



SCHOOL HEALTH

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Asthma

Asthma is the most common serious chronic disease of childhood, affecting nearly five million children in the United States. Characterized by coughing, chest tightness, shortness of breath and wheezing, asthma is the cause of almost three million physician visits and 200,000 hospitalizations each year. In infants and children, asthma may appear as cough, rapid or noisy breathing in and out, or chest congestion, without the other symptoms seen in adults. Asthma is a leading cause of school absenteeism with 10 million missed school days each year. This also results in a \$1 billion loss in productivity of working parents.

Some common triggers include dust mites, molds, pollen, strong odors (perfume and cleaning agents), cockroaches, pet dander, tobacco smoke or air pollution, and respiratory infections.

It is essential that children be protected from irritants such as tobacco smoke since this causes chronic irritation of the airways. Studies have documented that children born to a mother who smokes or who live with a smoker have a much higher incidence of asthma and respiratory infections.

Exercise can also be a potential trigger for bronchospasm which causes a child to have symptoms of asthma. With proper treatment it is very possible for a child with asthma to have normal endurance and even excel in athletics — many Olympic athletes have asthma.

Parents may have the urge to restrict their asthmatic child's physical activity to prevent wheezing. But once a child is taking proper medications, aerobic exercise needs to become part of his/her daily activities, because it improves airway function. Children must be encouraged to participate in normal activities as much as possible.

Breathing difficulty is caused by three types of reactions in the air passages of the lungs.

1. The bands of smooth muscle surrounding the bronchi and bronchioles (airways in the lungs) contract, narrowing these air passages.
2. the membranes lining the walls of the air passages become inflamed and swollen, narrowing the airways even further.
3. The membranes increase their production of a thick mucus, which further blocks the bronchial airways.

As part of an effective asthma management plan, the child's physician may prescribe specific medications. These can include metered dose inhalers, nebulizers that deliver medication in a mist, dry powder inhalers, or oral (tablet) medications. Not all children will require medication. If it is prescribed, it is important that the child take the medication as instructed, even if he/she feels fine. Many must be taken on a regular basis, even if there are no symptoms, to maintain optimal airway function.

The child, family, physician, and school personnel must work together to prevent and/or control asthma symptoms at school. In our school district, a child may carry his/her inhaler with them after we receive a written authorization from the child's physician, and if he/she specifies this. Medication can also be kept in the front office or with a teacher once the signed authorization is on file.

Don't panic during an asthma attack. Fear can make tight breathing worse, so try to remain calm and reassuring to the child. The usual position of comfort for a child with an asthma attack is sitting, so do not attempt to have the child lie down.

An asthma attack should be considered an emergency situation if:

1. Symptoms worsen or return in less than three to four hours after receiving rescue medication
2. The fingernails or lips are gray or blue
3. No improvement is noted within 15 minutes of taking the rescue medication
4. Coughing is continuous.