

Childhood Asthma

Asthma is the most common serious chronic disease of childhood, affecting nearly five million children in the United States. Asthma in children is the cause of almost three million physician visits and 200,000 hospitalizations each year.

Children with asthma typically cough, wheeze, and experience chest tightness and shortness of breath. Many parents do not know that a child does not have to wheeze to have asthma - the only symptom may be a frequent, annoying cough particularly at night or during exercise. Children with reactive airway disease, recurrent bronchitis or wheezy bronchitis probably have asthma. Unfortunately, asthma is often not diagnosed properly and is under treated.

Diagnosis

Up to 80% of children with asthma develop symptoms before age five. The child's physician must rely heavily on parents' observations to make a proper diagnosis.

To make a diagnosis of asthma your child's physician will want to know about the following:

- Does your child cough, wheeze (a whistling sound when breathing), have chest tightness or shortness of breath?
- Do colds go right to your child's chest and last much longer than other siblings?
- Does your child cough or wheeze with exercise, play, and laughter or during temper tantrums?
- Is there a family history of asthma or allergies?
- What triggers your child's symptoms-colds; allergens (like the family pet), or exercise?
- How often are the symptoms present and how bad?
- Is your child missing school?
- Is coughing or wheezing keeping you and your child up at night?

If your child is old enough (usually older than 5-6), he or she may do a Pulmonary Function Test. The results will tell the physician about how the child's lungs actually work. This test helps not only in the diagnosis but will help the doctor follow the response to medication.

For children, asthma symptoms can interfere with many school and extracurricular activities. Parents may notice their child has less stamina during play than other children, or they may notice the child trying to limit or avoid physical activities to prevent coughing or wheezing. More subtle signs of asthma, such as chest tightness, are often not identified as such by children. Sometimes they will complain that their "chest hurts" or that they can not "catch their breath." Often, recurrent or constant coughing spells may be the only observable symptom.

The two most common triggers of asthma in children are colds and allergens (substances that trigger allergies). It is important for parents to know that most kids with asthma are allergic and should have an allergy evaluation as part of their care. Common allergens include dust mite, animal dander, cockroach, pollen and molds. We cannot do a lot about viral illnesses but there are ways to limit allergen exposure in the home environment if you know what things you need to avoid.



Management

Asthma means inflammation of the airways. The goal of management is to control this inflammation. In most children with asthma if this is done, symptoms will be well controlled and children with asthma should be able to:

SLEEP, LEARN and PLAY

If asthma is waking the family at night: if the child cannot play soccer or dance ballet; if he or she is chronically missing school (and parents missing work) then the asthma is not controlled!

Every child with asthma should have a written asthma management plan. This tells the child and parents what medications to take when well; how to go up on medication when the child has increasing symptoms and when to call the physician. This plan gives control to the patient and their parents and allows for early treatment of symptoms, before the asthma flare gets out of control.

As part of an effective asthma management plan, the child's physician may prescribe specific medications and devices. These can include a peak flow meter to measure ease of breathing, metered dose inhalers (sometimes called pumps), spacers that attach to inhalers, a nebulizer that delivers medication in a mist, dry powder inhalers, or oral (tablet) medications. The physician should not only prescribe these medications and devices, but should teach children and parents how to use them correctly.

Your physician may use one of the new technologies to monitor the intensity of the inflammation in your airway and guide the use of your anti-inflammatory medications. This can be done by counting inflammatory cells from sputum or by measuring chemicals or gases (nitric oxide) in the air you breathe from your lungs.

Asthma medications include rescue medication or quick relievers to treat symptoms (i.e. albuterol) and long-term controller medicines to control the inflammation that causes asthma. If a child has symptoms more than twice a week or wakes more than twice a month at night, they should be on long-term controller therapy. For more information on asthma medications, please see the *Tip* brochure in this series.

Answers to commonly asked questions

Will my child outgrow his/her asthma?

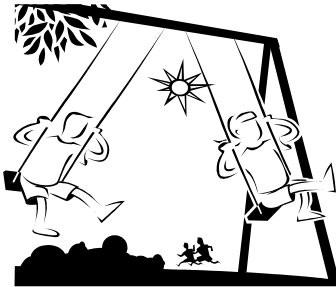
The challenge to the physician who cares for children and the parent is to identify the child who wheezes early in life and will outgrow their asthma, vs. the child who will continue to have persistent wheezing. Some babies who wheeze with viral respiratory illnesses will stop wheezing as they grow and their airways get bigger. If a child has atopic dermatitis (eczema), there is smoking in the home or if the mom has asthma, there is a greater chance that the child will have persistent wheezing. Some children have asthma symptoms that improve during adolescence, while others worsen. Often, symptoms in young children seem to resolve, but their asthma may flare up later in life.

Can asthma be cured?

Currently there is no cure for asthma. However, for most children, asthma can be controlled with appropriate management and treatment. While asthma is a chronic illness, it should not be a progressively debilitating disease—a child with asthma can have normal or near-normal lung function with appropriate management and medications.

Should my child exercise?

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 or her daily activities, because it improves airway function and has many other benefits. Children should be encouraged to participate in normal activities as much as possible. It is also very possible for a child with asthma to excel in athletics—several Olympic athletes have asthma.



Asthma at School

The child, family, physician and school personnel must work together to prevent and/or control asthma symptoms at school. Many children with asthma are embarrassed about their need for medication. In some cases, children may have difficulty because they are required to go to another part of the school building, such as a nurse's office, to take their medication. School officials and parents must create a supportive environment. With the approval of physicians and parents, school-age children with asthma should be allowed to carry metered dose inhalers with them at all times and use them as appropriate. Many states have now passed laws to allow responsible children to keep their inhaler in their book bag.

To ensure optimal care at school, parents can also take the following proactive steps:

- Meet with teachers, the school nurse, coach and perhaps the principal at the beginning of the school year.

- Have your child's doctor provide a written asthma plan for school such as the Asthma School Action Plan. You can find this on the [Patients & Consumers resources page](#) of the AAAAI Web site, www.aaaai.org.
- Encourage local educational programs to improve education for schools about asthma.

For children with asthma to function normally, school personnel, families and health care providers must effectively communicate and work together to encourage them to fully participate in activities with their peers. This team effort will help create a positive, healthy and safe environment for the child-both in and out of school-and ensure the best asthma care possible.

The AAAAI's *How the Allergist/Immunologist Can Help: Consultation and Referral Guidelines Citing the Evidence* provide information to assist patients and health care professionals in determining when a patient may need consultation or ongoing specialty care by the allergist/immunologist. Patients should see an allergist/immunologist if they:

- A child with allergic rhinitis. Immunotherapy may potentially prevent the development of asthma.
- Have potentially fatal asthma, meaning a prior severe, life threatening episode that included intubation.
- Have persistent asthma, particularly moderate-severe or uncontrolled persistent asthma.
- Need for daily asthma reliever medications.
- Would like to try to minimize their need for medications.
- Need education on asthma and guidance in techniques for self-management.
- Are not using medications as prescribed, and this is limiting their ability to control their asthma.