



Living with Asthma

A Guide to Controlling Your Asthma.

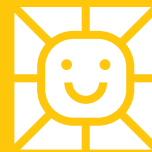
Controlling asthma through the right medications, lifestyle and support.

 **Driscoll**
Children's Hospital

 | **HEALTHY SOUTH TEXAS**



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Understanding Asthma

What is Asthma?

Asthma is a chronic disease in which the airways (bronchial tubes) in the lungs become swollen or inflamed. When the airways become swollen, it makes it hard for air to move in and out of the lungs.

Facts About Asthma

- Asthma is one of the most common serious chronic diseases of childhood.
- Asthma is the third-ranking cause of hospitalization among children under 15 years of age.
- An average of one out of every 10 school-aged children has asthma.
- Asthma in children is the cause of seven million physician visits and nearly 200,000 hospitalizations in United States annually.
- 13 million school days and 15 million work days are missed each year due to asthma.
- An estimated 400,000 to one million children with asthma have their condition worsened by exposure to second-hand smoke.



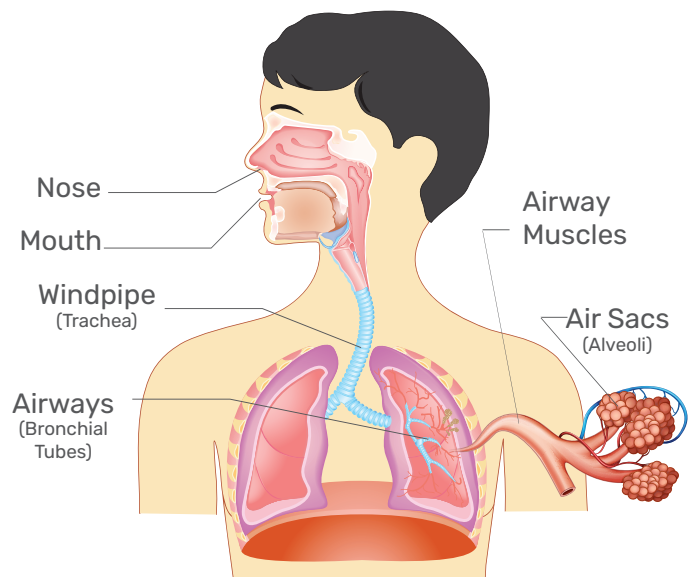
Symptoms of Asthma

Asthma Symptoms Include:

- Wheezing
- Shortness of breath or chest tightness
- Coughing (especially at night or with activity)

How the Lungs Work

- Air enters through your nose and mouth.
- Your mouth and nose warm the air.
- Air passes through your throat and windpipe (trachea).
- Your trachea divides into large tubes (bronchi) that lead to the left and right lung. The tubes divide again and again, becoming small airways (bronchial tubes).
- At the end of the smallest tubes there are tiny air sacs or balloon-like clusters called alveoli.
- When you breathe in, these air sacs fill with air.
- In these air sacs, your body takes up oxygen from the air you breathe in and expels carbon dioxide you breathe out.





▶ Please bring this page to your follow-up appointment with your doctor.

What is an Asthma Flare?

When you have asthma flare, your airways (bronchial tubes) become:

- Swollen or inflamed
- Congested with increased mucus
- Tight or constricted
- Sensitive and easily irritated

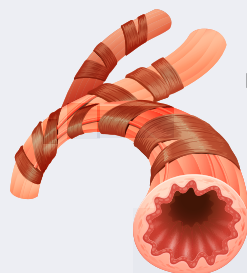
What is a Trigger?

A trigger is an exposure, activity or condition that can make your asthma worse, especially during an asthma flare. Some triggers include:

- Colds
- Allergies
- Cigarette Smoke
- Changes in the weather or temperature

By making your asthma worse, triggers can cause coughing, congestion, wheezing and chest tightness.

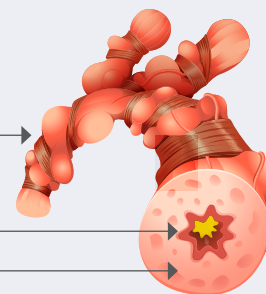
Airways During an Asthma Flare



Normal airway

Airway inflammation during an asthma flare:

- Muscle tightening or "squeezing" around airways
- Congestion and increased mucus
- Swelling



Medication

▶ Preventive Medicine:

Controls swelling/inflammation of airways.

Take every day.

Do not stop even if your child feels better.

How much medicine and how often:

Instructions: Rinse mouth after each use of inhaled controller medication.

References:

- Guidelines for the Diagnosis & Management of Asthma Expert Panel 2.NIH publication No 987-4051 April 1997. National Institute of Health, National Heart Lung Blood Institute
- NAEPP report. J Allergy Clin Immunol Supplement Nov 2002: s147-s183

▶ Rescue or Quick-Relief Medicine:

Relieves tightening of airways.

Use as needed only for the following symptoms:

- Increased cough
- Shortness of breath
- Wheezing
- Chest tightness

How much medicine and how often:

Date

Physician's signature



Asthma Triggers

What Triggers Asthma?

Smoke and Strong Smells (any type)

- Includes cigarette/tobacco smoke, vaping, industrial smoke, fireplace, bonfire or BBQ-pit smoke.
- Do not allow any smoking/vaping in your home or car. Second hand smoke can trigger asthma to flare, even up to 12 hours later. Strongly encourage family members to quit smoking and vaping.

Paint, Hairspray, Perfume, Air Fresheners and Aerosol Sprays

- Make sure child is not in room while using aerosol products.
- Open windows, doors or use an exhaust fan.

Weather Changes, Outdoor Pollution, Allergies

Outdoor Mold/Pollen

This can include flowers, trees, grasses, hay, ragweed and mold spores.

- When mold or pollen counts are high, check news daily or download an allergy app for your phone or computer.
- Keep car windows closed and use 're-circulate' button when using the air conditioner.
- Keep child indoors with windows closed during midday and afternoon, if you can. Pollen and mold spore counts are highest during those times.

Indoor Mold

Inhaling mold spores can trigger an asthma attack.

- Fix any leaky faucets, pipes or other sources of water.
- Check for moldy surfaces—clean areas stained with soap and water.

Ozone Alert Days

- On orange and red ozone action days limit outdoor time especially in the afternoon. Hot weather tends to result in poor air quality or increased air pollution.

High Humidity

- On hot, humid days, mold spore counts can be higher. Keep windows closed and use air conditioner at home.

Cold Air

- Cover child's nose and mouth with a scarf on cold or windy days.

Animal Dander

- Keep furred or feathered pets out of your home. If animals are indoors, they **MUST** stay out of child's bedroom.
- Bathe pets at least once a week.

Exercise, Sports and Play

- Child should remain symptom-free when engaged in exercising, playing or sports. If child has symptoms (shortness of breath, coughing or wheezing) please contact the doctor.

Dust Mites

- Dust Mites are tiny "bugs" that you cannot see. They exist in all homes and have nothing to do with a dirty house. They eat/consume organic dust that comes off our bodies, and so mainly are found in mattresses and pillows. Also found in carpet, furniture and stuffed toys.
- Mattresses and pillows should be encased in a special allergy/dust mite cover.
- Use pillows filled with synthetic filling - no feathers.
- Wash sheets and blankets once a week in the setting available to kill dust mites.
- No stuffed toys in child's room, if possible. If there are a few stuffed toys, keep them out of the bed and if possible, wash them regularly in HOT water and dry completely.

Vacuum

- Vacuum carpets once or twice a week. Keep child out of room while vacuuming and for several hours afterwards. Damp mop hardwood floors weekly.
- Vacuum cleaner should have a double layered/micro-filter cleaner bag OR HEPA filter.

Humidity

- Reduce indoor humidity to 30%-50%. Dehumidifiers or central air conditioners can do this. (Preference is to have an air conditioner).
- Check air conditioner filters. They should be changed approximately every four weeks.

Cockroaches

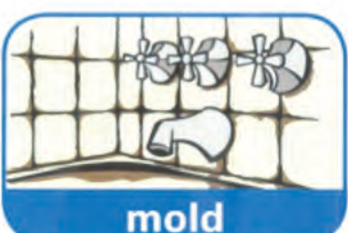
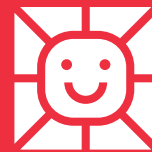
Many people are allergic to the dried droppings, saliva and body casings which can become airborne and trigger asthma.

- Check for cockroach droppings in all living quarters and do not allow food or drinks in bedrooms.
- Keep garbage contained with a lid. Use traps, gels, powders or paste to keep pests away. If you spray, keep child away out of room until smell goes away.

Other Triggers

- Viral illnesses
- Colds, flu and other respiratory infections. Hand-washing is a **MUST**.
- Strong emotions.
- Gastrointestinal Reflux (GERD).

This list is compiled from the United States Environmental Protection Agency, the Asthma and Allergy Foundation of America and Dr. Jon Roberts.



Provided as an educational resource by Merck






Treating Asthma

Driscoll Children's Hospital Asthma Action Plan

Admitting: Mdcpoe Intaptient, MD Phone: (361) 694-5445 (Call for appointment in 3-5 days or as directed by your physician)



Green Zone (Doing Well)

No symptoms:

- Breathing is good
- No cough or wheeze
- Can work or play
- Sleeps all night

Controller / Preventative Medications

Take these EVERY DAY!


Medications: Flovent 44 - 2 puffs twice a day

- Always use an Aerochamber with inhaler.
- Brush teeth or have something to drink after each dose of Flovent.
- Wash/wipe face after dosing if using a face mask.

If exercise causes asthma symptoms, then take/give:
Albuterol Inhaler - 4 puffs

- Use 15-20 minutes before exercise.

Add: ***



Yellow Zone (Caution)

Symptoms:


- Cough
- Wheeze
- Tight chest
- Coughing at night

Rescue Medications

Continue taking your controller medications as prescribed.

Take/Give: Albuterol Inhaler - 4 puffs every 4 hours

If symptoms DO NOT IMPROVE or are GETTING WORSE:
GO TO THE RED ZONE and call your doctor.



Red Zone (Severe Flare)

Medical Alert!

- Medicine is not helping
- Breathing is hard and fast
- Nose opens wide
- Can't walk or talk well
- Ribs show

Emergency Treatment

Take these medications and call your child's doctor NOW!

Take/Give: Albuterol Inhaler - 8 puffs every 4 hours

- If symptoms improve, return to yellow zone

If symptoms are GETTING WORSE or NOT IMPROVING,
go to the emergency department or CALL 9-1-1

Danger Signs

- Trouble walking or talking
- See-saw motion in chest from breathing (retractions)
- Lips or fingernails are blue
- Very fast breathing
- Hard to awaken, confused or combative while having an asthma attack

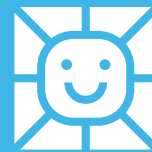
Start Emergency Treatment - Do Not Wait! Go Immediately to Hospital or Call 9-1-1

Instructions reviewed: Copy provided to caregiver and verbalized understanding.

Form completed by: **CPOE Resident, MD**

Patient Name: **John Doe**

Patient D.O.B.: **1/1/2012**

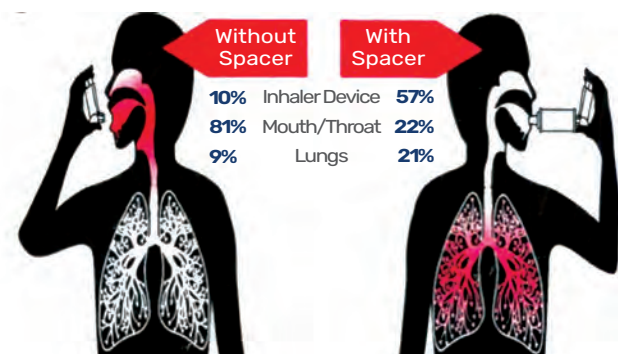


What are Steroids?

Steroids (also called Corticosteroids) are medications that treat the irritation and swelling in your lungs. We use inhaled steroids to prevent asthma flares and give them orally to treat them. Your airways become swollen and fill with mucus during an asthma flare.

The steroids athletes sometimes use to build muscle are not the same as the ones used to treat asthma. They are called Anabolic steroids.

Using Your Spacer



The purpose of the spacer is to help you get as much of the inhaled medication as possible.

How to use your face mask spacer:

- Prime the inhaler according to the instructions in box if it is brand new or hasn't been used in a few weeks.
- Shake the inhaler rapidly for at least 10 seconds. Insert the inhaler into the spacer.
- Place the mask on your child's face without force. Make sure the mouth and nose are covered and that there are no leaks around the mask.
- Press down on the medication in the inhaler so that one puff goes into the spacer.
- Hold the mask on your child's face for 8-10 breaths. If the child is breathing fast, count to 10 slowly.
- Repeat steps 2-5 for each additional puff, per prescription.
- Rinse/wipe your child's mouth and face after use to remove any medication.

There are two different ways this medication is used:

Inhaled Corticosteroids (ICS)

ICS is commonly inhaled on a daily basis to treat the inflammation and swelling of airways by those with asthma. The medication also helps to decrease symptoms like wheezing and cough.

One of the advantages of ICS over oral steroids is that there is less risk of undesirable side effects.

Oral Corticosteroids

Severe asthma can be treated with oral corticosteroids. They can be very effective at reducing the swelling and inflammation of the airways and relieving asthma symptoms during an asthma flare.

How to use your mouthpiece spacer:

- Prime the inhaler if it is brand new or hasn't been used recently (according to the inhaler instructions in box). Remove the cap on the spacer's mouthpiece.
- Shake the inhaler rapidly for at least 10 seconds. Insert the inhaler into the spacer.
- Blow all the air out of your lungs and put spacer in mouth, making a good seal. Press down on the inhaler only 1 time, releasing the medicine into the spacer.
- Take in a slow, deep breath like you would sip on a straw. There should be NO whistle sound.
- Hold your breath and slowly count to 10. (Parents please make sure to take note if they can't hold for 10 sec or if any asthma symptoms appear with the deep breathing.)
- Release your breath slowly.
- Repeat the steps 2-6 for each additional prescribed puff.

Do not put more than one puff of medication into either spacer at one time, as your child will actually receive less medication.

Always consult your doctor with any questions or concerns.





Treating Asthma (continued)

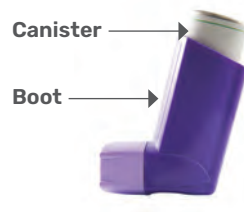
Keeping Track Of Your Puffs

Ways to track your puffs when your inhaler does not have a counter on the back of the boot.

Quick-Relief/Rescue Medication

This medicine is prescribed only as needed.

1. Look at the number of puffs listed on the side of the canister (listed below the name of the medicine): the amount of puffs differs depending on the medication & size of canister. Most rescue inhalers contain 200 puffs.
2. Write in how many puffs you take each day on your calendar.
3. Wrap a blank sticky label around the canister & mark each puff on the label.



Remember, if you are using two or more canisters of rescue medication per year, your asthma is out of control and you need to contact your doctor.

Don't shake the canister to hear if it's empty. After medicine is gone, you can still hear noise inside.



Preventive/Maintenance Medication

Preventive/maintenance medication should always be taken every day. These inhalers are easier to track if taken as directed by your doctor.

1. Look at the number of puffs listed on the side of the medicine canister.
2. Calculate how many puffs you take each day.
 - A. Divide daily puffs into total puff in canister.
 - B. The number will give you the amount of days your canister will last you.

Example:

- Doctor orders Qvar 40mcg, 2 puffs twice a day. The canister holds 100 puffs.
- You should be taking 4 total puffs per day. (2 in am and 2 in pm).
- Divide 100 by 4 = 25
- Canister will last you 25 days. Make sure you have a new prescription before you run out. Discard your old canister.

Myths About Asthma: A Look At Some Common Misconceptions

Myth: Children outgrow asthma.

Reality: Asthma is a chronic inflammatory disease of the airways. Some children have asthma symptoms that seem to go away during adolescence while others worsen, but the airways can still be sensitive. Unfortunately, there is no way to predict a child's progress.

Myth: It's just a cough. Asthmatics wheeze.

Reality: Asthma symptoms are not the same for everyone. Sometimes the only symptom is a chronic cough, most often at night or while laying down.

Myth: Asthma inhalers are only for when you get sick, not everyday.

Reality: This sort of thinking is the single most important reason for poor asthma control. It is important to understand that asthma has episodes of attacks or flare-ups during which the symptoms of breathlessness, cough & wheezing are seen. In between those attacks, the lungs still remain inflamed (swollen) though there may not be signs. This is why it is so important to take your medications during the attack, but it's also essential to take the controller medication regularly in between the attacks to provide effective long-term control to prevent lung damage.

Myth: Smoking doesn't trigger allergies or asthma.

Reality: Exposure to second-hand smoke and vaping is a known trigger of allergies and asthma. Children who are exposed to tobacco smoke (including just the smell of smoke in cars, rooms, in hair & on clothing) are at increased risk for asthma, allergic diseases, and recurrent respiratory infections.

Myth: Asthma can be cured.

Reality: There is currently no cure for asthma. Scientists are currently searching for the specific asthma genes. Although asthma cannot be cured, it can be controlled. With the proper diagnosis and treatment, asthmatics can lead normal, active lives.

Asthma Control Support



The Asthma Link Program

Free Asthma Education Classes

Driscoll Children's hospital offers free, one-on-one asthma education classes. The classes help you to learn about asthma and how to help your child manage their asthma.

Knowing about asthma, its triggers and its treatment is the key to ensuring your child can have a full, active and healthy life.

The classes are offered days or evenings and children are welcome. We will work with your schedule to find a time that is right for you.

If you are interested in attending an asthma class, please call the number below and leave your name and contact information. We will call back to set up a time to meet.

Contact the Asthma Coordinator at:
(361) 694-5477

Summer Camp for Children with Asthma

Camp Easy Breathers

Camp Easy Breathers is a summer camp for children with asthma who are between the ages of 7-14 years old. The camp is designed to provide physical and social experiences that are fun while increasing a child's understanding of asthma.

The children will be guided to manage their asthma so that they can fully enjoy all camp activities.

Camp Easy Breathers takes place every June and is held at Camp Aranzazu in Rockport, Texas. Camp Aranzazu is a not-for-profit camp facility designed to fit the needs of children with chronic illnesses or disabilities.

The camp's staff includes asthma specialists, nurses, doctors, respiratory therapists and other health professionals from the community.

For more information:
visit driscollchildrens.org/campeasybreathers

Contact Aracely Bigelow, Camp Director at:
(361) 694-4580

Resources

KidsHealth-What is Asthma video:

kidshealth.org/kid/asthma_basics/what/asthma.html



Allergy & Asthma Network/Mothers of Asthmatics:

aanma.org



U.S. Environmental Protection Agency, Asthma Control:

epa.gov/asthma/asthma-triggers-gain-control



NHLBI: Asthma Guidelines:

nhlbi.nih.gov/guidelines/asthma/index.htm



Weather/Allergy Updates:

wunderground.com



Texas Quit Smoking Line:

877-937-7848 (available 24 hrs/day)

yesquit.org



Iggy and the Inhalers Videos:

iggyandtheinhalers.com/pages/what-is-asthma



Texas Health & Human Services - Vaping:

dshs.texas.gov/vaping



