

MANAGING ASTHMA

A GUIDE FOR SCHOOLS



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Heart, Lung, and Blood Institute



U.S. DEPARTMENT OF EDUCATION
Office of Safe and Drug-Free Schools

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Foreword



This guide was developed as a collaborative project between the National Asthma Education and Prevention Program (NAEPP) (coordinated by the National Heart, Lung, and Blood Institute [NHLBI]), U.S. Department of Health and Human Services and the Office of Safe and Drug-Free Schools, U.S. Department of Education. These agencies are working together because of the serious health and educational threats that asthma poses to our Nation's children. In the United States, approximately 2 in 15 children have been diagnosed with asthma before they reach 18 years of age. But, with proper treatment, asthma can be controlled. This booklet is intended to provide school personnel with practical ways to help students with asthma come to school each day healthy and ready to learn.

Asthma is a leading cause of school absenteeism. According to parent reports, students miss 14 million days of school each year due to asthma. By encouraging school personnel to recognize asthma as a chronic disease requiring ongoing care, we hope to improve school attendance and keep students in classrooms, where they can learn, instead of in the health rooms of their schools. Although asthma cannot be cured, it can be controlled. Schools can help by being supportive of students and staff with asthma; adopting asthma-friendly policies and procedures; coordinating services with physicians, school personnel, patients, and families to serve students with asthma; and providing asthma education for students and staff.

This guide is intended to assist schools that are planning or maintaining an asthma management program for their students with asthma. For further information, please contact the NAEPP through the NHLBI Health Information Center at (301) 592-8573 or on the Web at <http://www.nhlbi.nih.gov>. By making our schools more "asthma-friendly," we can ensure that no child is left behind.

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Overview

This guide is intended to assist schools that are planning and/or maintaining an asthma management program. This guide provides followup steps for schools that currently identify students with asthma through health forms or emergency cards or plan to do so. It is designed to offer practical information to school staff members of every position.

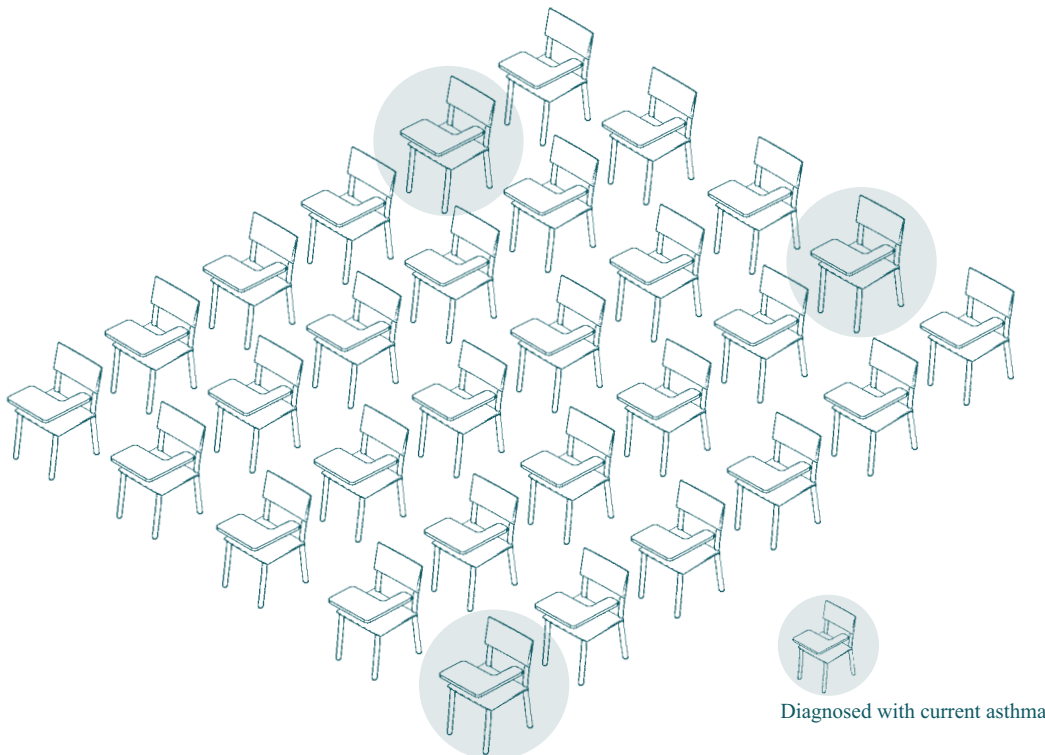
Asthma is a leading cause of school absenteeism.

Asthma is one of the leading causes of school absence due to illness. Approximately 9.2 million children younger than 18 years of age have been diagnosed with asthma in their lifetime; 3.2 million or approximately 6 percent of children ages 5 to 17 had an asthma episode (attack) in the preceding year (2001 NHIS data).* School staff members can play an important role in helping students with asthma manage their disease at school.

Why Be Concerned About Asthma at School?

As the figure shows, about 3 students in a classroom of 30 currently have asthma. Uncontrolled asthma can result in reduced performance for the child with asthma and disruptions for the entire classroom.

Students with asthma can function to their maximum potential if their needs are met. The benefits to students include better attendance; improved alertness and physical stamina; fewer symptoms; and fewer restrictions on participation in physical activities and special events, such as field trips, and fewer medical emergencies. Schools and their staff can work together with parents or guardians, students, and health care providers to minimize risk and to provide a healthy and safe educational environment for students with asthma. Good health and safety are prerequisites to academic achievement.



* National Health Interview Survey, National Center for Health Statistics, National Center for Disease Control and Prevention, 2001.



What to expect from effective asthma management in school settings

Effective asthma management can lead to the following positive results:

- A supportive learning environment for students with asthma.
- Reduced absences—students have fewer episodes and symptoms are treated earlier.
- Reduced disruption in the classroom—students have fewer symptoms when they adhere to their asthma action plan (See page 5).
- Appropriate emergency care—school staff members know how to respond to emergencies.
- Full student participation in physical activities—physical education (PE) instructors and coaches know how to prevent exercise induced asthma.

Information you need to plan and maintain an asthma management program

Responding to the needs of students with asthma in the school setting requires a comprehensive, coordinated, and systematic approach. This guide will help by providing you with the following information:

- Background information on asthma, including a brief definition of asthma and a list of common “triggers” or stimuli that cause asthma episodes.
- A description of ways to effectively manage asthma in schools.
- Strategies for developing an asthma management program for schools.
- Tips for developing strong partnerships between school staff, families, and physicians.
- A checklist of basic elements for a comprehensive school asthma management program.
- Action sheets for specific school staff, listing ways each person can reinforce implementation of an asthma management program.
- Sample outreach letters to families and physicians.
- Asthma resources, including a student asthma action plan, and other educational materials.
- A resource directory of organizations to contact for assistance.

What Is Asthma?



Asthma is a chronic lung disease that affects the airways. Children with asthma have airways that are inflamed. Inflamed airways are very sensitive, so they tend to react strongly to things called “triggers.” Triggers are either allergy-causing substances, such as dust mites, mold, and pollen; or irritants, such as cigarette smoke and fumes from paint and cleaning fluid. When the airways react to a trigger, they become narrower due to swelling and squeezing of the airways by the small muscles around them. This results in less air getting through to the lungs and less air getting out. Symptoms of asthma include acute episodes of:

- Coughing
- Wheezing (a whistling or squeaky sound during breathing)
- Chest tightness
- Shortness of breath

Symptoms can vary in severity; they can be mild or moderate and affect activity levels, or they can be severe and life threatening.

Asthma triggers and symptoms vary from one person to another. Some children have asthma symptoms only occasionally, while others have symptoms almost all the time. With proper control of asthma, children should have minimal or no asthma symptoms.

Common Asthma Triggers

Although triggers that cause an asthma episode vary among individuals, there are several common triggers.

- **Allergens** such as pollen, animal dander, dust mites, cockroaches, and molds
- **Irritants** such as cold air, perfume, pesticides, strong odors, weather changes, cigarette smoke, and chalk dust
- **Respiratory infections** such as a cold or the flu
- **Physical exercise**, especially in cold weather

Effective Management Can Control Asthma

Asthma can be controlled with proper medical diagnosis and management. It cannot be cured.

With appropriate asthma care, students with asthma should have minimal or no asthma symptoms. When their asthma is managed effectively, they can safely participate in all school activities. New treatment approaches emphasize preventing episodes by using medication appropriately and by protecting the airways from exposure to the triggers that cause inflammation.



In the past, asthma care focused on treating acute episodes. We now know that asthma episodes should be prevented to reduce long-term lung damage. Effective management of asthma enables students with asthma to maintain a normal activity level, prevents symptoms of acute episodes, and minimizes the amount of medications and medication side effects.

Managing asthma relies on:

- Taking medication exactly as prescribed. A person with asthma may need two types of medications. One type is used to relax the airways and is taken as needed when symptoms occur. The other is used daily to decrease the inflammation in the airways and prevent episodes from occurring.
- Monitoring students with asthma. A peak flow meter, which helps to keep track of how well air is moving through the lungs, is helpful for some patients with asthma. When the airways become narrow from inflammation, the peak flow measurement will be lower.
- Recognizing the early warning signs of asthma. These signs may include coughing, shortness of breath, and increased breathing rate.
- Avoiding or controlling triggers.
- Intervening with proper therapy when early signs are recognized.
- Forming a partnership among the student, parent(s) or guardian(s), the physician, and school staff. The school team plays an important role in helping students manage their asthma by providing support for development and implementation of an asthma management program.

Develop an Asthma Management Program in Your School

Developing an asthma management program shows that your school is responsive to the needs of students with asthma. By developing procedures and guidelines, the asthma management program ensures that staff knows how to help students with asthma. A management program should contain:

- A confidential list of students who have asthma.
- School policies and procedures for administering medications, including protocols for emergency response to a severe asthma episode.
- Specific actions for staff members to perform in the asthma management program.
- A written action plan for every student with asthma.
- Education for staff and students about asthma.

Student Asthma Action Plan

Schools should request that parents or guardians send a written student asthma action plan to school. This action plan should include daily management guidelines and emergency steps in case of an asthma episode. The plan should describe the student's medical information and specific steps for responding to worsening asthma symptoms. The asthma action plan should contain:

- A list of medications the student receives, noting which ones need to be taken during school hours. Also, medications needed during school activities "off-site" and "off-hours" should be noted and available.
- A specific plan of action for school staff in case of an acute episode that includes guidance for monitoring peak flow.
- Identified triggers that can make asthma worse.
- Emergency procedures and phone numbers.

This action plan should be developed by a licensed health care provider or physician, signed by a parent and the physician, kept on file at school, and renewed every year. Because every student's asthma is different, the action plan must be specific to each student's needs. The asthma action plans included in this guide serve as examples that may be adapted to fit the needs of your school in gathering and sharing asthma management information among school staff, parents or guardians and physicians.

Partnerships for an Asthma-Friendly School



A strong family-physician-school partnership is essential for students with asthma. A strong partnership improves attendance and positive educational outcomes for students with asthma. School policies supportive of partnerships contain the following:

- Outreach to families to encourage participation in managing students' asthma at school.
- Professional development for teachers and staff to enhance their effectiveness in asthma management and their skills in communicating with families.
- Good communication among physicians, school staff, and families, such as an ongoing exchange of information, agreement on goals and strategies, and a sharing of responsibilities.
- Opportunities for families to share in decision-making regarding school policies and procedures affecting their children.
- Linkages with special service agencies and community groups to address family and community issues when appropriate.

How Comprehensive Is Your School Asthma Management Program?

From the list below, check off those basic elements that make up the school asthma management program that you already have in place at your school.

- Identified staff person(s) to coordinate the program
- A confidential list of students who have asthma
- School policies and procedures for administering medications, including protocols for emergency response to a severe asthma episode
- Specific actions for staff members to perform in the asthma management program
- Education for staff and students about asthma
- A written action plan on file for every student with asthma, including:
 - A list of medications to be taken
 - Steps for school staff to take in case of an asthma episode
 - Identified triggers that can make asthma worse
 - Emergency procedures and phone numbers
- A strong family-physician-school partnership

If there are gaps in the basic elements included in your current school asthma management program, or if you are looking for resources to enhance your current efforts, the following sections of this guide provide reference materials intended for use by school staff members in their asthma management efforts.

- Actions for School Staff, p. 9
- Connecting With the Community, p. 23
- Asthma Education Materials, p. 27
- Resources, p. 35

MANAGING ASTHMA

ACTIONS FOR SCHOOL STAFF

- **Principal or School Administrator**
- **School Nurse**
- **Health Assistants, Health Aides, or Other Health Service Providers in the School**
- **Classroom Teacher**
- **Physical Education Instructor and Coach**
- **Guidance Counselor, Social Worker, and Psychologist**
- **Facilities and Maintenance Staff**

Note:

Although all action steps outlined in the following section for various school staff members can contribute to the goal of improved asthma management at school, some actions may have greater impact than others. Therefore, an effort is made to list the actions for each staff member in order of relative priority. Ultimately, however, each school must decide which steps are most practical to implement and best meet the school's own needs and circumstances. Every small step can make a difference.

Apparent overlap of some action steps across different staff positions serves as a means of reinforcing each other's efforts and makes the point that the implementation of a coordinated asthma management program requires a cohesive team approach where each staff member shares in the overall responsibility. Ideally, a qualified school nurse should be part of the team which supervises or provides nursing care to a student in the school setting.

Actions for the Principal or School Administrator

Help Children With Asthma and Their Families Manage Asthma

- **Involve your staff** in developing a school asthma management program. An effective program requires a cooperative effort that involves students, parents or guardians, teachers, school staff, and physicians. Many members of the school staff can play a role in maintaining your school's asthma management program, however, the principal or school nurse are the most instrumental in initiating and implementing the program.
- Work with school nurses, other medical professionals, and parents or guardians to **develop a policy** that ensures that medication administration is safe, reliable, and effective and, to the extent possible, allows students to self-administer medication. Consult State regulations and nursing practice acts to ensure appropriate professional standards for student care.
- **Designate one person** on the school staff, preferably the school nurse, to be responsible for maintaining students' asthma action plans and for educating appropriate staff members, including teachers, about each student's individual asthma action plan. **Have a backup plan** for emergencies in case the designee is not immediately available.
- **Provide health alerts** and institute appropriate guidance for outside play designed to protect students from extreme temperatures, high pollen counts, and air pollutants that may affect asthma.

Teach Staff, Students, and Families About Asthma

- Make sure that staff members **understand the school's responsibilities** under the Individuals With Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, Title II of the Americans With Disabilities Act (ADA), and, where applicable, Title III of the ADA, which applies to nonreligious private schools. In addition, staff should be familiar with any applicable State and local legal requirements.
- **Provide in-service programs for staff** members about managing asthma and allergies. You may get assistance from your school nurse, your local pediatrician or specialist, or a local hospital or medical society. Other sources of information are the Allergy and Asthma Network/Mothers of Asthmatics (AAN/MA), the American Lung Association (ALA), and the Asthma and Allergy Foundation of America (AAFA).
- Develop and **present an information program for all students** to make them aware of the symptoms of asthma. Involve the public health nurse and/or school nurse.
- Support and **encourage communication** with parents or guardians and health care providers to improve school health services.
- **Arrange** for the development of an **asthma resource file** for parents or guardians, students, and school personnel.



Keep the Environment Clear of Asthma-Provoking Substances

- Work with maintenance staff and environmental health specialists to **set and monitor standards** for school maintenance, humidity, ventilation and indoor air quality, mold, and dust control. Design and schedule building repairs, renovations, or cleaning to avoid exposing students and staff to fumes, dust, and other irritants. When possible, try to schedule painting and major repairs during long vacations or the summer months.
- **Enforce smoking bans** on school property.



Actions for the School Nurse

Help Children With Asthma and Their Families Manage Asthma

- **Identify students** with asthma by:
 - Reviewing medical records and emergency information.
 - Including questions related to asthma in the health history.
- **Talk with teachers** to help them become familiar with the needs of students who have asthma.
- **Maintain an asthma action plan** for every student with asthma. Include information on administering medications, monitoring peak flow, reducing triggers, and responding to an asthma attack.
- **Have an emergency backup plan** for times you are not immediately available. File student asthma action plans in a location that ensures easy access in an emergency.
- Arrange for administration of medication in accordance with school policy and State mandates. **Provide easy access to emergency medications.** Support self-administration when appropriate. Consult medical and State Nurse Practice Acts to determine the legal scope of practice for those providing nursing interventions and management.
- **Use a peak flow meter** to monitor daily management of asthma among students with more severe or difficult-to-manage asthma. In addition, a peak flow meter should be used during acute episodes of asthma—both to assess severity of an episode to determine action needed, and to assess response to medication during an asthma episode.

Look for Children With Uncontrolled Asthma

- **Communicate with parents** or guardians and health care providers (with parental permission) about acute episodes, if any, and about changes in students' health status, and to track asthma control.
- Discuss situations of suspected undiagnosed or poorly controlled asthma with the students, parents, or guardians and **suggest referral to their physician** for a proper diagnosis or a treatment update.

Teach Staff, Students, and Families About Asthma

- **Educate all staff members** about asthma and its potential impact on students' health, safety, and school performance. Within confidentiality guidelines, talk to school staff about students with asthma and their unique needs.
 - Teach staff to refer students to you when symptoms or side effects are interfering with breathing or school activities.
 - Provide this information to parents or guardians and encourage them to take the student to see a physician.
- **Conduct in-service** courses on asthma, and consult with staff to guide decisions about both appropriate school activities for students with asthma and the importance of full participation.
- **Provide asthma education for students with asthma** to help them improve their self-management skills.
- **Collaborate with parent teacher organizations** to offer a family asthma education program in school.
- **Provide asthma education for the general student body** to encourage students to be supportive of classmates who have asthma.



- **Train health aides** or school assistants, if appropriate, in proper Metered Dose Inhaler (MDI), Dry Powder Inhaler (DPI), and peak flow techniques; use of a nebulizer; and recognition of the signs and symptoms of acute asthma.

Keep the Environment Clear of Asthma-Provoking Substances

- Help **provide a safe and healthy school environment** for students with asthma, including off-hours and off-site school programming.

Note:

School health services managed by licensed school nurses are the most effective way schools can meet the needs of students with asthma for safe, continuous, and coordinated care in a safe environment. The school nurse's care plan, the Individualized Health Plan (IHP), or an asthma action plan document a student's health management needs and direct how those needs will be met at school. Check with your State Nurse Practice Act for guidelines on delegation of health care tasks.

School health services are a related service under the Individuals With Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973 (Section 504), and Title II of the Americans With Disabilities Act (ADA). School health services must be provided to individual students if indicated on the student's Individualized Education Program (IEP) under the IDEA, or if deemed necessary in providing a free, appropriate public education to students who are covered by Section 504 and Title II of the ADA. Not all students with asthma are covered by the IDEA. Students who experience difficulty breathing at school because of asthma may have a disability under Section 504 and Title II, which may qualify them to receive services under these laws. With respect to students who are covered under one or more of these laws, the individual situation of any particular student with asthma will affect what services are legally required for that particular student. For more information about these laws, please contact the Office for Civil Rights at the U.S. Department of Education.



Actions for Health Assistants, Health Aides, or Other Health Providers in the School

Help Children With Asthma and Their Families Manage Asthma

- **Identify students** with asthma by:
 - Reviewing the medical records and emergency information of all students
 - Asking questions related to asthma on the school’s health history forms
- **Maintain** (in coordination with the school nurse) **an asthma action plan** for every student with asthma. Include information on administering medications, monitoring peak flow, reducing triggers, and responding to an asthma attack. File action plans in a location that ensures easy access in an emergency.

Look for Children With Uncontrolled Asthma

- **Communicate** (in coordination with the school nurse) **with the parent(s)** or guardian(s) and health care provider(s) (with parental permission) about acute episodes, if any, and about changes in a student’s health status, and to track asthma control.
- **Talk with teachers** to help them become familiar with the needs of students with asthma. Encourage them to refer students with poorly controlled asthma to you. Use the warning signs presented in this publication. (See page 28.) When you suspect a student has poorly controlled asthma, notify the school nurse who will discuss this with the parents or guardians and encourage them to take the student to see a physician.

Teach Staff, Students, and Families About Asthma

- **Collaborate with parent-teacher organizations** to offer a family asthma education program in school.
- **Help to provide asthma education** for all students and encourage them to be supportive of classmates who have asthma.

Keep the Environment Clear of Asthma-Provoking Substances

- Help **provide a safe and healthy school environment** for students with asthma, including off-hours and off-site school programming.



Note:

School health services managed by licensed school nurses are the most effective way schools can meet the needs of students with asthma for safe, continuous, and coordinated care in a safe environment. The school nurse's care plan, the Individualized Health Plan (IHP), or an asthma action plan document a student's health management needs and direct how those needs will be met at school. Check with your State Nurse Practice Act for guidelines on delegation of health care tasks.

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Actions for the Classroom Teacher



Help Children With Asthma and Their Families Manage Asthma

- **Consult with your school nurse** or principal for updated policy and procedures for managing students with chronic health conditions, such as asthma, including managing medication and responding to emergencies, such as an asthma episode (attack).
- **Know your role.** Know how to easily access a student's asthma action plan or have a copy of it in the classroom, maintained in a confidential manner. Review it with the student and his or her parent(s) or guardian(s) to determine if any classroom modifications are necessary and how to otherwise work toward the goal of the student's full participation in class activities. Ask the student to tell you when he/she is experiencing any difficulty in breathing, and know what steps to take in case of an asthma episode. **Don't delay getting medical help** for a student with severe or persistent breathing difficulty.
- **Develop a clear procedure** with the student and his or her parent(s) or guardian(s) **for handling schoolwork missed** if the student has episodes of illness or misses school.
- **Report if a student's symptoms are interfering** with learning or activities with peers. Possible side effects of medicine that warrant referral are nervousness, nausea, jitteriness, hyperactivity, and drowsiness.
- **Alert** school administrators, school nurses, and parent(s) or guardian(s) **of changes in a student's performance** or behavior that might reflect trouble with asthma. The vast majority of students with asthma are able to participate fully in the school program when their asthma is well managed.
- **Encourage** the student with asthma **to participate fully in physical activities.** Plan activities to allow for variations in

stamina or tolerance for exercise, especially if the student is recovering from illness. Changes in weather conditions (hot, cold, breezy) and poor air quality (smoke, smog, pollen) often can aggravate asthma.

- **Plan field trips** and other activities **in a way** that ensures students with asthma **can fully participate.**

Look for Children With Uncontrolled Asthma

- **Be alert for signs of uncontrolled asthma.**
 - Lingering cough after a cold
 - Persistent cough during the day
 - Coughing during the night or early in the morning
 - Coughing, wheezing, chest tightness, or shortness of breath after vigorous physical activity or activity in cold or windy weather
 - Low level of stamina during physical activity or reluctance to participate
 - Coughing, wheezing, chest tightness, or shortness of breath even though the child is taking medicine for asthma
 - Increased use of asthma medicine to relieve coughing, wheezing, chest tightness, or shortness of breath
- **Advise the school nurse** when you suspect **poorly controlled asthma** in a student, so that the school nurse can discuss the situation with his or her parent(s) or guardian(s) and suggest referral to their physician for a proper diagnosis or a treatment update.
- **Be aware of** students with asthma in your class or classes. Understand their **triggers and symptoms.** Observe what seems to make them better or worse, and share your observations with the school nurse, who in turn may discuss the situation with parents or guardians as appropriate.



- **Know** the signs and symptoms of asthma and the early **warning signs of an asthma episode**. (See page 28.) If you have concerns about a student’s health, communicate them to the principal and to the parent or guardian in coordination with the school nurse.

Keep the Environment Clear of Asthma-Provoking Substances

- **Reduce allergens and irritants** in the classroom to help students who have allergies. Common allergens and irritants that can make asthma worse in classrooms include chalk dust, animals, dust, and strong odors (colognes or perfumes, paints, pesticides, cleaners or deodorizers, and markers).

Teach Staff, Students, and Their Families About Asthma

- **Educate all students** about lung health and asthma so they will be more understanding and accepting of students with asthma. Involve students with asthma in the manner and to the extent they prefer. Some will request complete confidentiality; others may want to talk about their symptoms or management.
- **Use the resources** found in this document, including the *Asthma Action Plan* and the checklist, *How Asthma-Friendly Is Your School?*



Actions for the Physical Education Instructor and Coach

Help Children With Asthma and Their Families Manage Asthma

- **Follow the student’s asthma action plan;** if indicated, follow premedication procedures before the student exercises. Know how to easily access the action plan. Consult with the school nurse for clarification.
- **Be sure** that the student’s **medications are available** for exercise activities that take place **away from school or after regular school hours**. This preventive medicine enables most students with exercise-induced asthma to participate in any sport they choose.
- **Warm-up and cool-down** activities appropriate for any exercise will also help the student with asthma.
- **Keep students’ quick relief medications readily available.** Even with precautions, breathing problems may occur. Learn the signs of severe distress and allergic reactions. Have an emergency plan. Don’t delay getting medical help for a student with severe or persistent breathing difficulty.
- Maximize participation and minimize the risks by **establishing good communication** among parents or guardians, students, health care providers, and school staff. Learn about the student’s asthma triggers and medication plan.
- **Encourage exercise and participation in sports** for students with asthma. When asthma is under good control, most students with asthma are able to play most sports. A number of Olympic medalists have asthma.
- Encourage students with asthma to participate actively in sports, but also recognize and **respect their limits**. Plan to adjust the type, pace, or intensity of activities during extreme weather, the pollen season, poor air quality, or when a student has allergy symptoms or a peak flow number lower than usual. Permit less strenuous activities if a recent illness precludes full participation.



Look for Children With Uncontrolled Asthma

- When you suspect poorly controlled asthma in a student, **notify the school nurse** who, in turn, can discuss the situation with the student's parent(s) or guardian(s) and suggest referral to their physician for a proper diagnosis or a treatment update. Signs of poorly controlled asthma include: coughing, wheezing, chest tightness, or shortness of breath. Exercise is a common trigger for children with asthma.



Actions for the Guidance Counselor, Social Worker, and Psychologist

Help Children With Asthma and Their Families Manage Asthma

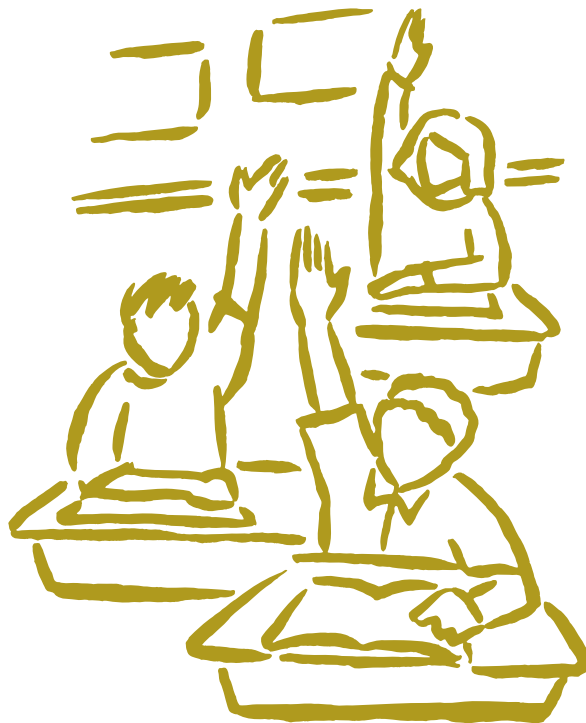
- Help **make sure that students** with asthma are **treated the same** as students without asthma, except to address asthma needs.
- Promote and **encourage independence** and self-care consistent with the student's knowledge, skills, and behaviors.
- Help the student **resolve any issues** related to school policies or practices and to his or her asthma management.
- Recognize that learning to **cope with asthma**, as with any chronic illness, can be stressful. Teachers may notice low self-esteem, withdrawal from activities, or difficulty making up schoolwork. Counseling may help identify unnecessary stressors and help the student handle problems more effectively.

Look for Children With Uncontrolled Asthma

- **Advise** parents and guardians on **behavioral strategies** that improve adherence to treatment for students with poorly controlled asthma. Encourage families with life stressors to seek case management services from their health care providers.

Teach Staff, Students, and Families About Asthma

Help school personnel understand that asthma is an inflammation in the airways, **not an emotional or psychological disease**. It is not “all in the student's head.” Physical responses to strong emotions, such as laughing or crying, can trigger an acute episode, because rapid breathing mechanically irritates and constricts the inflamed airways. However, these emotions do not “cause” asthma.



Actions for Facilities and Maintenance Staff



Keep the Environment Clear of Asthma-Provoking Substances

- **Develop an Indoor Air Quality (IAQ) Management Plan** to identify, solve, and prevent IAQ problems, such as mold growth, improperly maintained ventilation systems, and chemical pollutants from science and art classes. If allergens from classroom animals and cockroaches or other pests are known to cause problems for students with asthma, include allergen control in your IAQ plan.
- **Inspect the building** regularly for signs of mold, moisture, leaks, or spills.
- Establish and **follow a regular cleaning and maintenance schedule** to help minimize allergen and irritant levels in your school.
- **Enforce smoking bans** on school property.
- **Schedule extensive building repairs**, pesticide applications, renovations, or cleaning **when the building is unoccupied** to avoid exposing students to fumes, dust, and other irritants.

Teach Staff, Students, and Families About Asthma

- **Provide information** to school staff, parents or guardians, and students **about air quality problems**, and involve them in plans to reduce asthma triggers (such as mold and secondhand smoke) and allergens (such as cockroaches, dust mites, and classroom animals) if they are known to cause problems for students with asthma.
- Obtain a copy of the U.S. Environmental Protection Agency's (EPA) *Indoor Air Quality Tools for Schools* Action Kit to help staff identify and **learn ways to reduce or eliminate pollutant sources** in the school environment that may bring about asthma attacks. Other relevant EPA publications include:
 - *Pest Control in the School Environment: Adopting Integrated Pest Management*
 - *Mold Remediation in Schools and Commercial Buildings*



MANAGING ASTHMA

CONNECTING WITH THE COMMUNITY

- **Sample Letter to Parents or Guardians**
- **Sample Letters to Physicians**

Note:

The sample letters on the following pages can be sent as is or modified to meet the particulars of your school. The purpose of the letters is to outline steps parents or guardians and physicians can take to partner with the school in facilitating good asthma management.

Letter to Parents or Guardians (SCHOOL DISTRICT LETTERHEAD TO GO HERE)

Dear _____:

The school team at _____ school is looking forward to an excellent year for your child, _____.

Our School Asthma Management Program will provide the following health services:

- Access to the school nurse
- Help for students with asthma in following their asthma action plans
- Asthma education for all students in grade(s) _____
- Asthma in-service training for all school staff
- Indoor Air Quality (IAQ) Tools for Schools to promote a healthy environment

In order to provide the best possible school asthma management for your child, we request your assistance with the following:

Please

- Obtain an asthma action plan (a statement of your child's treatment goals, medication and peak flow plan, and environmental risk reduction measures) from your physician. Please be sure guidelines are included for managing symptoms during special school or off-site events (recess, gym, outdoor play, field trips, parties, art class, etc.). You may use the attached form.
- Meet with the school nurse—before school entry and as needed—to explain your child's condition, medication, devices, and environmental triggers.
- Submit the attached Medication Administration form for any medication that is administered in school. Please provide pharmacy-labeled medications, personally bring them to school, and keep them refilled as needed.
- Meet with teachers to setup expectations for maintaining communication and continuity during absences.
- Prepare your child. Discuss and rehearse the medication plan; discuss how to handle symptoms, triggers, food restrictions, and school policies.
- Keep the school staff up to date on any changes in your child's asthma action plan.
- Keep your physician up to date on school services and supports for helping your child manage his or her asthma.

Thank you for working with us to assist your child.

Sincerely,

Principal (signature)

School Nurse (signature)

Letter (Sample 1) to Physicians

(SCHOOL DISTRICT LETTERHEAD TO GO HERE)

Dear _____:

The school team at _____ school is looking forward to an excellent year for your patient, _____.

Our School Asthma Management Program will provide the following health services:

- Access to the school nurse
- Help for students with asthma in following their asthma action plans
- Asthma education for all students in grade(s) _____
- Asthma in-service training for all school staff
- Indoor Air Quality (IAQ) Tools for Schools to promote a healthy environment

In order to provide the best possible school asthma management for your patient, we request your assistance with the following:

- Complete the attached asthma action plan or provide comparable information on another form and return to us at school.
- Complete the attached medication administration form for any medications that may need to be administered in school and return it to us at school. (*Students may self-carry and administer their quick relief medications if you and the parents or guardians indicate approval on the form*).
- Inform us of additional patient needs.
- Assist us in supporting family priorities. Connect parents or guardians with each other, support groups, and resources such as the Allergy and Asthma Network/Mothers of Asthmatics (AAN/MA), the American Lung Association (ALA), and the Asthma and Allergy Foundation of America (AAFA).

Let us know if you need information on educational rights and responsibilities (Individuals with Disabilities Education Act [IDEA] and Section 504 of the Rehabilitation Act of 1973) for your patients.

We look forward to working with you. Thank you for your help.

Sincerely,

Principal (signature)

School Nurse (signature)

Letter (Sample 2) to Physicians (SCHOOL DISTRICT LETTERHEAD TO GO HERE)

Date _____

Dear _____: [name of provider]

Asthma may be affecting your patient's school performance.

We are writing about your patient, _____ Date of Birth _____.

The following information is being provided for your information and records.

- Missed _____ days in _____ period of time, possibly due to asthma.
- Is not complying with asthma medication at school or the treatment plan you have provided.
- Is not participating in physical education because of symptoms related to asthma.
- Visits school health office frequently because of symptoms related to asthma.
- Has required emergency management of asthma (e.g.: 911, ER referral).
- Our observations would suggest that this student's asthma severity may be as follows (observations are circled on chart below).

	Days with Symptoms	Nights with symptoms	Peak Flow % Normal
Severe Persistent	<i>Continual</i>	<i>Frequent</i>	< 60%
Moderate Persistent	<i>Daily</i>	<i>> 4 per month</i>	60% to 80%
Mild Persistent	<i>> 2 per week</i>	<i>3 to 4 per month</i>	> 80%
Mild Intermittent	<i>≤ 2 per week</i>	<i>≤ 2 per month</i>	> 80%

The family was asked to schedule an appointment with you. *Parents have provided permission for us to exchange the student's health information with you* (attached or shown below). Please contact us if there are questions or concerns. Thank you!

If you feel it is appropriate, please help us with the following:

- Send an "Asthma Action Plan" (attached form), so we can assist with your management plan.
- Student has no Peak Flow Meter. Please prescribe one so that we may better assist with management.
- Please prescribe a "Spacer." This student's technique with an MDI was observed and is not adequate.
- An additional MDI _____ (*medication name*) is needed at school for optimal availability/safety.
- Please reassess this child and his/her current medical regimen (see symptoms/severity above).
- Other _____

Sincerely,

District Medical Consultant (Signature)

School Nurse (Signature)

School: _____ Phone: (____) _____ Fax: (____) _____
Best days/time to call: _____

I permit my child's doctor (named above) to communicate with school staff regarding my child's asthma.

Parent's Signature _____ Date _____

ASTHMA EDUCATION MATERIALS

- **Early Signs of an Asthma Episode**
- **Sample *Asthma Action Plans***
- **Use of a Metered Dose Inhaler**
- **Use of a Peak Flow Meter**
- ***How Asthma-Friendly Is Your School?* Checklist**

Early Signs of an Asthma Episode

In asthma education programs, students are taught to identify early warning signs—the physical changes that occur in the early stage of airway obstruction. These early warning signs usually happen before more serious symptoms occur. They alert students that it is time to measure their peak flow and take medication according to their action plan. Each student’s early warning signs should be documented in the student’s asthma action plan available in the school health room or clinic. Teachers should be aware of each student’s early signs and symptoms and enable students with asthma to take the proper steps to prevent more serious asthma trouble.

Recognizing the early warning signs of an asthma episode can avoid a more serious medical emergency. **There should be no delay once a student has notified the teacher of a possible problem.**

A student may have one or more of these symptoms during the initial phase of an asthma episode.

1. Changes in breathing

Early signs may include:

- Coughing
- Chest tightness
- Throat tightness
- Breathing through the mouth

Later signs may include:

- Wheezing
- Shortness of breath
- Rapid breathing

2. Verbal Complaints

Often a student who is familiar with asthma will know that an episode is about to happen. The student might tell the teacher:

- “My chest is tight.”
- “My chest hurts.”
- “I cannot catch my breath.”
- “My mouth is dry.”
- “My neck feels funny.”
- “I don’t feel well” or “I feel tired.”
- “My chin (or neck) itches.”—the student may rub his or her chin or neck in response to this feeling.

Students may also use “clipped” speech—very short, choppy sentences.

Sample (1) Asthma Action Plan



Asthma and Allergy
Foundation of America

STUDENT ASTHMA ACTION CARD



National Asthma Education and
Prevention Program



Name: _____ Grade: _____ Age: _____

Homeroom Teacher: _____ Room: _____

Parent/Guardian Name: _____ Ph: (h): _____

Address: _____ Ph: (w): _____

Parent/Guardian Name: _____ Ph: (h): _____

Address: _____ Ph: (w): _____

ID Photo

Emergency Phone Contact #1 _____
Name Relationship Phone

Emergency Phone Contact #2 _____
Name Relationship Phone

Physician Treating Student for Asthma: _____ Ph: _____

Other Physician: _____ Ph: _____

EMERGENCY PLAN

Emergency action is necessary when the student has symptoms such as, _____, _____,
_____, _____ or has a peak flow reading of _____.

• Steps to take during an asthma episode:

1. Check peak flow.
2. Give medications as listed below. Student should respond to treatment in 15-20 minutes.
3. Contact parent/guardian if _____
4. Re-check peak flow.
5. Seek emergency medical care if the student has any of the following:
 - ✓ Coughs constantly
 - ✓ No improvement 15-20 minutes after initial treatment with medication and a relative cannot be reached.
 - ✓ Peak flow of _____
 - ✓ Hard time breathing with:
 - Chest and neck pulled in with breathing
 - Stooped body posture
 - Struggling or gasping
 - ✓ Trouble walking or talking
 - ✓ Stops playing and can't start activity again
 - ✓ Lips or fingernails are grey or blue

• Emergency Asthma Medications

	Name	Amount	When to Use
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____

See reverse for more instructions

Sample (1) Asthma Action Plan (Continued)

DAILY ASTHMA MANAGEMENT PLAN

• Identify the things which start an asthma episode (Check each that applies to the student.)

- | | | |
|---|--|--------------------------------------|
| <input type="checkbox"/> Exercise | <input type="checkbox"/> Strong odors or fumes | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Respiratory infections | <input type="checkbox"/> Chalk dust / dust | _____ |
| <input type="checkbox"/> Change in temperature | <input type="checkbox"/> Carpets in the room | |
| <input type="checkbox"/> Animals | <input type="checkbox"/> Pollens | |
| <input type="checkbox"/> Food _____ | <input type="checkbox"/> Molds | |

Comments _____

• Control of School Environment

(List any environmental control measures, pre-medications, and/or dietary restrictions that the student needs to prevent an asthma episode.) _____

• Peak Flow Monitoring

Personal Best Peak Flow number: _____

Monitoring Times: _____

• Daily Medication Plan

	Name	Amount	When to Use
1.	_____		
2.	_____		
3.	_____		
4.	_____		

COMMENTS / SPECIAL INSTRUCTIONS

FOR INHALED MEDICATIONS

- I have instructed _____ in the proper way to use his/her medications. It is my professional opinion that _____ should be allowed to carry and use that medication by him/herself.
- It is my professional opinion that _____ should not carry his/her inhaled medication by him/herself.

_____ Physician Signature	_____ Date
_____ Parent/Guardian Signature	_____ Date

Sample (2) Asthma Action Plan

ASTHMA ACTION PLAN FOR _____ Date _____

Doctor's Name _____

Hospital/Emergency Room Phone Number _____

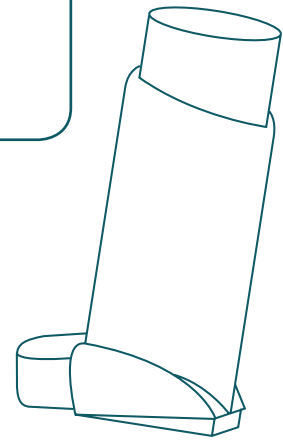
Doctor's Phone Number _____

<p>GREEN ZONE: Doing Well</p> <ul style="list-style-type: none"> ■ No cough, wheeze, chest tightness, or shortness of breath during the day or night ■ Can do usual activities <p>And, if a peak flow meter is used, Peak flow: more than _____ (80% or more of my best peak flow)</p> <p>My best peak flow is: _____</p>	<p>Take These Long-Term-Control Medicines Each Day (include an anti-inflammatory)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Medicine</th> <th style="width: 30%;">How much to take</th> <th style="width: 30%;">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> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Medicine	How much to take	When to take it													<p>Before exercise</p> <p><input type="checkbox"/> _____ <input type="checkbox"/> 2 or <input type="checkbox"/> 4 puffs 5 to 60 minutes before exercise</p>
Medicine	How much to take	When to take it															
<p>YELLOW ZONE: Asthma Is Getting Worse</p> <ul style="list-style-type: none"> ■ Cough, wheeze, chest tightness, or shortness of breath, or ■ Waking at night due to asthma, or ■ Can do some, but not all, usual activities <p>-Or-</p> <p>Peak flow: _____ to _____ (50% - 80% of my best peak flow)</p>	<p>ADD: Quick-Relief Medicine - and keep taking your GREEN ZONE medicine</p> <p>FIRST <input type="checkbox"/> _____ (short-acting beta₂-agonist)</p> <p>SECOND <input type="checkbox"/> 2 or <input type="checkbox"/> 4 puffs, every 20 minutes for up to 1 hour <input type="checkbox"/> Nebulizer, once</p> <p>If your symptoms (and peak flow, if used) return to GREEN ZONE after 1 hour of above treatment:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Take the quick-relief medicine every 4 hours for 1 to 2 days. <input type="checkbox"/> Double the dose of your inhaled steroid for _____ (7-10) days. <p>-Or-</p> <p>If your symptoms (and peak flow, if used) do not return to GREEN ZONE after 1 hour of above treatment:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Take: _____ <input type="checkbox"/> 2 or <input type="checkbox"/> 4 puffs or <input type="checkbox"/> Nebulizer (short-acting beta₂-agonist) <input type="checkbox"/> Add: _____ mg. per day For _____ (3-10) days (oral steroid) <input type="checkbox"/> Call the doctor <input type="checkbox"/> before/ <input type="checkbox"/> within _____ hours after taking the oral steroid. 	<p>RED ZONE: Medical Alert!</p> <ul style="list-style-type: none"> ■ Very short of breath, or ■ Quick-relief medicines have not helped, or ■ Cannot do usual activities, or ■ Symptoms are same or get worse after 24 hours in Yellow Zone <p>-Or-</p> <p>Peak flow: less than _____ (50% of my best peak flow)</p>															
<p>DANGER SIGNS</p> <ul style="list-style-type: none"> ■ Trouble walking and talking due to shortness of breath ■ Lips or fingernails are blue 	<p>Then call your doctor NOW. Go to the hospital or call for an ambulance if:</p> <ul style="list-style-type: none"> ■ You are still in the red zone after 15 minutes AND ■ You have not reached your doctor. <p>■ Take <input type="checkbox"/> 4 or <input type="checkbox"/> 6 puffs of your quick-relief medicine AND</p> <p>■ Go to the hospital or call for an ambulance (_____) NOW!</p>																

Use of a Metered Dose Inhaler

A metered dose inhaler (MDI) is a device used to deliver asthma medication directly to the lungs. In order to ensure effective administration of the medicine, the following steps should be performed:

1. Remove cap and hold inhaler upright.
2. Shake inhaler.
3. Tilt head back slightly and breathe out.
4. Position inhaler in one of the following ways:
 - A. Open mouth and hold inhaler 1–2 inches away.
 - B. Use spacer (recommended for children for any inhaled asthma medication and for adults/children using inhaled steroids).
 - C. Put inhaler in mouth.
(B is optimal, but C is acceptable if you have trouble with either A or B.)
5. Press down on inhaler to release medication as you start to breathe in slowly.
6. Breathe in *slowly* (3–5 seconds).
7. *Hold* breath for 10 seconds to allow medicine to reach deeply into the lungs.
8. Repeat puffs as directed. Waiting 1 minute between puffs may permit the second puff to penetrate the lungs better.



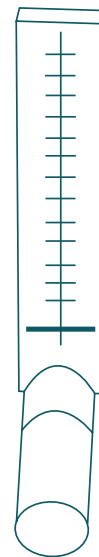
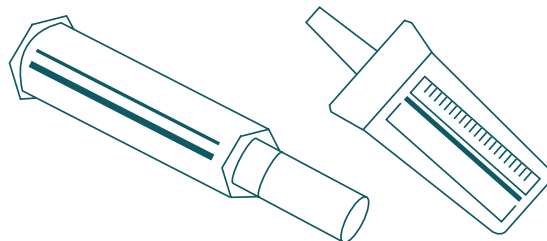
Use of a Peak Flow Meter

A peak flow meter is a useful tool for objectively measuring the severity of asthma. The number obtained is called a peak expiratory flow rate (PEFR). The PEFR indicates the degree of obstruction or narrowing of the airways. The PEFR is the amount of air that can be forcefully exhaled. Each individual has a predicted rate based on height and age. However, many physicians prefer to use the person's "personal best" value. This number represents the highest rate obtained when a person is feeling well.

This procedure can help determine when medicine or a change in treatment is necessary. In order to ensure accuracy of the results, the test must be performed using the correct technique. The following steps outline the procedure for this test.

1. Place indicator at the base of the numbered scale.
2. Stand up.
3. Take a deep breath.
4. Place the meter in the mouth and close lips around the mouthpiece.
5. Blow out as hard and fast as possible.
6. Write down the achieved value.
7. Repeat the process two more times.
8. Record the highest of the three numbers achieved.

This procedure can help determine when medicine or a change in treatment is necessary.





National Heart, Lung, and Blood Institute
National Asthma Education and Prevention Program
School Asthma Education Subcommittee

How Asthma-Friendly Is Your School?

Children with asthma need proper support at school to keep their asthma under control and be fully active. Use the questions below to find out how well your school assists children with asthma:

- Yes No 1. Is your school free of tobacco smoke at all times, including during school-sponsored events?
- Yes No 2. Does the school maintain good indoor air quality? Does it reduce or eliminate allergens and irritants that can make asthma worse? Check if any of the following are present:
- Cockroaches
 - Dust mites (commonly found in humid climates in pillows, carpets, upholstery, and stuffed toys)
 - Mold
 - Pets with fur or feathers
 - Strong odors or fumes from art and craft supplies, pesticides, paint, perfumes, air fresheners, and cleaning chemicals
- Yes No 3. Is there a school nurse in your school all day, every day? If not, is a nurse regularly available to help the school write plans and give the school guidance on medicines, physical education, and field trips for students with asthma?
- Yes No 4. Can children take medicines at school as recommended by their doctor and parents? May children carry their own asthma medicines?
- Yes No 5. Does your school have a written, individualized emergency plan for each child in case of a severe asthma episode (attack)? Does the plan make clear what action to take? Whom to call? When to call?
- Yes No 6. Does someone teach school staff about asthma, asthma management plans, and asthma medicines? Does someone teach all students about asthma and how to help a classmate who has it?
- Yes No 7. Do students have good options for fully and safely participating in physical education class and recess? (For example, do students have access to their medicine before exercise? Can they choose modified or alternative activities when medically necessary?)

If the answer to any question is “no,” students in your school may be facing obstacles to asthma control. Uncontrolled asthma can hinder a student’s attendance, participation, and progress in school. School staff, health professionals, and parents can work together to remove obstacles and promote students’ health and education.

Contact the organizations listed on the following pages for information about asthma and helpful ideas for making school policies and practices more asthma-friendly. Federal and State laws are in place to help children with asthma.

Asthma can be controlled; expect nothing less.

Resources Available to Schools To Help Manage Asthma



For more information contact:

The National Asthma Education and Prevention Program

NHLBI Health Information Center
P.O. Box 30105
Bethesda, MD 20824-0105
www.nhlbi.nih.gov
(301) 592-8573
TTY (240) 629-3255

The following organizations can provide additional materials and additional information about asthma:

Allergy and Asthma Network/ Mothers of Asthmatics, Inc.

2751 Prosperity Avenue
Suite 150
Fairfax, VA 22031
www.aanma.org
(800) 878-4403

American Academy of Allergy, Asthma, and Immunology (AAAAI)

Patient/Public Resource Center
611 East Wells Street
Milwaukee, WI 53202
www.aaaai.org
(800) 822-2762

American Academy of Pediatrics

141 Northwest Point Boulevard
Elk Grove, IL 60007
www.aap.org
(847) 434-4000

American College of Allergy, Asthma, and Immunology

Resource Center
85 West Algonquin Road
Suite 550
Arlington Heights, IL 60005
allergy.mcg.edu
(800) 842-7777



American Lung Association

National Office
1740 Broadway
New York, NY 10019
www.lungusa.org
(212) 315-8700
(or call your local Lung Association office)

Asthma and Allergy Foundation of America

National Headquarters
1233 20th Street, NW
Suite 402
Washington, DC 20036
www.aafa.org
(800) 727-8462

Centers for Disease Control and Prevention

4770 Buford Highway, NE MSK-12
Atlanta, GA 30341
www.cdc.gov/asthma
www.cdc.gov/HealthyYouth/asthma
(800) 311-3435

National Association of School Nurses

P.O. Box 1300
Scarborough, ME 04070-1300
www.nasn.org
(877) 627-6476
(877) NASN4SN

U.S. Environmental Protection Agency (EPA)

Information Clearinghouse
Headquarters
1200 Pennsylvania Avenue, NW
Washington, DC 20460
www.epa.gov
(800) 438-4318

Discrimination Prohibited: Under provisions of applicable public laws enacted by Congress since 1964, no person in the United States shall, on the grounds of race, color, national origin, handicap, or age, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity (or, on the basis of sex, with respect to any education program or activity) receiving Federal financial assistance. In addition, Executive Order 11141 prohibits discrimination on the basis of age by contractors and subcontractors in the performance of Federal contracts, and Executive Order 11246 states that no federally funded contractor may discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. Therefore, the National Heart, Lung, and Blood Institute must be operated in compliance with these laws and Executive Orders.



**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Heart, Lung, and Blood Institute**

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