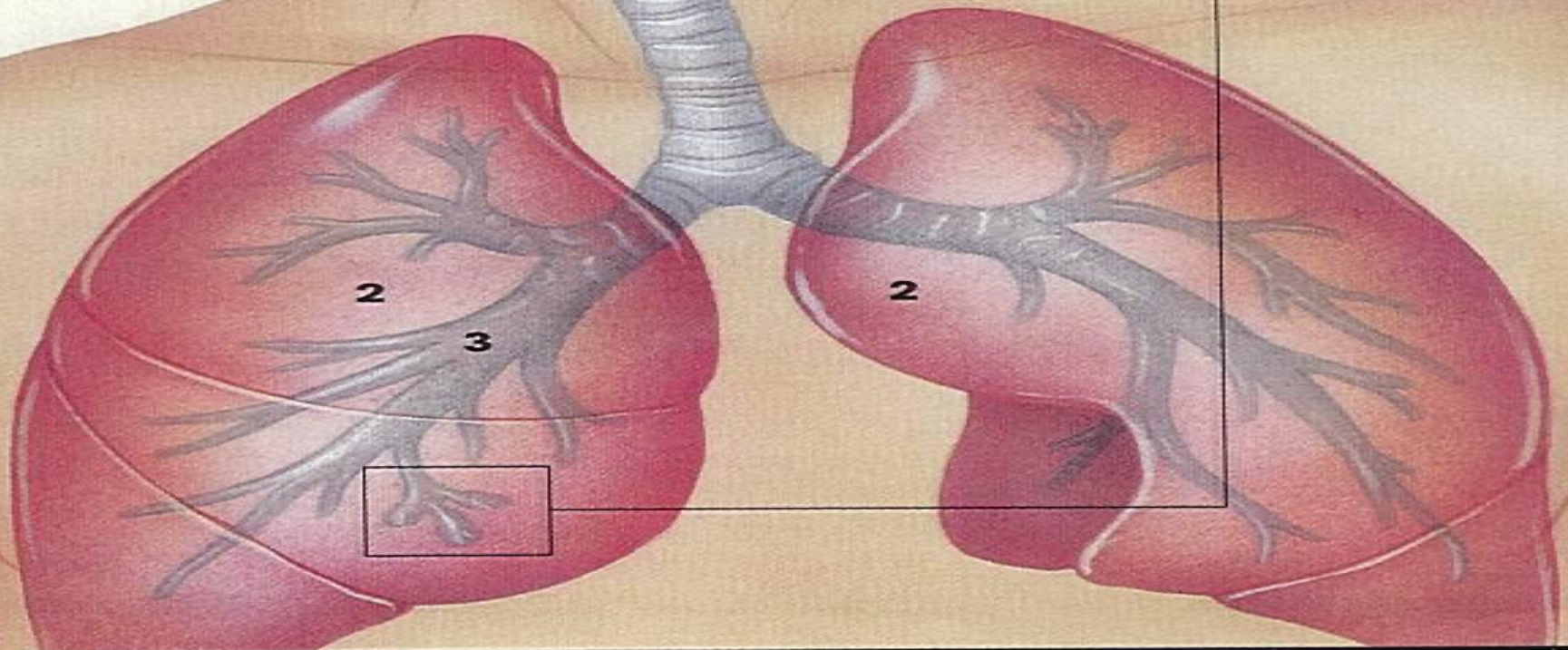
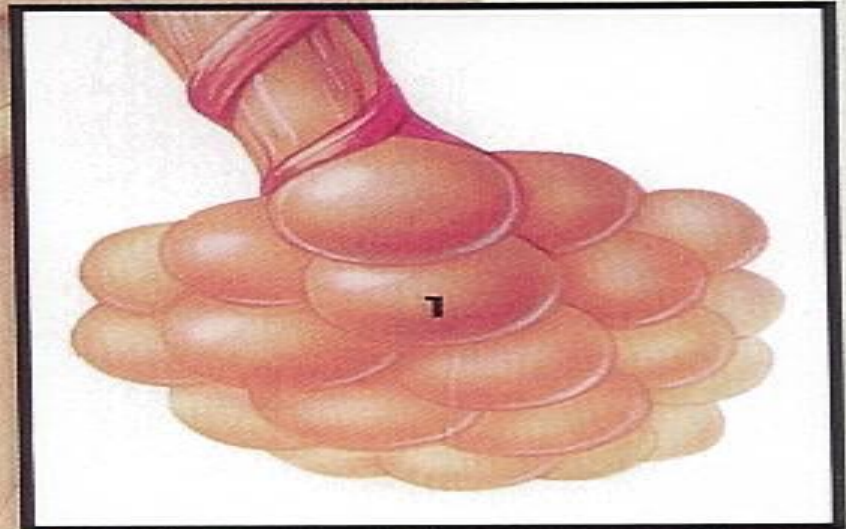
- Asthma Basics
- Managing Asthma at School
  - Reduce triggers
  - Be prepared
  - Know **when** and **how** to respond
  - How to read a student asthma plan
- Resources

# Asthma Basics

- What is asthma?
  - Chronic lung condition that causes breathing problems
  - It cannot be cured but it can be managed
  - Triggers, symptoms, and level of severity vary from student to student
- Who has asthma?
  - Prevalence is on the rise
  - 1 in 10 Washington children
  - Children of color are disproportionately impacted

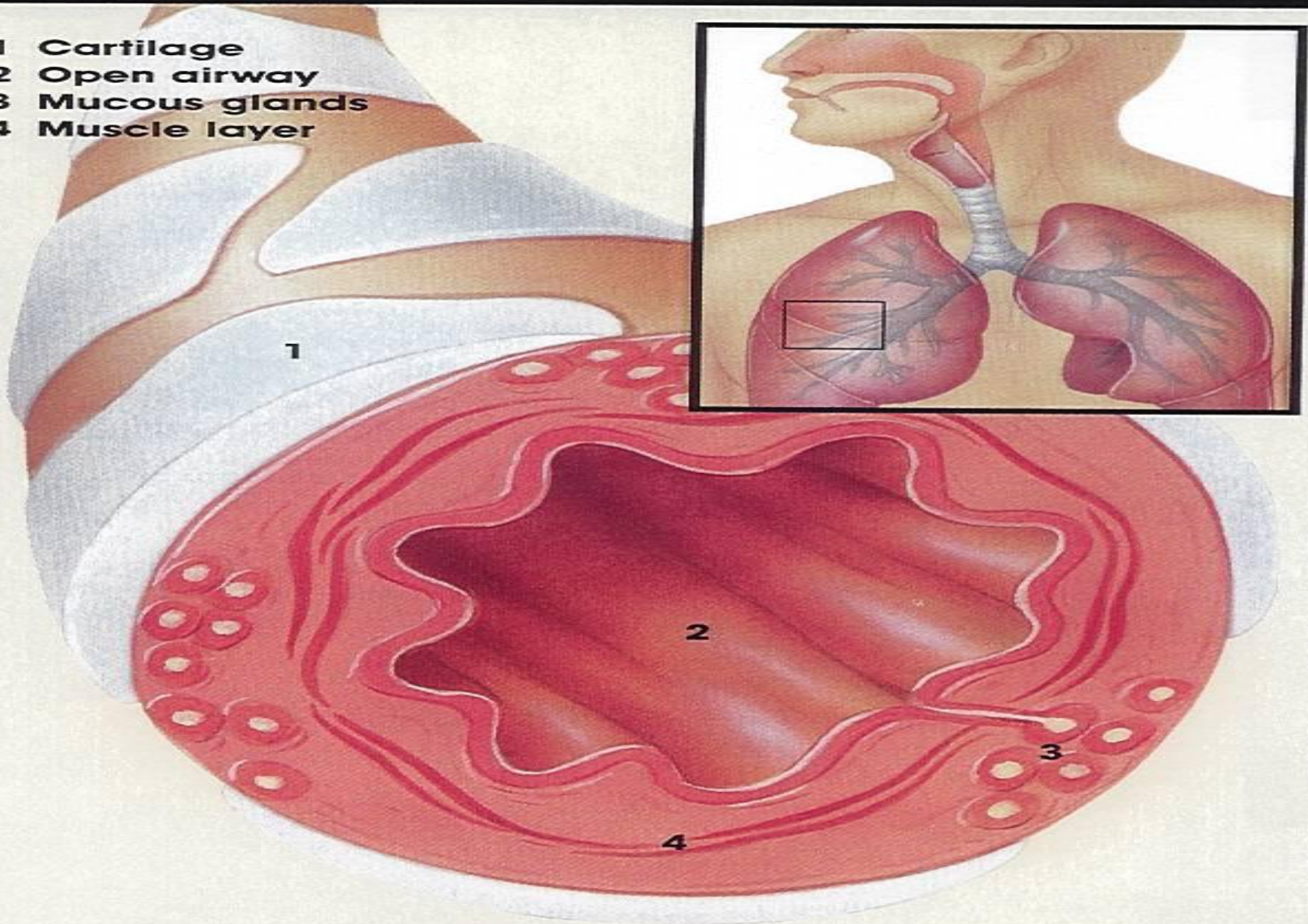
# RESPIRATORY SYSTEM

- 1 Normal alveoli
- 2 Lungs
- 3 Bronchus



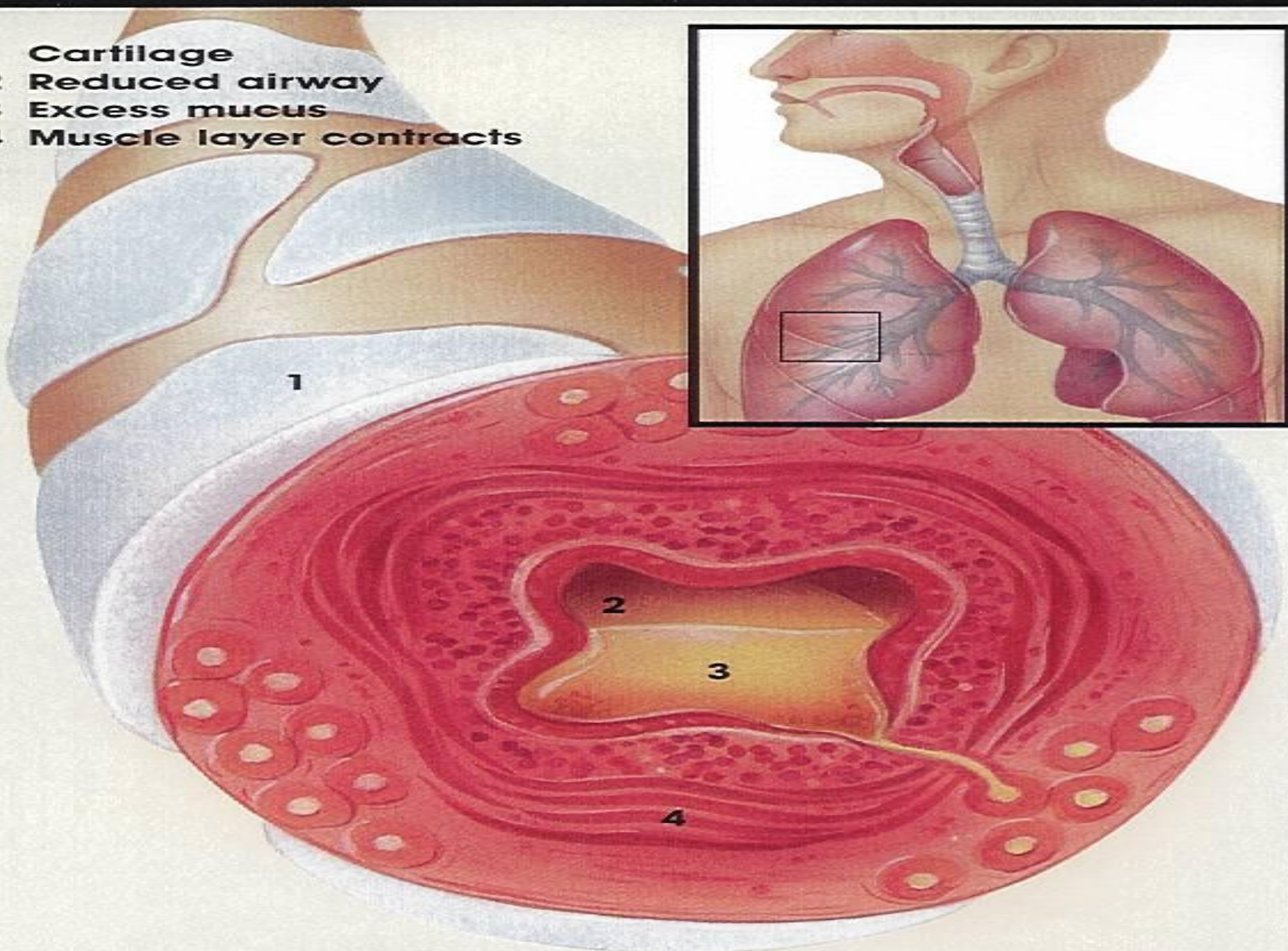
# NORMAL BRONCHUS

- 1 Cartilage
- 2 Open airway
- 3 Mucous glands
- 4 Muscle layer

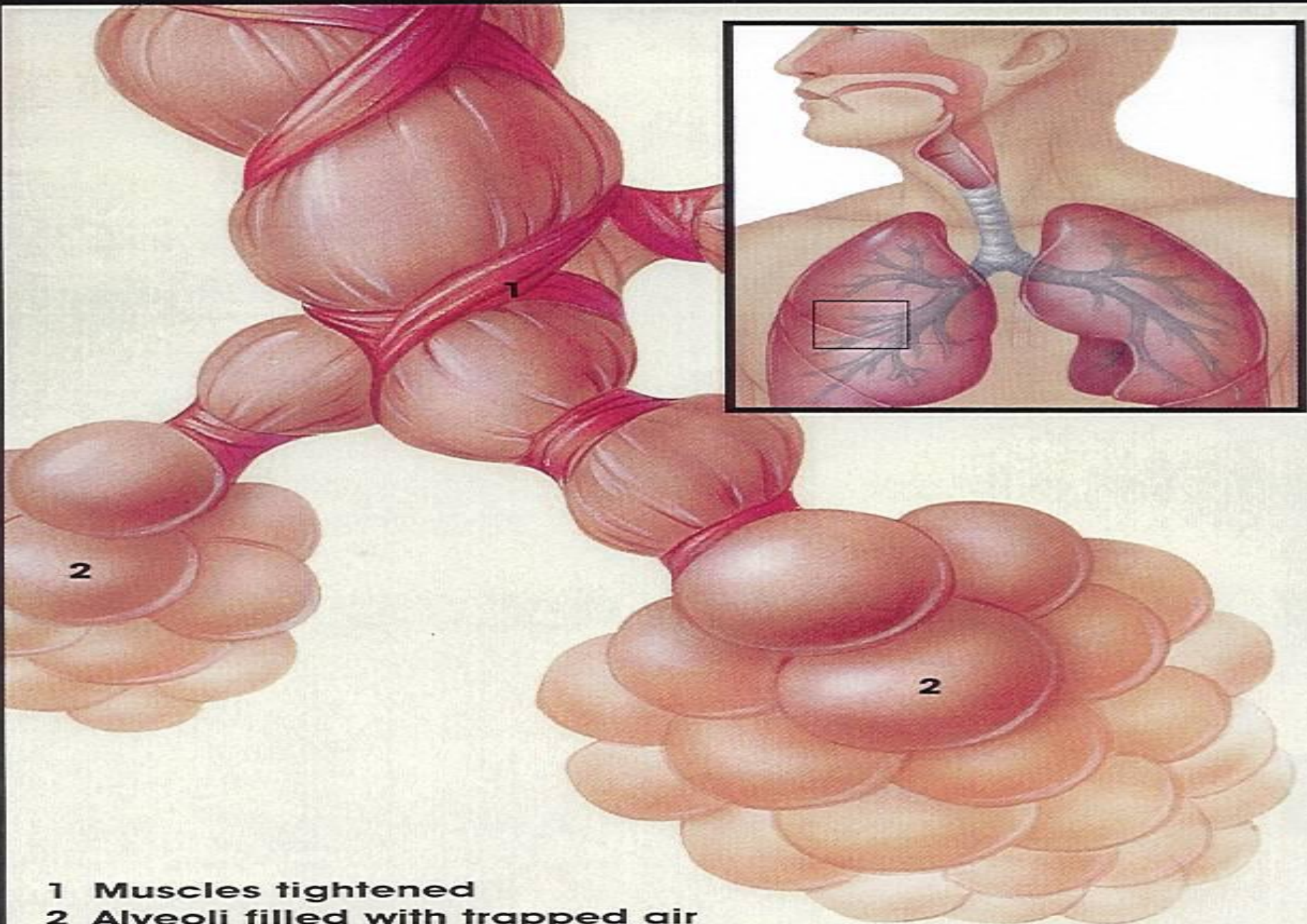


# BRONCHIAL INFLAMMATION

- 1 Cartilage
- 2 Reduced airway
- 3 Excess mucus
- 4 Muscle layer contracts



# BRONCHIAL CONSTRICTION



- 1 Muscles tightened**
- 2 Alveoli filled with trapped air**

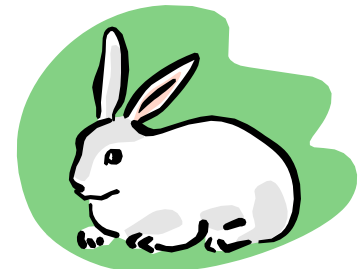
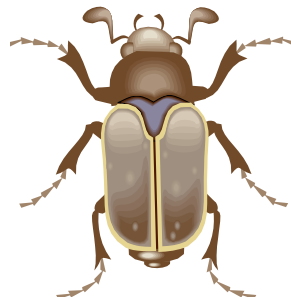


# Asthma Basics: Common Triggers

- Respiratory illness
- Pollen from trees, grasses and flowers
- Animal allergens
- Dust and dust mites
- Mold
- Exercise
- Cold or humid weather
- Cigarette or wood smoke
- Strong smells and chemicals
- Emotions
- Food allergies

# Reduce Triggers

- Animal allergens
- *Solutions:*
  - Remove animals with fur or feathers from the school
  - Minimize and securely store any food in classroom



# Reduce Triggers

- Dust and dust mites
- *Solutions:*
  - Remove upholstered furniture and pillows
  - Remove stuffed toys or wash them in hot (over 140°), soapy water every 2 weeks



# Reduce Triggers

- Cigarette smoke
- *Solutions:*
  - Encourage compliance with no-smoking policies on school property
  - If you smoke, wear a smoking jacket and hat



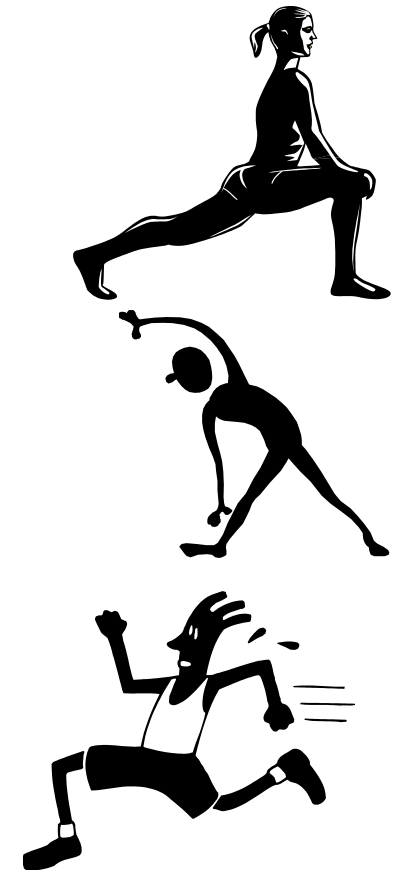
# Reduce Triggers

- Strong smells and chemicals
- *Solutions:*
  - Do not bring cleaning materials, air fresheners or candles from home into the classroom
  - Do not wear perfume or other strong smelling personal care products to school
  - Avoid solvent-based markers and art supplies -- use safe alternatives such as EXPO 2 markers



# Reduce Triggers

- Exercise
- *Solutions:*
  - Have student take medication before activity, if prescribed
  - Monitor student and adjust activity as necessary
  - Provide warm-up and cool-down activities



# Be Prepared

- Know how to access student's asthma plan or health care plan
- Know where student's medications are stored
- Ensure necessary medications and the asthma plan accompany student on all field trips or sporting events

# Recognize Early Warning Signs

- Coughing or itchy throat
- Stuffy or runny nose
- Funny or tight feeling in chest
- Fatigue
- Behavioral changes, agitation, irritability
- Decreased appetite
- Dark circles under eyes
- Headache



# Respond to Early Warning Signs

- Provide rescue medications as directed by student's asthma plan
- Encourage student to relax and take slow, deep breaths
- Contact the school nurse or main office personnel if rescue medications are not available [*Note: always have someone accompany the student with asthma symptoms to the nurse's or school office*]

# Recognize Asthma Attack Signs

- Incessant coughing
- Becoming anxious or scared
- Wheezing while breathing in or out
- Shoulders hunched over
- Tightness in chest
- Rapid or labored breathing
- Inability to say a full sentence without taking a breath
- Nasal flaring
- Requiring rescue medication more frequently than every 4 hours

# Respond to Asthma Attack Signs

- Contact the school nurse or main office personnel immediately [*Note: always have someone accompany the student with asthma symptoms to the nurse's or school office, never leave them alone*]
- Provide rescue medications as directed by student's asthma plan
- Encourage student to sit up, relax and take slow, deep breaths
- Provide calm reassurance
- Call 911 if medication or help is not available and you feel the problem is severe

## Call 911 if:

- No improvement 15-20 minutes after initial treatment with rescue medication
- Medications are not available and student has signs of a severe asthma attack
- Child is extremely anxious and you see them using neck muscles to breath or grunting at the end of each breath
- Lips or nail beds turn gray/blue (students with light complexions) or pale (students with dark complexions)
- Decreasing or loss of consciousness

# Managing Asthma: Understand How to Read a Student's Asthma Plan

## My Asthma Plan




Name: \_\_\_\_\_ DOB: \_\_\_\_\_  
 Parent/Guardian: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Doctor: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Friend/Taxi phone: \_\_\_\_\_ **Peak Flow Personal Best:** \_\_\_\_\_  
 Asthma Triggers: \_\_\_\_\_  
 Food Allergies: \_\_\_\_\_

For school & child care medication permission: This patient has been instructed in the proper way to take his/her medications. He/she is capable of self-administering medications: Yes No He/she can reliably report asthma symptoms: Yes No

**Health Care Provider's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**I Feel Good**

- Breathing is good
- No cough or wheeze
- Can work & play




**Prevent asthma symptoms every day:**

|                  |                  |              |
|------------------|------------------|--------------|
| <u>Medicine:</u> | <u>How much:</u> | <u>When:</u> |
| _____            | _____            | _____        |
| _____            | _____            | _____        |

Peak Flow Number \_\_\_\_\_ 20 minutes before exercise or sports, use this medicine:  
 to \_\_\_\_\_

**I Do NOT Feel Good**

- Cough or wheeze
- Difficulty breathing
- Wake up at night



**CAUTION! SLOW DOWN & take relief medicine:**

|                  |                  |              |
|------------------|------------------|--------------|
| <u>Medicine:</u> | <u>How much:</u> | <u>When:</u> |
| _____            | _____            | _____        |
| _____            | _____            | _____        |


ALSO CONTINUE/INCREASE your preventive medicine:  
 \_\_\_\_\_  
 \_\_\_\_\_

Call your doctor if you have these symptoms frequently or if relief medicine does not work!

Peak Flow Number \_\_\_\_\_ 80% of Personal Best  
 to \_\_\_\_\_

**I Feel Awful**

- Medicine not helping
- Breathing hard, fast
- Can't talk/walk well



**MEDICAL ALERT - GET HELP NOW!**  
 Take these medicines until you talk to the doctor:

|                  |                  |              |
|------------------|------------------|--------------|
| <u>Medicine:</u> | <u>How much:</u> | <u>When:</u> |
| _____            | _____            | _____        |
| _____            | _____            | _____        |

Call 911 if your asthma is very severe

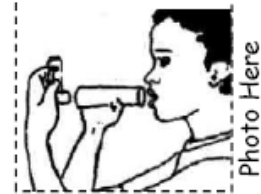
Peak Flow Number \_\_\_\_\_ 50% of Personal Best  
 to \_\_\_\_\_

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Drawings courtesy of RAMF, Berkeley, CA

# Managing Asthma: Understand How to Read a Student's Asthma Plan



## My Asthma Plan



Name: \_\_\_\_\_ DOB: \_\_\_\_\_  
 Parent/Guardian: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Doctor: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Friend/Taxi phone: \_\_\_\_\_ **Peak Flow Personal Best:** \_\_\_\_\_  
 Asthma Triggers: \_\_\_\_\_  
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**For school & child care medication permission:** This patient has been instructed in the proper way to take his/her medications. He/she is capable of self-administering medications: Yes No He/she can reliably report asthma symptoms: Yes No

**Health Care Provider's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

# Managing Asthma: Peak Flow Meter

- Hand-held device that measures how much the child can forcibly blow air out of their lungs (peak flow is a measure of the rate of air flow- not amount)
- Used for routine measurements or to identify emergent/urgent situations
- Peak flow zones calculated from student's personal best peak flow
- Steps for use:
  1. Set the arrow at zero.
  2. Stand up.
  3. Remove everything from one's mouth like gum.
  4. Take a deep breath in.
  5. Close lips tightly around the tube and blow one hard, quick breath into the mouthpiece. Note the number of the peak flow rate achieved by the blow.
  6. Repeat 3 times and use highest score.



# Managing Asthma: Understand How to Read a Student's Asthma Plan

I Feel Good

- Breathing is good
- No cough or wheeze
- Can work & play



Prevent asthma symptoms every day:

Medicine:

How much:

When:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Peak Flow Number  
\_\_\_\_\_ to \_\_\_\_\_

20 minutes before exercise or sports, use this medicine:

\_\_\_\_\_



# Managing Asthma: Understand How to Read a Student's Asthma Plan

I Do NOT Feel Good

- Cough or wheeze
- Difficulty breathing
- Wake up at night



80% of  
Personal  
Best

Peak Flow Number  
\_\_\_\_\_ to \_\_\_\_\_

**CAUTION! SLOW DOWN & take relief medicine:**

Medicine:

How much:

When:

\_\_\_\_\_

**ALSO CONTINUE/INCREASE** your preventive medicine:

\_\_\_\_\_


\_\_\_\_\_

Call your doctor if you have these symptoms frequently  
or if relief medicine does not work!

# Managing Asthma: Understand How to Read a Student's Asthma Plan

I Feel Awful

- Medicine not helping
- Breathing hard, fast
- Can't talk/walk well



50% of Personal Best

Peak Flow Number

\_\_\_\_\_ to \_\_\_\_\_

**MEDICAL ALERT - GET HELP NOW!**

Take these medicines until you talk to the doctor:

| <u>Medicine:</u> | <u>How much:</u> | <u>When:</u> |
|------------------|------------------|--------------|
|                  |                  |              |
|                  |                  |              |

Call 911 if your asthma is very severe

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Drawings courtesy of RAMP, Berkeley, CA

# Resources

- One-page summary from this presentation
- Copy of this presentation
- Your school nurse
- Parents of students with asthma
- Helpful websites
  - <http://www.alaw.org>
  - <http://www.aanma.org>
  - <http://www.alliesagainstasthma.net>
  - <http://www.aaaai.org>
  - <http://www.aafaw.org/>
  - <http://www.cdc.gov/HealthyYouth/asthma>