

# Wisconsin Asthma Program: Guide to Asthma-Friendly Schools

2015



Wisconsin  
Department of Health Services

Division of Public Health  
Bureau of Environmental and Occupational Health  
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# Acknowledgments

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- Kathryn A. Swenson, NP, UW Hospitals and Clinics
- Michelle Mercure, CHES, American Lung Association Wisconsin

Questions? Contact Cris Rameker at (608) 267-6845 or [Cristine.Rameker@dhs.wisconsin.gov](mailto:Cristine.Rameker@dhs.wisconsin.gov)

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# Purpose

The purpose of this document is to provide guidance to Wisconsin schools on ways to help students better manage their asthma. It is meant to assist school staff to better recognize asthma symptoms, reduce asthma triggers, and educate students on asthma self-management through various guides, handouts, and posters.

The forms contained within this guide have in-text hyperlinks to resources that can easily be printed in black and white. Everything in this guide is free for schools to use and combines recommendations from:

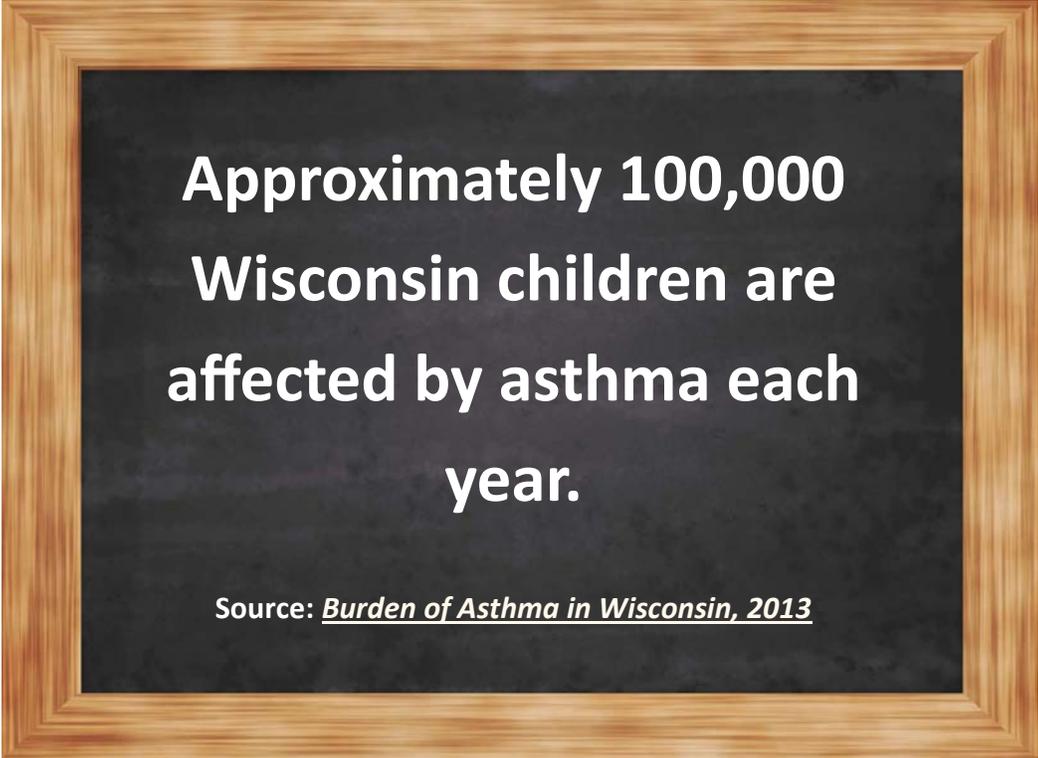
- American Academy of Allergy, Asthma, and Immunology
- American Lung Association
- Centers for Disease Control and Prevention
- Environmental Protection Agency
- Wisconsin Asthma Coalition
- Wisconsin Department of Health Services, Wisconsin Asthma Program
- Wisconsin Department of Public Instruction
- Other state asthma programs.

Nearly 200 school nurses and staff members throughout Wisconsin also provided input. This document draws on projects and programs already being implemented to reduce the burden of asthma in Wisconsin children.



**Controlling asthma  
starts with YOU!**

# Introduction



**Approximately 100,000  
Wisconsin children are  
affected by asthma each  
year.**

Source: *Burden of Asthma in Wisconsin, 2013*

Asthma is a chronic disease that affects the airways making breathing difficult. Asthma can cause episodes of chest tightness, wheezing, coughing, and shortness of breath.

Asthma often starts in childhood and is more common in children than in adults. The most common outdoor triggers for asthma attacks are pollen, exercise, pollution (such as particulate matter and diesel fuel), and pesticides. Indoor triggers for asthma include mold, dust, secondhand smoke, and pet dander.

While asthma has no cure, it can be controlled. The majority of problems associated with asthma can be prevented if asthma is managed properly.

Source: [Centers for Disease Control and Prevention's Environmental Public Health Tracking Network](#)

# The Impact of Asthma in Wisconsin

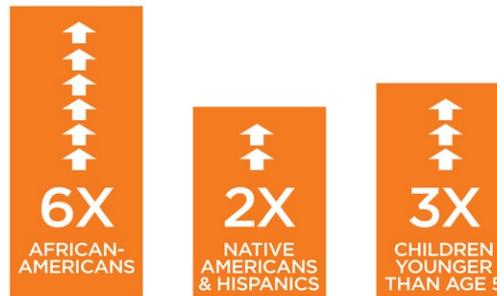
## ASTHMA IS COMMON

MORE THAN **HALF A MILLION** WISCONSINITES



## ASTHMA IS DEADLY

EMERGENCY DEPARTMENT VISIT  
& HOSPITALIZATION RATES



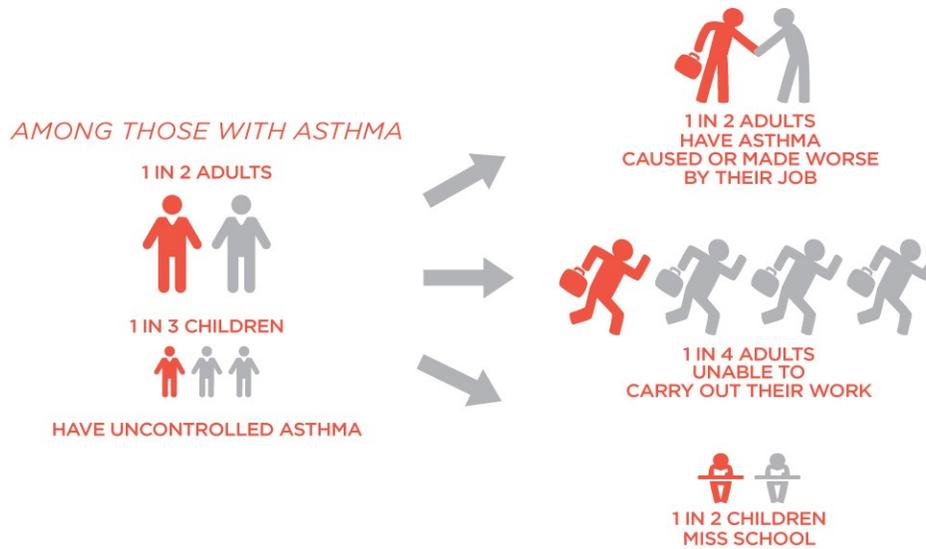
**1** PERSON DIES EVERY 5 DAYS

## ASTHMA IS EXPENSIVE



# The Impact of Asthma in Wisconsin

## ASTHMA IS DISRUPTIVE



## ASTHMA IS CONTROLLABLE

*AMONG THOSE WITH ASTHMA*

30% ADULTS  
42% CHILDREN



HAVE THE  
RECOMMENDED  
2 CHECKUPS  
PER YEAR

31% ADULTS  
47% CHILDREN



RECEIVE AN  
ASTHMA ACTION PLAN  
FROM PROVIDER

41% AGES 18-49  
70% AGES 50+



RECEIVE THE  
RECOMMENDED  
FLU VACCINE

Source: [Wisconsin Asthma Plan, 2015-2020](#)

# Asthma in Wisconsin Schools



## **Asthma is common among Wisconsin children.**

- In 2013, 12.4 percent or approximately 1 in 13 children had asthma.
- In 2011, nearly one-third (33.3 percent) of children with asthma had poorly controlled asthma.
- In 2011, 65.4 percent of children with asthma reported having an asthma attack.



## **Asthma hurts school attendance and academic success.**

- Nationwide, asthma is the leading cause of school absences due to chronic illness. Over 14 million school days are missed due to asthma each year.
- Nearly half (46.3 percent) of all Wisconsin children with asthma reported missing one or more school days due to asthma.
- Students with uncontrolled asthma may have lower test scores and academic achievement.



## **Asthma can be controlled at school.**

- Controlling asthma starts with correctly using asthma medications and reducing environmental triggers such as diesel exhaust and dust mites.
- Schools can help students with asthma by allowing students easy access to their medications and reducing asthma triggers.
- Creating an asthma-friendly school is important for student success. This guide outlines simple steps schools can take to become asthma-friendly.

# Key Steps to Asthma-Friendly Schools

The key steps to reducing asthma in Wisconsin students include recommendations that focus on *three* main areas:

## 1. Self-Management and Education

Every Wisconsin school should identify students with asthma. These students need to have an Asthma Action Plan on file. By law, students are allowed to self-carry and administer asthma medications during school hours or must have easy access to their asthma medication in the event they cannot self-administer. Students self-carrying asthma medication must have a medical authorization form on file and be educated on how to properly use their medicines. All students and staff should know the signs and symptoms of an asthma attack. A school-wide protocol for handling and responding to an asthma attack should be created and key staff should be trained.

## 2. Asthma Trigger Reduction

It is important to not only reduce asthma triggers in the classroom but outside of the classroom as well. Schools should focus on outdoor air quality, indoor air quality, integrated pest management, and green cleaning to help reduce common asthma triggers. Common asthma triggers include: diesel exhaust, pollen, dust and dust mites, cockroaches and other pests, pet dander, tobacco smoke, and certain cleaners and chemicals.

## 3. Collaboration with Families, Students, Staff, and Healthcare Providers

Successfully creating an asthma-friendly school depends on collaboration. A strong family-school-healthcare provider partnership is key. This guide details the roles of all parties involved in improving health outcomes for students with asthma.

# Asthma-Friendly School Checklist

Is your school asthma friendly? The list below covers the basic elements of an asthma-friendly school. Check off the steps you already have in place at your school.

- A registered school nurse, or another trained staff person, identified to coordinate asthma activities in the school.
- A process to identify all students in the school with asthma.
- The collection of medication authorization forms and Asthma Action Plans.
- A policy to allow students with medication authorization forms to carry and self-administer their asthma medication, in compliance with Wisconsin law.
- A school-wide protocol, widely known by staff and posted throughout the school, detailing what to do if a child has an asthma attack.
- A plan to allow students with asthma to fully participate in school activities, including pre-treating exercise induced asthma and modified physical activities for students with limitations.
- Education for all staff and students about asthma.
- A process to regularly identify asthma triggers inside and outside the school and take steps to reduce them.
- A strong family-school-health provider partnership.

In areas where your school does not have appropriate protocols and policies in place, consider implementing the suggestions from this guide using the resources provided.





# Key 1:

Self-Management and Education

# Identification of Students with Asthma

It is vital to know which students in your school have asthma. At the start of each school year, your school should identify all students with the disease. Examples of forms to help your school identify students with asthma are included on the next few pages. They are free to use and you are encouraged to make copies and distribute the materials to parents, students, and other interested individuals. These forms include:

- **Student Health History form** to identify students with asthma.
- **Asthma Identification Letter** to parents or guardians about additional forms to be completed once their student has been identified as having asthma.
- **Asthma Inhaler Administration form** giving authorization for students to receive asthma relieving medication.
- **Standing Orders for Anaphylaxis** defining what anaphylaxis is and the procedure for use of an epinephrine auto-injector.
- **Anaphylaxis Medication form** outlining an allergy treatment plan and providing consent for treatment.
- **Asthma Action Plan**, which should remain on file at school.

Additional educational materials providing more information on types and correct usage of asthma medications, signs of an asthma attack and first aid, definitions of allergic asthma and anaphylaxis, etc., are also included. These materials should be shared with the appropriate parties to fully manage asthma.



# Student Health History Form

Dear Parent:

We would like your child to gain the most from their school experience. In order for us to help accomplish this, we need a current health history. Please complete this form and return it to your child's school when you register.

Child's Name: \_\_\_\_\_ Gender: \_\_\_\_\_

Address: \_\_\_\_\_

Birthdate: \_\_\_\_\_ School Attending: \_\_\_\_\_

Telephone: \_\_\_\_\_ Parents' Names: \_\_\_\_\_

## 1. Family History:

Please check (✓) the following if your child has been treated for or is currently experiencing any of the following health conditions.

ADD/ADHD		Cystic Fibrosis		Measles	
Anemia (Include Sickle Cell)		Diabetes		Mononucleosis	
Arthritis		Head Injury/Concussion		Mumps	
Asthma		Headaches		Orthopedic/Bone Disorders	
Autism		Hearing Loss		Psychological/ Psychiatric	
Back/Neck Injury		Heart Condition/Murmur		Scoliosis	
Bladder/Kidney Disease		Hepatitis		Skin Disorders	
Bleeding/Clotting Disorder		Hernia		Speech/Language Issues	
Cancer/Leukemia		Hives		Spina Bifida	
Cerebral Palsy		Hypertension		Surgery	
Chickenpox		Lead Exposure		Vision Loss/ Correction	
Convulsions/Seizures		Lung Disease/Tuberculosis		Other:	

If you checked that your child has a health problem, please tell us more about it:

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# Student Health History Form

Does your child have allergies?  Yes  No If yes, to what? \_\_\_\_\_

Date of last reaction: \_\_\_\_\_ What happened? \_\_\_\_\_

Is an EpiPen® or other epinephrine auto-injector prescribed for allergy?  Yes  No

## 2. Medications:

Is your child currently taking medication(s) at home?  Yes  No

Name of medication(s) \_\_\_\_\_

Do you anticipate that your child will need to take medications (including as needed meds— Tylenol, Benadryl, etc.) at school?  Yes  No

Name of medication(s) \_\_\_\_\_

## 3. Health History:

Does the student have health insurance?  Yes  No

Does the student have a primary care provider?  Yes  No

Name of Provider: \_\_\_\_\_

Clinic: \_\_\_\_\_

Phone Number: \_\_\_\_\_

When did your child last have a physical examination? \_\_\_\_\_

When did your child last have a dental check-up? \_\_\_\_\_

When did your child last have a vision screening? \_\_\_\_\_

Has your child had a **serious illness or injury** since birth?  Yes  No

\_\_\_\_\_  
\_\_\_\_\_

Has this child ever needed to stay in the **hospital** or had any **operations**?  Yes  No

If yes, please describe why and when:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Student Health History Form

## 4. Developmental History:

Child sat without support:

5-7 months

After 7 months

Child walked alone:

Before 14 months

After 14 months

Child spoke single words:

11-20 months

After 21 months

Child began combining words into sentences:

14-24 months

After 24 months

## 5. Vision History:

Yes No

- I have concerns about my child's vision
- Family members have vision problems
- Child wears glasses
- Child is blind or visually impaired
- Eyes appear to cross

## 6. Hearing History:

Yes No

## 7. General History:

Yes No

- There has been a recent move, death, divorce, separation
- Has difficulty talking and playing with other children
- Frequently stumbles or falls when running or walking
- Has behavior habits that concern me
- Overly active compared to other children

Please explain if there is anything else we should know about your child:

---

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

District Nurse Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Alternative solution:** Consider annually collecting student health information using your school's electronic information system (e.g. Infinite Campus or Skyward). The letter on the next page can be used when a student with asthma is identified and additional authorization forms need to be filled out. Adapted from: [Oconomowoc Area School District](#)

# Asthma Identification Letter

Date

Dear Parent or Guardian,

Our school makes a special effort to ensure that all of our students have the best opportunity to be healthy in school. We believe that healthy students have the best chance at academic success. One of the most common health problems in children is asthma. Did you know that about 1 out of 13 Wisconsin children have asthma? Based on the answers you provided in your child's health history form, we have identified your child as having asthma.

For your child's health and safety, please fill out the attached forms and return them to school at (insert address here), to our district office at (insert address here), or scan and email them to us at (insert email address here).

- An **Asthma Inhaler Administration form** for you and your child's health care provider to fill out if your child needs to carry a rescue inhaler at school.
- An **Anaphylaxis Medication form** to be filled out by you and your child's healthcare provider if your child needs to carry an EpiPen® or other epinephrine auto-injector at school.
- An **Asthma Action Plan**, also to be filled out by a health care provider, that tells the school what to do if your child is having asthma symptoms.

Thank you for partnering with us to make our school a healthy place for children.

Sincerely,

Your School Nurse

School Nurse's Contact Information

# Wisconsin Student Asthma Inhaler Law

**Wisconsin Stat. § 118.291 allows students with asthma to possess and use metered dose and dry powder inhalers with written permission from their physician and parent/guardian.** The Wisconsin Student Inhaler Law allows a student with asthma to carry prescribed preventative and/or rescue medications with him/her at school in a locker, pocket, backpack, etc. The school should work with the family and health care provider to develop the best plan for the student, following the guidance in the law.

## **118.291 Asthmatic pupils; possession and use of inhalers.**

(1g) In this section:

(a) “Asthma” means a chronic inflammatory disease of the airways, characterized by airway obstruction, which is at least partially reversible and which manifests as increased bronchial responsiveness to a variety of stimuli.

(b) “School” includes a public and a private school.

(1r) While in school, at a school-sponsored activity or under the supervision of a school authority, an asthmatic pupil may possess and use a metered dose inhaler or dry powder inhaler if all of the following are true:

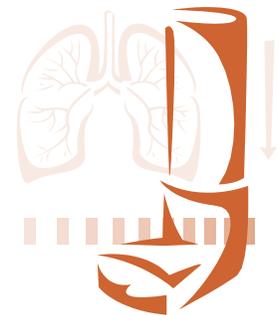
(a) The pupil uses the inhaler before exercise to prevent the onset of asthmatic symptoms or uses the inhaler to alleviate asthmatic symptoms.

(b) The pupil has the written approval of the pupil’s physician and, if the pupil is a minor, the written approval of the pupil’s parent or guardian.

(c) The pupil has provided the school principal with a copy of the approval or approvals under par. (b).

(2) (a) No school district, school board or school district employee is civilly liable for injury to a pupil caused by a school district employee who prohibits a pupil from using an inhaler because of the employee’s good faith belief that the requirements of sub. (1r) had not been satisfied or who allows a pupil to use an inhaler because of the employee’s good faith belief that the requirements of sub. (1r) had been satisfied.

(b) No private school or private school employee is civilly liable for injury to a pupil caused by a private school employee who prohibits a pupil from using an inhaler because of the employee’s good faith belief that the requirements of sub. (1r) had not been satisfied or who allows a pupil to use an inhaler because of the employee’s good faith belief that the requirements of sub. (1r) had been satisfied.



# Types of Inhalers and Additional Considerations for Students

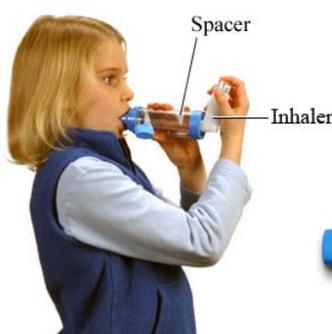
The best way to control asthma is to properly use all prescribed medications and avoid known asthma triggers. It is important that students have access to their asthma medications, a safe space to use their medications, are allowed to self-carry and administer their inhalers, and have access to the school nurse or other knowledgeable adult who can assess and treat their asthma symptoms. Special consideration and assistance should be given to children who are too young to self-administer their asthma inhalers.

Most asthma medications are given in the form of an inhaler. There are two main types of inhalers: aerosol inhalers—also called metered dose inhalers (MDIs) or puffers, and dry powdered inhalers. Aerosol inhalers are the most common and should be used with a spacer. Spacers allow more medicine to get into the lungs, reduce side effects, and eliminate the need to coordinate pressing the aerosol inhaler and breathing in at the same time. These devices are pictured below.

It is best practice that the school nurses check with students with asthma to make sure they know how to properly use their medication, discuss their asthma action plan, create an individualized health plan, and document inhaler education. School nurses should have the students demonstrate how to use their inhaler and show them correct technique, as illustrated on the next page. This allows students to better manage their asthma, rather than the asthma managing them.



Aerosol Inhaler



Aerosol Inhaler and Spacer



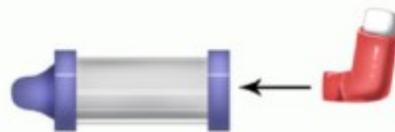
Dry Powdered Inhaler

# Proper Use of a Metered Dose Inhaler with a Spacer

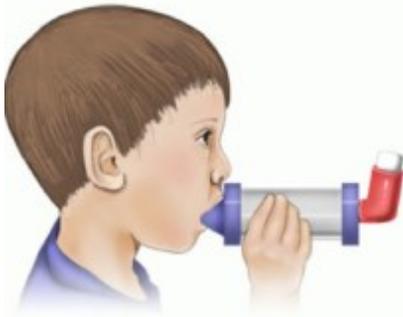
Most asthma rescue medications come in the form of an aerosol inhaler commonly called a metered dose inhaler (MDI). A metered dose inhaler is a pressurized canister of medicine that is sprayed through a mouthpiece. You can help a student follow these simple steps to properly use their metered dose inhaler. Some students will take their rescue medication using a spacer. A spacer is an attachment for the inhaler that makes it easier to use and can help the student inhale more medication. To properly use a metered dose inhaler with a spacer:



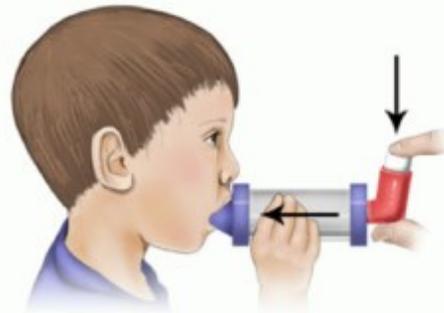
1. Shake the medicine.



2. Insert the mouthpiece of the inhaler into the rubber-sealed end of the spacer.



3. Breathe all of the air out of your lungs. Then put the spacer into your mouth between your teeth. Make a tight seal around the mouthpiece with your lips.



4. Press the metered-dose inhaler down once to release a spray of medicine. The medicine will be trapped in the spacer. Breathe in slowly and deeply.



5. Hold your breath for at least 5 to 10 seconds. Breathe out slowly.

Source: [Asthma and Allergy Foundation of America, Fam allies](#)

# Asthma Inhaler Administration Authorization

Student's Name: \_\_\_\_\_ D.O.B: \_\_\_\_\_ School/Grade: \_\_\_\_\_

Diagnosis: \_\_\_\_\_

In order for the student to receive the asthma relieving medication for asthma:

- Asthma inhaler administration authorization form will be completed and signed by parent and medical provider. Form will be given to school district administrator or school nurse.
- Asthma inhaler medication will have student's name, name of medication, directions for use and date.
- Authorization of asthma relieving medication will be updated annually.

The student has the skill, knowledge, and my authorization to use an asthma relieving medication in the following manner:

\_\_\_\_ Self-administer asthma-relieving medication. Student will seek the care of the school personnel if medication is unsuccessfully controlling his/her asthma.

\_\_\_\_ Self-administer asthma relieving medication with access to another inhaler in the health office as needed. Parents will supply health office secondary inhaler.

\_\_\_\_ Student needs assistance with administration of their asthma relieving medication with the medication available as needed in the health office.

Drug Name	Dosage	Route	Frequency	Start Date	Stop Date	Side Effects

School personnel may contact the medical provider of the medication for clarification regarding use, medication, dosage, and side effects.

Physician's Name:	Clinic/Phone:
Physician's Signature:	Date Signed:
Parent/ Guardian Signature:	Date Signed:

School Administrator Authorization: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Source: [Wisconsin Department of Public Instruction](#)

# Allergies, Asthma, and Anaphylaxis

## Allergic Asthma

Allergies can trigger asthma and may result in anaphylaxis. Allergic or extrinsic asthma is characterized by symptoms that are triggered by an allergic reaction. Allergic asthma is the most common form of asthma and currently affects 2.5 million children under 18 years of age in the U.S. Many of the symptoms of allergic and non-allergic asthma are the same and include coughing, wheezing, shortness of breath or rapid breathing, and chest tightness. Allergic asthma is triggered by inhaled substances such as dust mites, pet dander, pollen, mold, etc. It is important to be aware of students with allergies, in addition to those with asthma.



## Anaphylaxis

Anaphylaxis is a severe, potentially life-threatening allergic reaction to an allergen. An allergen is a substance, such as the venom from a bee sting, that can cause an allergic reaction. After being exposed to an allergen, the person's immune system becomes sensitized to it, and when a person is exposed to the allergen again, an allergic reaction may occur. Common allergens that may trigger anaphylaxis are certain foods, insect stings, medications, and latex.

Anaphylaxis happens quickly after exposure to an allergen and involves the whole body. Symptoms may include wheezing; dizziness; hives; itchiness; swelling of the face, eyes, or tongue; cough; chest discomfort and tightness; and abnormal (high-pitched) breathing sounds. These symptoms may lead to difficulty swallowing and breathing, and ultimately unconsciousness and death. Anaphylaxis is a medical emergency that requires immediate recognition and intervention. Students at risk for anaphylaxis should have a prescription for an epinephrine (adrenaline) auto-injector to be used at school. Students with asthma are at a higher risk for a severe allergic reaction leading to anaphylaxis.

# Wisconsin Epinephrine Auto-Injector Law and How to Obtain Free EpiPens®

## The Law

Wisconsin Stat. § 118.291 outlines the use of epinephrine auto-injectors on school premises or at a school-sponsored activity. These devices, such as EpiPens®, can save lives in the event of a severe allergy or anaphylaxis.

Wisconsin Stat. § 118.291 states that:

- The governing body of a school **may** adopt a plan for the management of pupils attending the school who have life-threatening allergies.
- The governing body shall specify in the plan the training necessary.
- Plan must be approved by a physician.
- Plan must be available on the governing body's website or the site of each school under its jurisdiction, or if a website does not exist, provide a copy of the plan to any person upon request.



## Receive Free EpiPens®

The EpiPen 4 Schools® program offers four FREE EpiPen® or EpiPen Jr® Auto-Injectors to qualifying public and private kindergarten, elementary, middle, and high schools in the U.S. Requirements to qualify for this offer include having a valid prescription. In the event that a free supply is used to respond to an allergic emergency (anaphylactic event), qualifying schools can get a refill at no additional cost. For more information visit: <https://www.epipen4schools.com/>.

Source: [2014 Wisconsin Stat. § 118.291](#)

# Standing Orders for Anaphylaxis

School District Name Here

**Anaphylaxis** is a severe allergic reaction that can be life threatening. It may occur within minutes after a triggering event or up to hours later.

In the event of an anaphylactic reaction of a student or staff member, if the person does not have their own prescribed EpiPen®, an “unassigned” EpiPen® may be administered by a staff member who has been adequately trained.

**Common Triggers/Allergens:** Extreme sensitivity to one or more of the following:

1. Food—peanuts, tree nuts, soybeans, milk, fish, shellfish, and wheat pollen
2. Insect sting, usually bee or wasp
3. Medication
4. Exercise
5. Asthma triggers
6. Latex

**Signs of Anaphylaxis:** Patients may experience hives, itching, and or vomiting. Serious signs and symptoms include:

1. **Neurological:** paleness, weakness, sweating, dizziness, mental confusion, fainting or loss of consciousness
2. **Respiratory:** difficulty breathing, talking or swallowing; tight chest, continuous cough, stridor (noisy breathing), wheezing
3. **Skin:** hives, flushing, swelling, itching, tingling sensation around the mouth or face
4. **Gastrointestinal:** nausea, abdominal cramps, vomiting and diarrhea
5. **Eyes:** itchy, watery, swelling around the eyes
6. **Nose and mouth:** sneezing, runny nose, swelling of tongue, and metallic taste

# Standing Orders for Anaphylaxis

## Procedure:

1. Confirm signs of serious anaphylaxis.
2. Administer EpiPen® or EpiPen Jr.®  
If weight > 60 pounds (approx. 8-year-old), give EpiPen® (0.3mg) IM (intramuscular injection).  
If weight ~30-60 pounds, give EpiPen Jr.® (0.15mg) (intramuscular injection).
3. Call 911 (EMS) and inform them you are giving an EpiPen® for anaphylaxis.
4. Call parent or guardian.
5. Maintain airway and monitor circulation and start CPR as necessary.
6. Place person in recovery position (on side) or position of comfort.
7. If bee stinger is present in the skin, remove it gently by scraping it out.
8. Monitor student for secondary reaction (biphasic reaction) for up to 72 hours after initial exposure.

## Additional Considerations:

### When Using EpiPen®:

- Remove EpiPen® from container and form a fist around the EpiPen®, with orange tip pointing downward.
- With other hand, remove blue safety cap by pulling straight up. Do not bend or twist.
- Firmly press the orange tip into **mid-outer thigh** until you hear a “click.”
- Hold on thigh for 10 seconds.
- If using **Auvi-Q®** injector, pull injector from case and follow verbal prompts. If using **Adrenaclick**, remove caps labeled “1” and “2,” and press firmly into mid-outer thigh until needle penetrates. Hold for 10 seconds.
- Remove and massage injection area for a few seconds.
- Call 911. The effects of the EpiPen® will only last 15-20 minutes.

### Storage:

- Store at room temperature in dark area (59-86°F).
- Keep track of expiration date and replace EpiPen® before it expires.

---

Physician Signature

---

Date Signed

---

District Nurse Signature

---

Date Signed

# Anaphylaxis Medication

**Alternative solution:** For an electronic version with fillable PDF fields, use this “gold standard” [Food Allergy and Anaphylaxis Emergency Care Plan](#) from FARE: Food Allergy Research and Education.

## Allergy Treatment Plan

**STUDENT:** \_\_\_\_\_ School: \_\_\_\_\_ Grade/Class: \_\_\_\_\_

Address: \_\_\_\_\_ Birthday: \_\_\_\_\_

**Allergy to:** \_\_\_\_\_ if exposed by being stung, ingesting, inhaling, skin contact (circle one)

**Asthmatic:** Yes\* or No (\* higher risk for severe reaction) Wash with soap and water if exposed

**Epinephrine medication:** (Circle appropriate) EpiPen EpiPen Junior Twinject 0.3 mg Twinject 0.15 mg

Give by injection

**Antihistamine:** Benadryl / Diphenhydramine \_\_\_\_\_ mg

Other \_\_\_\_\_

Give orally

Give \_\_\_\_\_

### Treat as indicated below

If exposed, but no symptoms	Antihistamine	Epinephrine/call 911	_____
Mouth (itching, tingling)	Antihistamine	Epinephrine/call 911	_____
Skin (hives, itchy rash, swelling)	Antihistamine	Epinephrine/call 911	_____
Swelling of lips, tongue, mouth or face	Antihistamine	Epinephrine/call 911	_____
Gut (nausea, cramps, diarrhea, vomiting)	Antihistamine	Epinephrine/call 911	_____
Throat ** (tightness, hoarseness, hacking cough)	Antihistamine	Epinephrine/call 911	_____
Lung ** (shortness of breath, repetitive coughing, wheezing)	Antihistamine	Epinephrine/call 911	_____
Heart ** (fainting, pale, blue, weak or thready pulse, low BP)	Antihistamine	Epinephrine/call 911	_____
Other ** _____	Antihistamine	Epinephrine/call 911	_____
If reaction is getting worse or several above areas are effected	Antihistamine	Epinephrine/call 911	_____

\*\* Potentially Life-threatening. Severity of symptoms can change quickly.

Any additional directions: \_\_\_\_\_

# Anaphylaxis Medication

## PARENT/GUARDIAN CONSENT:

- This student is capable of self-administration and may carry medication and self-administer in school. Yes \_\_\_ No \_\_\_
- I request and authorize that this medication be administered at school by school personnel.
- I will supply medication in its original, updated, properly labeled container. (Request extra bottle from pharmacist.)
- This order is in effect for this school year unless otherwise indicated.
- I will obtain a new physician's order and notify the school in writing for any changes.
- I authorize school personnel to exchange information verbally or in writing with my child's physician regarding this medication or the conditions for which it is prescribed.
- I further understand that parent/guardian/responsible adult should deliver all medication to the school.
- I give my permission to have my child's photo displayed on this form.
- I understand that non-medically trained school personnel will give medication.
- I agree to hold the school district, its employees and agents who are acting within the scope of their duties, harmless in any and all claims arising from the administration of this medication at school.
- My signature indicates that I have fully read and understand the above information.

\_\_\_\_\_  
Signature of Parent/Legal Guardian

\_\_\_\_\_  
Telephone Home

\_\_\_\_\_  
Business Phone

\_\_\_\_\_  
Date Signed

**PHYSICIAN ORDER:** The above medication/procedure is to be administered/performed during the school day in accordance with the above instructions and agreements. I agree to accept communication about student/medication/procedure and understand medication will be given by non-medically trained school personnel.

Please contact me if the following symptoms occur: \_\_\_\_\_

Student and parent/guardian have been instructed and student may carry medication and **self-administer** in school.

Yes \_\_\_ No \_\_\_

Physician Name: \_\_\_\_\_ Clinic: \_\_\_\_\_ Fax #: \_\_\_\_\_

Address: \_\_\_\_\_ Phone #: \_\_\_\_\_

Physician Signature: \_\_\_\_\_

Date Signed: \_\_\_\_\_

# Asthma Action Plans

**An asthma action plan** is an individualized plan, created by the health care provider along with the student and school nurse, detailing how to care for and manage the student's asthma. A student's asthma action plan should be kept on file with the school nurse, office staff, and all teachers who interact with the student.

**In general, an asthma action plan includes:**

- What medicine to take.
- When to take daily medications to control airway inflammation.
- What steps to follow when dealing with an asthma attack.

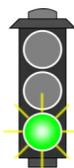
**It is recommended that an asthma action plan also include:**

- Treatment goals, which include the student's personal goals about their asthma.
- How to measure peak expiratory flow (PEF) with a peak flow meter.
- An asthma diary to keep track of symptoms and triggers.

An asthma action plan is based on three zones: **green**, **yellow**, and **red**, which are defined by the student's symptoms.

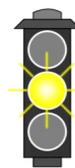
## Green

Green means GO! Being in the green zone is a good thing, and means that the person with asthma has a PEF of 80%-100%. The person should have no asthma symptoms and does not need quick relief treatment. The goal is to be in the green zone everyday!



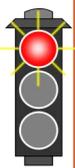
## Yellow

Yellow means CAUTION. If the student's PEF is 50% to 79% of their personal best, they are in the yellow zone. They may not have symptoms, but their lung function is reduced. If symptoms are present, they may be mild to moderate. Refer to the asthma action plan for what quick-reliever meds are needed.



## Red

Red means DANGER. If PEF is less than 50%, the student is in the red zone. If symptoms and/or peak expiratory flow are in the red zone, immediate medical help is needed. Refer to their asthma action plan for medicines and course of action. Emergency treatment or hospital admission may be needed.



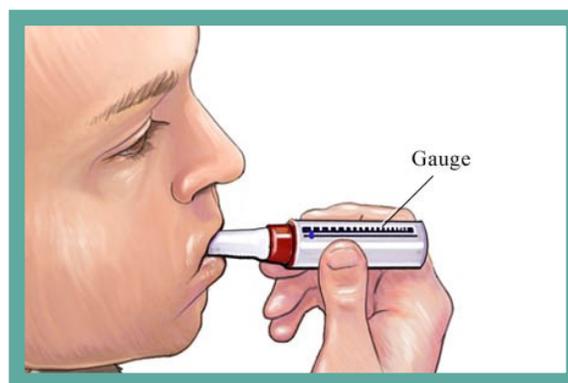
# What is Peak Expiratory Flow (PEF)?

Peak expiratory flow (PEF) is a measure of how much air a person can exhale while breathing out as hard and fast as possible. PEF is used to evaluate the condition of the airways in people who have asthma or other respiratory conditions.

When the airways narrow due to inflammation that occurs with asthma, the person's PEF drops. Even before asthma symptoms occur, a decrease in PEF can show that the bronchial tubes, the tubes that deliver air to the lungs, have narrowed. This can affect a person's ability to breathe and receive enough oxygen.

Peak expiratory flow may be measured at home using an inexpensive device called a peak flow meter. To measure PEF, a person takes a deep breath and then blows into the tube on a peak flow meter as hard and fast as possible. To get the most accurate PEF, the peak flow meter should be used three times and the best results recorded. PEF is lowest in the early morning and highest in the afternoon.

Results obtained by using a peak flow meter are not as accurate as those obtained by using spirometry, another test used to measure lung function. But, the peak flow meter can be used at home, while spirometry has to be done in a doctor's office.



# Recommended Asthma Action Plan

## Asthma Action Plan

### General Information:

Name \_\_\_\_\_  
 Emergency contact \_\_\_\_\_ Phone numbers \_\_\_\_\_  
 Physician/healthcare provider \_\_\_\_\_ Phone numbers \_\_\_\_\_  
 Physician signature \_\_\_\_\_ Date \_\_\_\_\_

- Intermittent     Moderate Persistent     Colds     Smoke     Weather  
 Mild Persistent     Severe Persistent     Exercise     Dust     Air Pollution  
 Animals     Food  
 Other \_\_\_\_\_
1. Premedication (how much and when) \_\_\_\_\_  
 2. Exercise modifications \_\_\_\_\_

<p><b>Green Zone: Doing Well</b></p> <p>Symptoms</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Breathing is good</li> <li><input checked="" type="checkbox"/> No cough or wheeze</li> <li><input checked="" type="checkbox"/> Can work and play</li> <li><input checked="" type="checkbox"/> Sleeps well at night</li> </ul> <p>Peak Flow Meter</p> <p>More than 80% of personal best or _____</p>	<p>Peak Flow Meter Personal Best = _____</p> <p>Control Medications:</p> <table border="1"> <thead> <tr> <th>Medicine</th> <th>How Much to Take</th> <th>When to Take It</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>	Medicine	How Much to Take	When to Take It	_____	_____	_____	_____	_____	_____	_____	_____	_____
Medicine	How Much to Take	When to Take It											
_____	_____	_____											
_____	_____	_____											
_____	_____	_____											

<p><b>Yellow Zone: Getting Worse</b></p> <p>Symptoms</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Some problems breathing</li> <li><input checked="" type="checkbox"/> Cough, wheeze, or chest tight</li> <li><input checked="" type="checkbox"/> Problems working or playing</li> <li><input checked="" type="checkbox"/> Wake at night</li> </ul> <p>Peak Flow Meter</p> <p>Between 50% and 80% of personal best or _____ to _____</p>	<p>Contact physician if using quick relief more than 2 times per week.</p> <p>Continue control medicines and add:</p> <table border="1"> <thead> <tr> <th>Medicine</th> <th>How Much to Take</th> <th>When to Take It</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table> <p>IF your symptoms (and peak flow, if used) return to Green Zone after one hour of the quick-relief treatment, THEN</p> <ul style="list-style-type: none"> <li><input type="radio"/> Take quick-relief medication every 4 hours for 1 to 2 days.</li> <li><input type="radio"/> Change your long-term control medicine by _____</li> <li><input type="radio"/> Contact your physician for follow-up care.</li> </ul> <p>IF your symptoms (and peak flow, if used) DO NOT return to Green Zone after one hour of the quick-relief treatment, THEN</p> <ul style="list-style-type: none"> <li><input type="radio"/> Take quick-relief treatment again.</li> <li><input type="radio"/> Change your long-term control medicine by _____</li> <li><input type="radio"/> Call your physician/Healthcare provider within _____ hour(s) of modifying your medication routine.</li> </ul>	Medicine	How Much to Take	When to Take It	_____	_____	_____	_____	_____	_____
Medicine	How Much to Take	When to Take It								
_____	_____	_____								
_____	_____	_____								

<p><b>Red Zone: Medical Alert</b></p> <p>Symptoms</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Lots of problems breathing</li> <li><input checked="" type="checkbox"/> Cannot work or play</li> <li><input checked="" type="checkbox"/> Getting worse instead of better</li> <li><input checked="" type="checkbox"/> Medicine is not helping</li> </ul> <p>Peak Flow Meter</p> <p>Less than 50% of personal best or _____ to _____</p>	<p><b>Ambulance/Emergency Phone Number:</b> _____</p> <p>Continue control medicines and add:</p> <table border="1"> <thead> <tr> <th>Medicine</th> <th>How Much to Take</th> <th>When to Take It</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table> <p>Go to the hospital or call for an ambulance if:</p> <ul style="list-style-type: none"> <li><input type="radio"/> Still in the red zone after 15 minutes.</li> <li><input type="radio"/> You have not been able to reach your physician/healthcare provider for help.</li> <li><input type="radio"/> _____</li> </ul> <p>Call an ambulance immediately if the following danger signs are present:</p> <ul style="list-style-type: none"> <li><input type="radio"/> Trouble walking/talking due to shortness of breath.</li> <li><input type="radio"/> Lips or fingernails are blue.</li> </ul>	Medicine	How Much to Take	When to Take It	_____	_____	_____	_____	_____	_____
Medicine	How Much to Take	When to Take It								
_____	_____	_____								
_____	_____	_____								

Source: [American Lung Association](http://www.AmericanLungAssociation.org)

# Need for Asthma Action Plans

According to the results of a 2015 survey sent out by the Wisconsin Asthma Program and Wisconsin Department of Public Instruction which was completed by 186 school nurses throughout the state, **only 29 percent of students with asthma have an asthma action plan** on file at school. As part of the American Academy of Allergy, Asthma and Immunology's initiative to ensure that 100 percent of children have an asthma action plan, the American Academy of Allergy, Asthma, and Immunology has launched the Office of School-Based Management of Asthma and Allergic/Immunologic Diseases.

Stakeholders throughout Wisconsin and nationally will be working toward better asthma management in schools.

Asthma action plans save lives. They help the person with asthma better control their asthma and their symptoms. They tell school nurses, teachers, and other designated staff what to do if the person

with asthma is experiencing an asthma attack. Asthma action plans explain what medicines to take and when, and when to go to the emergency room. **Every student with asthma should have an asthma action plan on file at school.**

Asthma plans are only effective if they work. To evaluate if a student's asthma action plan is working, the National Association of School Nurses (NASN) recommends using, "Is the asthma action plan working? A tool for school nurse assessment."

For more information, check out this interactive asthma action plan from the Minnesota Department of Health: <http://www.asthma-iaap.com/>.



# School-wide Protocol for Asthma

The next step for better managing asthma in schools is to create a simple protocol to be used to respond to a student having an asthma attack. An asthma attack occurs when a child with the disease shows signs of wheezing, coughing, or other problems breathing. The protocol should be widely posted around the school and all students and staff should receive education on how to respond to a student experiencing asthma symptoms. A sample protocol is included on the next page and can be printed off and used as a poster.

A good protocol should:

- Note the early signs of an asthma attack such as coughing, wheezing, chest tightness, and shortness of breath.
- Remind staff to follow the student's asthma action plan to help them administer rescue medication.
- Provide instructions on which emergency staff to contact, such as the name and number of the school nurse, and if the asthma action plan and/or rescue medication is unavailable or not working for the student.
- Describe when to call 911.

**All school staff and students should know the protocol for responding to an asthma attack and how to recognize asthma symptoms. Key staff members should be designated as emergency contacts for serious episodes.**

# What is an Asthma Attack?

An asthma attack occurs when the airways become swollen and inflamed. The muscles around the airways contract causing the breathing tubes to narrow. This makes it more difficult to breathe. An asthma attack can be minor or a life-threatening emergency.

If an asthma attack is suspected, contact:

Name

Room #

Phone

## Asthma Attack Signs:

### 1. Coughing



### 2. Wheezing



### 3. Chest Tightness



### 4. Shortness of Breath



## Asthma Attack First Aid:

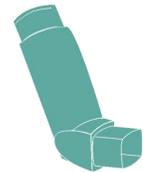
### 1. Sit the person upright

- Be calm and reassuring
- Do not leave the person alone



### 2. Give reliever medication

- Use quick relief medication as indicated in the asthma action plan or medication authorization form



### 3. Wait 5 minutes

- If no improvement, dial 911.

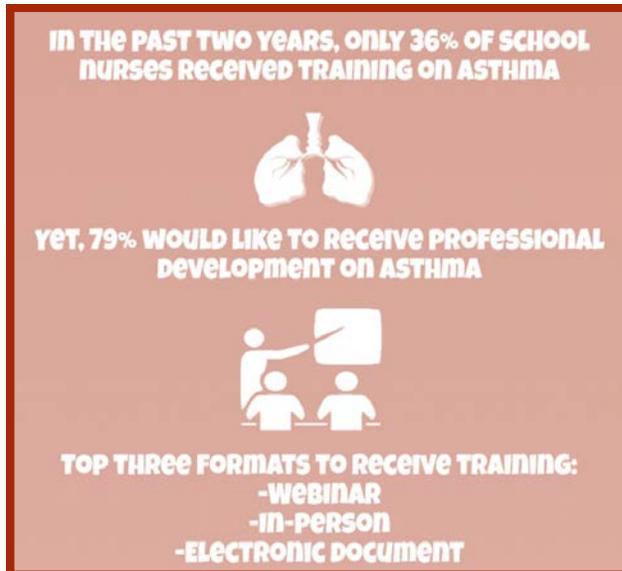


## When to Seek Emergency Care:

Dial 911 immediately if:

- Lips and/or nails are blue
- Skin is pulled tightly around neck or chest
- Cannot walk or talk
- Stomach is sucked under ribs when trying to breathe.

# Asthma Training for School Nurses



Results from the 2015 survey sent out to school nurses also showed that of the close to 200 respondents, **only 36 percent had received training on asthma in the last two years.** Yet, 79 percent of school nurses surveyed wanted to receive professional development on asthma. Listed below are recommended trainings and tools to assist school nurses with managing asthma in schools.

## Recommended Resources:

- **National Association of School Nurses Asthma Online Toolkit.** This toolkit combines national resources from the Centers for Disease Control and Prevention on asthma basics, videos for proper asthma medication technique, and additional tools from other national organizations leading the way for asthma education and management.
- **Back to School with Asthma Toolkit.** Developed by the American Lung Association, this toolkit provides information and forms available in Spanish and additional resources that may be of interest to school nurses such as information on how to connect students to health insurance.
- **eSchoolCare.** eSchoolCare provides evidence-based resources for managing the care of children with chronic health conditions such as asthma, diabetes, allergies, cancer, and mental health disorders. It was developed for school nurses by school nurses and those with a background in education. To subscribe to eSchoolCare contact: [eschoolcare@son.wisc.edu](mailto:eschoolcare@son.wisc.edu).

If you aren't already connected, consider subscribing to the **Wisconsin Department of Public Instruction's School Nurse Email List**, which provides updates on educational opportunities statewide. Scroll down to "Health, Wellness, Student Services" and select "schoolnurse."

# Asthma Training for School Staff

**61% OF OTHER  
SCHOOL STAFF  
RECEIVE TRAINING  
ON ASTHMA**

These staff include:



Teachers

Secretaries and Office  
Staff



PE Teachers and  
Coaches

Paraprofessionals and  
Educational Assistants



Health Aides

Emergency Response  
Teams

## Recommended Resources:

- **The Wisconsin Asthma Coalition's Website**. The Wisconsin Asthma Coalition's website provides many Wisconsin-specific resources and videos that can be used to manage asthma in Wisconsin schools.
- **Initiating Change: Creating an Asthma-Friendly School**. The Centers for Disease Control and Prevention provides videos, PowerPoints, tools, and other resources to help educate staff and create an asthma-friendly school.
- **Managing Asthma in Minnesota Schools: Manual and Training**. Created by the Minnesota Department of Health, the manual provides

staff-specific guides, which are also relevant for Wisconsin teachers, counselors, coaches, health assistants, and custodial staff.

- **Asthma-Friendly Schools Initiative**. Though not Wisconsin-specific, this toolkit from the American Lung Association is especially useful for school administrators, teachers, and physical education staff.

# Asthma Education for ALL Students

ALL students, not just those with asthma, should receive education on what asthma is, causes and symptoms of asthma, and what to do in the event of an asthma-related emergency. Several studies have shown that integrating this education into the core subjects of math, science, and communications increases the health literacy of all students, and significantly reduces the number of school days missed due to asthma. Presenting asthma as a real-world example in the classroom raises every student's awareness and understanding of asthma, not just those with the condition.

## What is health literacy?

**Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services to make appropriate health decisions.**

Source: [U.S. Department of Health and Human Services](#)

## Recommended asthma education resources for students:

- **Asthma Basics.** Asthma Basics is a free 50-minute online learning module from the American Lung Association designed to help people learn more about asthma. It is geared for an older audience and would be appropriate for high school students.
- **Breathe to Achieve.** Free, on-site program for all students (with and without asthma) in grades 3-5 in the Milwaukee area.
- **Iggy and the Inhalers.** *Iggy and the Inhalers* is a comic created by Dr. Alex Thomas, a board-certified pediatric allergist, to teach children about asthma. *Iggy and the Inhalers* provides appropriate information for elementary and middle school students and free videos for kids that introduce asthma symptoms, medications, pathophysiology, emergencies, and triggers.
- **Open Airways for Schools.** The Open Airways for Schools curriculum is designed for students ages 8-11 years and consists of six 40-minute group lessons using an interactive teaching approach.

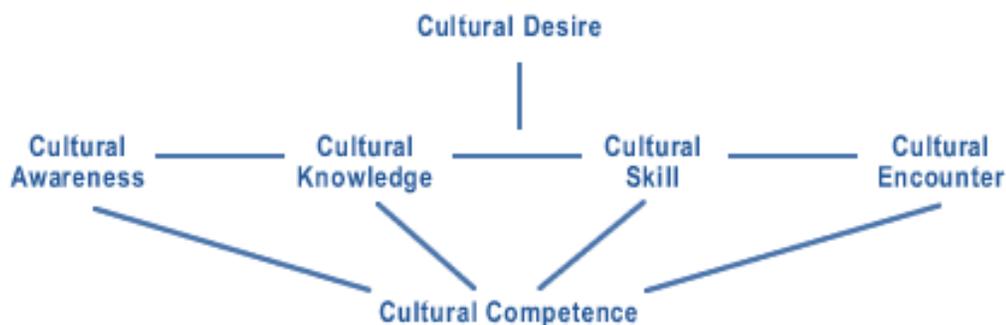
Source: [Pike et al. \(2011\)](#), [Ahmad and Grimes \(2011\)](#)

# Culturally Competent Asthma Education

## What is Cultural Competency?

Cultural competency refers to the ability to interact effectively with people of different cultures and socio-economic backgrounds. It encompasses a combination of knowledge, belief, and behavior, and involves personal identification, language, thoughts, communications, actions, customs, values, and institutions often specific to ethnic, racial, religious, geographic, or social groups. For those providing healthcare and education, it is important to be mindful of the beliefs surrounding health, healing, illness, disease, and delivery of services. Being respectful and responsive to health beliefs and practices has a positive impact on the delivery of asthma care to diverse students.

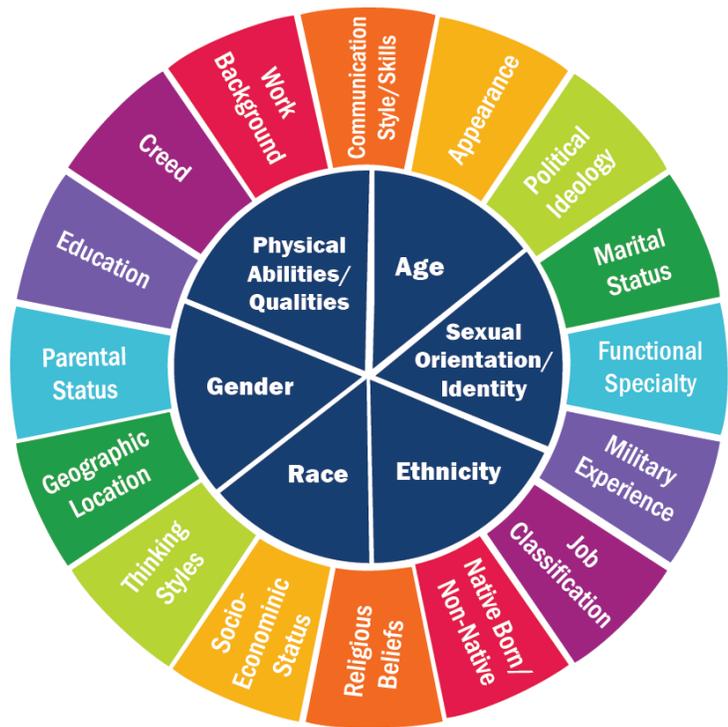
Cultural competency is critical to reducing health disparities. In Wisconsin, the burden of asthma is not equally shared. By gender, males are more severely impacted by asthma during childhood and females have higher rates of asthma after puberty. Households with the lowest incomes report higher rates of poorly controlled asthma. Geographic location also matters. Milwaukee, Menominee, Kenosha, Racine, and Rock Counties have some of the highest rates of asthma emergency department visits and hospitalizations. Both in Wisconsin and nationally, Hispanics, African-Americans, and Native Americans are disproportionately affected by asthma. It is important to keep these populations and their beliefs, norms, and values in mind when addressing asthma in Wisconsin schools.



# Culturally Competent Asthma Education Resources

## Recommended Resources:

- **Asthma: The Key to Control.** FAM (Fight Asthma Milwaukee) Allies provides educational materials on managing asthma in both English and Spanish.
- **Basic Facts About Asthma.** The Centers for Disease Control and Prevention provides basic information on asthma in both English and Spanish.
- **Tools for Managing Asthma.** FAM Allies also provides asthma action plans (referred to as Asthma Care Plans on their webpage) in both English and Spanish.
- **Noattacks.org.** The Environmental Protection Agency (EPA) and AirNOW have teamed up to provide information to kids about asthma symptoms, prevention, and asthma action plans. They provide print resources in both Spanish and English along with radio ads in Lakota, Navajo, and Anishinaabe.





# Key 2:

Asthma Trigger Reduction

# Common Asthma Triggers

Common asthma “triggers,” or things in the environment that may cause an asthma attack, can vary from person to person and should be avoided. Some of the most common asthma triggers are:



**Tobacco Smoke**



**Dust Mites**



**Outdoor Air Pollution**



**Diesel Exhaust**



**Cockroach Allergen**

**Pets**



**Mold**

**Smoke**



**Strong Smells (Perfumes)**

**Viruses (Cold and Flu)**



# Tips for Reducing Asthma Triggers

Other common asthma triggers include: strong emotions, strong odors from perfumes and cleaning products, pollen, mildew, cold air, extreme heat, respiratory infections, and exercise. Because asthma triggers are so common, they are often hard to avoid completely. Identifying asthma triggers is the first step. The American Lung Association provides handy worksheets in [English](#) and [Spanish](#) that can be used to identify and control students' asthma triggers. Below are a few more tips on how to reduce asthma triggers in schools.

## 1. Avoid animal allergens.

While they may be cute and good teaching tools, leave pets out of the classroom. The dander and proteins found in the saliva, feces, urine, hair, and skin of animals can make asthma worse.

## 2. Adopt integrated pest management.

The Environmental Protection Agency recommends that schools adopt [Integrated Pest Management strategies](#) to reduce sources of food, water, and shelter for pests in school buildings and grounds.

## 3. Be a dust detective.

Dust mites, a common allergen and asthma trigger, love to hang out in classrooms. The best way to reduce dust mites is to get rid of carpeting, rugs, stuffed animals, and reduce unnecessary clutter. Linens should be washed on the hottest water setting. The classroom should be regularly vacuumed with a vacuum that has a HEPA filter and surfaces cleaned with hot, soapy water.

## 4. Improve indoor air quality.

The Environmental Protection Agency's [Indoor Air Quality Tools for Schools](#) program provides tips and strategies for improving indoor air quality, reducing mold and mildew, and eliminating harsh chemicals and cleaning products with low or no-cost measures.

# The Wisconsin Asthma Coalition's Childcare and School Walkthrough Programs

The Wisconsin Asthma Coalition is a coalition of over 200 members who are physicians, pharmacists, respiratory therapists, nurses, public health professionals, educators, and individuals committed to improving asthma management in children and adults.

The Wisconsin Asthma Coalition offers **free** child care and school walkthrough programs to schools and child care centers to help identify and reduce asthma triggers.

The goal of these programs is to decrease asthma symptoms in children by reducing exposure to environmental asthma triggers found within the child care and school settings. This is accomplished by:

1. Identifying areas that may inhibit good indoor air quality and lead to asthma triggers.
2. Identifying low and no-cost solutions for eliminating or reducing environmental asthma triggers.
3. Providing recommendations to child care centers and schools on how to resolve any existing indoor air quality problems (e.g., reducing clutter or eliminating strong odors from air fresheners).
4. Increasing knowledge on preventing and controlling asthma attacks.

To participate in a school or childcare walkthrough program, contact Kristen Grimes at: [kgrimes@chw.org](mailto:kgrimes@chw.org) or 414-292-4001.

The Wisconsin Asthma Coalition also offers online school walkthrough training webinars. These webinars include background information on the program and modules on animals, dust/dust mites, pest/vermin, odors, and mold/moisture/mildew. These modules can be found on the Wisconsin Asthma Coalition's website under, "[School Walkthrough and Training Webinars.](#)"



WISCONSIN  
**ASTHMA**  
COALITION

★ Children's Health  
Alliance of Wisconsin

# Green Cleaning for Schools

Twenty-five percent of chemicals in the cleaning products used in schools are toxic and contribute to poor indoor air quality, smog, cancer, asthma, and other diseases. Students can be exposed to these chemicals through inhalation of vapors, skin contact with chemical residues, and ingestion. While it is important to keep spaces clean, students should not use cleaning products or disinfecting wipes. Disinfectants are registered by the EPA as pesticides.

Instead, schools should take practical steps to clean for healthy schools, protecting both students and staff. These steps include:

## 1. Prevent dirt; use advanced cleaning methods.

### Best practices:

- Use walk-off mats at all entrances.
- Ban food and pets from classrooms.
- Keep walkways clean.
- Keep recycling, trash, and dumpster areas clean and easily accessible.
- Clean areas from the top down.
- Replace polyvinyl chloride (PVC) and vinyl asbestos tile (VAT) floor tiles with durable, environmentally preferable alternatives.
- Clean up spills promptly and keep the building dry.
- HEPA vacuum instead of dry mopping; use microfiber mops and rags.
- Separate general cleaning from disinfecting.
- Disinfect if required, target high-risk areas; use EPA-registered disinfectants (pesticides) only as directed.
- Use soap and water for hand washing, not sanitizers.
- Use green-rated toilet paper and paper towels.
- Clean out lockers and desks regularly.
- Avoid classroom clutter and dust catchers.
- Prohibit cleaning products, and used carpets and furnishings brought from home.



# Green Cleaning for Schools Continued

## 2. Use third-party certified green cleaning products.

**Third-party certification is a scientific process by which a product is reviewed by a reputable and unbiased third party to verify that the product:**

- Meets independent standards as safer for human health and the environment.
- Meets standards for effective cleaning.
- Is cost neutral and may save money.
- Helps reduce health risks and sources of indoor pollution.

### **Choosing products:**

- Less-toxic, effective cleaning products are readily available through most manufacturers and vendors.
- Request, test, and choose only third-party certified green products.
- **Caution: beware of false marketing claims.**
- **See Consumer Reports' *Greener Choices*, [www.GreenerChoices.org](http://www.GreenerChoices.org)**
- **NOTE:** EPA's Design for Environment (DfE) program provides technical assistance to corporations to improve chemical-intensive products. DfE is not a registered certification mark.

## 3. Update old or outdated equipment.

- Use high-efficiency (HEPA) vacuum cleaners.
- HEPA-filtered vacuum cleaners help eliminate microscopic particles from the air.
- Visit the Carpet and Rug Institute for more information: [www.carpet-rug.org](http://www.carpet-rug.org).
- Use microfiber mops and wipes.
- Use vacuum attachments for buffers/burnishers.
- Install cleaning product dilution stations in custodial closets. These are used for portion control and reduce the need for product storage space.



Source: [Healthy Schools Network's Guide to Green Cleaning](#)

# School Bus Idling Policies



Over 25 million kids take buses to school every day. Most school buses run on diesel fuel and emit harmful gases and particulate matter that trigger students' asthma.

If school districts have not already done so, they should adopt anti-idling policies to reduce diesel emissions from school buses. A BIG source of emissions is unnecessary idling. Current technology eliminates the need for extensive warm-ups for any engine. Idling wastes fuel (1/2 gallon per hour!) and is harmful to public health. Everyone can save money and breathe easier by not idling.

- **Fleets should educate their drivers** about idling through training sessions.
- **School districts should enforce idling limits** by posting signs and notifying the companies they have contracts with. They should also provide waiting areas for drivers in the schools.
- **Bus drivers should not idle** when waiting for children outside of schools. They should arrive closer to the actual pick-up time or ask to wait in the school lobby if it is too hot or too cold to wait on the bus.
- **Parents and teachers** should encourage their school districts to develop anti-idling policies, with alternatives for the drivers, such as a waiting area in the school. They should also reduce idling themselves especially around schools.

For more information on clean school buses and resources to reduce emissions through retrofitting older buses, check out the [Environmental Protection Agency's Clean School Bus webpage](#).

# School Flag Program

The School Flag Program alerts schools and community members to the local air quality and helps schools take action to protect students' health, especially students with asthma. Each day the school raises a flag that corresponds to how clean or polluted the air is. The color of the flag matches the Air Quality Index. On unhealthy days, schools can take steps to adjust physical activities and reduce students' exposure to air pollution, while still keeping students active. **Wisconsin schools that wish to participate in the program should contact the American Lung Association of Wisconsin at [Info@lungwi.org](mailto:Info@lungwi.org).**



Air Quality Index Levels of Health Concern	Air Quality Index Scale	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health warnings of emergency conditions. The entire population is more likely to be affected.
Hazardous	301 to 500	Health alert: everyone may experience more serious health effects

Source: [Environmental Protection Agency's Air Now](#)

# A Note on Asthma and Exercise

Everyone benefits from exercise, but for people with asthma, exercise can make their asthma worse. This does not mean that exercise should be avoided. Instead, schools can take a few simple steps to ensure that students with asthma have the best opportunity to engage in all school activities.

- 1. Identify Students with Asthma.** Physical education teachers and coaches should know which students have asthma and whose asthma is worsened by exercise. They should be provided with a copy of each student's asthma action plan and talk with the student and their parents or guardians about any unique challenges related to physical activity and what types of exercise or environmental factors tend to trigger the student's asthma. Copies of the student's asthma action plan, along with any medications, should be made readily available for all on- and off-site activities.
- 2. Allow Students to Pre-Treat for Exercise Induced Asthma.** To prevent exercise induced symptoms, some students will need to pre-treat for exercised-induced asthma by using quick relief inhalers 10-15 minutes before they participate in physical activity. The student's asthma action plan should be consulted prior to pre-treatment.
- 3. Modify Activities for Students Experiencing Asthma Symptoms.** People with exercise-induced asthma are often sensitive to dry air and low temperatures. It is helpful for these students to do an extended warm-up activity before exertion (such as walking, flexibility exercises, or other low-intensity activities). Activities such as swimming, walking, biking, hiking, and those requiring short bursts of energy such as baseball, football, and short-term track, are good activities for these students. If a student is experiencing symptoms, consult their asthma action plan for treatment options. When environmental conditions are bad (e.g., high pollen counts, smoke in the air, freshly cut or sprayed fields), students with asthma may need to avoid being physically active outdoors.





# Key 3:

**Collaboration with Families, Students,  
Staff, and Health Care Providers**

# Who Can Help?

The responsibility for creating an asthma-friendly school does not fall on any one person or group. Instead, the process requires collaboration among school staff, administrators, health care providers, parents/guardians, and students. However, a few key individuals can help lead the effort, including:

- 1. A school nurse.** Asthma is a disease that requires medical attention. Having a school nurse available to students with asthma is one of the best ways to ensure their health and safety.
- 2. An “asthma champion.”** Every school needs a health champion who will advocate for the needs of children with asthma and other diseases and work towards change.
- 3. Supportive administration.** Many of the suggestions in this guide require administrative support to implement.
- 4. Engaged parents/guardians.** Parents/guardians are the strongest advocates for their children’s health, yet often do not identify their student as having asthma. Consider involving parent/guardian groups in the process of creating an asthma-friendly school to strengthen communication and relationships from the beginning.
- 5. Educated health care providers.** Health care providers must sign medication authorization forms and create asthma action plans. Schools must actively communicate with healthcare providers, and vice versa, to inform them of the information needed in order to protect students’ health.
- 6. Students.** Asthma is a disease best controlled through self-management. Students with asthma need to be empowered to advocate for themselves and communicate their unique health needs. Students must also learn how to responsibly carry and self-administer their asthma medication.

# What Are Their Roles?

Partner	Partner's Role		
	Self-Management and Education	Asthma Trigger Reduction	Collaboration and Advocacy
<b>School Nurse</b>	Educate students and staff on the signs and symptoms of asthma, proper medication use and technique, and when to seek emergency assistance. Oversee storage and administration of medications for those needing assistance. Seek out continuing education on asthma and consider becoming a certified asthma educator.	Using the student's asthma action plan, identify student's asthma triggers, educate student on how to reduce or avoid their asthma triggers, and work with other staff to reduce or eliminate asthma triggers inside and outside of school.	Serve as a point of contact for student's parents/guardians and health care providers. Communicate to parents and providers if student's symptoms worsen or become more frequent. Connect students and families who do not have access to health care with insurance options, such as insurance plans offered under the Affordable Care Act or Medicaid.
<b>Principal/ Administrator</b>	Ensure identification of students with asthma and collection of appropriate forms and compliance with state law. Champion a school-wide protocol for responding to an asthma attack and ensure all staff are trained on what to do.	Work with custodial staff and teachers to monitor for and take action to reduce asthma triggers. Distribute the informational materials and recommended trainings provided in this guide to appropriate staff.	Identify an individual to act as an "asthma champion" and provide support to the school nurse and health aides. Establish working relationships with parents/guardians, health care providers, and pharmacists to better manage students' health needs.
<b>School Board</b>	Support the implementation and integration of asthma and health education, and cultural competency into all students' curriculum. Ensure standard procedures, policies, and forms for identifying, tracking, and educating students with asthma. Seek out resources and support staff development and training to better address asthma in the school setting, along with providing awareness and education to community members.	Provide support and resources for all schools to identify and reduce common asthma triggers, promote integrated pest management, indoor air quality management, and green cleaning practices.	Advocate for school nurses and other appropriate personnel to have access to students' electronic medical records and other asthma-related information and education. Regularly discuss policy changes and current practices related to asthma with key stakeholders. Support the use of school nurses and hiring of additional personnel to better manage and address students' health.

# What Are Their Roles?

Partner	Partner's Role		
	Self-Management and Education	Asthma Trigger Reduction	Collaboration and Advocacy
<b>Classroom Teacher</b>	Know which students have asthma and have a copy of their asthma action plan. Know what to do in case of an asthma attack or emergency and ensure students have access to their medications. Post relevant educational materials in the classroom and work with the school nurse to educate all students regarding the signs and symptoms of asthma.	Participate in a school walkthrough with custodial staff to identify potential asthma triggers in your classroom. Remove any pets, pillows, linens, and excess carpet from your classroom. Avoid wearing perfumes or using air fresheners and sprays, as these can trigger asthma symptoms. Do not allow students to use wipes or other cleaning products. Be familiar with students' asthma triggers and be on the lookout for standing water or other sources of mold and pests.	Inform parents/guardians, administrators, and school nurses when students have frequent symptoms or worsening asthma. Also, help identify students who may have asthma and refer them to the school nurse for follow-up. Actively communicate and provide parents/guardians with educational materials regarding their student's health and asthma.
<b>Physical Education Teacher/Coach</b>	Know which students have asthma and have their asthma action plan on file. Be familiar with the signs and symptoms of asthma and what to do during an asthma attack. Allow students to pre-treat exercise-induced asthma (EIA), and ensure that needed asthma medications are readily available.	Be familiar with students' asthma triggers, especially cold, dry air for those who have EIA. Monitor environmental conditions outside and do not allow students with asthma to participate in outdoor activities if conditions are bad. Modify physical activities to be asthma-friendly and encourage students with asthma to do a longer warmup.	Support the value and expectation that students with asthma should be participating in all school activities by discussing ways to modify physical activities and encourage participation with students with asthma and their parents/guardians. Inform the school nurse and parents/guardians if student's symptoms worsen or become more frequent.
<b>Office Staff</b>	Ensure identification of students with asthma, distribution, collection and filing of all medical forms, and tracking of student absences due to asthma.	Recognize common asthma triggers in the environment and alert custodial staff if these triggers are present.	Work with school nurse, teachers, and administrators to ensure an asthma-friendly school environment, including the coordination of emergency response activities.

# What Are Their Roles?

Partner	Partner's Role		
	Self-Management and Education	Asthma Trigger Reduction	Collaboration and Advocacy
<b>Paraprofessionals/Health Aides</b>	Help identify which students have asthma, assist with self-management and education, and know the protocol for handling an asthma attack or related emergency. If administering medication or serving as a health aide, be familiar with the students' asthma action plans.	Assist with the identification and removal of asthma triggers. Be familiar with students' asthma action plans and students' triggers, especially any foodborne or environmental allergies, if assisting with mealtime and recess supervision.	Work closely with the school nurse, office staff, teachers, and administrators to provide a safe environment for students with asthma.
<b>Custodial Staff</b>	If possible, know which students have asthma, understand asthma medication policies, and know the protocol for handling an asthma attack or related emergency.	Participate in a school walkthrough program to identify and work to reduce asthma triggers, especially in classrooms where students have asthma. Use green cleaners and asthma-friendly cleaning methods, including integrated pest management (IPM), and indoor air quality (IAQ) management.	Work with administrators, teachers, and the school nurse to reduce asthma triggers at school.
<b>Bus Driver</b>	Know which students on your bus have asthma, understand school policies about carrying and self-administering asthma medication, and how to respond in case of an emergency. Know school protocol for handling an asthma attack and display it on the bus if possible. Seek out training and education on how to assist students with asthma.	Reduce diesel emissions by not idling near the school building. Work with school administrators and other bus drivers to create a school-wide "no idle" policy. At out-of-town school activities, turn off school bus engine to reduce diesel emissions.	Ask students with asthma if they are sensitive to diesel exhaust, cold temperatures, or specific allergens. Work closely with students, parents/guardians, and staff to make your bus a safe place for students with asthma.

# What Are Their Roles?

Partner	Partner's Role		
	Self-Management and Education	Asthma Trigger Reduction	Collaboration and Advocacy
<b>Health Care Provider</b>	Ensure that all school-age children in your practice with asthma are given medication authorization forms and asthma action plans to provide to the school each year. Educate students about how to self-carry and administer their asthma medication and work with parents/guardians and school nurses for those students that cannot self-carry to create a plan for medication access at school.	On the student's asthma action plan, list student-specific triggers. Work with parents/guardians and students on ways to avoid environmental triggers both at school and at home. If the student has exercise-induced asthma, create a protocol for pre-treatment. Provide a copy of the protocol to the school.	Recognize school nurses as part of the student's care team and the value they add. Support school nurses in advocating for proper health procedures in schools. Work closely with parents/guardians, students, school nurses, and pharmacists to ensure the student's safety and health at school.
<b>Pharmacist</b>	Educate patients on proper use of their asthma medications and have them demonstrate when and how to use their medicines. Offer trainings for school nurses and staff, and resources for medication stockpiles.	Educate patients and their families on possible asthma triggers and steps to take to reduce or avoid them.	Provide open and responsive communication, collaborating with school nurses and staff, healthcare providers, students with asthma, and their families.
<b>Parent/Guardian</b>	Alert school and appropriate personnel that your child has asthma. Complete all appropriate forms and return them to school. Ensure the completion of an asthma action plan to help the school nurse and other staff know how to help manage your child's asthma, and that your child has and can properly use their asthma medication. Seek out education and resources to better understand and manage your child's asthma.	Identify and understand your child's asthma triggers and communicate what these are to school staff. At home, take steps to reduce or remove asthma triggers and ensure the appropriate use of all asthma medications.	Work with your child, your child's teacher, school nurse, health care provider, and pharmacist to create and complete an asthma action plan and ensure the proper medications are being used and brought to school to help control your child's asthma. Talk with your child about their asthma triggers and help them understand their asthma. Speak with your child's school nurse if you do not have health insurance and need other assistance.

# What Are Their Roles?

Partner	Partner's Role		
	Self-Management and Education	Asthma Trigger Reduction	Collaboration and Advocacy
Students	Take home health history forms and medication authorization forms and return them to your teacher, signed by both your parent/guardian and your health care provider. Have your inhaler with you at all times, know where it is stored, and how to properly use it. Give your teacher a copy of your asthma action plan and tell your teacher when your asthma is bothering you.	Know your asthma triggers and have a plan for how to handle them. Bring your rescue inhaler to outdoor activities, field trips, and gym class. Communicate with your teachers if an activity is causing your asthma to become worse or if anything at school is affecting your asthma.	Talk with your teachers, substitutes, school nurse, and other adults at your school about your asthma and how they can help you. Ask your healthcare provider and pharmacist to explain your asthma, what triggers it, and steps you can take to make it better.

Schools should take the above guidelines into consideration and adapt them for what best fits their school's and students' needs. It is important to keep in mind that managing asthma in schools is a coordinated effort and involves partners both within and outside of the school setting. Most importantly, parents and health care providers should be involved from the beginning, especially when it comes to identifying which students have asthma. As one school nurse remarked in the survey sent out by the Wisconsin Asthma Program and the Wisconsin Department of Public Instruction, "If I don't know, I cannot make an intervention."

# Role of the Wisconsin Asthma Program

The Wisconsin Department of Health Services has been conducting asthma surveillance activities since 1992 and asthma interventions since 1994. Since 2001 the Wisconsin Asthma Program has expanded its activities under a cooperative agreement with the U.S. Centers for Disease Control and Prevention. In 2003, the *Wisconsin Asthma Plan* was first adopted to provide the blueprint for addressing asthma as a public health priority, and lists the prioritized goals, objectives, and activities recommended for statewide action to reduce the burden of asthma in Wisconsin. Since this time, the Wisconsin Asthma Program has provided funding and assistance for many statewide projects to address asthma, many of which have been previously mentioned in this guide.

Additionally, the Wisconsin Asthma Program serves as both staff to and member of the Wisconsin Asthma Coalition, which has been accomplishing many of its goals through various activities addressed within the *Wisconsin Asthma Plan, 2015-2020*. The Wisconsin Asthma Program also published the *Burden of Asthma in Wisconsin, 2013*, a statistical report on the extent of asthma in Wisconsin. This report addresses who has asthma, factors associated with asthma, asthma management, quality of life, health care utilization for asthma, government-funded programs on asthma, and asthma mortality.



One of the main goals of the Wisconsin Asthma Program is to build local capacity to address asthma and implement public health interventions for asthma. The Wisconsin Asthma Program, along with various partners, will be working to improve asthma management and decrease absenteeism in schools through asthma education and environmental asthma trigger reduction. The *Wisconsin Asthma Program School Nurse Survey* and this guide are among the first steps towards these goals. To find out more information, visit the Wisconsin Asthma Program [website](#).

# Conclusion

Asthma is a chronic disease that affects the airways, making it hard to breathe. Symptoms of asthma include: chest tightness, wheezing, coughing, and shortness of breath. Asthma often starts in childhood and is more common in children than in adults. Males are more severely impacted by asthma in childhood, and females have a higher asthma prevalence rate after puberty.

In Wisconsin, asthma affects 1 in 13 children. Of those children with asthma, 1 in 3 have uncontrolled asthma, and 1 in 2 children miss school. Students with uncontrolled asthma may have lower test scores and academic achievement. Nationwide, asthma is the leading cause of school absences due to chronic illness, with over 14 million school days missed due to asthma each year.

The good news is that asthma can be controlled through proper management. Asthma management in schools should involve three key areas: self-management and education, asthma trigger reduction, and collaboration with families, students, school staff, and health care providers.



Students with asthma need to be identified and have an asthma action plan on file along with appropriate forms and medications; and all students and staff need to be educated on asthma. A school-wide asthma protocol should be adopted so that everyone is on the same page. However, even with the best self-management and education, asthma triggers need to be identified and reduced. Common asthma triggers at school include animal allergens, cockroaches and pests, mold and moisture, dust mites, and air pollutants such as diesel exhaust and cleaning products. Completing a school walkthrough and working with custodial staff to incorporate integrated pest management and indoor air quality management practices can be helpful. Finally, building and maintaining strong relationships amongst families, students, school staff, and health care providers is essential.

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# Appendix B: Additional Resources

## Guidelines:

- [National Asthma Education and Prevention Program Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma](#)
- [Wisconsin Asthma Plan, 2015-2020](#)
- [AAFA's 2015 State Honor Roll™ of Asthma and Allergy Policies for Schools: Wisconsin](#)

## Webinars:

[Low-cost, High-impact Solutions for Asthma-safe Schools](#)

## Classes:

[Asthma Basics for Schools](#)

## Funding Opportunities:

[Wisconsin Asthma Coalition Mini Grants](#) (scroll down to “Become Involved”)