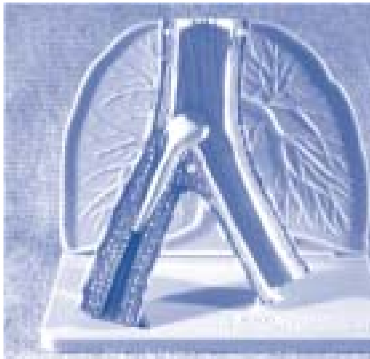
In today's K-12 schools, there are more students than ever before with asthma. This chronic, but manageable, disease affects 1 in 13 school-aged children.

Counselors and other Social Services Staff come in contact each day with students who have asthma. It's vital for you to understand the physical and emotional effects of asthma. It can impact a student's academic achievement, self-esteem and peer relationships. You can play a key role in creating a supportive environment for students who have asthma and helping them grow and thrive in school and beyond. Healthy children learn better.

"Asthma is a physical condition that can have psychological effects."

Why Learning about Asthma is Important to Counseling and Social Services Staff



ASTHMA CAN BE DEADLY.

An asthma episode can escalate and may result in death without prompt medical attention.

ASTHMA IS THE SINGLE MOST COMMON CHRONIC DISEASE CAUSING ABSENCE FROM SCHOOL.

Over 10 million school days are missed due to asthma each year.

ASTHMA CAN AFFECT A CHILD'S PERFORMANCE.

It can disrupt sleep, the ability to concentrate, memorize, and, when not managed properly can prevent a student from participating in "normal" school activities.

ASTHMA CAN HAVE PSYCHOLOGICAL EFFECTS

Asthma is not a psychological condition; it's a chronic lung disease. As with any chronic disease, students who have asthma may have difficulty coping with it.

Students who miss school due to uncontrolled asthma not only miss classroom instruction, they also miss out on social interactions with other children. That can lead to fears of social isolation and fears of being "different" from other children. Some students may develop low self-esteem, withdraw from activities, or have difficulty completing their schoolwork. Counseling with the student and/or parent(s) may help students handle problems more effectively.

Counseling staff should understand that a student with asthma may feel drowsy or tired, anxious about taking medications, or even embarrassed when disruption to school activities occurs due to an asthma episode. While psychological factors such as stress, anxiety and strong emotional reactions can bring on an asthma episode, the symptoms that appear are physical and require prompt management in order to avoid a crisis.

What You Need to Know

What is Asthma?

Asthma is a chronic disease that causes broncho-constriction (tightening of the muscles around the airways) and swelling of the airways. During normal breathing, air flows freely in and out of the lungs. But, during an "asthma episode," linings of the airways (bronchioles) swell, muscles around the airways tighten and mucus clogs the tiny airways, making breathing difficult. The airways become overly responsive (twitchy) to environmental changes, sometimes resulting in wheezing, coughing, breathlessness, or tightness in the chest. During an asthma episode a child may feel he/she can't inhale enough air, but actually, his/her lungs are having trouble exhaling.

Asthma symptoms can vary greatly from hour-to-hour and day-to-day. Symptoms are often worse at night and in the early morning hours. The severity of asthma varies from child to child and the severity may worsen or improve depending on the child's symptom control and amount of exposure to triggers or allergens. Some children have occasional symptoms (e.g. after strenuous exercise), while others have symptoms that interfere with their daily life, including concentration and participating in school.

Recognizing the Signs of an Asthma Episode

Children themselves are often the best source for identifying an asthma episode. Children who have asthma often learn to identify their own unique early warning signs — the physical changes that occur as their airways begin to close. These early warning signs usually begin long before the more serious symptoms appear and taking action quickly is paramount to preventing an asthma crisis! An asthma episode is easier to subdue if a child and school staff are aware of significant changes and the child is able to take medication quickly.

There should not be any delay once a child has notified school staff of a possible problem or developing asthma episode.

During the initial phase of an asthma episode a child may exhibit one or more of these signs:

Changes in breathing: Coughing, wheezing (a high pitched sound heard on exhalation), shortness of breath, breathing through the mouth, and or rapid breathing.

Verbal complaints: Often a child who is familiar with his/her asthma symptoms will know that an episode is about to happen. The child may tell school staff that his/her chest is tight, or hurts, or that he/she cannot catch a breath. Complaints may include "dry mouth" or a more general "I don't feel well" or "I'm scared."

Behavior changes and other signs: Clipped speech — a child may speak in very short, choppy sentences and appear to be gulping at air as he/she speaks. Some children may become very quiet (trying to control their breathing or simply out of fear) and subdued, while others may become highly agitated and panicky.

To understand how an asthma episode feels, put a straw in your mouth and, while blocking off the nasal passages, quickly move around the room. The ability to pull enough air in through a narrowed passage causes sensations of desperation and panic. A straw can be removed and the airways restored immediately, but the child experiencing an asthma episode must wait for the airways to relax and if severe, for mucus to clear before they can breath easier. TIME IS OF THE ESSENCE!

What Causes Asthma Episodes?

Children with asthma have airways that narrow more easily than children who do not have asthma. They may be allergic or sensitive to inhaled (or even some ingested) irritants. A variety of factors can set off an asthma episode including viral infections (cold and flu season is especially difficult) and exposure to allergens or "triggers." Each child with asthma reacts to a different set of factors.

Some common "allergens" are:

- Dust mites
- Chalk dust
- Food*
- Dander from furry or feathery animals**
- Mold (*moist ceiling tiles or wet sink areas)*
- Seasonal pollens *(e.g. tree pollen in the spring, grass in the summer, ragweed in the fall)*
- Cockroach droppings
- Mice/rat dander, urine and their droppings
- Some medications (e.g. aspirin)

Some common "triggers" are:

- Exercise (*Exercise induced asthma or EIA)*
- Cold air
- Viral/upper respiratory infections, bronchitis, sinusitis
- Strong emotional expressions (*such as stress, anxiety, anger, crying)*
- Air pollution- both indoor and outdoor ***
- Chemical irritants *(cleaning supplies, perfumes, whiteboard markers, paints,pesticides, glues)*
- Tobacco smoke, secondhand smoke, smoke from burning wood and other substances

"About 6-8% of children with asthma have food allergies that can trigger asthma symptoms."

PETS IN THE CLASSROOM:

All warm-blooded animals can cause allergic reactions. Animal allergen is in dander, saliva, and urine. Allergen particles become airborne and accumulate in carpets, upholstery, and fabrics and on books, desks, and walls. Sensitive airways are affected by the odors from urine, cedar chips, room deodorizers, disinfectant sprays, and the flea powders or insecticides used to control fleas and ticks. Once furry animals are introduced into a school, removal does not immediately eliminate the exposure problem. A central ventilating system can contaminate the entire school. Even after a thorough cleaning, the allergens persist for months. Carpets in the room become a trap for animal dander and vacuuming just stirs up the particles. It is important to know what your school district policy is regarding animals in the schoolroom and to take into consideration children in the classroom who may have asthma or allergies.

INDOOR AIR QUALITY (IAQ):

Indoor air quality or "IAQ" refers not only to the content of the air circulated throughout the school but also to the potential allergens and triggers that float around. Most people don't consider a light spray of perfume or cologne as a potential irritant, but for some children, strong scents (chemicals, cleaning supplies, perfumes, paste, whiteboard markers etc.) are triggers that can aggravate an asthma episode. When possible, it's best to avoid using items that have potential odor or scent producing irritants. Mold is a problem difficult to eradicate once in place. Moist, dark environments promote mold (often called mildew) growth and cleaning areas found to contain mold should be referred to the school custodian.

Exercise-Induced Asthma (EIA) and/or Exercise Induced Symptoms

Exercise is a very common trigger for asthma. Since exercise and participating in sports is part of healthy living, it is one trigger that should be managed and not avoided. For teenagers, exercise is often the most common cause of asthma symptoms. Fortunately, with better medications, monitoring and proper management, children can participate in physical activity and sports and achieve the highest performance levels.

A school counselor may deal with athletes whose self worth is determined by peer approval or disapproval. Using a medication inhaler at a sporting event (or even before one) can give the perception that an athlete has a 'weakness" or may not be able to compete at the same level as athletes without asthma. A school counselor can help break that perception by working with the coach to identify athletes who have asthma (keeping that confidential) and discussing their asthma management and what support they feel is necessary from the coach and other personnel. Often, an athlete (especially teens) will avoid informing the coach that he/she has asthma and "tough it out," thus reducing his/her ability to perform at their peak levels.

Counselors who encourage coaches and athletes to work together managing asthma will find that the child is a better student and athlete overall. Pointing out that there are a number of Olympic and professional level athletes that have asthma may be advantageous. Some examples include:

Tom Malchow – Olympic swimmer gold medalist
Greg Louganis – Olympic diver-USA
Jim "Catfish" Hunter – Baseball Hall of Fame
Jerome Bettis – NFL football player
Peter Maher – Olympic marathoner
Hakeem Olajuwon – NBA basketball player
Curt Harnett – Olympic cyclist and silver medalist
Charmain Crooks – Olympic runner and silver medalist
Joan Benoit – Women's marathon champion
Jackie Joyner-Kersee – Olympic double gold medalist intrack and field – heptathlete- 6 gold medals
Bill Koch – First American to win World Cup in cross-country skiing
Mark Spitz – 1972 Gold medalist in swimming - 9 golds
Paula Radcliffe – World champion marathoner
Paul Scholes – Professional soccer player- England and Manchester
Amy Van Dyken – 1996 Gold medalist in swimming – 4 golds
Donnell Bennett – Pro football player (NFL), Washington Redskins fullback
Gary Roberts – Pro hockey player (NHL), Toronto Maple Leafs
Dominique Wilkins – Pro basketball player (NBA) and currently working for the Hawks
Isiah Thomas – Pro basketball player (NBA) and currently coach of the Pacers

Asthma Medications

Treatment for asthma is based on how severe a child's symptoms are at any given time. Typically, there are two types of medications used to treat asthma:

- Quick relief (reliever) or rescue, and
- Controller or preventive.

The most common asthma medications most school staff will come in contact with are the quick relief or reliever medications which are taken by inhalation.

A note about inhaled corticosteroids: When you hear the word "steroid" you might think of the steroids used by athletes. But inhaled corticosteroids are not the same steroids used by athletes and do not have the same side effects. They are the most consistently effective controller medications available.

QUICK RELIEF (RELIEVER) OR "RESCUE"

These medications are taken when asthma symptoms flare up or a child is experiencing an "asthma episode." These medications work fast to relieve symptoms as they happen, or to help prevent exercise-related symptoms. This is the medication you most frequently see a student use in an inhaler form when symptoms are flaring up or in the case of exercise-induced asthma (EIA) 15-30 minutes prior to strenuous physical activity. They relax the muscles surrounding the airways usually within 10-15 minutes after using the inhaler.

Typical brand names of these medications are: *Albuteral, Maxair, Proventil, Ventolin, Combivent and, Alupent.*

It is important to remember that all medications carry the potential for side effects. Some common complaints with rescue medications include ***nervousness***, ***jitteriness***, ***nausea*** and, in some cases, ***drowsiness.*** If side effects are excessive or the child is complaining of not feeling well, promptly contact the school nurse for evaluation and follow-up and do not leave the child unattended.

LONG TERM CONTROLLER OR "PREVENTIVE"

Some children require medications that are taken daily to prevent symptoms or episodes from developing. These are the controller or preventive medications. It is important to understand that there is a difference between short acting reliever medications and long acting controller medications.

These controller medications either reduce or prevent inflammation from occurring or in some cases, prevent symptoms by relaxing the muscles surrounding the bronchioles (airways) over a long period of time.

Typical controller medications are: *Advair, AeroBid, Azmacort, Beclovent, Flovent, PulmicortTurbuhaler, Pulmicort Respules, Vanceril, Rotadisc, Accolate, Singulair, Zyflo, Filmta, Serevent, Foradil, Intal and Tilade.*

Oral (pills) corticosteroids are taken when an episode becomes severe, or when a child's asthma requires very intensive treatment.

What You Can Do

Working with the School Nurse – Asthma Management

Most asthma episodes can be prevented through asthma management. Asthma management can be defined as "managing, preventing, treating and controlling factors (environmental, medications etc.) that affect a child's asthma." Proper asthma management requires collaboration and cooperation from all school personnel, the parent/guardian, medical provider and the child.

Asthma that is well managed at home can be thrown completely off track when a child is away from home. The school nurse is typically the driving force behind helping a child maintain good asthma care while in school. A counselor who is asthma "savvy" and who makes an effort to work with the school nurse, child and parent will find students to be more cooperative, less likely to be fearful of having an asthma episode and more likely to achieve their own peak academic performance. This is what successful asthma management is all about!

Supporting the Student with Asthma

TIPS FOR COUNSELORS

- ✔ Be aware that many children in your school have asthma and that symptoms will vary greatly from child to child.
- ✔ Understand that a student with asthma may miss both classroom instruction and social interactions with other children, which can lead to fears of social isolation, rejection, and feeling "different" from other children. He/she may feel anxious about accessing medications, embarrassed about having asthma or simply feel more tired than some children.
- ✔ Supporting the child with asthma means treating him/her like all other children while watching for the appearance of symptoms and avoiding triggers.
- ✔ Respect the child's right to privacy and confidentiality.
- ✔ Educate classmates and other school staff about asthma so they will be more understanding of students with asthma and know when to get help from an adult.
- ✔ If a child seems unusually tired, inattentive, or hyperactive, advise the school nurse and the child's parents/guardians. Behavior that is out of character for that child could be related to asthma that is not being properly managed.
- ✔ Encourage parents to work with the school nurse and to provide asthma care plans and to encourage the child to take his/her medication daily (if prescribed).
- ✔ Work closely with the school nurse to support policies and procedures that help a child with asthma participate fully in school each and every day. Be proactive.
- ✔ Refer children and their parents to outside counseling and support services when appropriate.

Relevant Legislation:

There are legal requirements, statutes and guidelines that regulate schools in working with children who have asthma (and with children in general). These statutes are summarized below and are presented in full in the resources section.

FEDERAL LAWS (IDEA 1997) AND SECTION 504 OF THE REHABILITATION ACT OF 1973

These mandates require that schools promote the health, development and achievement of students with asthma. They are required to remove "disability barriers" that impede health, participation and achievement. The law requires schools and parents to work together as partners to develop and implement health plans to protect the welfare of the child.

FAMILY EDUCATION RIGHTS AND PRIVACY ACT (FERPA)

Generally prohibits schools from disclosing personally identifiable information in a student's education record, unless the school obtains the consent of the student's parent or the eligible student (a student who is 18 years old or older or who attends an institution of postsecondary education). FERPA does allow schools to disclose this information, without obtaining consent, to school officials, including teachers, who have legitimate educational interests in the information, including the educational interests of the child. Schools that do this must include in their annual notification to parents and eligible students the criteria for determining who constitutes a school official and what constitutes a legitimate educational interest. Additionally, under FERPA, schools may not prevent the parents of students, or eligible students themselves, from inspecting and reviewing the student's education records.

MINNESOTA INHALER LAW OVERVIEW

Minnesota Statutes, Section 121A.22

The Minnesota legislature enacted language during the 2001 session that allows public elementary and secondary school students to possess and use inhalers prescribed for asthma or reactive airway disease. These requirements must be met for student to carry asthma medication and self-medicate in school:

1. The parent has not requested that school personnel administer the student's asthma medication; *and*
2. The school district receives annual written authorization from the student's parent for the student to self-administer; *and*
3. The inhaler is properly labeled for that student; *and*
4. The school nurse or other appropriate party assesses the student's knowledge and skills to safely possess and use his/her inhaler in a school setting and enters a plan to implement safe possession and use of the inhaler into the student's school health record; *or* for schools without a school nurse or nursing services, the student's parent or guardian submits written verification from the student's physician documenting that the physician has assessed the student's knowledge and skills to safely possess and use his/her inhaler in a school setting.

Summary, August 2001 ALAMN

SCHOOL BUS IDLING LAW

Minnesota Statutes, Section 123B.885

Diesel School bus idling:

"All operators of diesel school buses must minimize, to the extent practical, the idling of school bus engines and exposure of children to diesel exhaust fumes." *(This pertains to bus drivers lining up buses waiting for the children to exit the school and load the buses. The buses engine should be shut off until all children are loaded onto the bus except for inclement weather (i.e., too cold or too hot).*

Parking:

"On and after July 1, 2003, diesel school buses must be parked and loaded at sufficient distance from school air-intake systems to avoid diesel fumes from being drawn into the systems, unless, in the judgment of the school board, alternative locations block traffic, impair student safety, or are not cost effective." (*Indoor air quality (IAQ) can suffer greatly when diesel fuel fumes are pulled into the building and circulated via the ventilation system. These fumes/odors are potent asthma triggers for some children.)*

PESTICIDE STATUTES

Minnesota Statutes, Section 121A.30

The Minnesota Legislature passed a new law called the Parents Right To Know Act of 2000. Public and non-public K-12 schools that plan to apply pesticides specified in the law are required to provide notices to parents and employees. This law also requires the Minnesota Department of Health (MDH) to develop and make available model notices for schools to use, if they choose to do so.