

# ASTHMA IN SCHOOLS: (K-12) Management and Emergency Information

REGIONAL **r**amp  
ASTHMA MANAGEMENT  
& PREVENTION

# ASTHMA IN SCHOOLS: **The Facts**

- No one has to die from asthma.
- Asthma can be fatal, even in mild cases, and symptoms are often sudden and unexpected.
- While asthma affects each individual differently, people with asthma can lead a normal life at home and at school by managing their asthma successfully and avoiding things that make it worse.
- For the purpose of this presentation we define an asthma episode as a flare-up of asthma that is not life-threatening and may be controlled with medication and adult school staff support. We define an asthma emergency as an asthma episode that cannot be controlled, may be life threatening, and needs immediate attention.



# ASTHMA IN SCHOOLS: **The Facts**

## Asthma...

- is a chronic, often lifelong condition of the airways.
- has no known cure.
- results in 15 deaths a day in the U.S..
- can be controlled through effective asthma management and reduction of environmental triggers.

## Asthma impacts schools because...

- it is a leading cause of school absences.  
(over 14 million school days lost/year in the U.S.)
- it creates a loss of revenue to school districts.
- can result in lower school performance when poorly managed.



## Alameda County Data:

<http://www.californiabreathing.org/files/alameda.pdf>

- Lifetime Asthma Prevalence Rate for Children (0 to 14 years) - **15%**, All ages - **13.1%**
- Asthma Hospitalizations for Children (0 to 14 years) - **34.7%**, All ages - **16.5%**

California County Profiles and local data can be found on California Breathing's website at [http://www.californiabreathing.org/asthma\\_data/new\\_asthma\\_data/](http://www.californiabreathing.org/asthma_data/new_asthma_data/)

Email the state epidemiologist for specific local data.

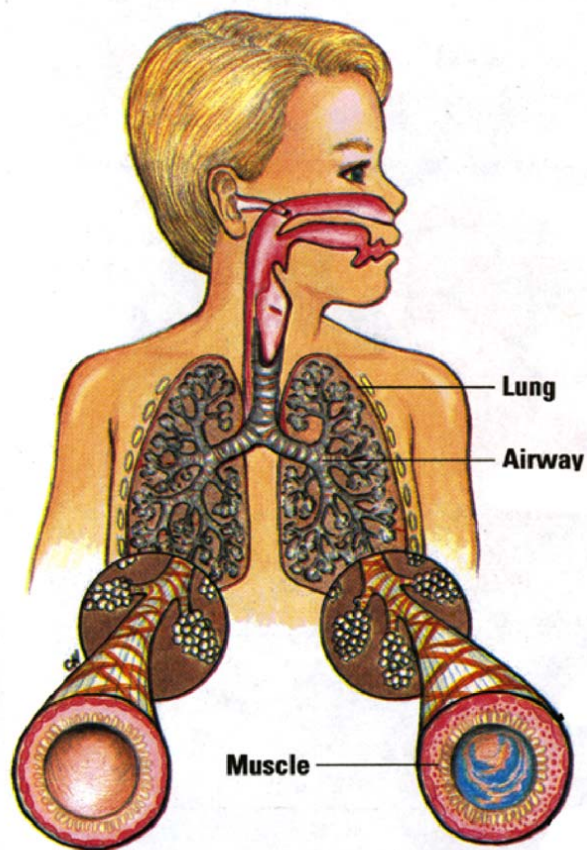
## Statewide Data:

<http://www.calasthma.org>

- Lifetime Asthma Prevalence Rate for Children (0 to 14 years) - **13.8%**, All ages - **13%**
- Asthma Hospitalizations for Children (0 to 14 years) - **17.7%**, All ages - **11.1%**

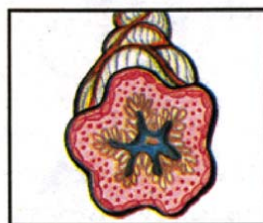


# ASTHMA IN SCHOOLS: **The Facts**



During an asthma episode:

- The airways swell
- Excess mucous production clogs airways
- Muscles around the airways tighten



# ASTHMA IN SCHOOLS: **The Facts**

## Symptoms of Asthma

Each individual has his/her own set of symptoms. If you know a student has asthma, or suspect they do, watch for these **warning signs** to indicate uncontrolled asthma or a potential asthma episode:

- Cough (persistent or with physical activity)
- Wheeze
- Shortness of breath
- Student reports tightness in the chest
- Consistent use of rescue inhaler
- Tired at school (waking at night with asthma symptoms)
- School absence due to asthma
- Stomach aches
- Headaches



## Asthma Triggers

- An asthma trigger is anything that can bring on an asthma episode or make it worse.
- Everyone's triggers can be different.
- Multiple triggers can have a cumulative effect.
- Some students have several triggers

## Other things that aggravate asthma

- Colds or respiratory viral infections
- Allergic reactions
- Strong emotions (stress, crying or laughing hard)



# ASTHMA IN SCHOOLS: **The Facts**



## Asthma Triggers in School Settings:

- chalk dust
- classroom animals
- mold, mildew
- strong odors  
(scented body products, markers, air fresheners, cleaning supplies, etc.)
- art class and shop materials
- cold temperatures
- output from idling school buses and vehicles
- dust mites
- pollens
- smoke
- pests



# ASTHMA IN SCHOOLS: **Medical Management**

## Medications

There are two basic types:

### 1. Quick Relief | **ALBUTEROL**

- Used to reduce asthma symptoms, before exercise, and during an emergency!
- Ideally, everyone with asthma has access to quick relief medication at school

### 2. Controller

- Ideally, used at home daily to prevent inflammation and episodes.
- Not prescribed for everyone with asthma and often under utilized.



**Inhalers** – give metered dose of medication

**Spacer** – increases effectiveness of medication delivery



# ASTHMA IN SCHOOLS: **Medical Management**

## Students with asthma at school

- Students with known asthma may need to take their medications when experiencing asthma symptoms.
- If child has medication in classroom (self-carry law allows this), administer and call school nurse.
- If child has medication in front office/nurse's office, send them **accompanied** to the office and call school nurse.

## Preventing asthma episodes during exercise

- Pre-medicate with quick relief medication (albuterol) 15 minutes prior to activity.
- Keep quick relief inhaler available and accessible during activity/physical education class.
- If symptoms occur during activity, stop exercise and utilize quick relief medication, if necessary.



# ASTHMA IN SCHOOLS: Asthma Emergency

For an asthma emergency:

Always stay calm, keep student upright,  
and don't leave the student alone!

**Call 911** if student is having an asthma emergency and has no quick relief medication.

**Call 911** if student is having an asthma emergency and is unable to control it with their quick relief medication (continued shortness of breath, straining to breathe, symptoms getting worse).

**Call 911** immediately if a student can't walk or talk, or a student's lips or nails are blue.

Remember, never leave the student alone!



# ASTHMA IN SCHOOLS: Environmental Management

## What Schools Can Do to Reduce Asthma Triggers:

- Keep Heating, Ventilation, and Air Conditioning system (HVAC) running when people are in the room.
- Ensure windows are open and air is flowing.
- Keep building free of condensation, mold/mildew and maintain average zone for humidity.
- Avoid scented products (Plug-Ins, air fresheners, cleaning products, perfumes, etc.)



## What Schools Can Do to Reduce Asthma Triggers (Continued):

- Minimize clutter and store art supplies and cleaning supplies in closed containers.
- Clean classrooms daily, remove trash, and keep free of pests and vermin.
- Minimize use of carpets and increase use of tile and hardwood floors.
- Use fake or low allergen plants.  
See [http://calasthma.org/resources/show\\_resource/448/](http://calasthma.org/resources/show_resource/448/)
- Have a “no pets allowed” rule or minimize exposure.



# ASTHMA IN SCHOOLS: Environmental Management



## Teacher's Classroom Checklist

Name: \_\_\_\_\_  
 School: \_\_\_\_\_  
 Room or Area: \_\_\_\_\_ Date Completed: \_\_\_\_\_  
 Signature: \_\_\_\_\_

### Instructions

1. Read the *IAQ Background* and the *Background Information* for this checklist.
2. Keep the *Background Information* and make a copy of the checklist for future reference.
3. Complete the Checklist.
  - Check the "yes," "no," or "not applicable" box beside each item. (A "no" response requires further attention.)
  - Make comments in the "Notes" section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

	Yes	No	N/A
<b>1. GENERAL CLEANLINESS</b>			
1a. Ensured rooms are dusted and vacuumed regularly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1b. Ensured rooms are free of clutter .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1c. Ensured that trash is removed daily .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1d. Ensured that no food is stored in classroom overnight .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1e. Ensured that animal food is stored in tightly sealed containers .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1f. Ensured room is free of pests and vermin .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1g. Used unscented, school-approved cleaners and air fresheners, if any, in rooms .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. ANIMALS IN THE CLASSROOM</b>			
2a. Minimized exposure to animal allergens .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2b. Ensured that animals are kept in cages (as much as possible) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2c. Ensured that cages are cleaned regularly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2d. Placed animal cages away from supply and return vents .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2e. Consulted school nurse about student allergies or sensitivities (privacy laws may limit the information that health officials can disclose) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2f. Identified potential allergies of students .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2g. Moved sensitive students away from animals and habitats .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. DRAIN TRAPS IN THE CLASSROOM</b>			
3a. Ensured that water is poured down floor drains once per week (approx. 1 quart of water) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3b. Ensured that water is run in sinks at least once per week (about 2 cups of water) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3c. Ensured that toilets are flushed once each week, especially if not used regularly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4. EXCESS MOISTURE IN CLASSROOMS</b>			
4a. Ensured that condensate is wiped from windows, windowsills, and window frames .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4b. Ensured that cold water pipes are free of condensate .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4c. Ensured that indoor surfaces of exterior walls are free of condensate .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4d. Ensured areas around and under classroom sinks are free of leaks .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4e. Ensured classroom lavatories are free of leaks .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4f. Ensured ceiling tiles and walls are free of leaks (discoloration may indicate periodic leaks) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4g. Ensured that spills are cleaned promptly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do a walkthrough to review your school environment.

This is an example of an Indoor Air Quality (IAQ) checklist that schools can use to review their classrooms and other facilities.

Source: U.S. Environment Protection Agency's Tools for Schools Program  
<http://www.epa.gov/iaq/schools/>



# ASTHMA IN SCHOOLS: Resources for Management

## My Asthma Plan

Patient Name: \_\_\_\_\_  
 Physician's Name: \_\_\_\_\_  
 Physician's Phone #: \_\_\_\_\_  
 Completed by: \_\_\_\_\_ Date: \_\_\_\_\_

# EXAMPLE

Controller Medicines	How Much to Take	How Often	Other Instructions
		_____ times per day EVERYDAY!	
		_____ times per day EVERYDAY!	
		_____ times per day EVERYDAY!	
		_____ times per day EVERYDAY!	
Quick-Relief Medicines	How Much to Take	How Often	Other Instructions
		Take ONLY as needed	NOTE: If this medicine is needed frequently, call physician to consider increasing controller medications.

Special instructions when I feel ● good, ● not good, and ● awful.

**GREEN ZONE**

I feel *good*.  
(My peak flow is in the GREEN zone.)

**YELLOW ZONE**

I do *not* feel good.  
(My peak flow is in the YELLOW zone.)  
My symptoms may include one or more of the following:  
• Wheeze  
• Tight chest  
• Cough  
• Shortness of breath  
• Waking up at night with asthma symptoms  
• Decreased ability to do usual activities

**RED ZONE**

I feel *awful*.  
(My peak flow is in the RED zone.)  
Warning signs may include one or more of the following:  
• Its getting harder and harder to breathe  
• Unable to sleep or do usual activities because of trouble breathing

**Danger! Get help immediately!** Call 911 if trouble walking or talking due to shortness of breath or lips or fingernails are gray or blue.

**PREVENT** asthma symptoms everyday:

- Take my controller medicines (above) everyday.
- Before exercise, take \_\_\_\_\_ puffs of \_\_\_\_\_
- Avoid things that make my asthma worse like: \_\_\_\_\_

**CAUTION.** I should continue taking my everyday controller asthma medicines AND:

- Take \_\_\_\_\_

If I still do not feel good, or my peak flow is not back in the **Green Zone** within one hour, then I should:

- Increase \_\_\_\_\_
- Add \_\_\_\_\_
- Call \_\_\_\_\_

**MEDICAL ALERT! Get help!**

- Take \_\_\_\_\_ until I get help immediately.
- Take \_\_\_\_\_
- Call \_\_\_\_\_

## Asthma Action Plans (or Asthma Care Plans):

Ideally, every student with asthma has a plan on file at school from their doctor and parent/guardian that indicates their:

- asthma diagnosis
- medication plan
- triggers
- emergency information

Ask your school nurse about Asthma Action Plans.



# ASTHMA IN SCHOOLS: Resources for Management

## EXAMPLE

**San Francisco Unified School District - School Health Programs Department**  
**MEDICATION FORM (One Medication Per Form)**

Dear Parent/Guardian/Caregiver:  
California Education Code 49423 provides that students required to take medically prescribed or over-the-counter medications during the school day **MAY** be assisted by school personnel **ONLY** if the school district receives a specific written statement from the health care provider **AND** the parent/guardian/caregiver of the student. **Please complete this entire form and return it to the Principal.**

**IF POSSIBLE, PLEASE SCHEDULE MEDICATION OUTSIDE OF SCHOOL HOURS.**

Please print legibly in all sections

Student Name: Last \_\_\_\_\_ First \_\_\_\_\_ Middle \_\_\_\_\_ Date of Birth (Month/Day/Year) \_\_\_\_\_

**HEALTH CARE PROVIDER SECTION**

Health Condition for which medication is prescribed: \_\_\_\_\_

Medication: \_\_\_\_\_ Dose: \_\_\_\_\_ Duration: \_\_\_\_\_

Frequency: \_\_\_\_\_ About what time does medication need to be given at school? \_\_\_\_\_ AM / PM

How is medication to be given?  
 By mouth  Inhalation  Injection  Topical

Any precautions that school personnel need to know?  
Contraindications? \_\_\_\_\_

The medication is to be continued as above until:  
(please be as specific as possible about date)

What should be done in the event of reaction/side effect?  
What are possible reactions/side effects? \_\_\_\_\_

**Check appropriate boxes below:**  
 I authorize this student to **self-administer** the above medication.  
 I authorize designated school personnel to **administer** the above medication.

Signature of Health Care Provider \_\_\_\_\_

Print name, address & phone number of Health Care Provider \_\_\_\_\_

**PARENT / GUARDIAN / CAREGIVER SECTION**

Home Language \_\_\_\_\_ Zip Code \_\_\_\_\_

Daytime Phone ( ) \_\_\_\_\_  
Evening Phone ( ) \_\_\_\_\_  
School Hours \_\_\_\_\_

### Medication Forms:

- Ideally, every student with asthma has a medication form on file at school from their doctor and signed by their parent/guardian that gives them permission to have medication at school and to have it administered, or administer it themselves.



## SELF-CARRY LAW:



AB 2132 became California law and went into effect on January 1, 2005. It is known as the "self-carry law" and allows students in California schools, with doctor and parental approval, to carry and self-administer their own asthma medication. The law contains information to help schools understand the requirements of the law and some factors that need to be considered by parents, physicians and school nurses in allowing students to carry their own medication.



For more information: <http://tinyurl.com/2aea58>



## INSERT YOUR INFORMATION HERE

### Other Resources/ Contact Information:

- Presenter
- School Nurse
- Local Coalitions
- RAMP

[Regional Asthma Management & Prevention]

180 Grand Ave, Suite 750

Oakland, CA 94612

Phone: (510) 302-3318

Fax: (510) 451-8606

[www.rampasthma.org](http://www.rampasthma.org)

