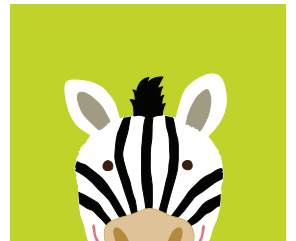
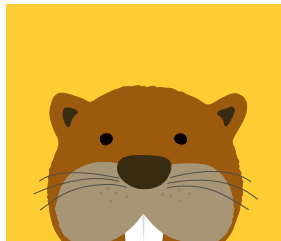


A FAMILY GUIDE



 Advocate
Children's Hospital

We are  AdvocateAuroraHealth™

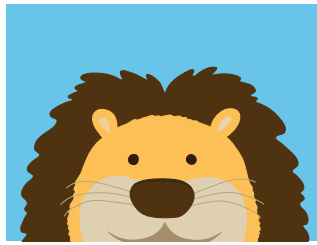
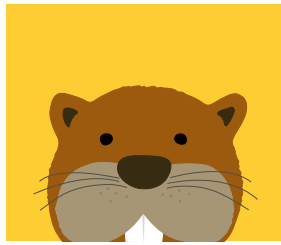
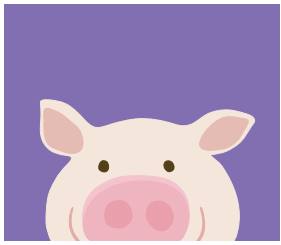


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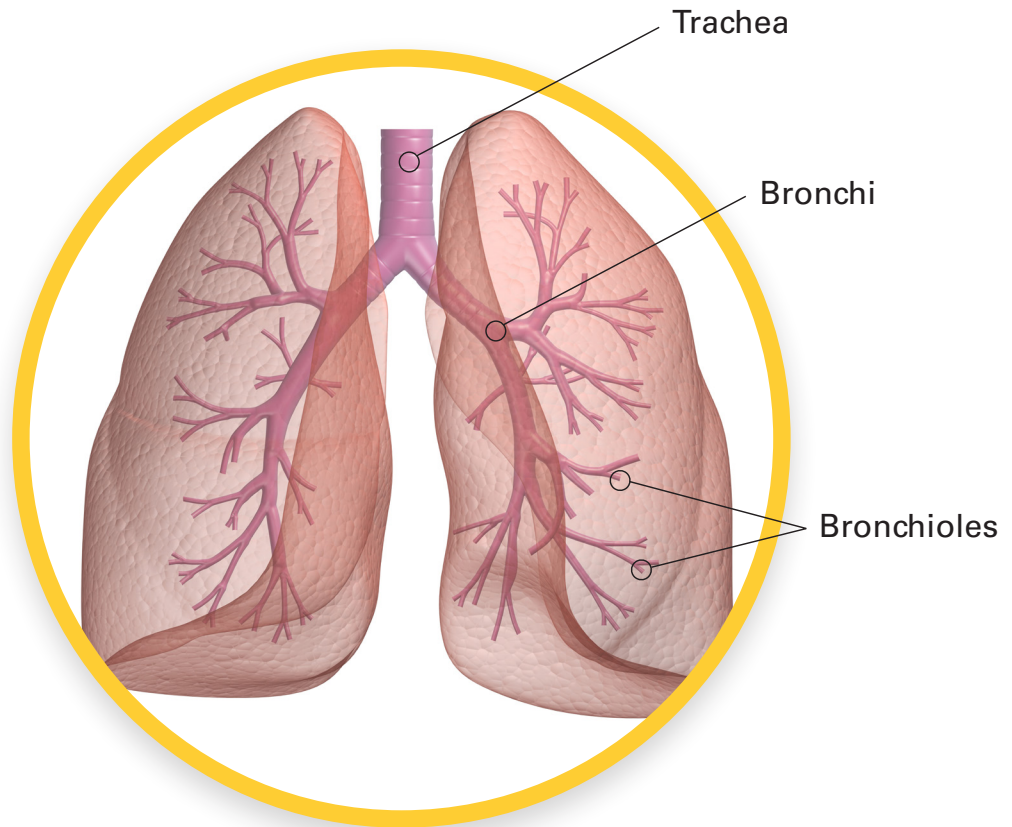


ANYONE AT ANY AGE CAN GET ASTHMA.

Some children seem to get better when they get older, but asthma **never really goes away**. Asthma symptoms may disappear and reappear as you age. You may also develop asthma when you are older. You might inherit the tendency to develop asthma if one or both of your parents have asthma or allergies.

HOW DO YOUR LUNGS WORK?

When you breathe, air goes in and out of your lungs through tubes called airways. The airways in each lung look like an upside-down tree. The airways are big at first, like a tree trunk, but then become very small, like the small branches of a tree. You may hear terms such as trachea, bronchi, and bronchioles. These are terms for different size airways. Air with oxygen travels through these airways until the oxygen is taken into the body for use.



GOALS FOR ASTHMA MANAGEMENT



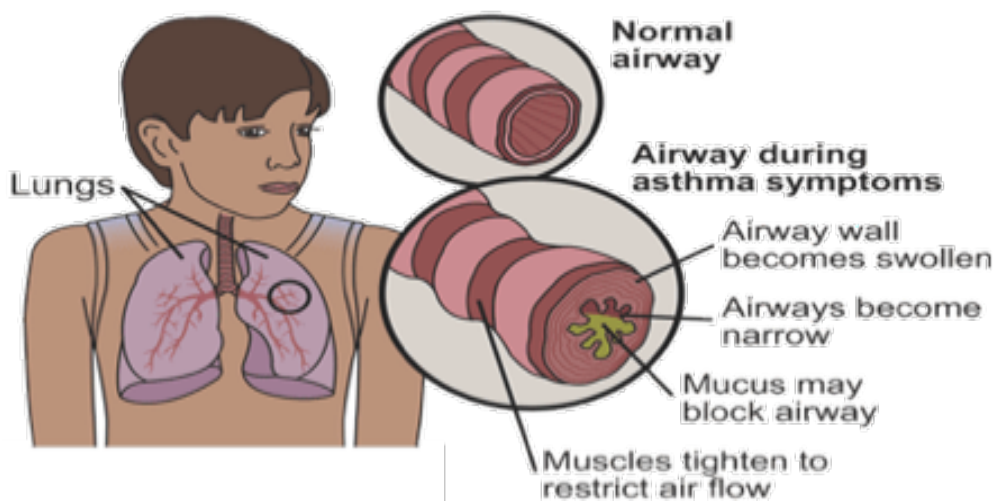
- Have productive, physically active lives
- Avoid troublesome symptoms during the day and night
- No missed school or work because of asthma symptoms
- Have no asthma episodes
- Need little or no reliever medications
- Minimize visits to the emergency room and hospital admissions for asthma
- Have normal or near-normal lung function
- Have few or no side effects from asthma medicines
- Experience satisfaction with your asthma care

WHAT IS ASTHMA?

Asthma is a life-long breathing problem caused by irritation, swelling, spasm and narrowing of the airways in the lungs. Asthma can be treated and controlled, but it cannot be cured. You do not outgrow asthma. When you have asthma, your airways are sensitive. When airways become swollen and smaller, air cannot get in and out of the airways easily, making it hard to breathe. People with asthma react to many things called “triggers.” Triggers are things that cause asthma to “flare up” or get worse.

Three main things happen:

- **Muscles tighten around the airway-causing narrowing**
- **The inside of the airway swells-causing narrowing and increased sensitivity to triggers**
- **Mucous fills the airway-blocking airflow**



Is Asthma serious?

Asthma is serious. Especially in severe asthma, it can kill if not treated the right way.

If your asthma is not taken care of, scarring in the airways can occur. This can affect your breathing forever.

If your asthma is treated correctly, you can live a normal, active life.

How does my health care provider know I have asthma?

To find out if you have asthma, your health care provider will ask you questions about your health history such as:

Does anyone in your family have asthma?

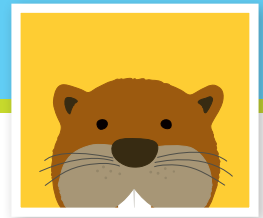
Do you have allergies or eczema?

Have you been to the emergency department or hospital for breathing problems?

Tell your health care provider if you have had coughing, wheezing or shortness of breath. Tell them if you have had itching, swelling or other reactions to food, insect stings or medicines such as penicillin or aspirin.

Lung Function Tests. A spirometry test may be ordered by your doctor and is done in the hospital or clinic. This test measures how much air you can breathe in and out.

SIGNS AND SYMPTOMS OF AN ASTHMA FLARE-UP



Asthma flare-ups hardly ever begin without warning. Signs of an asthma episode are not the same for every person. The following are common signs of an asthma flare-up:

- Coughing
- Wheezing
- Tight feeling in the chest
- Shortness of breath
- Rapid breathing

These signs may be mild. You may not think they are related to asthma. These are warning signs that may start 24 to 48 hours before an asthma episode begins. By knowing your warning signs and treating them quickly, you may be able to avoid an asthma flare-up.

Know Your Warning Signs

Check the early warning signs you have had in the past. Follow your asthma action plan for instructions on what to do.

- Itchy chin and or roof of mouth
- Rubbing nose, a lot
- Cough that does not go away, mainly at night
- Sneezing
- Waking up at night with asthma symptoms
- Stomach ache
- Dark circles under the eyes
- Runny, stuffy, or clogged-up nose
- Fever
- More tiredness
- Mood change — grouchy or extra quiet
- Throat clearing
- Eczema flare-up
- Itchy, glassy or watery eyes

If you have any of these signs, look at the **Yellow Zone** on your Asthma Action Plan.

- Cough, wheeze or chest tightness
- Breathing faster than normal
- Get out of breath easily
- Difficulty exhaling
- Waking at night

Act Fast: Call your health care provider if you need to.

The following signs, found under the **Red Zone** on the asthma action plan, indicate your asthma is out of control. **Medical Alert!**

- Lots of problems breathing
- Trouble walking; inability to lie flat
- Cannot work or play
- Getting worse instead of better
- Skin between ribs or above breastbone sucks in when breathing, nostrils flare
- Quick-relief medication is not helping

Call 911 immediately if the following danger signs are present:

- Bluish color to lips and nail beds
- Speaking in phrases or single words – inability to speak in full sentences

WHAT CAUSES SIGNS AND SYMPTOMS? TRIGGERS

Asthma symptoms are caused by “triggers.” Triggers are anything that bothers your airways. Some triggers are from allergies. You will feel better when you stay away from or control your triggers.





Learn what your asthma triggers are. Write down what you are doing and where you are when you have symptoms. Ask yourself:

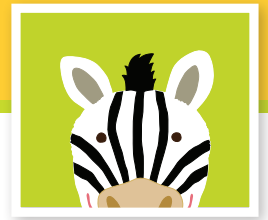
Do I have...





- symptoms at certain times of the year and not at other times?
- asthma symptoms when I come in contact with certain things?
- asthma symptoms during and after exercising?

Identify your triggers. Control them and avoid them.

How to control Triggers and Symptoms:

| | Non-Allergic Triggers | Actions to Avoid or Control Triggers |
|---|--|--|
|  | <p>Smoke Exposure: Tobacco smoke: smoking leads to permanent lung damage more quickly in people with asthma.</p> <p>Smoke from burning wood, coal or paper</p> | <p>Do not smoke.</p> <ul style="list-style-type: none"> • Help people who live in your house quit smoking. • Do not let people smoke anywhere in your house. • No smoking in your car. • Do not use open fires for cooking or heating your home |
|  | <p>Strong odors or vapors: Colognes, perfumes, scented candles, air fresheners, incense, plug-ins, essential oils, carpet fresheners, laundry detergents and softeners, paints and cleaning products.</p> | <ul style="list-style-type: none"> • Use unscented household cleaning and laundry products. • Avoid scented sprays and air fresheners |
|  | <p>Changes in the weather</p> | <ul style="list-style-type: none"> • Stay out of cold air or high humidity. • Wear a scarf when out in the cold. • Shower and change clothes after extended time outside. |
|  | <p>Infections: Like colds or Flu</p> | <ul style="list-style-type: none"> • Get a flu shot each year. • Wash your hands often. • Regularly clean household objects touched by everyone, such as light switches, door knobs, refrigerator and microwave handles. |



| | Non-Allergic Triggers | Actions to Avoid or Control Triggers |
|---|---|--|
|  | Exercise: With good asthma control, everyone should be able to exercise comfortably. | <ul style="list-style-type: none">• Warm up and cool down before and after activity. Then talk to your doctor about asthma control.• Do not take part in activity or modify activity when asthma symptoms are present.• Always have quick-reliever medications with you. Use 20 minutes before activity. |
|  | Emotions: Crying, laughing and yelling can cause asthma triggers. | |
|  | Air Pollution | <ul style="list-style-type: none">• Stay inside on high pollution and high ozone days |
|  | Heart Burn or Gastroesophageal Reflux Disease (GERD) | <ul style="list-style-type: none">• Take the medicine your doctor has prescribed for this. |

| | Allergic Triggers | Actions to Avoid or Control Triggers |
|---|---|---|
|  | <p>Molds and Yeast Spores Found in damp basements, bathrooms, kitchens, and outside wooded areas</p> | <ul style="list-style-type: none"> • Use a room dehumidifier in areas with increased dampness. • Keep air conditioners clean. • Use bleach solutions to kill mold with caution and good ventilation. • Keep damp areas and bathrooms dry and aired out. • Lower indoor humidity to less than 50%. |
|  | <p>Animals: Dogs, cats, rabbits, birds or other animals</p> | <ul style="list-style-type: none"> • Never let your pet in your bedroom. • Wash pets weekly to remove dander (found in flaking dry skin, saliva, urine). • Use furnace filters and change them monthly. • You may need to remove animals from your home. • Try not to visit friends and relatives' homes who have pets. • Wash your hands after touching. |
|  | <p>Pollens from trees (March to April), and grasses (May to July)</p> | <ul style="list-style-type: none"> • Check the pollen count. • Keep windows closed. Use air-conditioning on days of high pollen count. • Shower and wash your hair after being outside. |
|  | <p>Dust mites found in bedding, carpeting, upholstered furniture</p> | <ul style="list-style-type: none"> • Cover mattresses and pillows with allergy impermeable covers. • Wash bedding in hot water each week. • Remove stuffed animals from bed and sleeping area. • Do not use bedroom humidifiers or vaporizer. • Keep indoor humidity to less than 50%. • Remove carpet if possible, especially when laid on concrete. • Use a vacuum with a HEPA filter. |
|  | <p>Cockroaches</p> | <ul style="list-style-type: none"> • The waste products and rotting bodies of the cockroach are triggers for some people. • Take garbage out daily. • Keep food in covered containers. • Control cockroaches with gel bait or traps instead of poison chemical sprays or powders. • Do not leave dirty dishes in the sink. |
|  | <p>Aspirin, penicillin or other medication</p> | <ul style="list-style-type: none"> • Be aware that certain medications trigger asthma symptoms, especially aspirin and ibuprofen. |

SMOKING AND E-CIGARETTE (VAPING) FACTS AND EFFECTS



Smoking and the use of other tobacco products, including cigars and smokeless tobacco, causes or worsens numerous diseases and conditions. It also exposes nearby people to toxic secondhand smoke. Smoking is the leading cause of preventable death in the U.S.

Secondhand smoke is a serious health hazard for people of all ages.



Secondhand smoke is especially harmful to young children.

Secondhand smoke is responsible for lower respiratory tract infections in infants and children under 18 months of age.



Marijuana smoke is harmful to lung health. Marijuana is smoked in numerous ways and can also be consumed through dozens of different products. Smoke from marijuana combustion has been shown to contain many of the same toxins, irritants and carcinogens as tobacco smoke. Research shows that smoking marijuana causes chronic bronchitis and injures the cell linings of the large airways. It also weakens the immune system.



E-cigarettes are NOT proven to be a safer alternative to cigarettes.

E-cigarettes are inhaled like regular cigarettes and produce an aerosol cloud of nicotine and other substances. Virtually all e-cigarettes contain nicotine, even the ones labeled “nicotine free.” This is because there are no rules about how e-cigarettes or “e-juice” are made. E-cigarettes also contain acrolein, an herbicide primarily used to kill weeds. E-cigarettes produce several dangerous chemicals including acetaldehyde, acrolein and formaldehyde. These aldehydes can cause lung and heart disease. In the short term, e-cigarette aerosol can irritate your lungs, throat and eyes. It can cause irreversible lung damage. E-cigarette use has reached epidemic levels, especially in our youth population.

The most popular e-cigarette among teens is JUUL. The JUUL is more discreet and looks like a USB drive. All JUUL pods contain some nicotine. According to the manufacturer, one JUUL pod may contain as much nicotine as a pack of cigarettes. The e-liquids come in fruit flavors that appeal to youth.

Pods or cartridges containing cannabis – infused oils are also being used in place of e-liquids. Other harmful additives are used as thinning agents in these mixtures.

USE YOUR MEDICINES CORRECTLY

Many people with asthma must take asthma medicine every day. Others need to take medicine only as needed. There are two types of asthma medicine:

- **Quick-relief medicine** (used when you have asthma symptoms and during an asthma episode)
- **Long-term control medicine** (used to prevent asthma episodes)

Quick-Relief Medicine

Quick-relief medicines (short-acting bronchodilators) are used during an asthma episode. They relax the muscles around the airways quickly. The airways open so you can breathe easier. They work in minutes and last up to four hours. Always keep your quick-reliever medication with you so you have it when you need it.

If you are using a quick-relief medicine more than two times a week, talk with your doctor. This may be a sign that your asthma is not under control.

Long-Term Control Medicine (Anti-inflammatory Medicines)

Some people with asthma need to take long-term control medicine every day to prevent asthma episodes. Long-term control medicines are anti-inflammatory medicines and long-acting bronchodilators that relieve airway spasm.

Take these medicines even if you are not feeling asthma symptoms. These medicines **prevent** asthma episodes and keep your airways from swelling, reduce airway sensitivity and stop mucous build up. There are two types of anti-inflammatory medicines: corticosteroids and non-steroids. **Corticosteroids** used to prevent asthma episodes are not the same steroids that cause big muscles and are sometimes used by athletes. Take these medicines as your doctor tells you to prevent an asthma episode. Be sure to brush your teeth or rinse your mouth after using this type of medicine to prevent a mouth infection called thrush.

Leukotriene modifiers

These are a type of non-steroidal medicine. They come in pill form and can help make airways less sensitive to triggers. They can also help prevent tightening of the airway muscles.

Remember: *Anti-inflammatory medicines **should not** be used to relieve symptoms quickly. These medicines are long acting. They cannot take care of symptoms once they have begun. Take anti-inflammatory medicines to prevent an asthma episode.*

Combined anti-inflammatory and Bronchodilator medicine

These medicines open your airways by relaxing the muscles around the airway and decreasing inflammation to control asthma symptoms.

Long-acting anticholinergics

The use of the long-acting anticholinergic agent, as maintenance therapy in asthma, has been shown to be effective in some patients with moderate to severe asthma who are uncontrolled on combination therapy.

Cromolyn Sodium

This is an inhaled medication that helps prevent bronchospasm and reduce inflammation. It is also used to prevent bronchospasm from exercise or irritants.

Biologics

A biologic is used for patients who continue to have symptoms despite use of standard daily controller medications. They can help prevent asthma episodes by changing your body's response to triggers. This medicine is given as an injection.

Without controller medicine, your airways can become irritated and swollen. Over time, your lungs may become scarred, limiting the amount of airflow through your airways.

TAKING YOUR ASTHMA MEDICINE



How to Use Your MDI (Metered-Dose Inhaler)

An MDI gets medicine to your lungs in a mist or spray. You should always use a spacer with your MDI. MDIs need priming sprays before the first use. Check package insert for number of priming sprays. Always check the counter on the inhaler for remaining medication doses.

What is a Spacer?

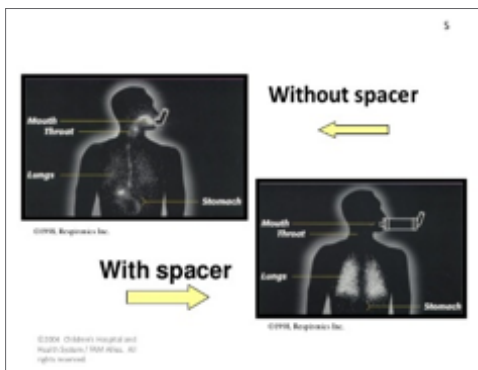
A spacer lets more medicine get into your lungs. It is also called a chamber.

Steps for Using a Spacer/Chamber

1. Remove the caps from inhaler and chamber.
2. Insert the inhaler into the back of the chamber.
3. Shake the inhaler for 5 seconds.
4. Place lips around mouthpiece, form a tight seal and exhale. Press one puff of medicine and immediately inhale slowly, taking a full deep breath.
5. Hold your breath for 10 seconds then exhale. (If you hear a whistle, inhale more slowly.)

✔ If instructed to take more than one puff, wait **one minute** then repeat.

✔ If using a mask, place firmly on the face over nose and mouth, press down on inhaler one time, and maintain seal for 6 breaths.



References:

- American Lung Association
- Global Strategy for Asthma Management and Prevention (GINA)
- National Heart, Lung and Blood Institute-Guidelines for the diagnosis and management of Asthma (EPR 3)
- Courtesy of Phillips Respironics

KEEP YOUR INHALER CLEAN

Follow manufacturer's directions.

- Some inhalers have canisters that cannot be removed.
- Clean the opening with a damp q-tip.

Keep Your Spacer Clean

Follow manufacturer's directions.

- Wash spacer in warm soapy water once a week. Rinse and let the spacer dry on clean paper towels.

When to Replace Your Inhaler

Check how many puffs (medicine) your inhaler contains. Contact your doctor before your inhaler runs out of medicine.

DPI (Dry Powder Inhaler)

The medicine in a DPI is a powder instead of a mist or spray.

Steps for Using Your Dry Powder Inhaler

Follow the instructions for your inhaler to get it ready to use. Some dry powder inhalers require you to place medicine inside the inhaler.

- Open the inhaler mouthpiece or remove the cap.
- Breathe out fully, away from the inhaler. Never exhale into your inhaler.
- Hold the inhaler as directed. Do not cover the vents. Place the mouthpiece between your lips.
- Inhale with a rapid, steady, deep breath through your mouth for as long as you can. Dry powder inhalers are breath activated, so breathe in quickly and deeply to get the right dose of medication.
- Hold your breath for 10 seconds or as long as you can. Breathe out slowly away from the inhaler.
- Make sure the counter has counted a dose. If your inhaler uses capsules, check the capsule to make sure it's empty.
- Repeat if your doctor has ordered more than one dose of medication.
- Brush teeth or rinse your mouth after using your inhaler. Do not swallow the water.
- After each use, wipe the mouthpiece with a dry tissue and close the mouthpiece or cap.

Breath-Actuated Inhalers

These inhalers do not require shaking or priming. The cap must be closed to prepare the inhaler before each inhalation.

- Do not open the cap until you are ready to take the inhalation.
- Hold the inhaler upright, being careful not to cover the vent. Open the cap.
- Breathe, all the way out away from the inhaler.
- Place mouthpiece in mouth, lips tight, forming a good seal.
- Inhale deeply to release the medication.
- Remove inhaler from mouth and hold your breath for 10 seconds.
- Exhale slowly away from inhaler.
- Close the cap to prepare for next inhalation.

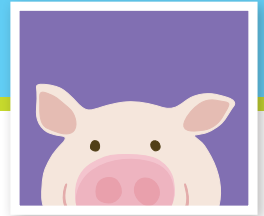
Redihaler



Dry Powder Inhalers




WHAT IS A NEBULIZER?



A nebulizer uses a mist to get medicine to the lungs.

Steps for Use of Nebulizer

- Wash your hands.
- Put the nebulizer cup together.
- Attach tubing to the machine.
- Measure medication or open vial. Place it in the nebulizer cup.
- Sit down. Turn nebulizer on.
- For mouthpiece:
 - Breathe through your mouth, holding mouthpiece between lips.
 - Breathe in slowly and deeply. Hold your breath for two seconds.
 - Breathe out slowly.
- For mask:
 - Connect mask to the top of the nebulizer cup. Place mask firmly onto face.
- If you become dizzy or shaky or if your heart beat goes up a lot, stop and rest for 5 – 10 minutes. Start your treatment again, but breathe more slowly. Call your doctor if these symptoms occur often during your treatments.
- If the nebulizer does not seem to be working:
 - Take off the tubing. Check that air is coming out of the machine when it is turned on.
 - If there is air flow, change the nebulizer cup and tubing.
- A treatment takes about 10 minutes.

 With correct technique, MDI with spacer is just as effective as a nebulizer. And it's portable.



Instructions for Cleaning Nebulizer Parts

Clean your nebulizer to get rid of germs and to keep it from clogging up. (See instructions that come with your machine.)

Nebulizer Cleaning Method 1

- Nebulizer cup, mouthpiece, T-piece, mask (all the parts that get wet during the treatment) need to be washed.

Do not wash tubing.

- After each use, rinse parts with warm running water for 30 seconds. Shake off excess water. Let air dry on a clean paper or towel.
- Every day: Wash with mild dishwashing soap and warm water. Rinse with strong stream of water for 30 seconds. Shake off excess water. Air dry on a clean paper or towel.
- Once or twice a week, disinfect (make germ free) your nebulizer. After cleaning, put all washed parts in a solution of 1-part vinegar and 2 parts distilled water. Soak for 30 minutes. Rinse under warm running water for 1 minute.
- Shake off extra water. Air dry on a clean paper or towel.
- Store in a plastic bag or covered container.

Note: Clean and disinfect at least daily when you have an infection or cold.

- Nebulizer machine

Never put compressor (air machine) in water. Clean the surface with a damp cloth as needed. Change or clean the filter as suggested by the manufacturer.

References:

American Lung Association
Global Strategy for Asthma Management and Prevention (GINA)
National Heart, Lung and Blood Institute-Guidelines for the diagnosis and management of Asthma (EPR 3)
Courtesy of Phillips Respironics

ASTHMA ACTION PLAN, YOUR HOME MANAGEMENT PLAN

An asthma action plan is a guide to help you take care of your asthma. It tells you:

- **What** medicines to take
- **When** to take them
- **How** much to take
- **When** to get help

The asthma action plan is based on your symptoms.

- If you are in the **“green zone,”** you are doing well. Your asthma action plan will guide you and keep you breathing well.
- If your symptoms show you are in the **“yellow zone,”** use caution. You have symptoms. You are not able to do some of your usual activities. Take your Quick Reliever medicine. Your Asthma Action Plan will help you move back to the green zone and feel better.
- If you are in the **“red zone”** or **“danger zone,”** **This is a medical alert!** Your asthma action plan will tell you what medicine to take, when to get help, go to the hospital or call 911!

Once you have your Asthma Action Plan, share it with others close to you, including family, friends, teachers and co-workers. They can help you if you have an asthma flare-up



IS YOUR ASTHMA OUT OF CONTROL?

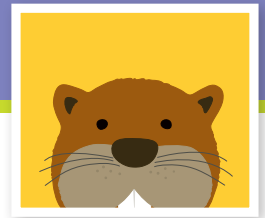
Your asthma is out of control if:

- your symptoms show that you are in the yellow or red zones on your asthma action plan.
- you are having warning signs or are having an asthma episode.
- you use a rescue inhaler **more than two** times a week.
- you awaken at night with asthma symptoms **more than two** times a month.
- you use **more than two** canisters a year of rescue medication.
- you miss too many days of work or school because of asthma.
- you cannot do physical activities because of asthma.
- you have to go to an emergency department or hospital due to asthma.

Follow Action plan as directed by your doctor.

| Severity Classification | Triggers | Exercise | | | | | | | | | | | | |
|--|---|---|------------------|-----------------|---|-----------------------------------|-------------------|---|-----------------------------|-------------------|--|---------|-------------------|--|
| <input type="checkbox"/> Intermittent <input type="checkbox"/> Moderate Persistent <input type="checkbox"/> Mild Persistent <input type="checkbox"/> Severe Persistent | <input type="checkbox"/> Colds <input type="checkbox"/> Smoke <input type="checkbox"/> Weather <input type="checkbox"/> Exercise <input type="checkbox"/> Dust <input type="checkbox"/> Air Pollution <input type="checkbox"/> Animals <input type="checkbox"/> Food <input type="checkbox"/> Other | 1. Pre-medication (how much and when) _____ 2. Exercise modifications _____ | | | | | | | | | | | | |
| Green Zone: Doing Well Peak Flow Meter Personal Best = _____ | | | | | | | | | | | | | | |
| Symptoms <input type="checkbox"/> Breathing is good <input type="checkbox"/> No cough or wheeze <input type="checkbox"/> Can work and play <input type="checkbox"/> Sleeps well at night | Control Medications: <table border="1"> <thead> <tr> <th>Medicine</th> <th>How Much to Take</th> <th>When to Take It</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | Medicine | How Much to Take | When to Take It | | | | Peak Flow Meter More than 80% of personal best or _____ LPM | | | | | | |
| Medicine | How Much to Take | When to Take It | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Yellow Zone: Getting Worse Contact physician if using quick relief more than 2 times per week. | | | | | | | | | | | | | | |
| Symptoms <input type="checkbox"/> Some problems breathing <input type="checkbox"/> Cough, wheeze, or chest tight <input type="checkbox"/> Problems working or playing <input type="checkbox"/> Wake at night | Continue control medicines and add: <table border="1"> <thead> <tr> <th>Medicine</th> <th>How Much to Take</th> <th>When to Take It</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Albuterol Inhalation</td> <td>2-8 puffs (2 Sma/Foris) 1 aerosol</td> <td>every 4 hours</td> </tr> <tr> <td><input type="checkbox"/> Albuterol MDI</td> <td>90 mcg per puff - 2-4 puffs</td> <td>every 4 hours</td> </tr> </tbody> </table> | Medicine | How Much to Take | When to Take It | <input type="checkbox"/> Albuterol Inhalation | 2-8 puffs (2 Sma/Foris) 1 aerosol | every 4 hours | <input type="checkbox"/> Albuterol MDI | 90 mcg per puff - 2-4 puffs | every 4 hours | Peak Flow Meter Between 50% and 80% of personal best or _____ to _____ LPM | | | |
| Medicine | How Much to Take | When to Take It | | | | | | | | | | | | |
| <input type="checkbox"/> Albuterol Inhalation | 2-8 puffs (2 Sma/Foris) 1 aerosol | every 4 hours | | | | | | | | | | | | |
| <input type="checkbox"/> Albuterol MDI | 90 mcg per puff - 2-4 puffs | every 4 hours | | | | | | | | | | | | |
| If your symptoms (and peak flow, if used) return to Green Zone after one hour of the quick-relief treatment, THEN <input type="checkbox"/> Take quick-relief medication every 4 hours for 1-2 days <input type="checkbox"/> Change your long-term control medicine by _____ <input type="checkbox"/> Contact your physician for follow-up care | | | | | | | | | | | | | | |
| If your symptoms (and peak flow, if used) DO NOT return to Green Zone after one hour of the quick-relief treatment, THEN <input type="checkbox"/> Take quick-relief treatment again <input type="checkbox"/> Change your long-term control medicine by _____ <input type="checkbox"/> Call your physician/healthcare provider within _____ hours of modifying your medication routine | | | | | | | | | | | | | | |
| Red Zone: Medical Alert Ambulance/Emergency Phone Number: _____ | | | | | | | | | | | | | | |
| Symptoms <input type="checkbox"/> Lots of problems breathing <input type="checkbox"/> Cannot work or play <input type="checkbox"/> Getting worse instead of better <input type="checkbox"/> Medicine is not helping | Continue control medicines and add: <table border="1"> <thead> <tr> <th>Medicine</th> <th>How Much to Take</th> <th>When to Take It</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Albuterol Inhalation</td> <td>6-8 puffs (3 Sma/Foris) 1 aerosol</td> <td>every _____ hours</td> </tr> <tr> <td><input type="checkbox"/> Albuterol MDI</td> <td>90 mcg per puff - 4 puffs</td> <td>every _____ hours</td> </tr> <tr> <td><input type="checkbox"/> Prednisone/Prednisolone</td> <td>mg oral</td> <td>every _____ hours</td> </tr> </tbody> </table> | Medicine | How Much to Take | When to Take It | <input type="checkbox"/> Albuterol Inhalation | 6-8 puffs (3 Sma/Foris) 1 aerosol | every _____ hours | <input type="checkbox"/> Albuterol MDI | 90 mcg per puff - 4 puffs | every _____ hours | <input type="checkbox"/> Prednisone/Prednisolone | mg oral | every _____ hours | Peak Flow Meter Less than 50% of personal best or _____ to _____ LPM |
| Medicine | How Much to Take | When to Take It | | | | | | | | | | | | |
| <input type="checkbox"/> Albuterol Inhalation | 6-8 puffs (3 Sma/Foris) 1 aerosol | every _____ hours | | | | | | | | | | | | |
| <input type="checkbox"/> Albuterol MDI | 90 mcg per puff - 4 puffs | every _____ hours | | | | | | | | | | | | |
| <input type="checkbox"/> Prednisone/Prednisolone | mg oral | every _____ hours | | | | | | | | | | | | |
| Go to the hospital or call for an ambulance if: <input type="checkbox"/> Not in the red zone after 15 minutes <input type="checkbox"/> You have not been able to reach your physician/healthcare provider for help. | | | | | | | | | | | | | | |
| Call an ambulance immediately if the following danger signs are present: <input type="checkbox"/> Trouble walking/talking due to shortness of breath <input type="checkbox"/> Lips or fingernails are blue | | | | | | | | | | | | | | |
| Plan reviewed and copy given to patient Date: _____ Parent initials: _____ Plan authorized by: _____ FOLLOW-UP CARE Date: _____ Time: _____ Provider name: _____ Phone #: _____ | | | | | | | | | | | | | | |
| <p>Advocate Children's Hospital ASTHMA ACTION PLAN PEDIATRICS</p> | | Patient Name: _____ MR Number: _____ Patient Number: _____ OR Affix Patient Label | | | | | | | | | | | | |

WHAT TO DO DURING AN ASTHMA EPISODE



The best time to plan for an asthma episode is before it happens.

When an asthma episode occurs, you should:

- Remain calm. Try to breathe slow and deep.
- Follow your asthma action plan.
- Tell someone you are having asthma symptoms. Get help if you need it. Do not be alone.

In an emergency, call 911.

TAKING CARE OF YOUR ASTHMA AT WORK OR SCHOOL

Asthma and Work or School



- Tell staff your child has asthma.
- Meet with your child's teacher, office staff, physical education teacher, coaches and school nurse.
- Give school a list of your medicines and a copy of the asthma action plan.
- Always have an inhaler and a spacer at school.
- Help the staff make your child's school room as trigger free as possible.
- Teach your child about asthma triggers and symptoms and what to do for an asthma episode.

You can go to school or work if:



- You have a stuffy nose but no wheezing.
- You have a little wheezing that goes away after taking medicine.
- You can do daily activities.
- You can breathe easily.

You should stay home from work or school if:



- You have an infection, sore throat or swollen, painful neck glands.
- You have a fever over 101 degrees.
- Wheezing or coughing still bothers you one hour after you take your medicines.
- You feel weak or so tired that it makes it hard to take part in daily activities.
- You have a hard time breathing.

IMPORTANT TIPS TO REMEMBER

It is important to remember to:

Follow up regularly with your primary doctor or pulmonologist.

Give them information about:

- your symptoms; how you're feeling.
- how often you take your quick-reliever medicine.
- how you take your medicines. Bring your inhaler and spacer to each visit.
- how you are controlling and caring for your asthma.

GLOSSARY | Asthma Words You May Hear

Airways: tubes that carry air in and out of the lungs.

Acute: something that can happen fast.

Allergen: anything that causes an allergy such as dust or mold.

Allergy: when something you eat or something in your environment makes you have a reaction.

Allergist: a doctor who sees patients with asthma and allergies.

Breath-Actuated Inhaler: inhalers that deliver medication just by taking a breath.

Bronchospasm: narrowing of the airways

Chronic: a disease that doesn't go away. Asthma is a chronic disease.

Controller medicines: help reduce the swelling in your airways.

Dry Powder Inhaler (DPI): used to give medicine in a powder form instead of a mist or spray.

Dust Mites: tiny bugs that cannot be seen. They live in bedding, couches, carpet, stuffed toys and old clothes.

E-cigarettes: electronic cigarettes.

Immunomodulators: medicines used to treat both allergies and asthma given by injection.

Inflamed: swollen, over-sensitive airways.

JUULS: a type of electronic cigarette that is the size of a USB drive.

Nebulizer: used to give medicine in a mist form.

Ask questions

- Write down questions before your appointment and bring them with you.

Plan how to control your asthma

- Decide and agree on an asthma home treatment plan.
- Update your plan as needed.

Follow directions

- Take your medicine as your health care provider told you. Do not skip doses.

Dose Inhaler (MDI): medication in a canister that should always be used with a spacer. Also called pump or puffer.

Mucous: a thick, slippery liquid that sometimes blocks your airways.

Peak Flow Meter: a hand-held device that measures the airflow in your lungs.

Pollen: powder-like material in most plants.

Pollution: things in the air like smoke and dirt that can bother your airways and cause you to have an asthma episode.

Pretreat: when you take medicines before you play sports to keep your asthma under control.

Pulmonologist: a doctor who sees patients with diseases of the lungs.

Quick Reliever/Rescue medications: medicine that acts quickly to open up the airways.

Spacer/Holding Chamber: something that is used with a metered-dose inhaler (MDI) that gives more medicine to your lungs.

Spirometer: an instrument used to measure the amount and speed of air going into and coming out of the lungs.

Trigger: things that bother the lungs and cause asthma symptoms to occur, like cold weather, dust, pollen and smoke.

Wheezing: a whistling noise that may be heard when your airways are narrowing or feel tight.

ACTIVITY: How it looks when I'm having an asthma attack.

My warning signs

Draw a picture of yourself HERE ↓

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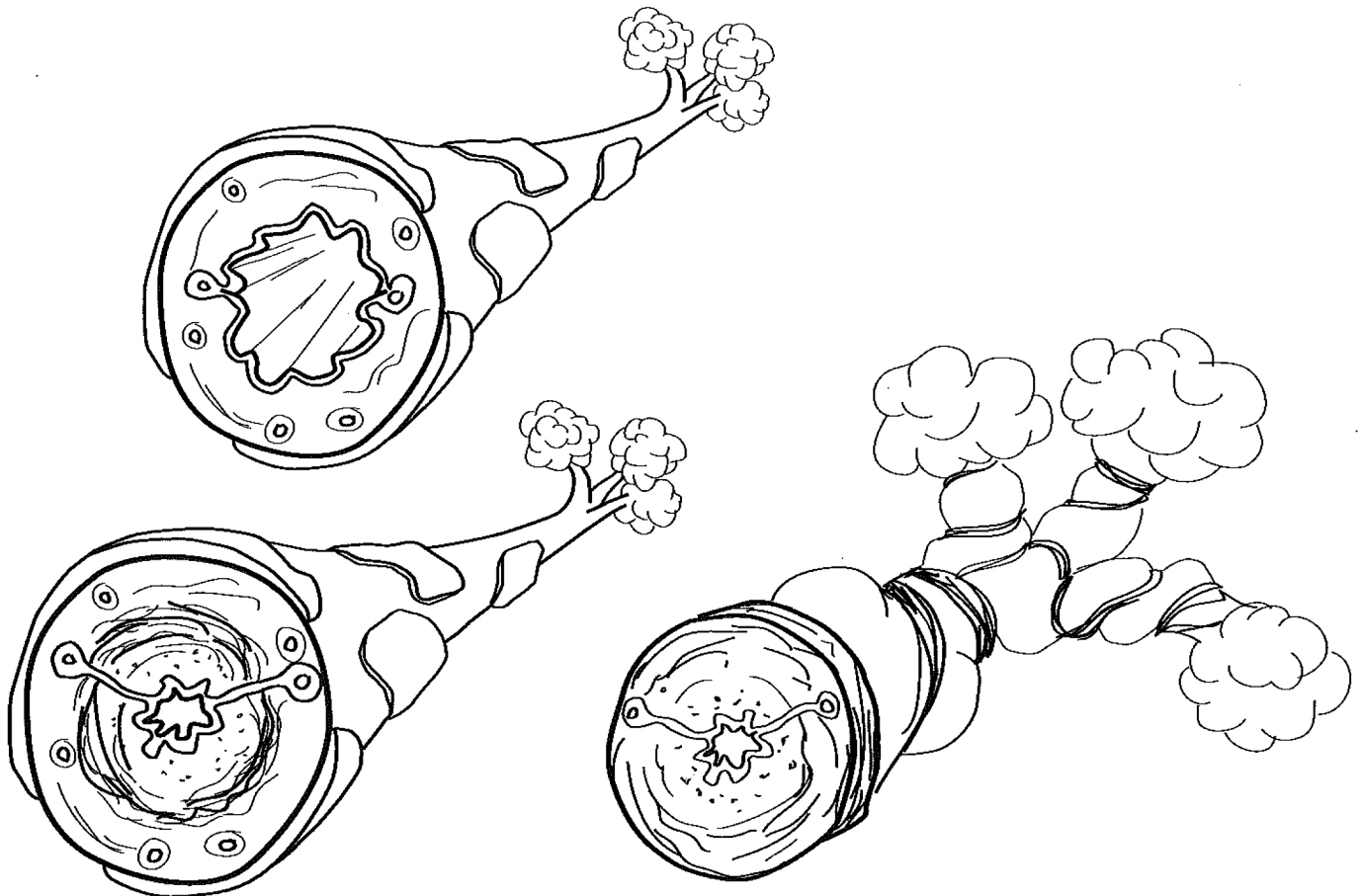
Asthma Attacks

During an asthma attack the airways become narrowed from:

- **Increased swelling**
- **Tightening of the muscles around the airways**
- **Mucous or phlegm**

As the airways swell up, the muscles on the outside of the airways tighten, causing them to narrow. When they narrow, air cannot move through the airways and it becomes hard to breathe air in and out. The lungs make more thick, gooey mucous that blocks the airways. In an asthma attack you may cough constantly, start wheezing or feel that it is hard to breathe.

Color the three different airways and circle the one that is best!!



ASTHMA MYTHS AND FACTS



MYTH: Asthma can be cured

✓ **FACT:** *There is no cure for asthma, but with regular treatment, it can be controlled.*

MYTH: People with asthma shouldn't exercise.

✓ **FACT:** *Exercise is important for healthy living, especially those with asthma. Regular exercise helps improve lung function.*

MYTH: Allergies have nothing to do with asthma.

✓ **FACT:** *Allergies increase lung inflammation and can trigger symptoms. When allergies are effectively treated, asthma symptoms often improve.*

MYTH: Children can outgrow asthma.

✓ **FACT:** *Asthma is not a disease you outgrow. Symptoms may improve or resolve in adolescence or adulthood, but the disease never goes away.*

MYTH: Asthma attacks are always sudden and severe.

✓ **FACT:** *Most asthma attacks develop slowly with a gradual increase in symptoms. Recognizing symptoms early can help address symptoms before they get severe.*

References

American Lung Association

Global Strategy for Asthma Management and Prevention (GINA)

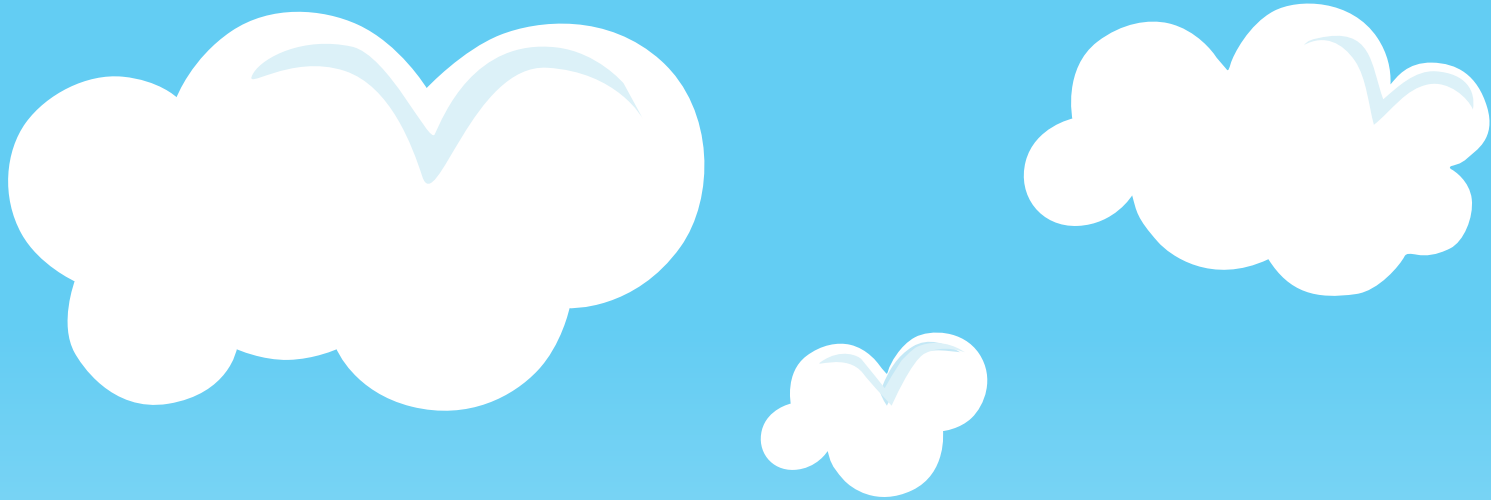
National Heart, Lung and Blood Institute-
Guidelines for the diagnosis and management
of Asthma (EPR 3)

Resources

Chicago Asthma Consortium
chicagoasthma.org

Asthma and Allergy Foundation of America | AAFA
<https://www.aafa.org>

KidsHealth.org | Nemours
<https://kidshealth.org/en/parents/asthma-basics.html>



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