



Asthma and Environment Fact Sheet for Parents and Schools

Healthy Schools Network, Inc.

www.HealthySchools.org

© 2003, 2012

www.CleaningForHealthySchools.org

- * Asthma has reached epidemic proportions in the United States, affecting about 25 million people of all ages and races, including about 7 million children.¹
- * Nearly one in 10 school-aged children has asthma, and the percentage of children with asthma is rising more rapidly in preschool-aged children than in any other age group.²
- * Asthma accounts for 13 million lost days of school missed annually, and is the leading cause of school absenteeism due to a chronic illness.³
- * Asthma is the third-ranking cause of hospitalization among children.⁴
- * There were 185 children who died from asthma in 2007.⁵
- * The cost of treating asthma in children and adults was \$50.1 billion in 2007, or about \$3,300 per person.⁶
- * Indoor contaminants and the outside environment can aggravate asthma or can cause new cases of asthma.⁷
- * **Indoor exposures can be 100-1,000 times more intense than outdoor exposures. 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. Asthma “triggers” include: dusts, strong odors, fumes from cleaning products, construction dusts and fumes, diesel exhaust, smoke (especially from tobacco), toxic pesticides, molds and mildews, insect and pet dander, airborne chemicals, allergens and other impurities in the air.**^{9,10,11}
- * Schools are the workplaces of children, they are required to be there by law, yet the GAO estimates that roughly a third of schools have poor indoor air quality and that 14 million children are in buildings that threaten their health.¹²
- * Schools with healthier indoor air have: fewer asthma attacks, better attendance, fewer bronchitis and upper respiratory illnesses, fewer visits to the school nurse with complaints of stomachaches, headache, sinus infection.
- * Federal laws require schools to provide a “free appropriate public education” and to provide accommodations to students, including those with health problems, like serious asthma, that affect learning.¹³

Healthy Schools Network, Inc.

773 Madison Avenue • Albany, NY 12208

Tel. (518) 462-0632 • Fax (518) 462-0433

... for children ... health ... environment ... education ... and communities ... since 1995

Asthma Fact Sheet and Common Asthma Drug Interactions

Your child's asthma can be controlled. Your child's physician may also prescribe medication to control your child's asthma. Follow your doctor's orders for taking any medicine; make sure your school has a copy of the medication plan and allows your child to carry his/her own inhaler at school. Parents of children with asthma should be aware that asthma can be seriously aggravated by the environment, and that controlling asthma "triggers" can reduce your child's discomfort and health problems caused by asthma (see reverse side of this fact sheet). As a parent, you should also be aware that any medication has side effects, some of them potentially serious. You should ask your physician about the side effects of prescribed medication. **Always try to alleviate your child's asthma through eliminating the environmental triggers in your child's home and school.** Some of these medications and some of their side effects are as follows:¹⁴

RELIEVER MEDICATIONS	COMMON ADVERSE EFFECTS
Albuterol HFA, Pirbuterol, Terbutaline, Albuterol Rotahaler, albuterol nebulized solution	Tremors, tachycardia, nervousness, nausea, vomiting, headache
Levalbuterol	Tremors, tachycardia, nervousness, headache
Methylprednisolone, Prednisone, Prednisolone	HPA axis suppression, hypertension, diabetes, osteoporosis, cataracts, obesity, moon face
Ipratropium MDI, Ipratropium nebulized solution	Headache, dry mouth, palpitations, nausea, wheezing, respiratory secretions
Ipratropium bromide	Dry mouth, respiratory secretions, wheezing
CONTROLLER MEDICATIONS	COMMON ADVERSE EFFECTS
Cromolyn, Nedocromil	Bad taste, cough, irritation
Salmeterol, Albuterol sustained release	Tremors, tachycardia, nervousness, vomiting
Formoterol	Anxiety, tremors, restlessness, tachycardia
Theophylline	Nausea, vomiting, nervousness, tremors, headache, seizures
Zafirlukast	Monitor liver enzymes, headache, abdominal pain
Montelukast	Headache, abdominal pain
Zileuton	Monitor liver enzymes, headache, heartburn, diarrhea, muscle pain

Resources for this guide follow below:

1. Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities, President's Task force on Environmental Health Risks and Safety Risks to Children, May 2012, <http://epa.gov/childrenstaskforce/>
2. Managing Asthma in the School Environment, US Environmental Protection Agency, 2010, <http://www.epa.gov/iaq/schools/managingasthma.html#Epidemic>
3. EPA, 2010.
4. America Breathing Easier, National Asthma Control Program, Centers for Disease Control, 2009, <http://www.cdc.gov/asthma/nacp.htm>
5. Vital Signs: Asthma, Centers for Disease Control, May 2011, <http://www.cdc.gov/vitalsigns/Asthma/>
6. CDC, May 2011.
7. Climate Change, the Indoor Environment, and Health, The Institute of Medicine, National Academies Press, 2011, http://books.nap.edu/catalog.php?record_id=13115
8. Green Schools: Attributes for Health and Learning, National Research Council, National Academies Press, 2007, http://www.nap.edu/catalog.php?record_id=11756
9. EPA, 2010
10. IOM, 2011
11. National Asthma Education and Prevention Program, Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma, National Heart, Lung, and Blood Institute, 2007, <http://www.nhlbi.nih.gov/guidelines/asthma/>
12. General Accounting Office, School Facilities: Conditions of America's Schools, 1995, <http://www.gao.gov/products/HEHS-95-61>
13. Protecting Vulnerable Students in Sick Schools, Healthy Schools Network, 2001, <http://www.healthyschools.org/clearinghouse.html>
14. NHLBI, 2007