

What is asthma?

- Asthma is a common lung condition. Most of the time, children who have asthma feel OK, but during an asthma attack, it gets harder to breathe. An asthma attack is also known as an asthma episode.
- Asthma is chronic, which means it can last a lifetime. Many children with asthma can get better as they get older. There is no cure for asthma, but it can be controlled.

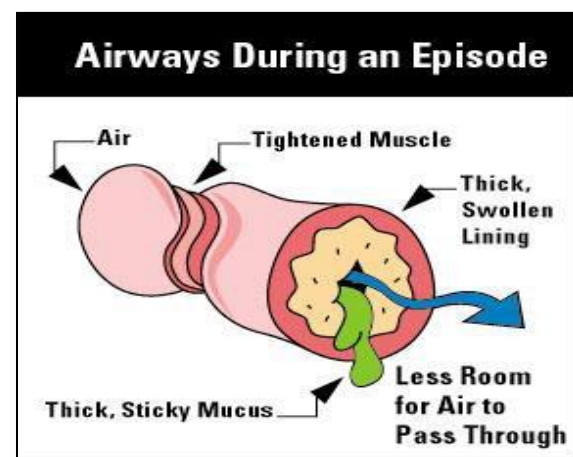
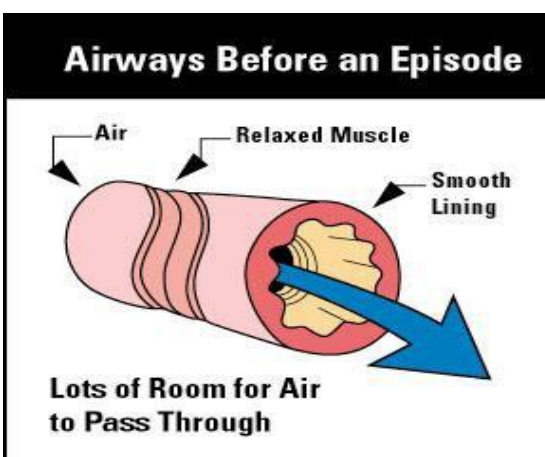
What happens during an asthma attack?

Three things happen in the airways of the lungs during an asthma attack:

- The airways get swollen. Doctors call this inflammation. People with asthma have sensitive airways. They always have a little inflammation, even when they are not having an attack.
- Thick mucus fills up the airways.
- The muscles that wrap around the airways squeeze tight.

These 3 things can cause coughing:

- A tight feeling in the chest
- Shortness of breath
- Wheezing or labored breathing
 - Wheezing is the sound caused by trying to breathe through the narrowed airways.
 - Labored breathing is working much harder to breathe.



In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.

Asthma basics, continued

What are some early signs of an asthma attack?

Most asthma attacks start slowly, and you may notice small changes ahead of time. These changes are called **early warning signs**. You can often stop an attack or make it less severe if you start treatment when you see these signs. Talk with the doctor about what to do when your child has any of these early warning signs:

- Mild coughing
- Itchy or sore throat
- Runny or stuffy nose
- Itchy or watery eyes
- Headache
- Tired or irritable
- Chest tightness
- Wheezing
- Shortness of breath

What causes asthma attacks?

Asthma attacks most often start when something bothers the airways. These things are called **triggers**. Every child's triggers are different. Try to reduce your child's triggers as much as possible. Some common triggers and tips to help avoid them are:

- **Smoke** from cigarettes, pipes, cigars, e-cigarettes, grills, fireplaces and burning wood. Do not allow anyone to smoke near your child or in your house or car – even when your child is not there.
- **Colds, the flu, and sinus and ear infections**. Make sure your child gets the flu vaccine (shot) each year. Cleaning your hands well with soap and water or an alcohol-based gel or foam is the best way to help prevent colds and infections.
- **Strong smells** from sprays, perfumes, cleaning products and other things. Do not spray these items when your child is in the room.
- **Air pollution**. Spend less time outside when the smog level is high, especially on hot summer days.
- **Exercise or sports**. Your child may need to take asthma medicine before exercise or sports. Being active is still important. Talk with the doctor about how to help avoid asthma attacks with activity.
- **Allergens**, such as dust, pollen, mold, insect droppings and animals with fur or feathers. Keep your home clean and bug-free. Your child may or may not have allergies to these. Talk with your doctor about this.
- **Strong feelings**, such as being mad or very excited. Your child cannot avoid these feelings, but it is important to know they can trigger an asthma attack.
- **Weather**, such as rain, wind, cold temperatures or sudden changes. Have your child wear a scarf over their mouth and nose on cold, dry days.

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Asthma basics, continued

What is a metered dose inhaler (MDI) and spacer?

An **MDI**, or inhaler, is a device that has asthma medicine in it. It delivers the medicine into the lungs. The MDI needs to be used in a certain way or it will not work.

A **spacer**, or holding chamber, is a plastic tube with a mask or mouthpiece. It connects to the MDI. The spacer helps more of the medicine get into the lungs where it can help your child.

- Ask the doctor to teach you and your child how to use the inhaler if they prescribe one. Ask when to use it and when to refill it.
- **Make sure the inhaler has medicine. It may be out of medicine and just have propellant left, even if it still:**
 - Puffs when you press it or shake it.
 - Feels like there is something inside.
- Know how many puffs (doses) are in the inhaler.
 - Check the counter on the inhaler before each treatment.
 - If the inhaler does not have a counter, ask your child each day if they used any of the medicine.
 - Count the number of puffs used, and write it down. Keep a log each day.
 - Get a new inhaler when doses get low.
 - Check the inhaler expiration date. Replace it when needed.
- If your child has used an MDI in the past, the spray may feel softer, warmer and taste different now. A new propellant that is safer for the environment may cause these changes.

How should my child use an MDI with mouthpiece or mask?

Teach your child these steps for using an MDI:

1. Wash your hands well with soap and water for at least 20 seconds.
2. Stand or sit up straight.
3. Take off the cap. Shake the inhaler. (If it is a new inhaler or has not been used for several days, read the manufacturer instructions for how to prime the inhaler first.)
4. Hold the inhaler as taught by the respiratory therapist, nurse or doctor.
5. Breathe out all the way.
6. Slowly start to breathe in while pressing down on the inhaler at the same time. Breathe in slowly and deeply to fill the lungs.
7. Hold your breath for 5 to 10 seconds.
8. If the doctor prescribed more than 1 puff, wait 1 minute between puffs. Shake the MDI before each puff.
9. Rinse your mouth after using any inhaled steroid medicine.

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Asthma basics, continued

Should my child use a spacer or holding chamber?

Yes – using a spacer or holding chamber is **the best way** to use an MDI. They help more medicine get into the airways so the medicine can work better. Ask the doctor about using a spacer if your child does not use one.



Spacer or holding chamber with mouthpiece



Spacer or holding chamber with mask

How can I tell when my child is having trouble breathing?

Your child is having an asthma attack if you see any of the signs listed below. Follow your child's Asthma Action Plan. If you do not have one, call your child's doctor **right away**.

- Coughing or wheezing
- Chest tightness
- Less playful than normal or hard to wake up
- Trouble catching their breath
 - An older child may sit hunched over or may not be able to say a full sentence without stopping to take a breath.
 - A baby may have a softer cry than normal and may not be able to suck on a pacifier or bottle well.
- The skin between the ribs and around the collarbones pulls in with each breath. This is called retractions.
- The nose may open wider than normal, like a bull's nose, with each breath.
- Breathing faster than normal
 - To find out if your child has a normal breathing rate, count breaths when they are calm or sleeping.
 - Normal breathing rates are:
 - Birth to 1 year - 30 to 40 breaths in 1 minute
 - 1 to 8 years - 24 to 30 breaths in 1 minute
 - 9 years and older - 16 to 24 breaths in 1 minute

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Asthma basics, continued

If your child has a blue, purple or pale gray color to the lips, gums or nails, call 911 RIGHT AWAY. This is an emergency.

What else do I need to know?

- Ask your child's doctor for a written Asthma Action Plan. Share the plan with your child's school, childcare center and others who care for your child.
- Try to stay calm during an asthma attack. Reassure your child, and follow their Asthma Action Plan.
- Take a class to learn more about how to manage asthma.
- Call the doctor if your child seems to need their MDI more often than prescribed.
- Make sure your child always has **fast, easy access to their rescue medicine at all times** – at home, at school and at play.
 - Be prepared. No one knows when an asthma attack will happen.
 - Rescue asthma medicines, such as albuterol, help to open the airways. These medicines provide fast relief of asthma symptoms, such as coughing, wheezing and breathing problems.
 - Make sure the inhaler **always** has medicine in it. Replace it as needed.
- Talk with your child's doctor about how to better control your child's asthma. Asthma may not be well-controlled if your child:
 - Needs to use rescue medicine for asthma symptoms more than 2 times in 1 week.
 - Wakes up at night with asthma symptoms more than 2 times in 1 month.
 - Needs a refill for their rescue inhaler more than 2 times in 1 year.
- Learning how to help prevent and treat asthma attacks can help your child:
 - Think of themselves as healthy, rather than sick.
 - Take part in school, play and physical activities.

Where can I learn more?

Visit choa.org/asthma to learn more about asthma. You may also visit these websites:

- lung.org
- nhlbi.nih.gov
- allergyasthmanetwork.org
- aafa.org
- lungusa.org

Children's Healthcare of Atlanta has not reviewed all of the sites listed as resources and does not make any representations regarding their content or accuracy. Children's Healthcare of Atlanta does not recommend or endorse any particular products, services or the content or use of any third party websites, or make any determination that such products, services or websites are necessary or appropriate for you or for the use in rendering care to patients. Children's Healthcare of Atlanta is not responsible for the content of any of the above-referenced sites or any sites linked to these Sites. Use of the links provided on this or other sites is at your sole risk.

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.

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