

How to Help Your Child With Asthma

Guidelines for Parents



How to Help Your Child With Asthma

One out of 10 children in the United States has asthma. In fact, asthma is one of the main reasons children are admitted to the hospital and miss school. The number of children with asthma has increased in the last 10 years, and there has been a rise in the number of children who have died of asthma. The American Academy of Pediatrics has developed this brochure to provide parents with information on how to recognize asthma symptoms and how to tell if their child's asthma is getting worse.

What is asthma?

Asthma is a chronic disease of the passageways that carry air to the lungs. These "airways" become narrow and the linings become swollen, irritated, and inflamed. In children with asthma, they may be especially sensitive to many irritants such as viral infections, cigarette and other smoke, cold air, and particles or chemicals in the air. Allergies to dust, animals, pollens, and molds can also cause asthma.

The narrowing and inflammation of the airways cause labored breathing, coughing, feelings of chest tightness, and shortness of breath. Cough may be the first and sometimes the only symptom of early asthma. Other asthma symptoms are wheezing, fast breathing, or difficult breathing that uses extra muscles from the neck, abdomen, and chest to help "draw in" air. Symptoms of asthma can be different for each person, depending on how often they occur or how much or how fast the airways become narrowed. Some children have symptoms of asthma most days and may have to take daily medication; others may just need medication when they have asthma symptoms.

Your child's pediatrician can help you and your child understand what asthma is, and how to prevent symptoms, as well as treat them. Prevention and early treatment of asthma may help reduce the number of days your child is absent from school or in the hospital. Controlling the symptoms of asthma will help your child to feel good, run and play, and take part in sports and other physical activities. Your pediatrician will help you recognize what triggers your child's asthma so that you and your child can reduce or eliminate asthma attacks.



Be sure to ask your pediatrician for an asthma action plan that includes advice about the following:

- how to prevent or reduce asthma symptoms
- how to recognize asthma symptoms, especially symptoms of worsening asthma
- what treatment should be administered first and what to do if the asthma is getting worse
- what to do in an emergency

One way to prevent or decrease asthma symptoms is to know when your child isn't getting air in the lungs. You can measure the amount of air your child can breathe in and out with the use of a simple device called a peak flow meter. The peak flow meter will help you measure the flow of air from the lungs so that you can recognize if the airway is narrowing. Peak flow rate measurements can usually be used for children over 5 to 6 years of age. For additional information, see the section of this brochure on peak flow rate measurements.

Your pediatrician can show you and your child how to use a peak flow meter and how to find out your child's "personal best" peak flow rate. You can then use this peak flow rate to determine when your child's asthma is getting worse and when the treatment is working.

What medications are used to treat asthma?

There are different kinds of asthma medications. Your pediatrician will choose the best medications for your child and talk to you about when to use them. Some of these medications are used continuously. Others are used only during asthma attacks. There are two general groups of asthma medications — bronchodilators and anti-inflammatory drugs.

1. Bronchodilators open up narrow passageways. They help relieve the feeling of tightness in the chest, wheezing, and breathlessness.
2. Anti-inflammatory drugs help prevent the swelling and inflammation in the airways and may increase drainage of secretions from the airways. These drugs can be given by mouth, by injection, or can be inhaled in an aerosol (mist) form.

How severe are the asthma symptoms?

You should learn to recognize when your child's asthma symptoms are getting worse or are becoming severe. At times your child's airways may become more irritated and narrowed. If this happens, your child may suddenly start to cough, experience difficulty in breathing, or notice a gradual worsening of asthma symptoms. This is usually called an "asthma attack." During asthma attacks, the airways are more obstructed and the air flow is decreased. Your child's treatment is based on the severity of asthma symptoms and the degree of airway obstruction. Signs of mild, moderate, or severe asthma attacks are described below.

Signs that your child may have a MILD asthma attack are:

- breathing is mildly difficult
- breathing is only slightly faster than usual
- speaking in complete sentences is easily done
- mild complaints of wheezing, cough, shortness of breath, or tightness in the chest
- skin color is good
- peak flow rate is 70% to 90% of the child's personal best
- no "drawing in" of muscles between the ribs is noticeable
- awareness of surroundings is normal and the child is alert



Asthma triggers

Certain things cause, or trigger, “asthma attacks” or make asthma worse. Some of the asthma triggers are:

1. Infections in the airways:
 - viral infections of the ear, nose, and throat
 - other infections (such as pneumonia)
2. Things in the environment (outside or indoor air you breathe):
 - cigarette smoke
 - irritants in the air (air pollution)
 - cold air, dry air
 - sudden changes in the weather
3. Things your child may be allergic to (allergens):
 - pollens
 - dust (house dust mites)
 - animals
 - mold
4. Exercise
5. Emotional stress

Signs that your child may have a MODERATE asthma attack are:

- breathing is moderately difficult
- breathing is faster than usual
- speaking is affected because of difficulty breathing (phrases or partial sentences are spoken)
- moderate complaints of wheezing, cough, shortness of breath, or tightness in the chest
- skin color is normal or may be pale
- peak flow rate is 50% to 70% of the child’s personal best
- slight to moderate “drawing in” of muscles between the ribs is necessary to breathe
- awareness of surroundings is normal and the child is alert

Signs that your child may have a SEVERE asthma attack are:

- breathing is extremely difficult
- breathing is very fast *or* very slow with a lot of distress (labored breathing)
- speaking is affected because of difficulty breathing (single words or short sentences are spoken)
- severe complaints of wheezing, cough, shortness of breath, or tightness in the chest
- skin color is poor
- peak flow rate is less than 50% of the child’s personal best peak flow rate
- “drawing in” of the neck, abdomen, and chest muscles is needed in order to breathe
- level of awareness has decreased (child may be drowsy)



How can I tell if my child's asthma is getting worse?

- asthma symptoms such as cough, wheezing, chest tightness, and shortness of breath occur more frequently and/or get worse
- large decreases in your child's peak flow rate occur
- asthma medications do not seem to help your child's cough or breathing problems

What are other ways I will know if my child's asthma is not in good control?

- You frequently have to take your child to your pediatrician or the hospital emergency room for treatment of acute asthma.
- Your child is admitted to the hospital for asthma treatment.
- Your child is admitted to a hospital intensive care unit for asthma treatment.
- Large changes in peak flow rate measurements occur (more than 20% change between morning and evening measurements).
- Your child's asthma symptoms increase (cough, wheezing, chest tightness, and shortness of breath); symptoms may occur more often at night and awaken the child from sleep.
- Your child's asthma attacks last longer and do not easily improve with treatment.
- Special oral anti-inflammatory medications such as steroids are needed more often to control the asthma.
- Your child's asthma attacks quickly become severe.
- Your child has panic attacks with severe confusion and anxiety with the asthma attacks.

Where can I learn more about asthma?

Consumer Update on Asthma

User's Guide to Peak Flow Monitoring from Allergy and Asthma Network/Mothers of Asthmatics, Inc

3554 Chain Bridge Road, Suite 200

Fairfax, VA 22030

Phone: 800/878-4403

Peak flow rate measurements

The peak flow meter measures the amount of air flow in the airways (breathing tubes). The peak flow rate is the rate of air flow in the breathing tubes when a person inhales fully and blows the air out as quickly as possible. For the test to be useful, the peak flow rate must be reproducible (the person must be able to repeat the same flow rate at least three times).

There are many kinds of peak flow meters. The same peak flow meter must be used every time to make sure the changes in air flow are measured correctly. Peak flow rate measurements help determine if the airway is closing or opening up.

Peak flow rates decrease (the numbers on the scale go down) when your child's asthma is getting worse or is out of control. Peak flow rates increase (the numbers on the scale go up) when the asthma treatment is working and the airways are opening up. The use of peak flow rate measurements can help you to recognize when your child's airway is narrowing, so asthma treatment can be started early. Peak flow rates also will help you identify some of the "triggers" for your child's asthma, so they can be avoided.



There are differences in peak flow rate measurements at different times of the day. Measuring your child's peak flow rate twice a day shows you how much your child's peak flow rate changes throughout the day. Children of different sizes and ages have different peak flow rate measurements.

How to measure the peak flow rate

1. Have your child take a deep breath and fill his or her lungs with air.
2. Have your child blow into the peak flow meter as fast and as hard as possible.
3. Read the number on the peak flow meter scale and write the number down on a piece of paper.
4. Measure the peak flow rate again and write the numbers down. (Measure the peak flow rate a total of three times.)
5. At a time when your child is able to do his or her best, draw a circle around the best (highest) of the three measurements. This is your child's "personal best" peak flow rate. This value may need to be changed periodically as your child grows or improves or both.

Your pediatrician suggests you measure your child's peak flow rate:

_____ twice daily, morning and evening
_____ at the time of asthma symptoms

Your child's personal best peak flow rate is:

Green (safety) asthma zone:
(80% or more of personal best peak flow rate)

Yellow (caution) asthma zone:
(50% to 80% of personal best peak flow rate)

Red (danger) asthma zone:
(less than 50% of personal best peak flow rate)

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.



From your doctor

The American Academy of Pediatrics is an organization of 53,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists dedicated to the health, safety, and well-being of infants, children, adolescents, and young adults.

Now available from the American Academy of Pediatrics. . . *Guide to Your Child's Symptoms*. More than 100 common symptoms are listed alphabetically and the book is designed to enable a parent to quickly identify a symptom, learn its possible cause, and determine how best to proceed. To order this 266-page deluxe hardcover edition at a discounted price, call 800/433-9016 (847/228-5005 outside the US and Canada). Or visit the AAP Web site at <http://www.aap.org> to order on-line.

Other parenting guides from the Academy include *Caring for Your Baby and Young Child: Birth to Age 5*, *Caring for Your School-age Child: Ages 5 to 12*, and *Caring for Your Adolescent: Ages 12 to 21*. These books (except *Caring for Your Adolescent*) are available in softcover and hardcover. *Caring for Your Adolescent* is available only in hardcover.

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