

# Living with Asthma

A guide to controlling your asthma.



Controlling asthma  
through the right  
medications, lifestyle  
and support.



# Contents

## Understanding asthma

What is asthma? .....	Page 1
Facts about asthma .....	Page 1
Systems of asthma .....	Page 1
How the lungs work .....	Page 1
What is an asthma flare? .....	Page 2
What is a trigger? .....	Page 2
Airways during an asthma flare .....	Page 2
Medication .....	Page 2

## Asthma triggers

What triggers asthma? .....	Page 3
Asthma triggers, illustrated for kids .....	Page 4

## Treating asthma

Driscoll Children's Hospital Asthma Action Plan .....	Page 5
What are steroids? .....	Page 6
Using your spacer .....	Page 6
Keeping track of your puffs .....	Page 7
Myths about asthma .....	Page 7

## Asthma control support

The Asthma Link Program .....	Page 8
Summer camp for children with asthma .....	Page 8

### NON-DISCRIMINATION NOTICE

Driscoll Health System and its affiliated entities complies with applicable Federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex. Driscoll Health System does not exclude people or treat them differently on the basis of race, color, national origin, age, disability, or sex.

Driscoll Health System provides free aids and services to people with disabilities to communicate effectively with us, such as:

- Qualified sign language interpreters
- Written information in other formats (large print, audio, accessible electronic formats, other formats)
- Driscoll Health System provides free language services to people whose primary language is not English, such as:
  - Qualified interpreters
  - Information written in other languages

If you need these services contact the Patient Relations Department at (361) 694-5811.

If you believe that Driscoll Health System has failed to provide these services or discriminated in another way on the basis of race, color, national origin, age, disability, sex, or gender identity, you can file a grievance with: Chief Ethics & Compliance Officer, 3533 S. Alameda, Corpus Christi, Texas 78411, Phone (361) 694-5000, TTY: 1-800-735-2989, Fax (361) 808-2000, Email: [filegrievance@dchstx.org](mailto:filegrievance@dchstx.org). You can file a grievance in person or by mail, fax, or email. If you need help filing a grievance, Chief Ethics & Compliance Officer is available to help you.

You can also file a civil rights complaint with the U.S. Department of Health and Human Services, Office for Civil Rights electronically through the Office for Civil Rights Complaint Portal, available at <https://ocrportal.hhs.gov/ocr/portal/lobby.jsf>, or by mail or phone at: U.S. Department of Health and Human Services, 200 Independence Avenue SW., Room 509F, HHH Building, Washington, DC 20201, 1-800-368-1019, 800-537-7697 (TDD). Complaint forms are available at <http://www.hhs.gov/ocr/office/file/index.html>.

### CHARITY MEDICAL CARE

Driscoll Health System will not deny healthcare services to a person who needs those services due to the inability to pay for those services. You may qualify for charity medical care. Your qualification for charity medical treatment will be determined by your family size and income according to the Driscoll Children's Hospital charity care policy in relation to Federal Poverty Guidelines.

To apply: Contact a Financial Counselor at (361) 694-4758 or (361) 694-5163

### LANGUAGE ASSISTANCE SERVICES

ATTENTION: Language assistance services, free of charge, are available to you. Call (361) 694-5000 (TTY: 1[800] 735-2989).

TTY Deaf Messaging: (800) 735-2989



# 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.
- 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.



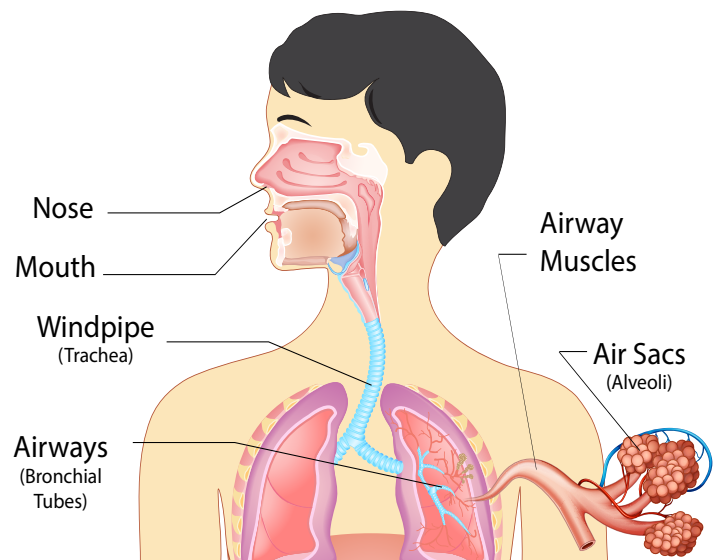
## Symptoms of asthma

**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.



Reviewed 6/2015



# Understanding asthma

▶ Please bring the 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 increase mucus
- Tight or constricted
- Sensitive and easily irritated

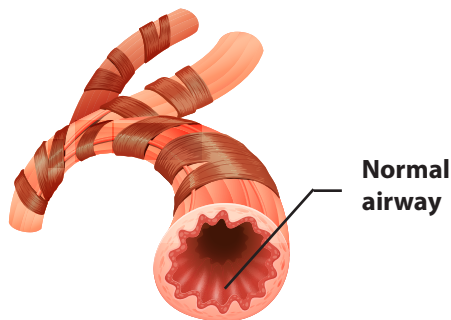
## What is a trigger?

**A trigger is a thing, 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

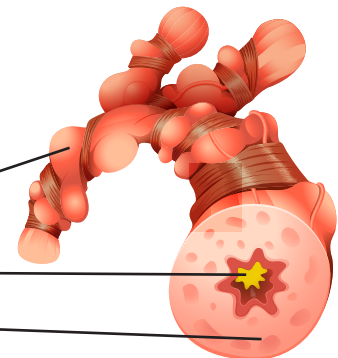
**By making your asthma worse, triggers can cause coughing, congestion, wheezing and chest tightness.**

## Airways during an asthma flare



**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

Reviewed 6/2015

# Asthma triggers

## What triggers asthma?

### Smoke and strong smells (any type)

- Includes cigarette/tobacco smoke, industrial smoke, fireplace, bonfire or BBQ-pit smoke.
- Do not allow any smoking 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.

### Paint, hairspray, perfume, air fresheners and aerosol sprays

- Make sure child is not in room.
- 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.
- Dust with a damp cloth.
- 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.

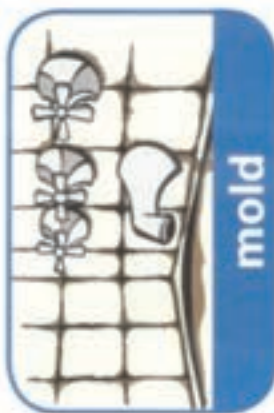
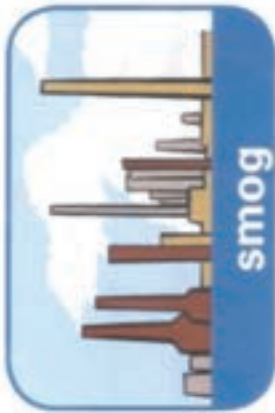
- Check for cockroach droppings in all living quarters and do not allow food or drinks in bedrooms.
- Keep garbage contained with a lid. Use traps, gels, powders or paste to keep pests away. If you spray, keep child away out of room until smell goes away.

### 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.*

# Asthma triggers



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

### CONTROLLER / PREVENTATIVE MEDICATIONS

Take these EVERY DAY! Replace every 30 days!

**Medications:** Symbicort (160/4.5) 2 puffs twice a day using AeroChamber.

- Always use an AeroChamber as instructed. Take before brushing teeth.
- Wash/wipe face after dosing if using a face mask.

If exercise causes asthma symptoms, then take/give:

**Albuterol MDI 2 puffs using AeroChamber if needed per physician.**

Use 15-20 minutes before exercise.

**ADD: \*\*\***

### YELLOW ZONE (Caution)

#### Symptoms:

- Cough, wheeze, chest tightness or shortness of breath
- Waking at night due to asthma
- Can do some but not all usual activities

### RESCUE MEDICATIONS

Continue taking your controller medications as prescribed.

**First:** Take/give - Albuterol MDI 4 puffs now. If no improvement, may repeat 4 puffs in 20 minutes using AeroChamber.

**Second:** If symptoms are better:

CONTINUE: 4 puffs every 4 hours as needed for 1-2 days.

If symptoms DO NOT IMPROVE or are GETTING WORSE: **GO TO THE RED ZONE.**

**ADD: \*\*\***

### RED ZONE (Severe Flare)

#### MEDICAL ALERT!

- Very short of breath
- Bronchodilator has not helped
- Cannot do usual activities

### EMERGENCY TREATMENT

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

**Take/give:** Albuterol MDI 8 puffs now using AeroChamber.

May give two additional treatments 20 minutes apart.

**Call your child's doctor NOW** - say your child is having SEVERE asthma symptoms and needs to be seen **TODAY** or go directly to Emergency Department.

**ADD: \*\*\***

Continue Daily Medications AND Yellow Zone Medications as prescribed.

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

3533 SOUTH ALAMEDA STREET, CORPUS CHRISTI, TX 78411  
I should always avoid tobacco smoke and my asthma triggers.



# Treating asthma

## What are steroids?

Asthma flares can be prevented by a medication called corticosteroid (steroid) that treats the irritation and swelling your lungs. Your lungs' 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.**

**There are two different ways this medication is used:**

### Inhaled corticosteroids (ICS)

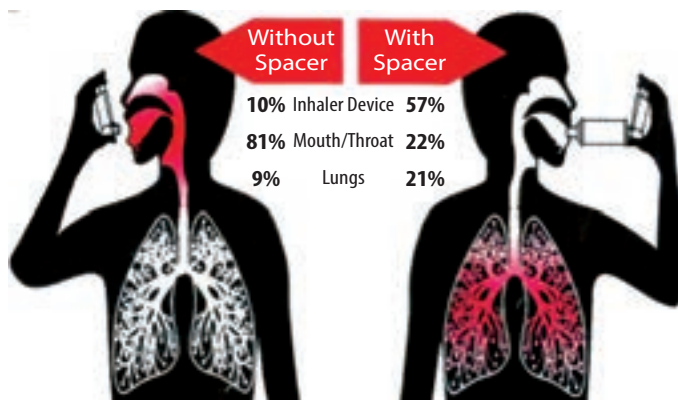
ICS is commonly inhaled on a daily basis to treat the inflammation and swelling of airways by those with asthma. The medication also helps to decrease symptoms like wheezing and cough.

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 lungs' airways and relieving asthma symptoms during an asthma flare.

## 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.

### 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 medicines 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

## 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.



**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.

**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.**

## 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 are known triggers 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.

**Respiratory Therapy Department**  
**(361) 694-4167**

## 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 full enjoy all camp activities.

Camp Easy Breathers takes place every June and is held at Camp Aranzazu in Rockport, Texas. Camp Aranzazu is a non-profit camp facility designed to fit the needs of children with chronic illnesses or disabilities

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

**For more information,**  
**visit [www.driscollchildrens.org/](http://www.driscollchildrens.org/campeasybreathers)**  
**[campeasybreathers](http://www.driscollchildrens.org/campeasybreathers)**

**or call Aracely Bigelow, Camp Director at**  
**(361) 694-4580**

## Resources

### KidsHealth-What is Asthma video

[www.kidshealth.org/kid/asthma\\_basics/what/asthma.html](http://www.kidshealth.org/kid/asthma_basics/what/asthma.html)



### Allergy & Asthma Network/Mothers of Asthmatics

[www.aanma.org](http://www.aanma.org)



### U.S. Environmental Protection Agency, Asthma Control

[www.epa.gov/asthma/triggers.html](http://www.epa.gov/asthma/triggers.html)



### Quest for the Code: Asthma Game

<http://www.asthma.starlightprograms.org>



### NHLBI: Asthma Guidelines

[www.nhlbi.nih.gov/guidelines/asthma/index.htm](http://www.nhlbi.nih.gov/guidelines/asthma/index.htm)



### Weather/Allergy Updates

[www.wunderground.com](http://www.wunderground.com)



### Texas Quit Smoking Line

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

[www.yesquit.org](http://www.yesquit.org)

