Asthma

Symptoms or Behaviors

- Coughing
- Wheezing
- Student reports tightness in chest or pressure
- Breathing that is deep and rapid
- Student reports that he/she can not breathe

Minnesota Low Incidence Project

About the Disorder

More than 17 million Americans suffer from asthma. Among all Americans, the prevalence of asthma increased more than 60% between 1982 and 1994, especially among children. According to the American Lung Association, asthma affects more the 5.2 million school-aged children. Results from the Asthma in Schools survey suggest that an overwhelming majority (85%) of school nurses believe that there are students with undiagnosed asthma in their schools. Asthma occurs in males and females of all ages, ethnic groups, and socioeconomic levels.

Asthma is a chronic lung condition in which the passages that enable air to pass into and out of the lungs periodically narrow, causing coughing, wheezing, and shortness of breath. This narrowing is typically temporary and reversible, but in severe attacks, asthma may result in death. These symptoms occur because the inflammation makes the airways overreact to a variety of stimuli which are often called triggers. Each student with asthma has a list of triggers that can increase the airway inflammation and/or make the airways constrict, which makes breathing difficult. Asthma triggers include:

- Exercise: running or playing hard, especially in cold weather.
- Upper respiratory infections: colds or flu
- Laughing or crying hard
- Allergens:
  - Pollens from trees, plants and grasses
  - Animal dander from pets with fur or feathers
  - Dust or dust mites located in carpeting, pillows and upholstery
  - Cockroach droppings
  - Molds
  - Some foods
- Irritants:
  - Cold air
  - Strong odors such as perfumes, chemicals/cleaning solutions
  - Medications such as aspirin, ibuprofen and others
  - Cigarette and other tobacco smoke

Although there is no cure for asthma, effective treatment is available for treating, preventing and controlling asthma symptoms. Most asthma medications are inhaled, but some types may be taken orally. There are two different types of asthma medications: controllers and relievers. Many students with persistent asthma take controller medication one or twice every day to prevent asthma symptoms. Most students take their controller medications before and/or after school hours, but a few students may take these daily at school. Reliever medications are usually taken only as needed to relieve asthma symptoms. For students with exercise-induced asthma, reliever mediation may also be taken before vigorous exercise. It is recommended that all students with asthma keep reliever medications at school (with written permission from health care provider and parent/guardian). Persons with asthma can also prevent asthma episodes by limiting their exposure to environmental triggers such as allergens, cigarette smoke, etc.

Developed with Minnesota Low Incidence funds, Region 10 Physical Health Disabilities Network, and School Nurse Organization of Minnesota (SNOM)

Asthma

Educational Implications

1. Students may have an asthma action plan developed by their health care provider indicating what medications to use and what types of actions to take to prevent, recognize and treat various asthma symptoms. Information from this plan needs to be shared with school nurses, coaches, teachers and other school staff who need to know about the student's asthma.
2. Most students with well-controlled asthma can participate fully in physical activities. However, at certain times students may need modified physical activity. When a student has experienced or is recovering from a recent asthma episode, exercise should be temporarily modified on type, length, and/or frequency to help reduce the risk of further symptoms.
3. Some students may experience more frequent and longer period of absences from school. Students with asthma may need more time to recover from illnesses, especially respiratory illnesses. Students also may require frequent visits to the doctor.
4. If a student has experienced a recent significant asthma episode and/or if asthma symptoms are keeping him/her up at night, the student may experience difficulties concentrating on schoolwork.
5. Some students are allowed to self-carry their inhalers at school if they have written permission form their health care provider and parent, and if they have demonstrated (usually to the school nurse) that they understand safe and correct use of the inhaler. It is generally most appropriate for young or developmentally disabled students to use their inhaler in the school health office under adult supervision, but for many other students it is appropriate to self-carry.

Instructional Strategies and Classroom Accommodations

1. Teach asthma awareness and peer sensitivity. As students learn more about asthma, they can offer support instead of barriers to their classmates with asthma.
2. Provide students with asthma-convenient access to their medications for all on and off-site school activities.
3. Students may require temporary modifications from physical activity if a recent episode has occurred or student is recovering from a recent episode.
4. Monitor the environment for potential allergens and irritants that may trigger asthma, and minimize them when possible. Stress and depression can lead to asthma attacks, therefore, students may need access to school counselors or mental health professionals. Treating emotional triggers or the depression often decreases asthma attacks.

Resources

The American Lung Ass'n
National Office
61 Broadway – 6th Floor
New York, NY 10006
212-315-8700
www.lungusa.org
On-line articles, publications, contacts and information on asthma.

Asthma and Allergy Foundation of America
1233-20th St. NW, Suite 402
Washington, D.C. 20036
202-466-7643
www.aafa.org
Free information, advocacy, education and research.

Asthma and Schools
www.asthmaandschools.org
(Site supported by National Education Ass'n Health Info Network).
An on-line site that consolidates information about asthma-related resources for school personnel working with students with asthma.

Minnesota Asthma Coalition
490 Concordia Ave.
St. Paul, MN 55103
651-227-8014
www.mnasthma.org
Contains information about asthma education, camps, and asthma plans.

American Lung Association of Minnesota
www.alamn.org
(800) 642-LUNG or
(651) 227-8014

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