

IAQ Tools for Schools

Managing Asthma in the
School Environment

10 Ways to Manage Asthma in the School Environment

- 1. Use the IAQ Tools for Schools Kit**
 - Help people with asthma by improving the school environment with IAQ practices recommended in this kit.
- 2. Control Animal Allergens**
 - Remove classroom animals from the school, if possible.
 - If not, locate animals away from sensitive students and ventilation systems.
- 3. Control Cockroach Allergens**
 - Use Integrated Pest Management practices to prevent cockroach and other pest problems (e.g., store food in tightly sealed containers and place dumpsters away from the building).
- 4. Clean Up Mold and Control Moisture**
 - Fix moisture problems and thoroughly dry wet areas within 24-48 hours to prevent mold growth.
 - Clean up hard, moldy surfaces with water and detergent, then dry thoroughly.
- 5. Eliminate Secondhand Smoke Exposure**
 - Enforce no-smoking policies in the school.
- 6. Reduce Dust Mite Exposure**
 - Make sure the school is dusted and vacuumed thoroughly and regularly.
- 7. Develop an Asthma Management Plan in Your School**
 - Include school policies on inhaler and other medication usage, and emergency procedures for school staff for use when a student has an asthma attack.
 - Obtain the National Asthma Education and Prevention Program's *Managing Asthma: A Guide for Schools*.
- 8. Provide School-Based Asthma Education Programs**
 - Contact your local American Lung Association about *Open Airways For Schools*, a school-based asthma management program for students with asthma.
- 9. File Student Asthma Action Cards**
 - Encourage students to work with their health care providers to identify their asthma triggers.
 - Make sure students with asthma obtain and turn in copies of their Asthma and Allergy Foundation of America action cards to teachers, school nurse, etc.
- 10. Gather Additional Asthma Information and Resources**
 - Establish a complete file on existing asthma and allergy-related information sources to reference throughout the school year.

Visit www.epa.gov/asthma for information on common asthma triggers and how to manage them, asthma education programs available in your community, and no-cost resources that schools can use to educate students and staff about asthma.

The Asthma Epidemic



Asthma has reached epidemic proportions in the United States affecting millions of people of all ages and races. An average of one out of every 13 school-age children has asthma, and the percentage of children with asthma is rising more rapidly in preschool-age children than in any other age group. Asthma is the leading cause of school absenteeism due to a chronic condition, accounting for more than 14.7 million missed school days per year. Asthma also accounts for many nights of interrupted sleep, limitation of activity, and disruption of family and care-giver routines. Asthma symptoms that are not severe enough to require a visit to an emergency room or to a physician can still be serious enough to prevent a child with asthma from living a fully active life.

Asthma is a long-term, inflammatory disease that causes the airways of the lungs to tighten and constrict, leading to wheezing, breathlessness, chest tightness, and coughing. The

inflammation also causes the airways of the lungs to become especially sensitive to a variety of asthma triggers. The particular trigger or triggers and the severity of symptoms can differ for each person with asthma.

Since Americans spend up to 90% of their time indoors, exposure to indoor allergens and irritants may play a significant role in triggering asthma episodes. Some of the most common asthma triggers found indoors include:

- animal dander
- cockroaches
- mold
- secondhand smoke
- dust mites

Other asthma triggers include: respiratory infections, pollens (trees, grasses, weeds), outdoor air pollution, including ozone and particulate matter, food, allergies, exercise, and cold air exposure.



Asthma in Schools

Each day, one in five Americans occupies a school building; the majority of these occupants are children. Environmental asthma triggers commonly found in school buildings include cockroaches and other pests, mold resulting from excess moisture in the building, and dander from animals in the classroom. Secondhand smoke and dust mites are other known environmental asthma triggers found in schools. In addition, some literature suggests that children with asthma may be affected by other pollutants from sources found in schools, such as unvented stoves or heaters and common products (e.g., cleaning agents, perfumes, and sprays).

Effectively managing a child's asthma can best be accomplished through a comprehensive plan that addresses both the medical management of the disease and avoidance of environmental triggers. Since children spend most of their time in schools, day care facilities, or at home, it is important to reduce their exposure to environmental asthma triggers as much as possible in each of these environments. This publication focuses on steps that schools can take to help children breathe easier.



Use the Indoor Air Quality Tools for Schools Kit



Many indoor air quality problems in schools can impact the health of students and staff, including those with asthma. Some of the indoor air quality problems include chemical pollutants



from building or building maintenance materials; chemical pollutants from science and art classes; improperly maintained ventilation systems; and allergens from classroom animals and cockroaches. Mold growth may result from standing water in maintenance rooms and near piping, or from moisture in ceiling tiles, carpets, and other furnishings. Also, outdoor air pollutants and pollens may enter the school through ventilation systems and open doors and windows.

In order to help improve indoor air quality problems in school buildings, the Environmental Protection Agency (EPA) developed the *Indoor Air Quality (IAQ) Tools for Schools Kit*. The *IAQ Tools for Schools Kit* helps school personnel identify, resolve, and prevent indoor air quality problems in the school

environment. Using an IAQ management plan that includes checklists for the entire building can lower student and staff exposure to asthma triggers. The checklists available in the *IAQ Tools for Schools Kit* help schools address ventilation systems, maintenance procedures, renovations and repairs, classroom policies—especially for animals and mold—administrative offices, health offices, food service areas, pest management, waste management, the role of school officials, and a walkthrough of the entire building.

Included in the Kit are several resources to explain the fundamentals of indoor air quality and guidance for improving air inside schools:

- IAQ Coordinator's Guide
- IAQ Reference Guide
- Checklists
- Background informational piece for staff
- IAQ problem solving wheel
- Road Map
- Fact sheet on district-wide implementation
- Summary of EPA's Awards Program
- Video on how to conduct a walkthrough
- Video covering the ventilation checklist and a case study on how one school implemented *IAQ Tools for Schools*

Most schools form an IAQ coordinating team to implement the guidance in the *IAQ Tools for Schools* Kit. Because IAQ problems can originate anywhere in the school building, the entire staff should be informed about and participate in improving IAQ. In addition, students can be involved in the process. Information about available curricula on indoor air quality can be found on EPA's Web site, www.epa.gov/iaq/schools.

School districts across the United States have adopted *IAQ Tools for Schools*. The *IAQ Tools for Schools* Kit can be used alone or in conjunction with the American Lung Association's *Open Airways For Schools* asthma curriculum for eight to 11-year old children (see information included in this publication on *Asthma Management and Education*).

EPA has developed additional tools and programs to help schools and school districts implement the *IAQ Tools for Schools* Kit. This document, *Managing Asthma in the School Environment*, is one of those tools. It is a component of the *IAQ Tools for Schools* Kit and is also available as a stand alone document.

For more information about EPA's *IAQ Tools for Schools* Program, visit the Web site at www.epa.gov/iaq/schools.

The *IAQ Tools for Schools* Kit is available at no cost. To receive the Kit, call IAQ INFO at 1-800-438-4318 or download it from EPA's Web site at www.epa.gov/iaq/schools.



Control Animal Allergens



Classrooms often adopt animals as classroom pets or science projects. Any warm-blooded animals, including gerbils, birds, cats, dogs, mice, and rats, may trigger asthma. Proteins, which act as allergens in the dander, urine, or saliva of warm-blooded animals, may sensitize individuals and can cause allergic reactions or trigger asthma episodes in people sensitive to animal allergens.

Common Sources Found in Schools

The most common, obvious sources of animal allergens in schools are in the air and on the clothing of staff and children who handle pets. If an animal is present in the school, there is a possibility of direct, daily exposure to the animal's dander and bodily fluids. It is important to realize that, even after extensive cleaning, pet allergens may stay in the indoor environment for several months after the animal is removed.

The most effective method to control exposure to animal allergens in schools is to keep your school free of feathered or furred animals. However, for some individuals, isolation measures may be sufficiently



effective. Isolation measures include keeping animals in localized areas; keeping animals away from upholstered furniture, carpets, and stuffed toys; and keeping sensitive individuals away from animals as much as possible.

It is important to make sure that classrooms containing animals are frequently and thoroughly cleaned. In addition, animal allergens can readily migrate to other areas of the school environment through the air and on the clothing of staff and children who handle pets. Therefore, the entire building should be cleaned thoroughly.

Schools are sometimes advised to use air cleaners. Although properly used and maintained air cleaners may be effective for reducing animal dander in small areas, they should only be considered as an addition to other control methods. It is also important to carefully review

information on the type of air

cleaner used to make sure it is suitably sized and has high particle removal efficiency. In addition, some air-cleaning devices marketed as air purifiers emit ozone, which may be harmful to people with asthma.

Suggestions for Reducing Exposures in Schools

- Remove animals from the school, if possible.

If completely removing animals from the school is not possible, then:

- Keep animals in cages or localized areas as much as possible; do not let them roam.
- Clean cages regularly. Consider using disposable gloves when cleaning.
- Place animals away from air vents to avoid circulating allergens throughout the room or building.
- Locate sensitive students as far away from animals and habitats as possible.
- Keep animals away from upholstered furniture, carpets, and stuffed toys.

These action items are included on the Teachers Checklist, available in the IAQ Tools for Schools Kit.

Control Cockroach and Pest Allergens

Cockroach allergens play a significant role in triggering asthma throughout inner-city, suburban, and rural schools. Certain proteins that act as allergens in the waste products and saliva of cockroaches can cause allergic reactions or trigger asthma symptoms in some individuals.

Pest allergens, especially rats and mice, have been shown to cause occupational asthma symptoms among laboratory workers. These allergens may also

contribute to allergies and asthma in the general population.

Common Sources Found in Schools

Cockroaches and other pests, such as rats and mice, are often found in the school setting. Allergens from these pests may be significant asthma triggers for students and staff in schools. Pest problems in schools may be caused or worsened by a variety of conditions such as plumbing leaks, moisture



problems, and improper food handling and storage practices. In order to manage a pest problem, control water and food sources. It is important to avoid exposure to cockroach and pest allergens by using common sense integrated pest management (IPM) practices throughout the entire school.

There are four key IPM methods for reducing exposure to pests in the school setting: 1) look for signs of pests; 2) do not leave food, water, or garbage exposed; 3) remove pest pathways and shelters; and 4) use pest control products such as poison baits, traps, and pesticide sprays, as needed.

Integrated Pest Management Practices for Reducing Exposures in Schools

Check food preparation, cooking, and storage areas regularly for signs of cockroaches and pests:

- Look for dead cockroaches or pests.
- Look for waste products (e.g., pest droppings).
- Look for greasy smears on walls, which could indicate possible rat runs.

Confirm that appropriate food preparation, cooking, and storage practices are implemented:

- Review food handling and storage practices. Containers should be well-sealed, with no traces of food left on outside surfaces of containers.
- Make sure food is not kept in the classroom overnight.
- Keep animal food in sealed containers.

Maintain general cleanliness:

- Sweep and wet mop floors to remove food.
- Clean stoves and ovens after use.
- Wipe counters clean with soap and water or a disinfectant, according to school policy.
- Remove trash daily.
- Fix plumbing leaks and other moisture problems.
- Do not let water stand in air conditioning or refrigerator drip pans.

Select waste containers by considering the kind of waste that is placed in them:

- Dispose of food waste or contaminated papers and plastics in secured, covered containers or tied off plastic bags to discourage pests.

Empty waste containers regularly and frequently, and store them in an appropriate location:

- Follow a regular schedule of emptying waste containers in order to minimize odors and deprive pests of their food sources.
- Place dumpsters away from the building to minimize opportunities for pests to enter the building.

Eliminate pest entryways, pathways, and shelters:

- Remove clutter (e.g., stacks of papers) where cockroaches may hide.
- Seal small spaces where cockroaches may live (e.g., where plumbing or electrical wiring goes through walls, and cracks or spaces in walls around baseboards and window sills.)
- Block possible entry points for rodents and other pests.

Do not rely on widespread, indiscriminate use of pesticides to control pests:

- Try using poison baits, boric acid, or traps before using pesticide sprays.
- Track cockroach populations by using small sticky traps or monitoring traps that contain no pesticide.
- Rather than using bait, trap rats and mice.
- Use pesticide sprays in classrooms only as a last resort.

If pesticide sprays are used in the school:

- Use pest control chemicals in strict accordance with state and local regulations and the instructions on the container.
- Consider notifying school staff and parents well in advance of pesticide applications.
- Schedule pesticide applications for unoccupied periods so that the affected area can be well ventilated before occupants return.

These action items can be found on the following checklists in the IAQ Tools for Schools Kit:

Integrated Pest Management Checklist, Teachers Checklist, Administrative Staff Checklist, Waste Management Checklist, Food Service Checklist, Building & Grounds Maintenance Checklist, Ventilation Checklist, Walkthrough Checklist



Clean Up Mold and Control Moisture



Molds can be found almost anywhere; they can grow on virtually any substance if moisture is present. Outdoors, many molds live in the soil and play a key role in the breakdown of leaves, wood, and other plant debris. Without molds we would be struggling with large amounts of dead plant matter.

Molds produce tiny spores to reproduce. Mold spores travel through the indoor and outdoor air continually. When mold spores land on a damp spot indoors, they may begin digesting whatever they are growing on to survive. There are molds that can grow on wood, paper, carpet, and foods. If excessive moisture or water accumulates indoors, mold growth may occur, particularly if the moisture problem remains undiscovered or unaddressed. There is no practical way to eliminate all mold and mold spores in the indoor environment; the way to control indoor mold growth is to control moisture. If mold is a problem in your school, you must clean up the mold and eliminate sources of moisture.

When mold growth occurs in buildings, it may be followed by reports of health symptoms from some building occupants, particularly those with allergies or respiratory problems. Potential health effects and symptoms associated with mold exposures include allergic reactions, asthma, and other respiratory complaints.

Common Moisture Sources Found in Schools

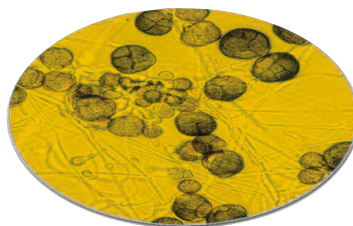
Moisture problems in school buildings can be caused by a variety of problems, including roof and plumbing leaks, condensation, and excess humidity. Some moisture problems in schools have been linked to changes in building construction practices during the past twenty to thirty years. These changes have resulted in more tightly sealed buildings that may not allow moisture to escape easily. Moisture problems in schools are also associated with delayed or insufficient maintenance due to budget constraints. Temporary structures in schools, such as trailers and portable classrooms, have frequently been associated with moisture and mold problems.

Suggestions for Reducing Mold Growth in Schools

Reduce Indoor Humidity:

- Provide adequate ventilation to maintain indoor humidity levels between 30-60%.
- Control humidity levels and dampness by using air conditioners and dehumidifiers.
- Use exhaust fans whenever cooking, dishwashing, and cleaning in food service areas.
- Vent showers and other moisture-generating sources to the outside.

Inspect the building for signs of mold, moisture, leaks, or spills:



- Check for moldy odors.
- Look for water stains or discoloration on the ceiling, walls, floors, and window sills.
- Look around and under sinks for standing water, water stains, or mold.
- Inspect bathrooms for standing water, water stains, or mold.
- Do not let water stand in air conditioning or refrigerator drip pans.

Respond promptly when you see signs of moisture and/or mold, or when leaks or spills occur:

- Clean and dry any damp or wet building materials and furnishings within 24-48 hours of occurrence to prevent mold growth.
- Fix the source of the water problem or leak to prevent mold growth.
- Clean mold off hard surfaces with water and detergent, and dry completely. Absorbent materials such as ceiling tiles, that are moldy, may need to be replaced.
- Check the mechanical room and roof for unsanitary conditions, leaks, or spills.

Prevent moisture condensation:

- Reduce the potential for condensation on cold surfaces (i.e., windows, piping, exterior walls, roof, or floors) by adding insulation.

Floor and carpet cleaning:

- Remove spots and stains immediately, using the flooring manufacturer's recommended techniques. Use care to prevent excess moisture or cleaning residue accumulation and ensure that cleaned areas are dried quickly.
- Avoid installing carpeting in areas where there is a perpetual moisture problem (i.e., by drinking fountains, by classroom sinks, or on concrete floors with leaks or frequent condensation).

These action items are included on the following checklists found in the IAQ Tools for Schools Kit:

Ventilation Checklist, Building & Grounds Maintenance Checklist, Administrative Staff Checklist, Teachers Checklist, Food Service Checklist, Renovation and Repair Checklist, Walkthrough Checklist.

Eliminate Secondhand Smoke Exposure



Secondhand smoke can originate from burning cigarettes, pipes, or cigars or exhaled smoke. Secondhand smoke exposure causes a number of serious health effects in young children, such as coughing and wheezing, bronchitis and pneumonia, ear infections, reduced lung function, and worsened asthma attacks. Secondhand smoke is an irritant that may trigger an asthma episode, and evidence suggests that secondhand smoke may cause asthma in children. EPA estimates that exposure to secondhand smoke exacerbates asthma symptoms in 200,000 to 1,000,000 children. Secondhand smoke can also lead to buildup of fluid in the middle ear, the most common cause of children being hospitalized for an operation.

Common Sources Found in Schools

The majority of schools in the United States prohibit smoking on school grounds. However, oftentimes smoking occurs in school bathrooms, lounges, and on school grounds, especially near entrances. This may cause problems for students and staff who have asthma.

It is important to enforce smoking bans on school grounds in order to prevent exposure to secondhand smoke. If smoking occurs within the building, secondhand smoke can travel through the ventilation system to the entire school. Even when people smoke outside, secondhand smoke may enter the school through the ventilation system, open windows, and doors.

Suggestion for Reducing Exposure in Schools

- Develop no smoking policies on school grounds.
- Enforce smoking bans on school property.
- Educate staff and students on the effects of secondhand smoke.
- Learn more about EPA's Smoke-free Homes Program at www.epa.gov/smokefree

These action items are included on the Health Officer/School Nurse Checklist, available in the IAQ Tools for Schools Kit.



Reduce Exposure to Dust Mites

Dust mite allergens play a significant role in triggering asthma. They may cause an allergic reaction or trigger an asthma episode in sensitive individuals. In addition, there is evidence that dust mites cause new cases of asthma in susceptible children.

Dust mites are too small to be seen but are found in homes, schools, and other buildings throughout the United States. Their food source is dead skin flakes.

Common Sources Found in Schools

Dust mites may be found in schools in carpeting, upholstered furniture, stuffed animals or toys, and pillows. Stuffed animals or toys, as well as pillows for taking naps, are used mostly in the primary grades. It is important to keep classrooms free of clutter, to dust regularly, and to wash items frequently that attract dust.

Suggestions for Reducing Exposure in Schools

- Choose washable stuffed toys; wash them often in hot water.
- Cover pillows in dust-proof (allergen-impermeable), zipped covers.
- Remove dust from hard surfaces often with a damp cloth, and vacuum carpeting and fabric-covered furniture to reduce dust buildup. Allergic people should leave the area being vacuumed. Vacuums with high efficiency filters or central vacuums may be helpful.
- Maintain clean classrooms.

Refer to the Teachers and Building & Grounds Maintenance Checklists, available in the IAQ Tools for Schools Kit.



Asthma Management and Education



Experts convened by the National Asthma Education and Prevention Program (NAEPP) and coordinated by the National Institutes of Health (NIH) have reviewed the scientific literature and produced guidelines that define the best diagnosis and management practices for asthma. These guidelines include recommendations for medical diagnosis and treatment, including the use of inhalation therapy and specific recommendations for controlling indoor environmental factors that contribute to asthma severity.

Develop an Asthma Management Plan in Your School

Schools can play an important role in helping students manage their asthma by providing support through the development of an asthma management plan. Each school should develop an overall asthma management plan that includes school policies on the use of inhalers and medications, actions or emergency procedures school staff should take when a student has an asthma attack, and student asthma action cards.

The student asthma action card serves as an individual management plan for each student with asthma. The action card also provides pertinent information to school officials on each student's asthma condition.

The asthma action card should contain the student's medical information, identified asthma triggers, emergency procedures, and phone numbers. This action card should be signed by a physician and parent or care-giver and kept on file at school. The Asthma and Allergy Foundation of America's (AAFA) asthma action card is provided in this publication. AAFA encourages duplication and distribution of the asthma action card in the school setting.

Provide School-Based Asthma Education Programs

The school setting provides an opportunity for directly educating children, parents, care-givers, teachers, and other school staff about asthma management and indoor environmental triggers. An example of a school-based asthma education program is the



American Lung Association's (ALA) *Open Airways For Schools*. This elementary school-based program empowers children and their parents by teaching them to take control of asthma.

Through ALA's *Open Airways For Schools* program, children learn specific steps they can take to manage asthma. Specifically, they learn to prevent asthma episodes by reducing their exposure to environmental asthma triggers and using their asthma medication correctly. Children also learn what to do when asthma symptoms develop, how to use medications correctly, and when to seek help from adults.

Designed for eight to 11-year old children with asthma, this curriculum consists of six lessons and is designed to be easy for trained volunteers or school staff to present. Generally held during the school day, each lesson takes about 40 minutes and is flexible enough to fit any school's schedule. The program's hands-on teaching approach utilizes group discussion, stories, games, and role-playing to promote children's active involvement in the learning process.

Children enrolled in this program have demonstrated: increased school performance; more confidence in their ability to manage asthma; greater influence on their parents' asthma management decisions; fewer episodes of asthma, as well as episodes of shorter duration; and more active management of their asthma. The program is approved and recommended by the National Association of School Nurses.

Although asthma affects children of all backgrounds, minority groups are disproportionately affected. To reach children from all backgrounds, artwork in the curriculum was designed with a distinctive multi-cultural appeal with specially designed cartoon illustrations of children in urban, rural, and suburban settings. To reach an even broader audience, ALA's *Open Airways For Schools* is now available in English and Spanish.

For more information about the American Lung Association's Open Airways For Schools program, contact your local Lung Association at 1-800-LUNG-USA (1-800-586-4872) or visit the ALA Web site (<http://www.lungusa.org>.)

Asthma Action Card



Name: _____ Grade: _____ Age: _____

Homeroom Teacher: _____ Room: _____

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

Address: _____ Ph: (W) _____

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

Address: _____ Ph: (W) _____

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. _____	_____	_____

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

Additional Resources



For more information on asthma contact:

U.S. Environmental Protection Agency

www.epa.gov/iaq/schools

Download the *IAQ Tools for Schools* Kit from EPA's Web site.

www.epa.gov/asthma

Find more asthma resources on EPA's Web site.

www.epa.gov/cleanschoolbus

Learn about EPA's clean school bus initiative on EPA's Web site.

U.S. EPA Indoor Air Quality Information Clearinghouse (IAQ INFO)

(800) 438-4318

(703) 356-5386 Fax

Call to request the *IAQ Tools for Schools* Kit.

Allergy and Asthma Network/Mothers of Asthmatics, Inc.

(800) 878-4403

www.aanma.org

Ask about obtaining their School Information Packet.

American Lung Association

(800) LUNG-USA

www.lungusa.org

Ask about the *Open Airways for Schools* program and the Asthma-Friendly Schools Toolkit.

Asthma and Allergy Foundation of America

(800) 7-ASTHMA

www.aafa.org

Ask about AAFA's *Asthma Management at School* presentation for parents and school personnel. Also available are additional school-based child and teen education materials.

Center for Disease Control and Prevention

(888) 232-6789

www.cdc.gov/asthma

Find out more information on the Asthma Prevention Program by visiting this Web site.



***Integrated Pest Management
in Schools Web site***

schoolipm.ifas.ufl.edu

Find out more IPM information by
visiting this Web site.

National Association of School Nurses

(207) 883-2117

www.nasn.org

Ask about obtaining Asthma Modules to
present to school staff.

***National Asthma Education and
Prevention Program***

(301) 592-8573

www.nhlbi.nih.gov

Ask about obtaining four publications:
Managing Asthma: A Guide for Schools,
Asthma and Physical Activity in School,
How Asthma Friendly is your School?, and
the *Asthma Awareness Curriculum*.

***National Education Association Health
Information Network***

(800) 718-8387

www.neahin.org

Call to request information on a variety
of health issues in schools, including
asthma. Check this Web site for IAQ in
schools information.

*Names, phone numbers, and e-mail addresses are
provided for informational purposes only. EPA
does not endorse products, services, or general policies
of any organization. The organizations mentioned in this
publication are not the only sources of information on
asthma in schools. Additional information may be
obtained from your physician or other health care
provider, insurance carrier, school system, or state or
local public health agency as appropriate.*



EPA REGIONAL OFFICES



US EPA/Region 1 (CAP) (CT, ME, MA, NH, RI, VT)

1 Congress Street
Suite 1100
Boston, MA 02114-2023
(617) 918-1639
(617) 918-1505 fax

US EPA/Region 2 (R2DEPDIV) (NJ, NY, PR, VI)

290 Broadway
28th Floor
New York, NY 10007-1866
(212) 637-4013
(212) 637-4942 fax

US EPA/Region 3 (3PM52) (DC, DE, MD, PA, VA, WV)

1650 Arch Street
Philadelphia, PA 19103-2029
(215) 814-2086
(215) 814-2101 fax

US EPA/Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)

61 Forsyth Street, SW
Atlanta, GA 30303-3104
(404) 562-9143
(404) 562-9095 fax

US EPA/Region 5 (AE-17J) (IL, IN, MI, MN, OH, WI)

77 West Jackson Boulevard
Chicago, IL 60604-3590
(312) 353-6053
(312) 886-0617 fax

US EPA/Region 6 (6PD-T) (AR, LA, NM, OK, TX)

1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733
(214) 665-7547
(214) 665-6762 fax

US EPA/Region 7 (ARTD/RALI) (IA, KS, MO, NE)

901 North 5th Street
Kansas City, KS 66101
(913) 551-7020
(913) 551-7065 fax

US EPA/Region 8 (8P-AR) (CO, MT, ND, SD, UT, WY)

999 18th Street
Suite 300
Denver, CO 80202-2466
(303) 312-6031
(303) 312-6044 fax

US EPA/Region 9 (Air-6) (AZ, CA, HI, NV, AS, GU)

75 Hawthorn Street
San Francisco, CA 94105
(415) 947-4192
(415) 947-3583 fax

US EPA/Region 10 (OAQ-107) (AK, ID, OR, WA)

1200 Sixth Avenue
Seattle, WA 98101-9797
(206) 553-4273
(206) 553-0110 fax

Remember...

***10 Ways to
Manage Asthma in
the School Environment***

- 1.** *Use the IAQ Tools for Schools Kit*
- 2.** *Control Animal Allergens*
- 3.** *Control Cockroach Allergens*
- 4.** *Clean Up Mold and Control Moisture*
- 5.** *Eliminate Secondhand Smoke Exposure*
- 6.** *Reduce Dust Mite Exposure*
- 7.** *Develop an Asthma Management Plan in Your School*
- 8.** *Provide School-Based Asthma Education Programs*
- 9.** *File Student Asthma Action Cards*
- 10.** *Gather Additional Asthma Information and Resources*



United States
Environmental Protection
Agency