



ASTHMA CAREGIVER'S HANDBOOK

ACKNOWLEDGEMENTS

Special thanks to Dr. Anna Volerman from the University of Chicago for her contributions.
Funding for the development of this resource was provided by the Illinois Department of Public Health.

For additional information about this Handbook,
please contact Erica Salem at esalem@resphealth.org

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A MESSAGE FROM RESPIRATORY HEALTH ASSOCIATION

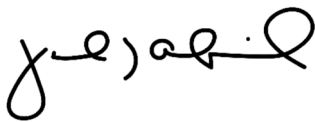
Dear Caregiver,

Asthma is a common disease that affects nearly 5 million children in the United States. Children with well-managed asthma can live full and healthy lives. But if your child's asthma is not well-controlled, they may need to go to the emergency room or be hospitalized. That can be scary for children – who often don't understand what is happening – and for you as a parent or caregiver.

The good news is you can help control your child's asthma. The Asthma Caregiver's Handbook is designed to help you in that effort. The Handbook combines medical and non-medical information from expert sources ranging from doctors to asthma educators and other caregivers.

The Handbook answers questions you may currently have and addresses issues that may come up in the future as your child grows up. We hope you find it helpful as you embark on your caregiver journey.

Yours in health,

A handwritten signature in black ink, appearing to read "Joel J. Africk". The signature is fluid and cursive, with a large initial "J" and a distinct "A" at the end.

Joel J. Africk, RHA President and CEO

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01

INTRODUCTION

BASIC INFORMATION ABOUT ASTHMA

*What is Asthma? * Causes and Types of Asthma * How is Asthma Diagnosed * Childhood Asthma in the United States*

THE RESPIRATORY SYSTEM AND ASTHMA

What Happens During an Asthma Episode

BASIC INFORMATION ABOUT CHILDHOOD ASTHMA

WHAT IS ASTHMA?

Asthma is a common, long-term (chronic) illness that affects the lungs and airways. An airway is the passage that air moves through to reach a person's lungs. Children with asthma have sensitive airways that inflame and narrow in response to certain triggers. Examples of triggers are pollen, dust mites, pets, smoke, pollution, and exercise. Information about asthma triggers and how to manage them is provided later in this handbook.

During an asthma episode, your child may have trouble breathing. They may experience wheezing, chest tightness, or coughing. Asthma episodes (also called asthma attacks or exacerbations) can be mild, moderate, or severe and sometimes life-threatening. Asthma can be controlled with proper medication and education.

CAUSES AND TYPES OF ASTHMA

The exact cause of asthma is not known and there is often no single cause of asthma. Asthma often begins when your child is young and their immune system is still developing. The most common causes of asthma are identified below. A list of different types of asthma is presented in the chart on the following page. Knowing which type of asthma your child has can help reduce triggers and ensure the right treatment.

- Family history: Asthma has a genetic component and can run in families. Children who have a parent or sibling with asthma, allergies, and/or eczema are more likely to develop asthma.
- Exposure to allergens such as dust, air pollution, and second-hand smoke.
- Respiratory infections such as the flu, bronchitis, sinusitis, and respiratory syncytial virus (RSV).

TYPES OF ASTHMA

VIRAL-INDUCED ASTHMA

Viral asthma is an episode caused by a viral infection and are amongst the most common cause of flare-ups in children. The best way to avoid a viral episode is to take precautions to avoid infections, e.g. flu shot, hand-washing.

ALLERGIC ASTHMA

Allergic asthma is asthma triggered by allergens like pollen, pets, and dust mites. About 80% of people with asthma have allergies.

SEASONAL ASTHMA

Some people have asthma that only flares up at certain times of the year, such as during hay fever season or when the weather gets cold.

COUGH-VARIANT ASTHMA

With cough-variant asthma, a dry cough is the only symptom. People don't have "traditional" asthma symptoms, like shortness of breath or wheezing.

EXERCISE-INDUCED ASTHMA

Some people may only have asthma symptoms during exercise or physical exertion. This is called exercise-induced asthma or exercise-induced bronchospasm.

NIGHTTIME ASTHMA

For some, asthma gets worse at night. Known as nocturnal asthma, the best way to stop an asthma cough at night is to take medications as prescribed, sleep with head elevated, and use an air purifier to reduce allergens in the air.

HOW IS ASTHMA DIAGNOSED?

There is no single test to determine if your child has asthma. Your child's healthcare provider will conduct several assessments to help make a diagnosis.

Medical History

The first step to learning if your child has asthma is to talk to a doctor about their health. The doctor will ask you and your child about their symptoms. They may also ask about your child's exposure to dust, secondhand smoke, and other substances that have been linked to asthma. The doctor may also ask about other relatives who have asthma or allergies.

Physical Examination

During a physical examination, the doctor will look at your child's nose, throat, and upper airways. The doctor will use a stethoscope to listen to your child's breathing. They will typically listen for signs of wheezing, a common sign of asthma in children.



Spirometry (for children 5 years and older)

Spirometry is a breathing test that can help diagnose asthma. A spirometer is an instrument that measures the amount of air that a person can breathe in and out of their lungs. A person must be able to follow directions to complete the test, so the test is typically done for children 5 years of age and older.

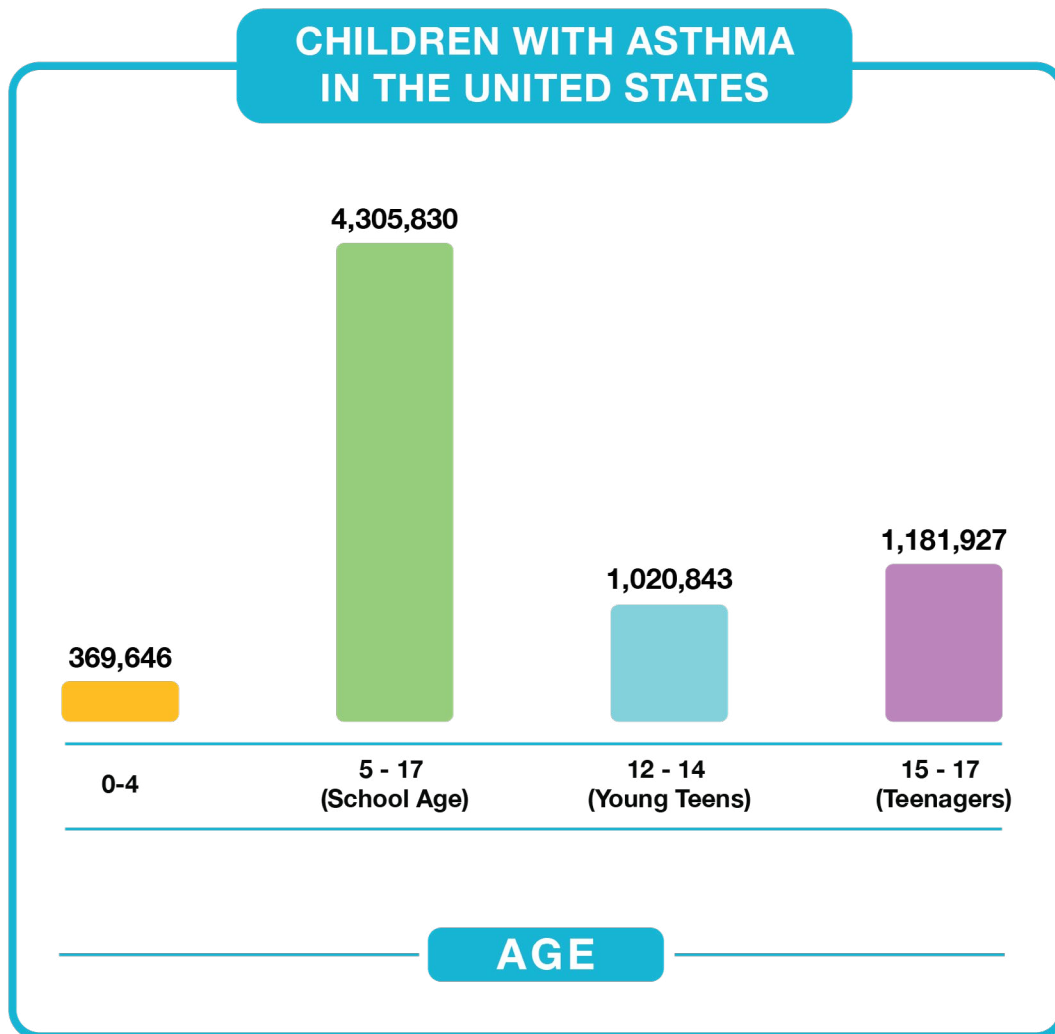
During the test, your child will take a deep breath and then blow into a hollow tube as hard and quickly as possible. The tube is attached to the spirometer that measures the amount of air your child can hold in their lungs. Your child will do this process a few times. The results will determine whether anything is blocking their airways.

Sometimes, the doctor might ask your child to inhale asthma medicine to open their air passages. They will then repeat the same steps as above. If your child's breathing gets better after taking the medicine, that could mean they have asthma.

Asthma is difficult to diagnose in young children for a few reasons. First, young children may be unable to clearly communicate their symptoms. There are also similarities between asthma symptoms and those of other respiratory conditions. Finally some testing cannot be performed on young children.

CHILDHOOD ASTHMA IN THE UNITED STATES

If your child has asthma, they are not alone. As of 2021, 20 million adults and more than 4.6 million children (17 years of age or younger) were living with asthma.¹ Nearly 40% of children had experienced an asthma episode in the past year.



With the proper supports in place, asthma is a largely manageable condition. However, more than 270,330 children with asthma (2.69%) visit a hospital emergency room annually and 94,560 (0.06%) are hospitalized for their asthma. In 2021, 145 children with asthma died due to their condition.

¹U.S. Centers for Disease Control and Prevention. https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm

THE RESPIRATORY SYSTEM AND ASTHMA

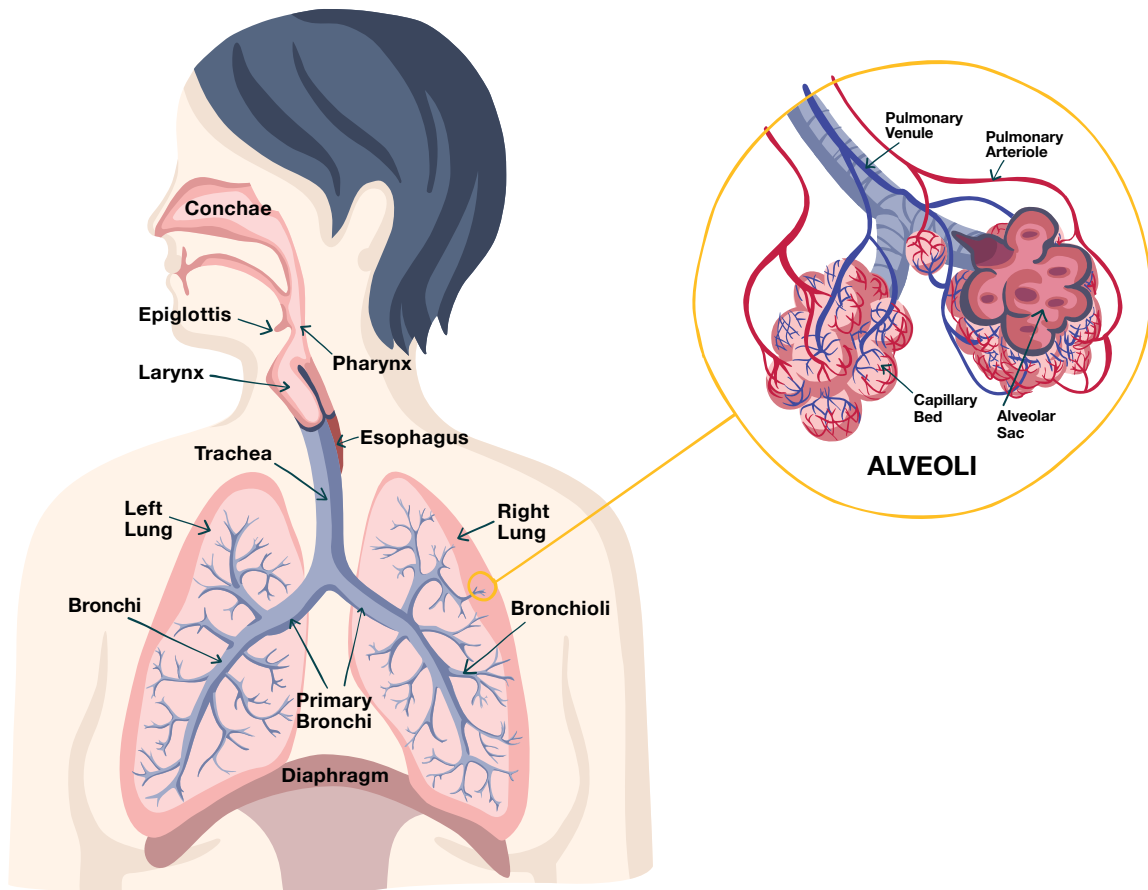
UNDERSTANDING ASTHMA

To understand how asthma affects the body, it is helpful to understand the respiratory system.

The respiratory system takes up oxygen from the air we breathe and expels the unwanted carbon dioxide. The main organ of the respiratory system is the lungs.

Other parts of the respiratory system include the nose, the trachea, and the breathing muscles (the diaphragm and the intercostal muscles).

RESPIRATORY SYSTEM

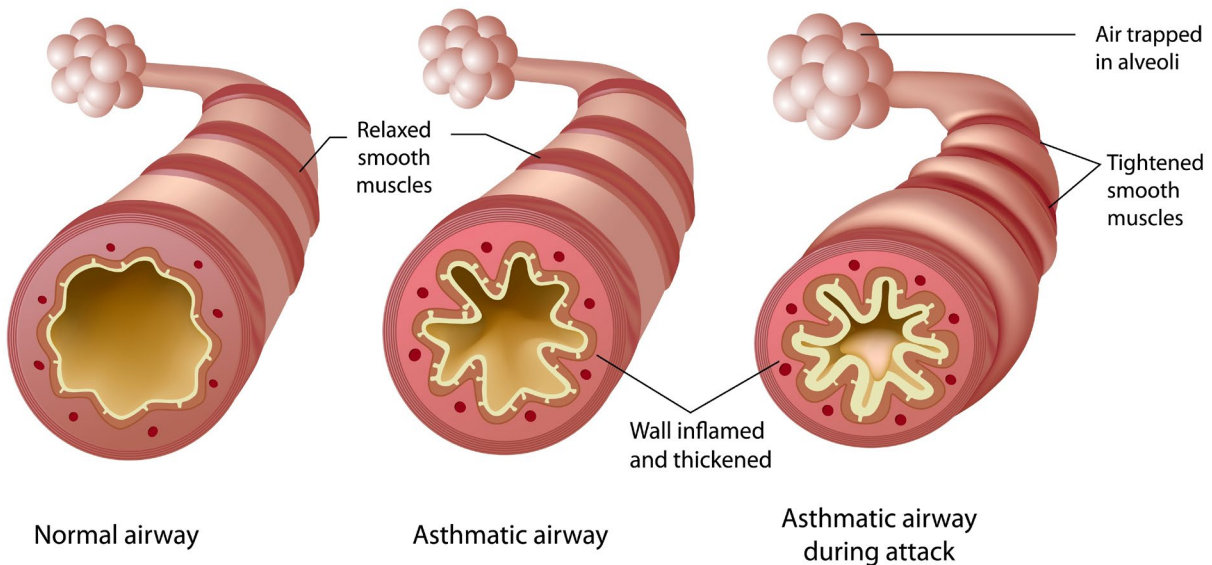
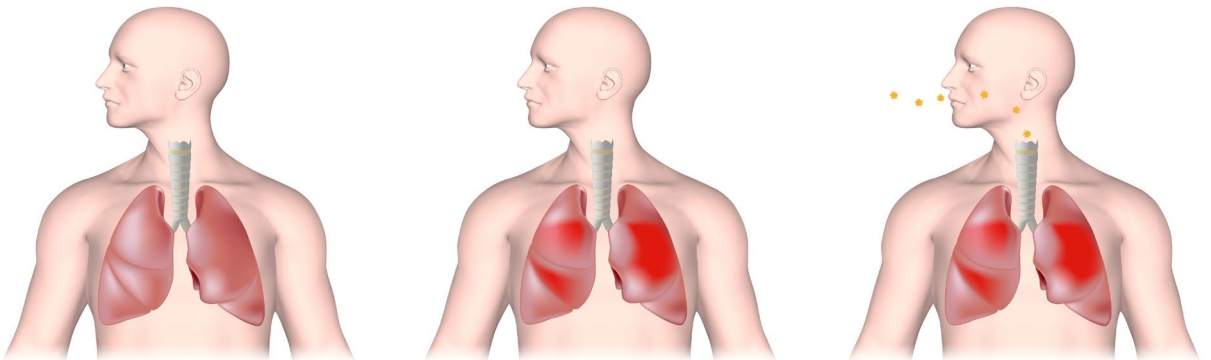


WHAT HAPPENS DURING AN ASTHMA EPISODE

Asthma is a disease that affects the airways in the lungs. The bronchioles are the smallest airways that branch off from the bronchi and carry air into the lungs.

During an asthma episode, as the air moves through the lungs, the airways become smaller. The sides of the lung's airways can swell (get thicker), and the airway can fill with mucus. Muscles that are present in the airways start to contract (squeeze down) causing the narrowing of the airways, which makes it difficult for the air to be exhaled from (move out of) the lungs.

PATHOLOGY OF ASTHMA





02

MANAGING YOUR CHILD'S ASTHMA

MANAGING ASTHMA SYMPTOMS

Common Warning Signs and Action Steps to Take Based On Level of Severity

TALKING WITH YOUR CHILD'S HEALTHCARE PROVIDER

*Before Your Child's Appointment * Possible Questions for Your Child's Healthcare Provider*

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MANAGING ASTHMA SYMPTOMS

People with asthma have sensitive airways that swell and narrow when exposed to triggers. Asthma affects each person differently. Almost everyone with asthma feels some warning signs and symptoms before an asthma episode or when the episode begins. Knowing potential signs and symptoms can help you and your child take the right steps to prevent an asthma episode from getting worse.

COMMON WARNING SIGNS AND ACTION STEPS TO TAKE BASED ON THEIR LEVEL OF SEVERITY

WARNING SIGNS	HOW TO RESPOND
LEVEL 1 <ul style="list-style-type: none">• Shortness of breath• Cough• Wheezing• Tight feeling in chest• Feeling tired or weak• Watery eyes• Dark Circles under eyes• Stomachache	<ul style="list-style-type: none">• Move child away from any triggers or, if necessary, try to leave the situation.• Administer quick-relief medication to relieve symptoms. This medicine should work within 15 minutes.• Watch your child's warning signs and make sure symptoms do not get worse.
LEVEL 2 <ul style="list-style-type: none">• Medications are not working or the effects do not last• Increase in coughing or tightness in chest• Inability to do usual activities• Feeling tired or weak	<ul style="list-style-type: none">• Take the same steps as with Level 1: move away from triggers, take quick-relief medication, and monitor warning signs.• If symptoms worsen or are not better within 15 minutes of using medication, follow child's asthma action plan or repeat medication, and consider calling 911.
LEVEL 3 <ul style="list-style-type: none">• Severe shortness of breath• Difficulty walking or talking (unable to finish a sentence)• Retractions (sucking in skin at ribs and neck)• Pale, blue, or gray lips and nail beds	<ul style="list-style-type: none">• Call 911 immediately. Any ONE of these symptoms requires immediate medical help.• If you have not already, administer quick-relief medication.

TALKING WITH YOUR CHILD'S HEALTHCARE PROVIDER

As a parent or caregiver of a child with respiratory symptoms or an asthma diagnosis, it is helpful to go to their medical visits as prepared as possible. Preparation includes listing information about your child's health that you can share with the provider and knowing which questions to ask.



BEFORE YOUR CHILD'S APPOINTMENT

- Prepare a list of symptoms your child has had, including the time of day, location, and activities when the symptoms began. It is also important to note when symptoms do not occur.
- Create a list of all medications your child takes or bring all the medicines with you. Medicines taken for other conditions may affect their asthma medication.
- Think about questions the provider may ask you, e.g. Do you have family members who have asthma or allergies?
- Write down questions that you and your child have.

POSSIBLE QUESTIONS FOR YOUR CHILD'S HEALTHCARE PROVIDER

1. Which medicines should my child take to manage their asthma?

There are two common types of medicine for asthma:

- Quick-relief (sometimes termed rescue) medicine: used to treat symptoms or sometimes taken before exercise or exposure to known triggers.
- Controller medicine: used to prevent asthma flare-ups; typically used every day, even when your child does not have any symptoms.

Your child's healthcare provider may also prescribe that these medicines be taken together. This is known as SMART therapy.

Source: National Heart, Lung, Blood, Institute, Learn More Breathe Better[®] Program.

2. Can you give me a written Asthma Action Plan for my child?

An Asthma Action Plan is a chart or written set of directions that tells you and other adults what to do if your child has asthma symptoms, depending on their severity. Your action plan also should tell you or your child what to do when you do NOT feel any symptoms (i.e., preventive care).

The plan will summarize:

- Steps to take daily to help control your child's asthma
- Actions to take if your child's asthma symptoms get worse
- Ways to help your child during a severe asthma episode

Share a copy of the completed Asthma Action Plan with your child's school nurse, teachers, and anyone who regularly spends time with your child (for example grandparents, coaches, and after-school teachers). An Asthma Action Plan is included in the Appendices.

3. What can I do at home to help minimize my child's asthma symptoms?

Some specific questions related to the home environment:

- Can we have a family pet? In the house or outside? How about in my child's bedroom?
- Is it okay for anyone to smoke in the house when my child is not in the house?
- Can I vacuum and clean the house when my child is home?
- What type of furniture is best to have?
- Do I need to cover my child's bed or pillows?
- Can my child have stuffed animals?

4. Does my child need to be tested for allergies?

Allergy testing might show you if there are allergens that could make your child's asthma worse and that may be good for your child to avoid.

5. Does my child need to see a pulmonologist?

If your child is taking their medications and avoiding triggers, and their asthma still is not under control, their doctor may refer you to a pulmonologist, a doctor who specializes in the respiratory system.

6. How will I know when the inhalers are getting empty? Should my child use a spacer?

Most inhalers have a dose counter that tells you how many puffs are left in the inhaler before it runs out. A good rule of thumb is to get a refill when the inhaler has about one week's supply remaining.

7. Can you show my child the correct way to use their inhaler?

Your child's healthcare provider should be able to demonstrate the correct way to use an inhaler. They may also observe your child (or you helping your child) use their inhaler to confirm they are using it correctly. You can also ask the pharmacist to show you the correct way to use an inhaler when picking up the medication from the pharmacy.

8. Can my child play sports or exercise?

When your child's asthma is under control, playing sports and exercising should not cause problems. Ask your child's healthcare provider before they start a new physical activity. If your child does have an asthma episode during or right after physical activity, let the doctor know. They may recommend changes to your child's medication and Asthma Action Plan.

9. How often do you want to see my child for their asthma?

A child with asthma should see a clinician every one to six months. If your child is doing well and their asthma is under control, two visits a year are usually recommended so the doctor can check on your child's condition and medications. If your child is experiencing asthma symptoms or not able to keep their asthma controlled, more frequent visits are typically needed so you can work together to get it controlled.



Sources: Information for this section was compiled from resources made available by Blue Cross Blue Shield, [MyAsthmaTeam.com](https://www.MyAsthmaTeam.com), Mount Sinai Hospital, and the National Heart, Lung, and Blood Institute's Learn More Breathe Better® program.

YOUR CHILD'S ASTHMA ACTION PLAN

WHAT IS AN ASTHMA ACTION PLAN?

An Asthma Action Plan is a written plan that helps you manage your child's asthma. The plan takes the guesswork out of asthma management. It includes instructions for what to do when your child is feeling well and the steps to take when your child has asthma symptoms. It also documents your child's asthma triggers and medicines needed every day and/or during an asthma emergency.

The Asthma Action Plan is based on color zones – Green, Yellow, and Red. These color zones are determined by the person's symptoms. Each color zone has medicine and action steps to take.

GREEN ZONE: No coughing, wheezing, chest tightness, or shortness of breath. Can do usual activities.

DOING WELL

YELLOW ZONE: One or more of these symptoms: coughing, wheezing, chest tightness, trouble breathing, waking up at night due to asthma. Can only do some, but not all usual activities.

SOME SYMPTOMS

RED ZONE: EMERGENCY! Very short of breath, or quick-relief medicines have not helped or symptoms are the same or worse after 24 hours in the Yellow Zone. Cannot do any of usual activities.

SEVERE SYMPTOMS - EMERGENCY!

HOW TO USE YOUR CHILD'S ASTHMA ACTION PLAN

Review your child's Asthma Action Plan with their healthcare provider. The Asthma Action Plan will be updated with each change in medications. As a caregiver of a child with asthma, it is important that you share a copy of the completed Asthma Action Plan with your child's daycare center or school. It should be on file and easily accessible to the staff so they can best care for your child. You should also keep a copy at home to support other caregivers who may spend time with your child.

MY ASTHMA ACTION PLAN!

EFFECTIVE DATE: ___/___/___

MY ASTHMA ACTION PLAN IS A GUIDE THAT HELPS ME AND MY ADULTS MANAGE MY ASTHMA SYMPTOMS AND RESPOND APPROPRIATELY TO ASTHMA EPISODES

MY NAME: _____ BIRTHDAY: ___/___/___

PARENT/ GUARDIAN: _____ PHONE: (___) ___-___

OTHER EMERGENCY CONTACT: _____ PHONE: (___) ___-___

DOCTOR: _____ PHONE: (___) ___-___ CAN YOU SELF-MEDICATE: Yes No




MY ASTHMA TRIGGERS: CHECK OFF THE ITEMS THAT YOU KNOW CAN TRIGGER YOUR ASTHMA:


<input type="checkbox"/> Cigarette smoke/ secondhand smoke	<input type="checkbox"/> Sudden temperature change	<input type="checkbox"/> Pests - rodents & cockroaches	<input type="checkbox"/> Strong odors, perfumes
<input type="checkbox"/> Respiratory illness	<input type="checkbox"/> Mold	<input type="checkbox"/> Pets - animal dander	<input type="checkbox"/> Cleaning products
<input type="checkbox"/> Dust mites, dust	<input type="checkbox"/> Ozone alert days	<input type="checkbox"/> Plants, flowers, cut grass, pollen	<input type="checkbox"/> Strong emotions
<input type="checkbox"/> Exercise	<input type="checkbox"/> Wood smoke		

FOODS: _____

OTHERS: _____


KNOW YOUR ZONES: WE USE THE TRAFFIC LIGHT SYSTEM TO HELP YOU USE YOUR ASTHMA MEDICATIONS AND KEEP TRACK OF YOUR SYMPTOMS.

	GREEN ZONE (GOOD): Represents your baseline or well-controlled asthma. No symptoms are present and the peak flow measurement is in a good range.		YELLOW ZONE (CAUTION): Indicates worsening asthma symptoms or peak flow measurements. This section outlines what actions to take when you experience mild to moderate asthma symptoms.		RED ZONE (DANGER): This zone indicates a severe asthma episodes or very poor peak flow readings. It provides guidance on what steps to take in the event of a severe asthma attack and when to seek emergency medical help.
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 **RESPIRATORY HEALTH ASSOCIATION**

RESPHEALTH.ORG
HEALTHY LUNGS AND CLEAN AIR FOR ALL

A copy of an Asthma Action Plan is included in the Appendices and can be downloaded from www.resphealth.org

GREEN ZONE	<p>I FEEL GREAT!</p> <p>IF YOU HAVE ALL OF THESE</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Breathing is good <input checked="" type="checkbox"/> No cough or wheeze <input checked="" type="checkbox"/> Slept through the night <input checked="" type="checkbox"/> Can work or play <p>PEAK FLOW ABOVE: _____</p>	<p>USE THESE MEDICATIONS EVERY DAY:</p> <p>NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY</p> <p>FOR ASTHMA WITH EXERCISE TAKE: _____ TIMES A DAY</p>
YELLOW ZONE	<p>I HAVE MILD SYMPTOMS</p> <p>IF YOU HAVE ANY OF THESE:</p> <ul style="list-style-type: none"> <input type="checkbox"/> First sign of a cold <input type="checkbox"/> Exposure to a known trigger <input type="checkbox"/> Cough <input type="checkbox"/> Mild wheeze <input type="checkbox"/> Tight chest <input type="checkbox"/> Coughing at night <p>AND/OR PEAK FLOW FROM _____ TO _____</p>	<p>CONTINUE MY EVERY DAY CONTROL MEDICINE (SAME AS GREEN ZONE) <input type="checkbox"/> Increase Dose</p> <p>NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY</p> <p>OR I TAKE A COMBINATION MEDICINE THAT PROVIDES BOTH QUICK-RELIEF AND CONTROL:</p> <p><input type="checkbox"/> Symbicort® <input type="checkbox"/> Dulera® (___ strength) <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> 1 or <input type="checkbox"/> 2 puffs, up to 4 times a day (up to 6 times a day, if older than 12 years old)</p>
RED ZONE	<p>MY ASTHMA IS GETTING WORSE FAST</p> <p>IF YOU ARE EXPERIENCING:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Persistent cough <input type="checkbox"/> Persistent wheeze <input type="checkbox"/> Fast breathing <input type="checkbox"/> Hard to breathe <p>AND/OR PEAK FLOW FROM _____ TO _____</p>	<p>I TAKE THESE MEDICATIONS & CALL MY DOCTOR:</p> <p><input type="checkbox"/> Albuterol® (Proair®, Ventolin®, Proventil®) _____ puffs, every 2 to 4 hours as needed for temporary relief of asthma symptoms</p> <p><input type="checkbox"/> Other Medicine _____</p> <p>SEE DOCTOR PROMPTLY (ADDITIONAL MEDICINE MAY BE NEEDED)</p> <p>AND CONTINUE MY EVERY DAY CONTROL MEDICINE <input type="checkbox"/> Increase Dose (SAME AS GREEN ZONE)</p> <p>NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY</p>
<p>CALL 911 OR GO TO THE NEAREST EMERGENCY ROOM IF YOU ARE EXPERIENCING:</p> <ul style="list-style-type: none"> <li style="width: 50%;"><input checked="" type="checkbox"/> Very hard or fast breathing <li style="width: 50%;"><input checked="" type="checkbox"/> Nose opens wide with breathing <li style="width: 50%;"><input checked="" type="checkbox"/> Chest is sucking in between ribs <li style="width: 50%;"><input checked="" type="checkbox"/> Lips or fingernails look blue <li style="width: 50%;"><input checked="" type="checkbox"/> Breathing so hard you can't walk or talk 		
 RESPIRATORY HEALTH ASSOCIATION		RESPHEALTH.ORG HEALTHY LUNGS AND CLEAN AIR FOR ALL

ASTHMA TREATMENT

Your child's asthma can be controlled by taking medication as prescribed by their doctor and by avoiding triggers that may cause asthma symptoms.

TYPES OF ASTHMA MEDICATION

There are two types of asthma medications: long-term control and quick relief. Both types can be delivered through either an inhaler or nebulizer.

Long-term asthma control medications

- Generally taken every day, even when not experiencing asthma symptoms,
- Keeps asthma under control by reducing swelling and extra mucus in the airways,
- Makes it less likely to have an asthma episode, and
- Comes in dry powder inhalers, metered dose inhalers, and pills.



Quick-relief medications

- Relieves the squeezing and tightness in the airways,
- Used as needed for rapid symptom relief during an asthma episode,
- Should always be available to your child,
- Should be used when your child feels the first signs of an asthma episode, and
- May be used before physical activity (even if no symptoms), if recommended by a healthcare provider.



SMART Therapy

The standard asthma treatment described above uses different inhalers for maintenance (control) and rescue (quick-relief) treatment. However, with SMART therapy, your child uses only one inhaler to control their asthma. SMART therapy refers to Single Maintenance and Reliever Therapy.² This single medication is used for both control and quick-relief. SMART therapy can help minimize the possible negative side effects of long-term steroid use. It can also decrease emergency department visits and hospital stays while also making it easier for your child to take medication consistently.³

SMART therapy is recommended for children with mild to severe persistent asthma.⁴ Quick-relief inhalers usually have only a bronchodilator (which acts to decrease the muscles squeezing around the airways), while maintenance medications contain anti-inflammatory inhaled corticosteroids (which act to decrease the thickness of the airways and the mucus in the airways).

However, with SMART therapy, the inhaler combines both an anti-inflammatory inhaled corticosteroid and an inhaled long-acting beta-2 agonist (LABA).⁵

Currently, you can find this medication combination in two inhalers:

- budesonide/formoterol (Symbicort®)
- mometasone/formoterol (Dulera®)

SMART therapy medication is taken in two doses daily, either together or one dose twice daily.

According to asthma guidelines, SMART therapy is recommended for children four years and older with mild to severe persistent asthma. It might also be an option for mild intermittent asthma on an as-needed basis.⁶ It's considered an easier treatment plan to follow than standard asthma therapy. Speak with your healthcare provider to see if SMART therapy is right for your child.

²<https://allergyasthmanetwork.org/news/asthma-smart-therapy/>

³Asthma Management Guidelines: <https://www.aafp.org/pubs/afp/issues/2021/1100/p446.html>

⁴Asthma Management Guidelines: <https://www.aafp.org/pubs/afp/issues/2021/1100/p446.html>

⁵<https://allergyasthmanetwork.org/news/asthma-smart-therapy/>

⁶Asthma Management Guidelines: <https://www.aafp.org/pubs/afp/issues/2021/1100/p446.html>

METHODS OF ADMINISTERING MEDICATION

There are different delivery methods to administer asthma medicine - metered dose inhaler, dry powder inhaler, pill, spacer/holding chamber, and nebulizer.

Metered Dose Inhaler (MDI)

A metered dose inhaler uses an aerosol canister to spray mists of medicine.

Steps to use a metered dose inhaler

1. Remove any candy, food, or gum from mouth.
2. Stand up straight.
3. Take the cap off the inhaler. Make sure to clean out any dust or fuzz so there is nothing inside.
4. Shake the inhaler for five seconds.
5. Away from the inhaler, take a deep breath in and breathe out slowly to empty the lungs completely.
6. Place the inhaler mouthpiece inside the mouth and seal the lips tightly around the mouthpiece.
7. Press down on the inhaler and at the same time take a quick breath in.
8. Hold breath for 10 seconds and then breathe out.
9. Repeat if directions say to do more than 1 puff.
10. When done with all puffs, if using a controller medicine, rinse the mouth with water and spit water.



Spacer or Holding Chamber

A spacer, or holding chamber, is an add-on device that should be used with metered dose inhalers only. It is a long tube that helps ensure the asthma medicine reaches your child's lungs slowly and effectively. It is best to use a spacer or holding chamber with their metered dose inhaler because it is hard to coordinate pushing down and breathing in all the medicine at the same time. A spacer is not used with inhaler types other than the metered dose inhaler.

Steps to use a metered dose inhaler with spacer/holding chamber

1. Remove any candy, food, or gum from the mouth.
2. Stand up straight.
3. Remove the caps of the inhaler and spacer and attach them together. Make sure to clean out any dust or fuzz in both.
4. Shake the inhaler and spacer for five seconds.
5. Away from the inhaler and spacer/holding chamber, take a deep breath in and breathe out slowly to empty the lungs completely.
6. Put the spacer in the mouth and seal the lips around the mouthpiece. If the spacer has a face mask, place the mask firmly on the face.
7. Press down on the inhaler and take a slow deep breath in.
8. Hold breath for 10 seconds and then breathe out.
9. If using a controller medicine, rinse your mouth with water and spit water out.



Children who cannot control their breathing (for example breathe in and hold their breath) should use a face mask along with the spacer and metered dose inhaler. Once they press on the inhaler, children using a face mask should take 6 breaths in and out with the face mask on their face to inhale all the medication.

More information about MDIs and spacers, including how to clean them, is included in the Appendices.

Care and Cleaning of a Metered Dose Inhaler and Spacer

- Clean your spacer and MDI each week to prevent the buildup of medicine and/or dust.
- To clean your inhaler, remove the medical canister from the L-shaped plastic tube. Rinse only the plastic pieces in warm water and let them dry overnight. Do not clean the canister.
- To clean your spacer, take it apart (per manufacturer's instructions) and wash each piece separately with warm, soapy water. Do not rinse. Let it air-dry.

Dry Powder Inhaler (DPI)

This type of inhaler delivers medicine in dry powder form.

Steps to use a dry powder inhaler

1. Remove candy, food, or gum from your mouth.
2. Stand up straight.
3. Hold the inhaler level to the floor.
4. Open the inhaler with the mouthpiece facing you.
5. Slide the lever away your child until you hear it click. This means the medicine has been released. Be careful not to tip the inhaler or slide the lever again; the medicine will fall out and it will be wasted.
6. Take a deep breath in and breathe out.
7. Place the inhaler in the mouth, seal lips tightly around it and take a quick, deep breath in.
8. Hold breath for 10 seconds, and then breathe out.
9. Rinse mouth with water and spit water out.



Nebulizer

Nebulizers are small air compressors used to change liquid medicine to mist that is easy to inhale through the mouthpiece of mask. Both long-term controller medicine and quick-relief medicine can be administered using a nebulizer. The medicine comes in liquid vials. One nebulizer treatment takes approximately 10 minutes.

Steps to use a nebulizer

1. Wash hands.
2. Open the medication cup and fill it with medicine as directions say or as instructed by healthcare provider.
3. Secure the cap.
4. Attach either a mouthpiece or mask to the end of the medication cup.
5. Hook one end of the tubing to the medication cup and the other end to the nebulizer.
6. If using a mouthpiece, seal lips tightly around the mouthpiece. If using a mask, place mask firmly on the face.
7. Turn on the nebulizer. Breathe normally through the mouthpiece or mask. Continue until you no longer see the medication mist (about 10 minutes).



Care and Cleaning of Nebulizer

- It is important to clean the nebulizer to prevent infections.
- Always wash hands prior to touching medicine.
- After each use, remove the medication cup and rinse with warm water. Place on paper towel and allow to air dry.
- Once a week clean medication cup in mild soapy water or one part vinegar and two parts water. Rinse well and place on a paper towel to air-dry.

WHEN YOUR CHILD HAS AN ASTHMA EMERGENCY

It is important to follow your child's treatment plan and know when to seek emergency care.

Your child should always have their medicine available, including at school, during activities or sporting events, and while traveling.

Early Signs of an Asthma Episode

Early warning signs of respiratory distress can include:

- Exposure to a known trigger
- Wheezing
- Shortness of breath
- Trouble breathing during physical activity
- Coughing
- Tightness in chest



When some or all of these symptoms occur, your child should take their quick-relief medication. Stay with your child until symptoms get better.

Signs of an Asthma Emergency

- Constant wheezing
- Breathing is hard and fast
- Nostrils are wide open (called flaring)
- The areas below the ribs, between the ribs, and in the neck visibly pull in during inhalation (called retractions)
- Cough that does not respond to inhaled quick-relief medicine
- Changes in your child's color, like gray or bluish lips and fingernails
- Trouble talking and can't speak in full sentences
- Uses quick-relief medicine repeatedly for severe symptoms that do not go away after 15–20 minutes or return again quickly

When your child is having any of the above signs of an asthma emergency, they should immediately use their quick-relief medicine and then you or they call 911.

Keep a copy of your child's Asthma Action Plan nearby so that you can take it with you to the emergency department so medical staff are aware of your child's asthma medications.

Once your child is discharged, it is important that you communicate with their healthcare provider.

ASTHMA TRIGGERS & HOW TO MANAGE THEM

WHAT IS AN ASTHMA TRIGGER?

Asthma triggers are things that can cause asthma symptoms or lead to an asthma episode or flare-up. Triggers can include activities, conditions, or substances that cause the airways to react. Some children may react to one or two triggers, and some may find that many triggers worsen their asthma. Work with your child's doctor to identify triggers. Then you can develop a plan that includes ways to reduce your child's exposure to their asthma triggers. Below are common asthma triggers and recommendations on how to manage them.

Types of asthma triggers

ALLERGENS

PETS

Animals with fur or feathers produce dander (found in dried saliva and skin cells) that can trigger asthma. This can be true even with non-shedding, or hypoallergenic, breeds. Dander becomes airborne and settles on surfaces, including furniture and toys.

How to Manage: Keep animals out of your child's bedroom and off furniture. Wash hands and face after touching animals. Vacuum weekly with a HEPA filter vacuum cleaner.



DUST AND DUST MITES

Dust are particles that float in the air and collect on surfaces. Dust mites are tiny bugs that cannot be seen by the human eye. They feed off dead skin cells from humans and household pets. They commonly live in house dust, bedding, stuffed animals, carpets, and cloth furniture.

How to Manage: Cover your child's mattress and pillow with dust-proof covers. Dust and vacuum often. Wash stuffed animals and bedding in hot water weekly. Minimize the number of stuffed animals. Keep stuffed animals off the bed and, if possible, in sealed containers or sealed plastic bags.



MOLD

Mold often lives on walls in spaces that are dark and humid. It survives by eating materials, such as wood, paper, and wallpaper paste. Mold is often found in bathrooms, basements, and water-damaged flooring and ceilings.

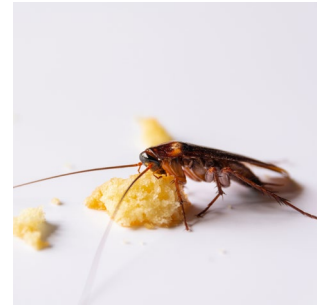
How to Manage: Clean your bathrooms, basements, and other damp and high-humidity areas with mold-killing products that are asthma-friendly.



PESTS

Pests can live anywhere, especially in dark and damp places. They can also live behind walls, furniture, and clutter. Many children are allergic to pest droppings. Some are allergic to body parts of pests, such as rodents or cockroaches.

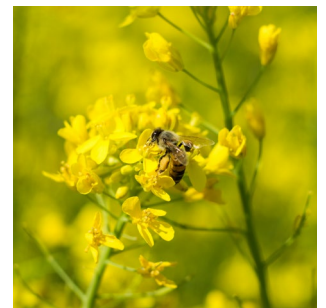
How to Manage: Keep food and garbage in sealed containers. Do not leave food or garbage out and clean up spills right away. Clutter attracts pests, so tidy up piles of paper, boxes, and bags. Don't leave water sitting in sinks with pots and pans and fix all water leaks and seal cracks. Use poison baits and traps, rather than bombs or sprays, to get rid of pests.



POLLEN

Pollen travels through the air at certain times of the year. High pollen count days are typical in the fall and spring. In the spring, pollen typically comes from trees, grasses, and weeds. In the fall, pollen typically comes from ragweed and weeds.

How to Manage: Check for daily pollen counts at www.pollen.com or weather reports. When pollen counts are high, avoid outdoor activities and keep doors and windows closed. If possible, use an air conditioner when needed. Be sure the air conditioner and other air filters are cleaned regularly. Take allergy medicine per doctor's orders.



SMOKE

Smoke from a burning cigarette, pipe, or cigar, or smoke exhaled by a smoker is the number one asthma trigger. Materials that produce smoke when burning, like wood, candles, coal, and incense, can also give children trouble with their asthma. Third-hand smoke (chemicals from smoke left on surfaces after smoking) and aerosol from e-cigarettes may also trigger a child's asthma.

How to Manage: Keep indoor environments, including home and car, free of all forms of smoke. If you or another adult that your child is around smokes, be sure to wash hands and change clothes after smoking and before being around children. It is also important for them to talk with their doctor about ways to stop smoking or visit <https://RespHealth.org/Quit-Smoking> or call 1-866-QUIT-YES or 1-866-784-8937



POLLUTION AND EXTREME WEATHER

Poor air quality, particularly on hot summer days when ozone pollution is high, can cause asthma episodes.

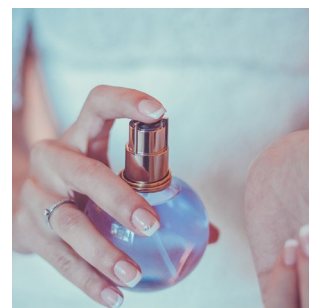
How to Manage: Check air quality, especially in the summer. Limit or avoid outdoor activities on Air Pollution Actions Days: www.airnow.gov. When air quality is poor, only go outside early or after sunset. Try to stay indoors with windows closed and use air conditioning or fans. As always, prepare for hot days by drinking plenty of water, wearing sunscreen, and staying in the shade.



STRONG ODORS

Any strong smell can trigger an asthma episode. Common odors include cleaners, bleach, pesticides, air fresheners or plug-ins, potpourri, perfume, cologne, aftershave, hair products, cosmetics, scented soaps and lotions, paints, glues, and other crafts.

How to Manage: Use cleaners that are odorless and are not in spray form. Switch to less toxic “free and clear” or “green” products. Avoid using scented bath and beauty products. When your child with asthma is present, avoid painting or using chemicals. Use an exhaust fan or open a window (if the air quality is good) when using a gas stove or an unvented gas or kerosene space heater.



EMOTIONS

Strong emotions - like fear, anger, stress, frustration, crying or even laughing - can change breathing patterns. They may result in tense muscles or rapid breathing and can lead to an asthma episode.

How to Manage: Help your child find ways to stay calm and express themselves without shouting or yelling. Taking deep and slow breaths during times of stress and unhappiness can reduce emotional triggers. Staying calm during asthma episodes can also help reduce symptoms.



INFECTIONS

Asthma symptoms can be triggered by a respiratory or sinus infection, including a cold or the flu.

How to Manage: Frequent hand-washing and good general hygiene will reduce the risk of infections. Discuss what shots (or vaccines) are available to protect against infections (e.g., the flu, COVID-19, and pneumonia vaccines) with your child's healthcare provider.



COLD AND HOT WEATHER

Cold, dry air, very hot weather, changes in seasons, or sudden fluctuations in weather can lead to asthma episodes.

How to Manage: Have your child avoid outdoor activities during the hottest part of the day, from 2:00 pm to 4:00 pm. Your child can prepare for cold days by covering his/her mouth and nose whenever outside.



EXERCISE OR PHYSICAL ACTIVITY

Asthma episodes can be triggered by exercise or physical activity, especially when it leads to overexertion or when exposed to extreme temperatures (both hot and cold). Although exercise or physical activity can be a trigger for asthma, a child with asthma can and should be active.

How to Manage: Have your child warm-up and cool-down before and after being physically active. Ensure they drink plenty of water. Discuss with your child's doctor if he/she should take a quick-relief inhaler before being active.



KEEPING YOUR HOME ASTHMA-SAFE

Building on the overview of various types of triggers of asthma, this section focuses on steps that can be taken to reduce asthma triggers in your home environment.

Safely Cleaning Your Home

Cleaning can aggravate asthma symptoms for some people. This may be due to harsh chemicals used in some cleaning products and dust that is disturbed during the cleaning process.

- Clean while your child with asthma is out of the house to reduce exposure to triggers.
- Clean visible mold or mildew with a bleach solution.
- Wash shower curtains and bathroom tiles with mold-killing products which can be purchased from a hardware store, grocery or drug store (e.g., Target), or online (like Amazon).
- Use a damp cloth to dust furniture instead of dry dusting.
- Regularly clean ceiling fans and air conditioning vents.
- Clean dust using a damp rag or mop, rather than a broom, to avoid spreading dust around.
- Use furniture polish to help reduce dust.
- Use a vacuum cleaner with a HEPA filter to help control the dust that vacuuming stirs up.
- Vacuum and clean furniture frequently.
- Use cleaners that have no smell and are not in spray form. Many products have received a “green” seal of approval and are easier on the environment. One alternative is to create and use your own cleaning solutions.



Recommended Cleaning Solution

Mix 2 cups vinegar, 2 cups very hot water, 1/2 cup salt and 2 cups borax. Apply solution to area and allow it to sit for 30 minutes. Apply the solution again, scrubbing with a soft bristled brush and rinse well with plain water.

American Academy of Asthma, Allergy, and Immunology

Minimizing Dust

If your child has asthma and is allergic to dust mites, exposure to them can trigger an asthma episode. Some suggestions on how to cut down on the amount of dust in your home include:

- Avoid wall-to-wall carpet and try to use wood or other hard flooring. If there is carpet, select short pile or loop carpet that is nylon and solution dyed.
- Avoid turning on the fan before your child goes to bed. Fans can spread dust, dust mites, pollen, and other allergens in the room.
- If possible, replace slatted blinds or cloth curtains with pull-down shades as they will not collect as much dust.
- If you can, get rid of fabric or upholstered furniture. Wood, leather, and vinyl are better.
- Put doors on any open shelving units.
- Cover your child's pillowcases, mattress, and box spring with hypoallergenic covers that keep dust mites and other allergens out. Wash bedding at 130 degrees Fahrenheit or higher to kill dust mites.
- Have no, or limit, indoor plants as mold can grow in plant soil.



Reducing Exposure to Mold

- Keep the house dry.
- Run a dehumidifier (machine that dries out the air) in the basement or other damp areas where mold tends to grow.
- Get rid of house plants, which may have mold in their soil.
- Replace or wash moldy shower curtains.
- Do not leave wet clothes in the washing machine, where mold can quickly grow.
- Fix any leaks or seepage at home, indoors and outside.
- Use exhaust fans in the kitchen and bathroom.
- Clean dehumidifiers and humidifiers every week.

Managing Pets

- Ideally, children with asthma should not have family pets.
- Consider getting cold-blooded pets, such as fish, which are safer for children with asthma.
- If there are pets with hair or dander in the home, it is recommended to:
 - Keep pets outside of your child's bedroom.
 - Bathe your pet every week.
 - Allow your child to play with your pet but avoid hugging or kissing it.
 - Ensure people in your home wash their hands after touching your pet.

Other Ways to Keep Your Home Asthma-Safe

- Do not allow smoking or vaping in your home, even when your child is not there.
 - Keep an air purifier in your child's room.
 - Avoid wood fires in the fireplace or wood stove.
 - Hot-wash soft toys every week.
 - Avoid scented candles or room fresheners.
 - Run the air conditioning, especially on days when the pollen or mold count is high out-
- doors, or when there are ozone or pollution warnings.
 - Do not leave open food or dirty dishes lying around your kitchen. Keep counters clean to lower the chance of cockroaches and other pests.
 - Keep garbage containers closed and wash recyclables before putting them in the bin.



ASTHMA AND FOOD ALLERGIES

One in 13 children are affected by food allergies. While food allergies do not cause asthma, children with food allergies are more likely to have asthma than children with no food allergies. Food allergies can also exacerbate asthma symptoms. Having a diagnosis of both food allergy and asthma has also been shown to influence the severity of a patient's disease including being at greater risk of severe asthmatic episodes.⁷

Most Common Food Allergens⁸

- Milk
- Eggs
- Fish
- Shellfish (e.g., crab, lobster, shrimp)
- Tree nuts (e.g., almonds, walnuts, pecans)
- Peanuts
- Wheat
- Soybeans
- Sesame
- Maraschino cherries

Common Reactions to Food Allergies

- Skin rashes, itching, and hives
- Swelling of the lips, tongue, or throat
- Stomach pain, vomiting, and diarrhea
- Shortness of breath, trouble breathing, and wheezing
- Dizziness and/or fainting

Food Preservatives

Food preservatives, such as sulfites, can trigger asthma if eaten in high amounts.⁹ High sulfite foods may include:

- Dried fruits and vegetables
- Shrimp
- Packaged potatoes
- Pickled foods
- Bottled lime and lemon juice

If you suspect your child may have a food allergy, make an appointment with your doctor. They will figure out if your child has an allergy based on your child's symptoms and test results. The doctor may also refer your child to an allergy specialist for further testing and treatment.

⁷Foong RX, du Toit G, Fox AT. Asthma, Food Allergy, and How They Relate to Each Other. *Frontiers in Pediatrics*. 2017 May 9;5:89. doi: 10.3389/fped.2017.00089. PMID:28536690; PMCID: PMC5422552.

⁸U.S. Food and Drug Administration

⁹Asthma and Allergy Foundation of America



03

Supporting Your Child With Asthma

TALKING TO YOUR CHILD ABOUT ASTHMA

*Explaining Asthma to Your Child * Addressing Stigma Associated with Asthma*

EMPOWERING YOUR CHILD'S SELF-CARE

*Getting Started * Educating Your Child About Asthma*

ASTHMA, SMOKING AND VAPING

*Cigarette Smoking * Electronic Cigarettes * How E-Cigarettes Work * How Vaping Will Make Your Child's Asthma Worse * Talking to Your Child About Vaping * Helping Your Child to Quit Vaping*

PREPARING FOR DAYCARE

*Tips for Caregivers * Choosing a Day Care Provider * Preparing for Day One * When to Keep Your Child Home * Tips for Your Child's Day Care Provider * Asthma Training for Providers * Day Care Provider Checklist*

PREPARING FOR SCHOOL

*Preparing to Send Your Child to School * Your Child's Rights at School * What are Asthma-Friendly Schools*

PREPARING FOR COLLEGE AND ADULTHOOD

*Finding Housing that Fits Your Child's Needs * Health Care Considerations * Knowing How Insurance Policies Work * Finding a Healthcare Provider * Locating a Pharmacy * Protecting Your Ability to Help Your Child * HIPAA Release Form * Power of Attorney for Health Care * Contact the Office for Students with Disabilities or Accommodations*

TALKING TO YOUR CHILD ABOUT ASTHMA

Talking with your child regularly about their asthma is important. Depending on their age, some children may find the topic scary or confusing. Some may feel embarrassed or resent what they need to do to manage their asthma. Helping your child understand asthma will make it easier for them to control their condition.

It is important that your child, at the appropriate age, learns how to care for themselves. Self-care includes gaining the ability to use and even carry their own medicine as well as learning how to fill prescriptions and feeling empowered to speak up during doctor's visits.

Some tips for talking to them about asthma include:

- Use language that is appropriate for your child's age and encourage them to ask questions.
- Use pictures to help you explain. Ask your doctor for pictures if you don't have any.
- Use activities (see Appendices at the end of this handbook) to explain what happens to the lungs during an asthma episode.

EXPLAINING ASTHMA TO YOUR CHILD¹⁰

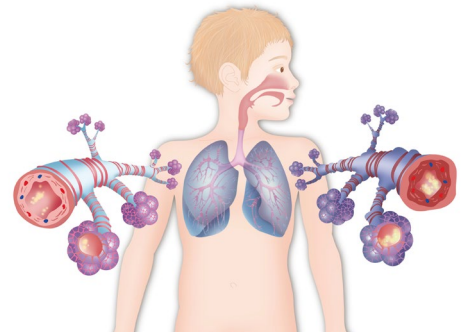
It can be hard to explain asthma to your child, especially when they are young. The tips below may make it a little easier. You will need to relate these explanations to your child's own asthma symptoms and treatment, including their Asthma Action Plan.

Talk about how lungs work

"Your lungs are in your chest. The job of the lungs is to move the air in and out. The tubes inside your body that carry the air in and out of your lungs are round and open and clear."

Talk about what happens during an asthma episode

"When you are around something that bothers your asthma, your lungs can get tight (the muscles around the tubes in your lungs squeeze down) and make thick, sticky stuff called mucus. That's why it's hard to breathe, and you may feel like coughing."



¹⁰Asthma Initiative of Michigan for Healthy Lungs. Compiled from the experiences of asthma educators across the state of Michigan, 2001, and adapted from the Practical Guide for the Diagnosis and Management of Asthma, NIH Publication No. 97-4053, October 1997, National Institutes of Health, National Heart, Lung and Blood Institute."

Talk about the medicines they will take and how they will help

Long-term controller medicines: “You need to take some medicine every day to keep your lungs from getting tight and making that thick, sticky stuff. Even when you feel good, you need to keep taking it, because it helps you stay feeling good every day and keeps you from having asthma symptoms.”

Quick-relief medicines: “When you feel like you are having trouble breathing (like your chest is tight or you are coughing), use this medicine which acts fast to help the lungs open.”

Spacer/Holding Chamber: “The spacer helps the medicine get into your lungs better. When you push down on the inhaler, the medicine goes inside the tube and makes a cloud of medicine inside the tube, which gives you time to slowly breathe the medicine deep into your lungs.”

Nebulizer: “The nebulizer is a machine that makes a mist with your medicine in it. It looks like the steam that comes out of the tea kettle, but it isn’t hot like that steam. It’s like a cloud. When you breathe that mist in, the medicine can go deep in your lungs. This makes it easier for you to get the medicine you need.”

Talk about going to the doctor

“Asthma is a disease that can be serious and tricky. The doctor helps us figure out the best ways to take care of it so that you can play and be active just like other kids. We may need to go to the doctor pretty often, so that they can make sure you are doing okay with your medicines and aren’t having any trouble breathing. The doctor will listen to you breathe and ask you if you have any trouble when you sleep or play. They will make sure we know all about your medicines and the things that lead you to have asthma symptoms, so we can keep an episode from happening.”

“At the doctor, we will make an Asthma Action Plan, which is a plan for how to take care of your asthma. We will give copies of this plan to your school and _____(list all the adults with whom your child spends time, such as a grandparent or babysitter) so that they know what to do if you have trouble breathing.”



Talk about triggers (using the specific triggers that affect your child)

Exercise: “You know how when you’re running around you sometimes feel like it’s hard to breathe, and you have to stop or slow down? That’s what starts your asthma. We want to keep your asthma under control so you can do everything all of your friends are doing.”



Infections: "When you get a cold, the germs that make you feel yucky also can make your breathing feel tight. That's what starts your asthma."

Allergies: "You are allergic to _____ (put in child's allergy/allergies, such as cats). When you are around _____ (child's allergy), you breathe in stuff that can make your asthma act up, like making you cough or making your breathing hard."

Irritants: "There are things in the air sometimes that cause people with asthma to start to have trouble breathing. Your asthma starts up when you are around _____ (put in child's trigger(s), such as cigarette smoke)."

Weather: "We have figured out that your asthma is started by the weather sometimes. That's why we watch for _____ (put in child's symptoms) on _____ (type of weather, such as foggy) days. That's what starts your asthma."

Emotions: "When you are _____ (put in child's emotional trigger, such as laughing or crying) a lot, sometimes you start to feel like you can't breathe. That's what starts your asthma."

Avoiding triggers: "To keep you from having trouble breathing, we try to stay away from _____ (child's triggers). Sometimes we can't always stop triggers, so we make sure that we know what to do when you have trouble breathing. If you know that you are near something that makes your asthma worse, ask a grownup for help right away."


Vaping: Depending on the age of your child, speak to them about how e-cigarettes and other smoking devices can make their asthma worse. This important topic is addressed in a separate section of this handbook.

Talk about what to do about their asthma episodes (fit to your child's warning signs/symptoms).

Green zone: "This green zone is when you are feeling good and aren't having asthma symptoms. In order to stay in the green zone, we'll keep using the medicine and staying away from your triggers."

Yellow zone: "When you start _____ (put in child's early warning signs, such as coughing), we know that your asthma is starting so we'll do what it says to do on the action plan for yellow zone. For you, that means we _____ (put in child's yellow zone actions). If I'm not with you and you feel like your asthma might be starting, tell an adult right away. It's much better to take the medicine when you first start feeling bad than to wait for your breathing to get hard."

Red zone: "When you feel like you can't breathe very well, tell someone right away. You'll need to do what your asthma action plan says to do for the red zone, and for you that means _____ (put in child's red zone actions). Then we'll take you to the doctor or the emergency room. This is a bad time for your lungs and we need to make sure they get lots of help fast."

GREEN ZONE	<p>I FEEL GREAT!</p> <p>IF YOU HAVE ALL OF THESE</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Breathing is good <input checked="" type="checkbox"/> No cough or wheeze <input checked="" type="checkbox"/> Slept through the night <input checked="" type="checkbox"/> Can work or play <p>PEAK FLOW ABOVE: _____</p>	<p>USE THESE MEDICATIONS EVERY DAY:</p> <p>NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY</p> <p>_____ - _____ - _____ TIMES A DAY</p> <p>_____ - _____ - _____ TIMES A DAY</p> <p>FOR ASTHMA WITH EXERCISE TAKE: _____ - _____ - _____ TIMES A DAY</p>
YELLOW ZONE	<p>I HAVE MILD SYMPTOMS</p> <p>IF YOU HAVE ANY OF THESE:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> First sign of a cold <input checked="" type="checkbox"/> Exposure to a known trigger <input checked="" type="checkbox"/> Cough <input checked="" type="checkbox"/> Mild wheeze <input checked="" type="checkbox"/> Tight chest <input checked="" type="checkbox"/> Coughing at night <p>AND/OR PEAK FLOW FROM _____ TO _____</p>	<p>CONTINUE MY EVERY DAY CONTROL MEDICINE (SAME AS GREEN ZONE) <input type="checkbox"/> Increase Dose</p> <p>NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY</p> <p>OR I TAKE A COMBINATION MEDICINE THAT PROVIDES BOTH QUICK-RELIEF AND CONTROL:</p> <p><input type="checkbox"/> Symbicort® <input type="checkbox"/> Dulera® (____ strength) <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> 1 or <input type="checkbox"/> 2 puffs, up to 4 times a day (up to 6 times a day, if older than 12 years old)</p>
RED ZONE	<p>MY ASTHMA IS GETTING WORSE FAST</p> <p>IF YOU ARE EXPERIENCING:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Persistent cough <input checked="" type="checkbox"/> Persistent wheeze <input checked="" type="checkbox"/> Fast breathing <input checked="" type="checkbox"/> Hard to breathe <p>AND/OR PEAK FLOW FROM _____ TO _____</p>	<p>I TAKE THESE MEDICATIONS & CALL MY DOCTOR:</p> <p><input type="checkbox"/> Albuterol® (Proair®, Ventolin®, Proventil®) _____ puffs, every 2 to 4 hours as needed for temporary relief of asthma symptoms</p> <p><input type="checkbox"/> Other Medicine _____</p> <p>SEE DOCTOR PROMPTLY (ADDITIONAL MEDICINE MAY BE NEEDED)</p> <p>AND CONTINUE MY EVERY DAY CONTROL MEDICINE <input type="checkbox"/> Increase Dose (SAME AS GREEN ZONE)</p> <p>NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY</p>
<p>CALL 911 OR GO TO THE NEAREST EMERGENCY ROOM IF YOU ARE EXPERIENCING:</p> <ul style="list-style-type: none"> <li style="width: 50%;"><input checked="" type="checkbox"/> Very hard or fast breathing <li style="width: 50%;"><input checked="" type="checkbox"/> Nose opens wide with breathing <li style="width: 50%;"><input checked="" type="checkbox"/> Chest is sucking in between ribs <li style="width: 50%;"><input checked="" type="checkbox"/> Lips or fingernails look blue <li style="width: 50%;"><input checked="" type="checkbox"/> Breathing so hard you can't walk or talk 		
 RESPHEALTH.ORG HEALTHY LUNGS AND CLEAN AIR FOR ALL		

ADDRESSING STIGMA ASSOCIATED WITH ASTHMA¹¹

Both younger children and teenagers may feel like their asthma makes them different than others. This feeling can be difficult at a time when they just want to fit in with other children their age. They may be embarrassed by their symptoms or by having to use an inhaler. They may feel that having asthma makes them look weak.

Feelings of shame about their asthma can negatively affect your child's health. This may include:

- Feeling anxious
- Delays in diagnosis
- Denial and hiding the fact of having asthma
- Limiting physical activity
- Avoiding inhaler use around other people or in public

How to Help Your Child Feel Less Stigmatized

Let them know they are not alone.

Asthma is one of the most common chronic conditions among children. In fact, in the U.S., nearly 5 million children (17 years of age and younger) have asthma.¹² It is likely that your child has some friends or schoolmates who also have asthma.

Encourage your child to take care of their asthma.

Every state has a law or guidance that allows children with asthma to carry and use their inhalers at school. Depending on their age, carrying an inhaler at school means your child no longer needs to go to the nurse's office to get their medicine and can stay in their classroom with their peers. Talk to your child about who they can talk to when they take their medicine and what to do if their symptoms do not improve after taking their medicine.



¹¹Information for this section was compiled from Asthma.net at <https://asthma.net/living/stigma#>

¹²U.S. Centers for Disease Control and Prevention. Current asthma prevalence by select sociodemographic characteristics (2021).

Show your child positive role models who have asthma.

Many famous people have asthma and still thrive in their fields. These individuals include athletes (including David Beckham and Dennis Rodman), singers (including Pink, Coolio, and Harry Styles), activists (including Jesse Jackson, Jr.), and six past presidents (including Bill Clinton and John F. Kennedy). Knowing this may help your child feel less different about their asthma.

Modeling good behavior

If you, another family member, or a close friend has asthma, be open about having asthma and model good behavior. For example, have them openly use their inhaler and talk about adjustments made, such as for triggers like animals or air quality.

Keep communicating!

Getting your child to talk openly about their feelings can be challenging, particularly when they are teenagers. As a parent or caregiver, you can bring up the issue of asthma stigma and see if this is an issue for your child and help them share their feelings.



EMPOWERING YOUR CHILD'S SELF-CARE

Most children who get asthma have their first symptoms by age five. At this age, management of your child's asthma falls to you as their caregiver, and to their healthcare provider, and other adults in their life. But as your child grows older, the responsibility for asthma care should be transferred from the caregiver to the child.

The key aspects of empowering your child with asthma are to enable shared decision-making and self-management and help the child minimize the impact of asthma on their life.¹³ Caregivers and children may adopt a variety of strategies that result in both planned and unplanned outcomes.

The transfer of asthma management responsibility from caregiver to child can be a slow process and should be viewed within the broader context of your child gaining independence in other areas of their life. Depending on their development, your child may begin to learn skills to self-manage their asthma as early as seven years old, with growing independence thereafter. The process is influenced by your child's social, developmental, and emotional stage; by the caregiver's willingness to share caregiving responsibilities; the support of your child's healthcare provider; and, at times, their school.

Asthma self-management may be defined as your child's ability to manage the symptoms, treatment, physical and psychological consequences, and lifestyle changes that are fundamental to living with asthma.



¹³Sinha IP, Brown L, Fulton O, Gait L, Grime C, Hepworth C, Lilley A, Murray M, Simba J. Empowering children and young people who have asthma. *Arch Dis Child*. 2021 Feb;106(2):125-129. doi: 10.1136/archdischild-2020-318788. Epub 2020 Jul 24. PMID: 32709687.

GETTING STARTED

To assume responsibility for their asthma management, your child will need to:

- Have both factual and experiential knowledge (e.g., learning how to correctly use their inhaler and spacer).
- Develop skills such as learning how to talk with their healthcare provider.
- Adopt useful strategies, such as creating a schedule or setting an alarm to remind them to take their medications.¹⁴

As noted above, the process should begin as a partnership between you and your child, their healthcare provider, and, at the appropriate age, their daycare or school. It should end with an independent, healthy functioning adult.

Educating Your Child About Asthma

In addition to talking to your child about asthma (as discussed earlier in this handbook), their healthcare provider should talk to them directly as they get older. You should also encourage your child to ask questions during their provider visits.

Some schools offer asthma management education to their students with asthma. For example, Respiratory Health Association offers in-person, multi-session programs designed for children to increase their knowledge and asthma management skills. Importantly, it is also intended to increase your child's confidence in their ability to manage their condition. Although this program is primarily available to schools in Illinois, a virtual program has been developed that can be used by schools nationwide, and by parents to use with their child. Information on how to access these resources is included in the Appendices.

Developing asthma self-management skills is a part of growing up. Be aware that during their teenage years, young people can find it challenging to follow treatment plans, which

can result in worse symptoms and poor outcomes. Recognize that some children may find it difficult to manage their asthma within a busy and structured school environment, in particular dealing with competing demands such as schoolwork, sports, and socializing with their friends. Talking openly about asthma and how it affects the child, both positively and negatively, is important to help them move through this period.



¹⁴Nightingale R, McHugh G, Kirk S, Swallow V. Supporting children and young people to assume responsibility from their parents for the self-management of their long-term condition: An integrative review. *Child Care Health Dev.* 2019 Mar;45(2):175-188. doi: 10.1111/cch.12645. PMID: 30690751. Educating Your Child About Asthma

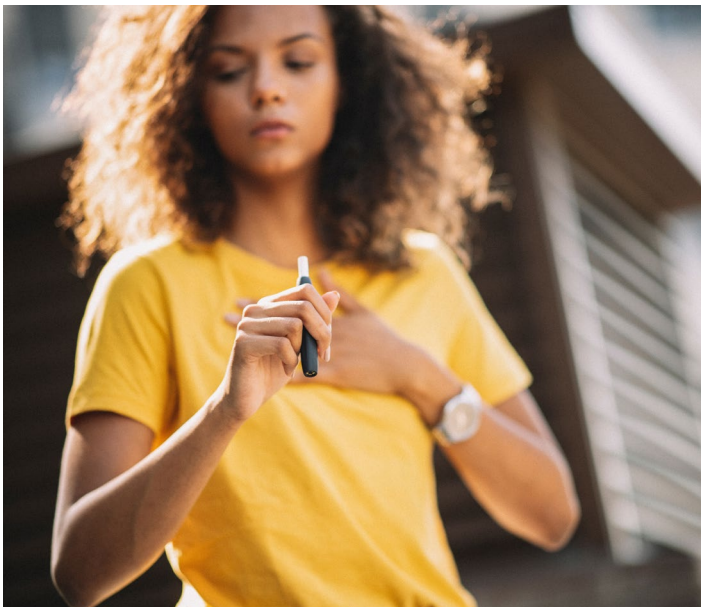
ASTHMA, SMOKING AND VAPING

CIGARETTE SMOKING

While cigarettes can have negative effects on everyone who smokes, the effects of smoking on people with asthma cannot be understated. Smoke irritates airways, causing the same type of swelling and mucus buildup that occurs during an asthma episode. Smoking will result in more asthma symptoms and more frequent and severe asthma episodes.

When speaking with your child with asthma about the dangers of tobacco use, consider sharing the following information.¹⁵

- Smoking can undo the effects of any medicine they take to keep their asthma under control.
- Smoking can cause them to have to take their medicine more often for quick relief of symptoms.
- Smoking may disturb their sleep by making them cough more at night.
- Smoking can affect how well they do in sports or other physical activities.
- Smoking can send them to the hospital emergency room with a severe asthma episode.



ELECTRONIC CIGARETTES

While the rate of cigarette smoking among youth has steadily decreased over the past decades, the use of electronic cigarettes has skyrocketed. A recent study found that 2 million young people currently use e-cigarettes. And 8 in 10 of those youth use flavored e-cigarettes.¹⁶

E-cigarette use (vaping) can be harmful to the respiratory system. It can be especially dangerous among people with asthma.

¹⁵Nemours Children's Health. Smoking and asthma.

¹⁶U.S. Centers for Disease Control and Prevention (CDC). C Morbidity and Mortality Weekly Report. Notes from the Field: E-cigarette use among middle and high school students – National Youth Tobacco Survey. United States, 2021. October 1, 2021 Vol 70/39

HOW E-CIGARETTES WORK¹⁷

- E-cigarettes are alternative tobacco products that produce an aerosol by heating a liquid that usually contains nicotine, flavorings, and other chemicals.
- The liquid used in e-cigarettes is sometimes called “e-juice,” “e-liquid,” “vape juice,” or “vape liquid.”
- Users inhale e-cigarette aerosol into their lungs. Others close by may also breathe in this aerosol when the user exhales it into the air.
- The e-cigarette aerosol that users breathe from the device and exhale can contain harmful and potentially harmful substances, including:
 - Nicotine,
 - Ultra-fine particles that can be inhaled deep into the lungs,
 - Flavorings such as diacetyl, a chemical linked to serious lung disease,
 - Volatile organic compounds,
 - Cancer-causing chemicals, and
 - Heavy metals such as nickel, tin, and lead
- Some studies have found at least 60 different chemicals in e-liquids. The types of chemicals in e-liquid can differ by brand as well as flavor.



HOW VAPING WILL MAKE YOUR CHILD'S ASTHMA WORSE¹⁸

Vaping can make your child's asthma worse for several reasons.

- The main chemicals in e-cigarettes have been linked to more mucus, increased cough, chest tightness, and reduced lung function.
- Vaping can irritate the lung's airways, making asthma episodes more likely.
- Studies have linked some flavored additives in e-cigarettes, like clove and cinnamon, to causing cell damage in the airways.
- Studies of e-cigarette users found that common side effects of vaping include cough and dry throat.
- Vaping may help pneumonia-causing bacteria to stick to cells that line the airways, causing further damage to the lungs.
- Vaping might impair the lung's ability to fight infection, increasing the risk of more severe asthma episodes.
- One study also found that teenagers with asthma who were with someone using an e-cigarette and were exposed to their second-hand vapor were 27% more likely to report having had an asthma episode in the previous year than those who were not exposed to e-cigarettes.¹⁹

¹⁷CDC. E-cigarette quick facts. https://www.cdc.gov/healthyschools/bam/e_cigarettes_quick_facts.htm

¹⁸Source: Global Allergy and Airways patient platform

¹⁹Bayly, J, et. al. Secondhand exposure to aerosols from electronic nicotine delivery systems and asthma exacerbations among youth with asthma, CHEST Journal, October 22, 2018.

TALKING TO YOUR CHILD ABOUT VAPING

It is important that you talk to your child about vaping early, ideally before they are first offered an e-cigarette. They may be hearing that vaping is a “safe alternative” to cigarettes. This marketing comes from direct messaging from the e-cigarette industry and is simply not true.

Some tips for having this conversation include:

- **Be calm.** Your manner will set the tone for your conversation.
- **Start early.** Educate your child before they are exposed to or offered a vape.
- **Find the right time.** Bring up vaping in a natural way, like when you see it in an advertisement or television show. This approach is more effective than sitting your child down for a talk.
- **Do not be accusatory.** Make it a dialogue. Listen without judgment. State your concerns calmly and let them know how vaping can make their asthma worse.
- **Ask them what they are hearing or seeing at school.** Correct any misperceptions. Emphasize that these products are not safe.
- **Talk about industry manipulation.** The tobacco industry spends nearly \$1 million every hour advertising these products. Point the blame at the industry and its desire to make money at the expense of your child’s health.
- **Avoid extremes (e.g., “The vape device will blow up and kill you.”).** Be factual and fair in delivering the message.
- **Leave the door open for your child to ask more questions in the future.** This topic should be an ongoing discussion. It takes time to change a person’s mind.

HELPING YOUR CHILD TO QUIT VAPING

This is Quitting is a free and anonymous text messaging program from the Truth Initiative designed to help young people quit vaping. The program incorporates messages from other young people like them who have attempted to or successfully quit e-cigarettes. Messages show the real side of quitting, both the good and the bad, to help young people feel motivated, inspired, and supported throughout their quitting process. To date, the program has helped over 600,000 youth and young adults on their journey to quit vaping.



TEXT "DITCHVAPE" TO 88709

message and data rates apply

PREPARING FOR DAYCARE

While often an exciting time, sending a child to daycare can also cause parents and caregivers to worry. Sending a child with asthma to daycare may bring additional concerns. Fortunately, there are steps that both caregivers and daycare providers can take to ensure your child is safe.

TIPS FOR CAREGIVERS

Choosing a Daycare Provider²⁰

Children with asthma need proper support in daycare settings to keep their asthma under control and be fully active. When considering providers for your child, use the checklist below to determine how well they assist children with asthma.

- Is the child-care setting **free of tobacco smoke** at all times?
- Are child-care **staff prepared to give medications as prescribed** by each child's doctor and authorized by each child's parent? Is there someone available to supervise children while taking asthma medicines and monitor correct inhaler use?
- Is there **good ventilation** in the child-care setting? Are **allergens and irritants that can worsen asthma reduced or eliminated**? Check if any of the following are present:
 - Cockroaches
 - Dust mites (found in humid climates in pillows, carpets, upholstery, and stuffed toys)
 - Mold
 - Furry pets
 - Strong odors or fumes from art and craft supplies, pesticides, paint, perfumes, air fresheners, and cleaning chemicals
- Is there a **medical or nursing consultant** available to help child-care staff write policies and guidelines for managing medications within the child-care setting, reducing allergens and irritants, promoting safe physical activities, and planning field trips for students with asthma?
- Is there a written **Asthma Action Plan** for each child in case of an asthma episode? Does the plan make clear what action to take? Whom to call? When to call?
- Does a nurse, respiratory therapist, or other knowledgeable person **teach child-care staff about asthma**, management plans, allergens and irritants, and medicines?
- Does the child-care provider help children with asthma participate safely in **physical activities**? For example, are children encouraged to be active? Can children take or be given their medicine before exercise? Are modified or alternative activities available when medically necessary?

If the answer to any question is “no”, children in your childcare setting may face obstacles to controlling their asthma. Uncontrolled asthma can hinder a child's attendance, participation, and progress in school. Childcare staff, health professionals, and parents can work together to remove obstacles to promote children's health and development.

²⁰National Heart, lung and Blood Institute, National Asthma Education and Prevention Program. How asthma-friendly is your childcare setting? https://www.nhlbi.nih.gov/files/docs/public/lung/chc_chk.pdf

Preparing for Day One

Once you have identified a daycare provider and before your child begins daycare, meet with their teacher and center/school nurse to:

- Provide a copy of your child's Asthma Action Plan, including as many details as possible.
- Provide extra (labeled) medication and sign consent forms allowing administration.
- Provide a demonstration of medication use and inform them of any patterns at home regarding the use of medication.
- Provide a list of your child's asthma and allergy triggers.



When to Keep Your Child Home²¹

Your child can attend daycare if they:

- Have a stuffy nose.
- Have no wheezing, or if wheezing subsides after taking medication.
- Are able to perform usual activities (getting dressed, eating, etc.) without additional effort to breathe.

Your child should stay home if:

- Wheezing or coughing continues after treatment.
- They have trouble breathing or are breathing fast.
- They have a fever of more than 100.4°F.
- They are too weak or tired to participate in activities.



²¹Liu T, Valdez R, Yoon P, Crocker D, Moonesinghe R, Khoury M. The association between family history of asthma and the prevalence of asthma among US adults: National Health and Nutrition Examination Survey, 1999-2004. *Genet Med.* 2009; 11(5): 323-328.

TIPS FOR YOUR CHILD'S DAYCARE PROVIDER

Your child's daycare providers should be prepared to watch for and recognize warning signs of an asthma flare-up as well as know how to recognize and respond to emergency situations. Staff should also know how to administer medication as well as how to use and care for nebulizers, inhalers, and spacers. A training developed for daycare providers in Illinois can be found on the Respiratory Health Association website at www.resphealth.org



Asthma Training for Providers

There are several practices and policies that daycare providers can put into place that will help reduce your child's exposure to asthma triggers, including taking efforts to eliminate asthma triggers in the facility where your child receives their care.

Daycare Provider Checklist

A tailored checklist is included in the Appendices for how daycare providers can both reduce your child's exposure to asthma triggers and the steps they can take to best support your child during an asthma episode. It includes both common triggers found in different settings and those more unique to the daycare setting.

The checklist also recommends a broad range of practices and policies that are part of best practices for supporting children with asthma in daycare and school settings including, but not limited to:

- Requiring and maintaining Asthma Action Plans for each child
- Conducting asthma training for daycare staff each year
- Ensuring no idling policies for vehicles coming to the daycare center
- Eliminating exposure to perfume or other scented personal products
- Keeping all children's personal belongings separate from play areas to minimize exposure to pet dander and other allergens from their homes
- Adjusting outdoor time for temperature-sensitive children and offering alternate indoor activities.

The Daycare Provider checklist is included in the Appendices so that you can share it with your child's daycare provider.

PREPARING FOR SCHOOL

An estimated 13.8 million school days are lost each year due to asthma. Sending your child with asthma to school can create concerns for both of you. The best way to keep your child's asthma controlled and prevent asthma emergencies at school is to plan ahead.

PREPARING TO SEND YOUR CHILD TO SCHOOL

These are important steps to take before and during the school year.

- Work with your child's healthcare provider to create or update your child's **Asthma Action Plan** and be sure the school has a copy on file. You should bring a copy of the updated Asthma Action Plan to school at the start of each school year.
- Call the school or visit the school/district website to find the necessary form(s) that allows your child to have and/or carry asthma medication at school. Fill out the form(s) and bring to school at the start of each school year. Save the prescription label for your child's asthma medication to provide with the form/medication.
- Ensure your child has their quick-relief medication with them at school. Studies show that inhalers are as effective as nebulizers when used properly. School-aged children should be able to use a metered dose inhaler with spacer with proper teaching from healthcare providers, pharmacists, nurses, and parents/guardians.
- Assess whether your child is ready to carry and use their inhaler independently. Some children are ready to carry and independently use their inhaler. Others may not be ready to do so and should have a quick-relief inhaler to store at school, typically in the nurse's office, in the main office, or in the child's classroom. Help your child practice administering his/her asthma medication. Make sure they understand how important it is to always keep the medication close by and when they should use it.



- Talk with your child’s teachers to make sure they understand your child’s triggers and how to avoid them. Also make sure they understand your child’s asthma symptoms and how to respond.
- Make sure your child stays in the routine of taking long-term control medications if prescribed. Skipping doses can lead to increased symptoms and missed school time.
- Reinforce general hygiene, including washing hands frequently and sneezing into their

elbows instead of their hands, to prevent catching upper respiratory infections that can cause asthma flare-ups.

- Keep up to date with annual vaccines to prevent viruses, such as the flu. Research has shown the flu can be more serious for people with asthma. Respiratory viruses, including the flu, can trigger asthma episodes and worsen asthma symptoms. It can also lead to pneumonia (an infection in the lungs) and other respiratory diseases.

YOUR CHILD’S RIGHTS AT SCHOOL

Because children spend most of their waking hours at school, it is important that school staff are prepared to help your child if they experience an asthma flare-up during the day. Many schools require asthma management training for school nurses and at times, for other school staff. There are also policies in place that are designed to support your child.

Asthma Medication Self-Carry and Self-Administer Laws

One of the best ways that your child can take care of themselves is to always keep their quick-relief medication with them. There are laws in all 50 states that allow your student to keep their prescribed medicine with them at school and take it as needed. Your child has the right to keep their medication on their body (or in their backpack) for use as needed. Schools can no longer require that medications be held in the school nurse’s office.

Be sure to save your child’s asthma inhaler prescription label from the pharmacy. In many states, the school will need to see this packaging and will have a consent form for parents and guardians to sign. Contact your child’s school before classes begin to receive and complete the necessary forms.

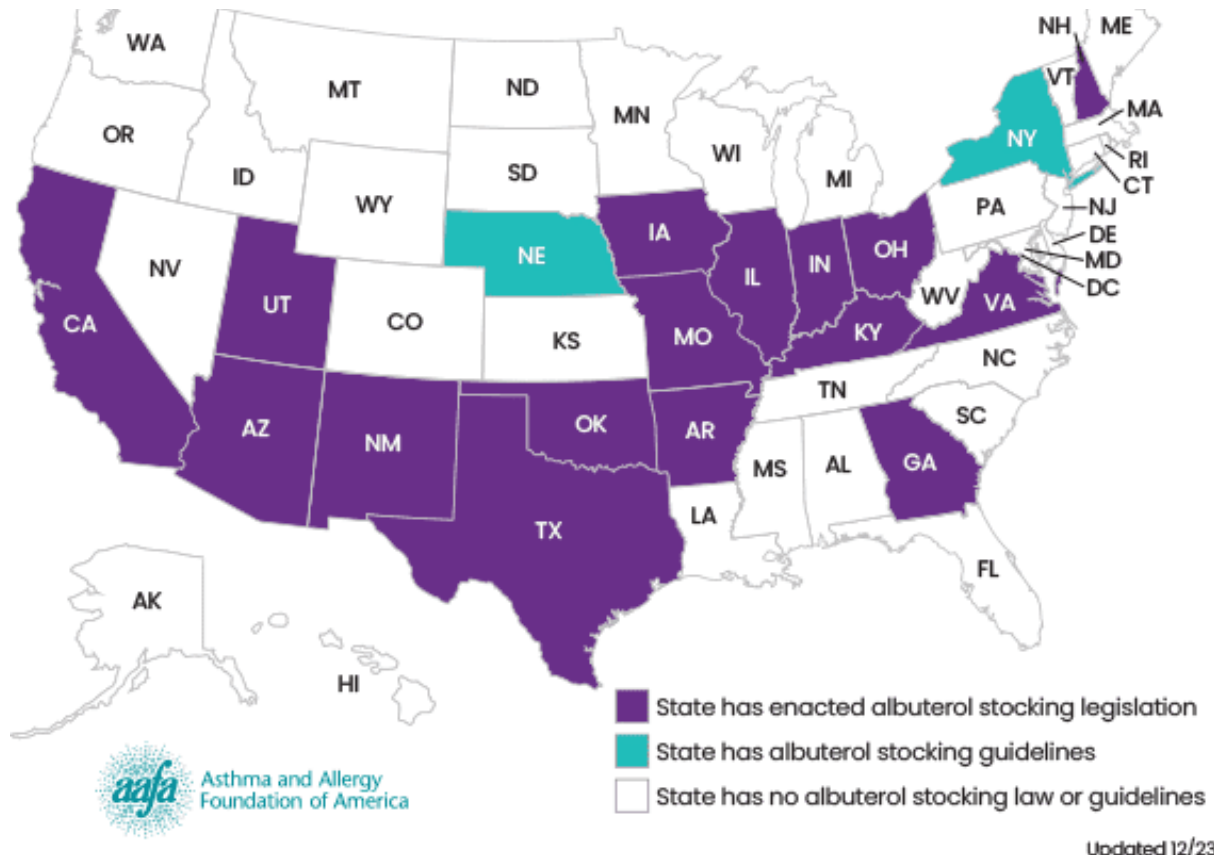
Before sending your child to school with their asthma inhaler, it’s a good idea to talk with their healthcare provider and school nurse. You want to make sure your child knows when to use their medication and can administer it correctly.



Undesignated Stock Albuterol Laws and Guidelines

Undesignated stock albuterol laws and/or guidelines permit schools to keep a supply of medication for asthma emergencies.

As of January 2024, eighteen (18) states currently have such laws and guidelines in place.



- Arizona
- Arkansas
- California
- Georgia
- Illinois
- Indiana
- Iowa
- Kentucky
- Missouri
- Nebraska
- New Hampshire
- New Mexico
- New York
- Ohio
- Oklahoma
- Texas
- Utah
- Virginia

Training and reporting requirements are included in the laws in all 18 states.

Most have language that addresses the notification of parent/caregiver and liability concerns of school personnel who may be reluctant to adopt a program.

It is important to note that none of these 18 states require that schools have medication for asthma emergencies.

WHAT ARE ASTHMA-FRIENDLY SCHOOLS

Asthma-friendly schools have policies and procedures that allow students to successfully manage their asthma. Research and case studies that looked at ways to best manage asthma in schools found that successful school-based asthma programs:

- Establish strong links with asthma care clinicians to ensure appropriate and ongoing medical care.
- Target students who are the most affected by asthma at schools to identify and intervene with those in greatest need.
- Get administrative buy-in and build a team of enthusiastic people, including a full-time school nurse, to support the program.
- Use a coordinated, multi-component, and collaborative approach that includes school nursing services, asthma education for students, and professional development for school staff.
- Provide appropriate school health services for students with asthma ensuring that students take their medicines and learn to use them when appropriate.
- Provide asthma education for students with asthma and awareness programs for students, school staff, parents and families.
- Provide a safe and enjoyable physical education and activities for students with asthma.
- Support evaluation of school-based programs and use adequate and appropriate outcome measures.



Source: Centers for Disease Control and Prevention

PREPARING FOR COLLEGE AND ADULTHOOD

When your child is getting ready to leave home – either for college or work – they need to be prepared to manage their asthma. If you have been taking care of your child's healthcare needs, it is now time for them to start figuring things out for themselves. While at college, or just living on their own for the first time, your child will be responsible for:

- Making sure they can recognize and control their trigger(s)
- Keeping up with their medication(s)
- Getting prescriptions filled and refilled
- Scheduling appointments
- Getting medical care if their asthma acts up

As their caregiver, you may worry about them living on their own. These tips will help both you and your child feel more confident.



Find Housing That Fits Your Child's Needs

Take time to look at all housing options ahead of time to find one that will help your child manage their asthma. Consider a building that:



Is Smoke-Free



Has air
Conditioning



Has hard-wood floors
instead of carpet



Is Pet-Free

Once housing is selected, there are more steps your child should take:

- Discuss their asthma with roommates, friends, and, if in college, their resident advisor. Your child should let them know what they must avoid and how to help if they have an asthma episode.
- Consider bringing an air purifier for their room as well. Air purifiers filter particles in the air, such as dust or smoke, and circulate clean air back into the room. Additional information on how to select the right air purifier is included in the Appendices.
- Keep their living area clean to help avoid allergens, such as dust and mold.
- Use dust-mite-proof covers for their pillows and mattress.
- Change their sheets weekly.

HEALTH CARE CONSIDERATIONS

Knowing How Insurance Policies Work

Talk with your child about your health insurance limits. Most insurance plans allow your child to stay covered on your plan if they are a full-time student or until they turn 26.

For college students, student health insurance may be available at their school for a more affordable fee. But your child may then be limited to the campus clinic for care.



Finding a Healthcare Provider

Your child should identify a healthcare provider close to their school or new home. Tips for finding the right doctor include:

- Getting a recommendation from your child's doctor(s). Tell them that your child is moving and ask their advice for finding qualified doctors in their hometown.
- Find healthcare providers through your insurance provider. Make sure any new doctor is covered by your child's health insurance.
- Use an online tool to find a reputable provider.
 - U.S. News & World Report provides information about top doctors across the country. This easy tool will help you find a provider by zip code and specialty - <https://health.usnews.com/doctors>

Locating a Pharmacy

Once your child's housing decision is made, identify a nearby pharmacy where their prescriptions can be filled. Be sure the pharmacy is included in your prescription insurance.

PROTECTING YOUR ABILITY TO HELP YOUR CHILD

At age 18, your child is legally an adult with the right to medical privacy. While your adult child may be capable of making their own healthcare choices, there may be emergency situations when they are unable to communicate with their provider.

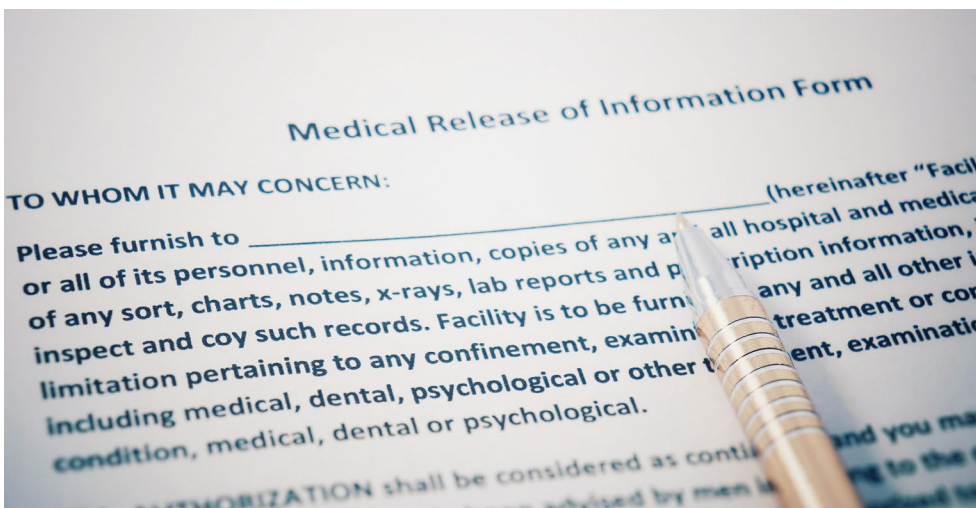
With your child's consent, there are steps you can take to make sure you can still participate on their behalf in their healthcare decisions.

HIPAA Release Form

The main purpose of the HIPAA Privacy Rule is to protect patient privacy. This HIPAA Release Form is like a permission slip. It allows you to be part of conversations and decisions relating to your student's health.

Your child should complete a HIPAA Release Form which should include the following information:

- A description of the information that will be shared
- The purpose for which the information will be shared
- The name of the person to whom the information will be disclosed
- An end date or event when consent to use/disclose the information is withdrawn. For example, an end event may be when college studies are complete
- A signature and date from your child



Power of Attorney for Health Care

Your child should have a Power of Attorney for Healthcare in place. This document will allow you to communicate with their healthcare providers about their care and treatment if they are sick.

The Power of Attorney for Healthcare allows your child to designate someone to help handle their medical needs and decision-making in case they are not able to. These forms can vary by state. You can find a tool here - <https://eforms.com/power-of-attorney/medical/> - to find a form specific to the state in which your child will be living.

CONTACT THE OFFICE FOR STUDENTS WITH DISABILITIES OR ACCOMMODATIONS

Most college campuses have an office for students with disabilities or accommodations. It is important that your child contact this office to see what assistance is available. This office may help to advocate for students with their professors in case of illness and missed classes.

At college, your child may need in-class accommodations not previously required. For example, in a science lab class, your child may be exposed to chemical inhalants for the first time. In this type of situation, they may need their professor to provide a respirator mask or even a different assignment. It's important your child takes advantage of the supportive services their school can provide.





04

OTHER TIPS FOR CAREGIVERS

[SELF-CARE FOR CAREGIVERS](#)

*The Many Roles of a Caregiver * Signs of Caregiver Stress * Caring for Yourself*

[TIPS FROM OTHER CAREGIVERS](#)

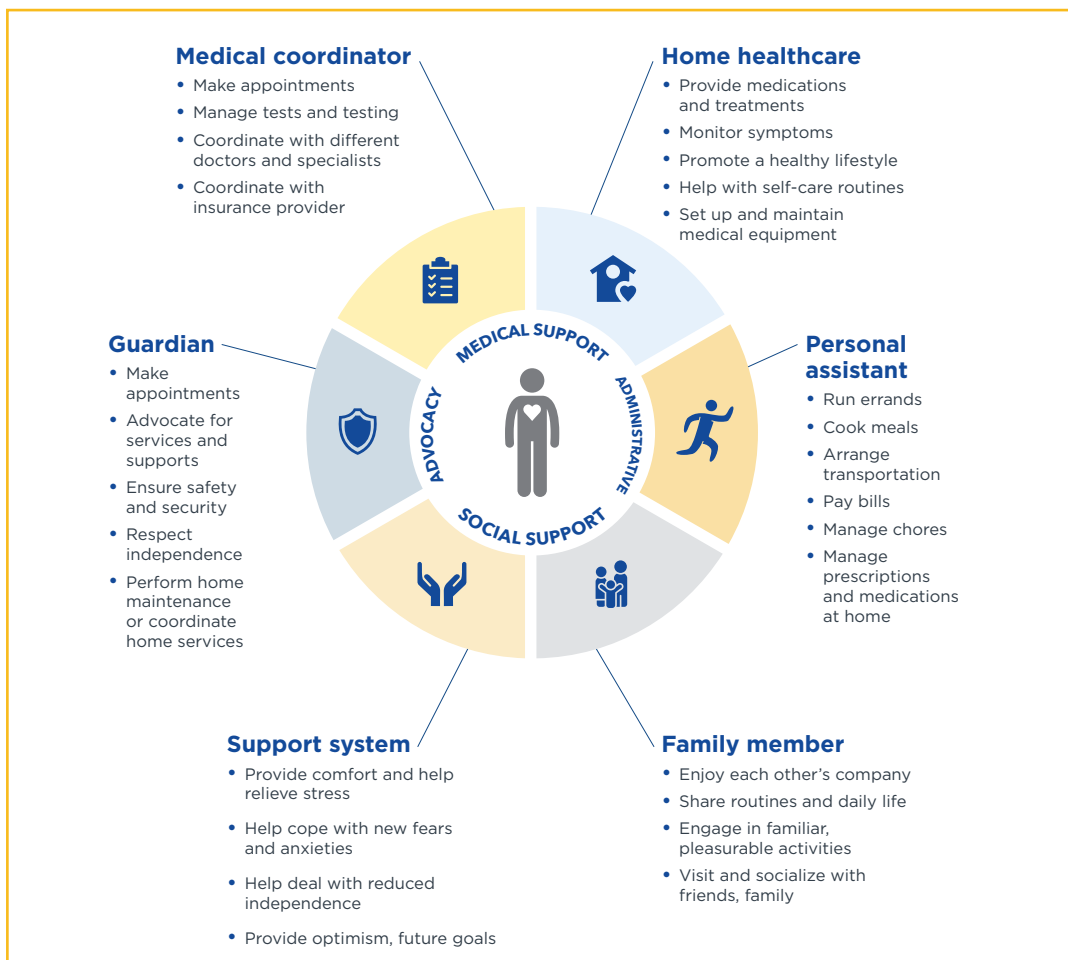
[ASK THE DOCTOR](#)

SELF-CARE FOR CAREGIVERS

Simply put, being a caregiver can be hard. Worrying about your child going off to daycare or school, fearing that a cough will soon be followed by an asthma flare-up, being exhausted from staying up at night caring for your child, or feeling helpless about how you can help your child feel better can add up and can take a toll.

THE MANY ROLES OF CAREGIVERS

Caregiving is more than a single role. It can involve many types of roles, each with a different set of responsibilities and skills. If your child with asthma is older and you have been a caregiver for a while, you may recognize yourself in these “job titles.” If you are newer to caring for a child with asthma, you may find it useful to see the diversity of caregiving tasks so you can begin to consider your approach and get support where needed.



SIGNS OF CAREGIVER STRESS²²

As a parent or caregiver, you may be so focused on your child's health that you do not realize how their asthma is affecting your own health and well-being. Signs of caregiver stress include:

- Feeling burdened or worrying all the time.
- Feeling tired often.
- Sleeping too much or not enough.
- Gaining or losing weight.
- Becoming easily irked or angry.
- Losing interest in activities you used to enjoy.
- Feeling sad.
- Having frequent headaches or other pains or health problems.
- Misusing alcohol or drugs, including prescription medicines.
- Missing your own medical appointments.

Too much stress over time can harm your health. As a caregiver, you might feel depressed or anxious. You might not get enough sleep or physical activity. Or you might not eat a balanced diet. All of these increase your risk of health conditions, such as heart disease and diabetes.

CARING FOR YOURSELF

- **Join a support group.** People in support groups know what you're dealing with. They can cheer you on and help you solve problems. A support group also can be a place to make new friends.
- **Seek social support.** Stay connected to family and friends who support you. Make time each week to visit with someone, even if it's just a walk or a quick cup of coffee.
- **Be kind to yourself.** Being kind to yourself builds the foundation for self-care. Self-compassion means giving yourself credit for the tough, complex work of caregiving, stepping away from the self-critical, harsh inner voice, and allowing yourself time — even if it's just a few minutes a day — to take care of yourself.
- **Practice simple breath awareness for 10 minutes a day.** One of the simplest deep relaxation techniques is breath awareness. Information about breath awareness, paced breathing, and other breath techniques is available in [The Harvard Medical School Guide to Yoga](#). Here is one you can try:
 - Find a comfortable seated position on a chair or cushion.
 - Close your eyes and begin to notice your breath.
 - It is common to have distracting thoughts come and go, but just let them pass, and gently bring your attention back to your breath.
 - Breathe in slowly through your nose for five counts, hold and pause for five counts,* and exhale for five counts.
 - Continue for 10 minutes.

²² Mayo Clinic. Caregiver stress: Tips for taking care of yourself. <https://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/caregiver-stress/art-20044784>

TIPS FROM OTHER CAREGIVERS

Beyond guidance from healthcare providers, many parents and caregivers often find some of the best advice to come from others going through similar experiences. This section is based off of questions and responses from online support groups for caregivers of children with asthma. Please note these are not all evidence-based practices, so consider talking about them with your child's healthcare provider.

Does anyone have advice about how to get my toddler to use her inhaler?

- Put a mask on the spacer and let them decorate it with stickers.
- Give their stuffed animals a treatment first to show your child how easy it can be.
- If the spray part scares your child, try spraying it in the air first so they will see what happens.
- Show your child videos of other kids taking their treatment.
- For younger children, try giving nebulizers and inhalers when your child is sleeping



My child has pneumonia and refuses to take their antibiotic even when it's flavored by the pharmacy. What can I do to get her to take her medicine?

- Try giving her a spoon of Nutella followed by the medication mixed with something with strong flavors. Nutella is thick and oily and will make kind of a coat inside her mouth.
- Mix it into yogurt and do not tell your child it is in there.
- Make a strawberry banana (or other fruit) smoothie in the blender and freeze it into ice cubes. When it is time to take the medicine, toss one ice cube and a tablespoon of milk into blender to make it smooth again. It makes about a shot glass-sized smoothie. Then mix in the dose of medication and give it to your child.

How can I help my child with his nighttime coughing?

- Elevate pillows at night to prop them up.
- Give them some honey.
- Try steaming up the bathroom with a hot shower and putting your child in the bathroom to play.
- Use a humidifier.

My 4-year-old had allergy tests today, he's allergic to dust mites. Anyone who's experienced this please share tips for dust mite reduction to help his congestion.

- Replaced all our carpets with bamboo floors and this helped my daughters immensely.
- Install whole house air purifier/humidifier/dehumidifier.
- Dyson pet vacuum has the best dust filters—weekly to bi-weekly vacuuming.
- Allergy covers on all pillows and mattresses (or foam/latex mattresses only).
- Very limited stuffed animals, wet paper towel dusting twice a week, periodic air vent and dryer vent cleaning.
- Use the zippered pillow and mattress covers and wash curtains frequently.
- Buy a good air filter for the house and replace it every 45 days in the summer and every 60-75 days in the winter.
- Allow one or two loveys in bed and alternate them in the freezer.
- Avoid using a broom when cleaning the floor.

I'm feeling nervous about a planned trip to Mexico over Thanksgiving because my son has had some flare-ups with the cold season. What should I do to prepare?

- Bring all of his medications and, if appropriate, a nebulizer.
- Bring oral steroids just in case.
- Make sure you have cash to pay for private clinics or private hospitals.
- Make sure there are ambulances at your destination.
- Try to get a room where pets have not been allowed in an area of the hotel where smoking is not permitted.

I need help. I am struggling to keep up with dusting and making sure the environment is the best for my two-year-old.

- Air purifiers are really good. I've got one in my kid's room. It's not perfect but it does help a lot. You just want to make sure that you replace the filter regularly.
- Use baby wipes or wet wipes to clean around the house. To be honest, even though my son is allergic to dust it's the dust being disturbed that makes him worse.
- Clean when my child is not in the house buy a HEPA vacuum.
- Empty your vacuum bag outside after each use.
- Use vinegar and hot water to dust and clean



ASK THE DOCTOR



Dr. Anna Volerman is primary care doctor for adults and children as well as an Associate Professor of Medicine and Pediatrics at University of Chicago. Her work focuses on reducing asthma disparities in children.

Will asthma medications affect my child's teeth?

Certain asthma medications can affect the health of your child's teeth. Some medicines leave a residue on your teeth that can wear down the hard outer layer of your tooth called the enamel. Some medicines can affect the gums and can cause dry mouth. It is important to ensure that your child brushes their teeth twice a day using toothpaste that has fluoride in it. Most children need an adult to help them brush their teeth well (or check their teeth) until around age 8. If appropriate, your child should use floss and/or mouthwash. Ask your dentist if you are not sure and be sure that your child sees the dentist twice a year for a cleaning and checkup. Also be sure to avoid juice, soda, and other drinks that have sugar since they can also damage the teeth. Finally, it is important for your child to rinse their mouth after using any inhaled asthma medications that have a steroid in them.

How do I know if a cough is an asthma cough that should be treated or a cough due to postnasal drip caused by a sickness?

People can have a cough for many reasons. When a child is sick and they have postnasal drip, there are typically other signs of the virus, such as a runny nose, fever, throwing up, or rash. A healthcare professional can also examine your child to look for other signs of postnasal drip in the nose and mouth as well as other signs of the virus.

Can children have asthma but no wheezing?

Wheezing is a whistling sound that is made as air tries to move through an airway that is partially blocked. Wheezing is one symptom of asthma; other symptoms are cough, difficulty breathing, and chest tightness. Each child's asthma presents in different ways so some children may have wheezing while others may not and rather present with one or more of the other symptoms.

My son's rescue inhaler is about to expire on the 31st. He still has a lot of puffs left. Do I throw it away? For how long past the expiration date would it be good?

It is considered that most inhalers are good for approximately one year after their expiration date. It is important to note that this can vary based on factors, such as where the inhaler is stored. Be sure to follow the manufacturer's recommendations (see the package insert of the inhaler or ask your pharmacy. Importantly, the potency (strength) of a medication becomes lower after the expiration date so the medication may not work as well. If you use an inhaled medicine that has passed its expiration date, it will not be harmful although it will not be as effective.

Can asthma medications affect my child's behavior and mental health?

Certain asthma medicines can affect a child's behavior and mental health. Inhaled beta-agonist medications (e.g. albuterol) can lead to tremors, nervousness, and difficulty sleeping. Inhaler corticosteroids can lead to behavior changes, such as being hyperactive, aggressive, or agitated. A leukotriene receptor antagonist (e.g. montelukast) may have side effects of depression, aggression, nightmares, anxiety, difficulty sleeping (insomnia), and thoughts of hurting oneself. It is impossible to predict whether your child will experience these effects when taking asthma medicines. So, it is important to watch for symptoms and signs and, if appropriate, talk to your child about it so you can report any symptoms.



If my child only coughs at night, do they need to use their inhaler during the day?

A cough at night suggests that your child's asthma is not well controlled or another condition is causing them to cough, such as reflux or postnasal drip. It is important for them to be seen by a doctor or healthcare professional to figure out what is causing the cough to happen at night. Based on the history and exam, the healthcare professional will make recommendations that can help decrease the cough at night.

If it is asthma that's causing your child's coughs at night, taking an inhaler during the day can decrease the swelling and muscle squeeze in their lungs, which will help decrease the coughing at night.

When is it ok to send my child back to school or daycare after treating flare-ups?

Children can go back to school after their symptoms are under control and continue to improve. All of the symptoms do not need to be resolved as it can take several days to get better. They should be taking medication no more than every 4 hours. Every school is different so it is important to talk to your school nurse or staff member to ensure that the school is aware of the child's asthma, signs to watch out for, medications to give, and how to use the medications.



Do I need to keep my child inside when the outdoor air quality is poor?

It is important to watch air quality levels regularly as children with asthma are more sensitive to poor air quality. When the air quality is poor, it is a good idea to limit the time that your child spends outside. There is no right amount of time or maximum amount of time that they can be outside. It can be helpful to watch for symptoms, decrease the intensity of the activities, and take breaks regularly. You can check the air quality in your neighborhood by going to www.airnow.gov.

For what circumstances should additional steroids be prescribed?

Inhaled or oral corticosteroids help decrease the swelling (or inflammation) in the airways. If a child's asthma is not well controlled with their current medications, an inhaled corticosteroid may be prescribed or the dose may be increased. If the symptoms are severe, then a child may be given steroids to take by mouth, either as a tablet or a liquid.

Is it common for a child's asthma to get worse when starting school?

A child's asthma may worsen when they are in new environments which can bring about exposures to certain triggers or irritants. In addition, a child may be more active during the school day which can cause symptoms. It is important to work with your child's healthcare professional and school to ensure their asthma is controlled and they can use their medications in school when symptoms arise.



Is it normal for albuterol to make my toddler have more mucous and increased drainage?

Albuterol can lead to an increase in mucus and drainage. Medications given via a nebulizer can cause the mucus in the airways to loosen. Also, a side effect of albuterol inhalers is a runny nose (also called rhinitis).

05

APPENDICES

- [GLOSSARY](#)
- [CHILDHOOD ASTHMA CONTROL TEST](#)
- [SPACERS AND METERED DOSE INHALERS](#)
- [ASTHMA ACTION PLAN](#)
- [DAYCARE PROVIDER CHECKLIST](#)
- [VIRTUAL FAN FLYER](#)
- [GET THE FACTS ABOUT VAPING](#)
- [VAPING DEVICES](#)
- [ACTIVITIES FOR CHILDREN](#)

GLOSSARY

Airways: The passage by which air reaches a person's lungs.

Allergen: A substance that triggers an allergic reaction. Many allergens are responsible for triggering asthma, including dust mites, animal dander, mold and cockroaches.

Allergist: A doctor that has specific training in the care of asthma and, in some cases, may be more familiar with current clinical guidelines than a pediatrician or general practitioner.

Alveoli: Tiny air sacs where oxygen is transferred into your lungs and carbon dioxide waste enters the airways in order to be exhaled out.

Anti-Inflammatory Medicines: Long-term control medicines that reduce swelling and mucus in a patient's airways. This makes the airways less sensitive and keeps them from reacting as easily to triggers. They prevent asthma episodes.

Asthma: A chronic, inflammatory disorder of the airways characterized by wheezing, breathing difficulties, coughing, chest tightness and other possible symptoms. People with asthma have sensitive airways that are constantly on the verge of over-reacting to asthma triggers.

Asthma action plan: A written set of directions or a chart that tells you what to do if asthma symptoms occur, depending on their severity. Your action plan also should tell you what to do when you do NOT feel any symptoms (i.e., preventive care). See page 22 for a sample asthma action plan for children ages 0-5 years.

Asthma attack: A sudden onset of asthma symptoms, also called an asthma episode.

Asthma symptoms: Signs that a person has asthma, including coughing, wheezing, shortness of breath or rapid breathing, and chest tightness (also called asthma warning signs).

Bronchi: Smaller airway branches that carry air from the trachea to the bronchioles.

Bronchial tubes: Airways in the lungs. There is one major branch going into each lung and these then divide into many smaller branches.

Bronchioles: The smallest airways that branch off from the bronchi and carry air into the lungs.

Bronchoconstriction: This is when the muscles that wrap the airways constrict tighter and tighter, pinching the airways closed.

Bronchodilators: Medicines that make the airways wider. They come in two forms: short acting bronchodilators (see quick relief medicine) or long-acting bronchodilators (see long-term controller).
Comprehensive allergy panel: Conducted to determine triggers that lead to an asthma attack, these test can detect a patient's sensitivity to common inhalants like pollen and dust mites or to medicines, certain foods, and more.

Corticosteroids: The most common and effective medications used for long-term daily control of asthma (prevention of symptoms). They are most frequently inhaled using either a metered dose inhaler, dry powder inhaler or nebulizer. Corticosteroids primarily decrease or prevent inflammation.

Dry powder inhaler: A small device similar to a metered dose inhaler, but where the medicine is in powder form. The patient exhales out a full breath, places the lips around the mouthpiece, then quickly breathes in the powder.

Hepa vacuum: High-efficiency particulate absorption (HEPA) is a type of air filter that satisfies certain standards of efficiency. They are beneficial for asthma and allergy sufferers because the HEPA filter traps the fine particles, such as pollen and dust mites, which trigger allergies and asthma.

HIPAA: The Health Insurance Portability and Accountability Act of 1996 (HIPAA) is a federal law that required the creation of national standards to protect sensitive patient health information from being disclosed without the patient's consent or knowledge.

Holding chamber: See Spacer.

Inflammation: When part of the body is red, hot, and swollen, and has too much mucus present

Long-term controller: Medication taken daily to control and to prevent asthma symptoms. If prescribed, this medication should be taken every day to prevent asthma symptoms even when the asthma seems better. The medication is helpful in preventing symptoms but should not be used to relieve symptoms. They also can be called preventative or maintenance medications.

Metered dose inhaler: The most common device people use to take asthma medication. An MDI allows you to inhale a specific amount of medicine (a "metered dose"). It consists of a metal canister, which keeps the medication under pressure, and a plastic sleeve, which helps to release the medication. When you press the canister, medicine particles are propelled toward your throat where you can inhale them.

Mucus: A thick liquid produced in the lining of the mouth, nose, sinuses, throat and lungs. It protects the tissue from drying out and also catches foreign objects, like dust, bacteria and pollutants, from entering the body. Increased mucus can be uncomfortable and can make breathing troublesome.

Nebulizer: A device that creates a mist out of your asthma drug, which makes it easy and pleasant to breath the drug into the lungs. The medicine is placed into a small cup. Air from a small compressor converts the medicine into an aerosol mist, which travels through a hose with a mouthpiece attached. By taking slow, deep breaths, the medicine is delivered into your lungs.

Oximetry: This laboratory test is a painless probe also called a pulse oximeter when placed on your fingertips measures the amount of oxygen in your bloodstream. A blood test or a blood sample may not pinpoint the cause of asthma but it is useful to check for any signs of infections or to determine the amount of oxygen and carbon dioxide present in your body.

Peak flow: A measurement of how well you can blow air out of your lungs. If your airways become narrow and blocked due to asthma, you can't blow air out as well and your peak flow values drop.

Quick relief medicine: A medicine used as needed to relieve asthma symptoms during asthma attacks. It is also called a reliever or rescue medicine.

Power of Attorney for Healthcare: This is a legal document that lets you give someone legal authority to make important decisions about your medical care. These decisions could be about treatment options, medication, surgery, end-of-life care, and more.

Provocative Test for Exercise: This laboratory test helps your doctor to measure any obstruction caused during or after you perform any physical activity or breathe cold air.

Rescue medicine: Relief or quick-relief medicine.

Second-hand smoke: The smoke and chemicals that are inhaled by a person who is around smoke, but not actually smoking. Second-hand smoke can come in two forms: (1) smoke from the lighted end of a cigarette, pipe or cigar or (2) smoke exhaled by a smoker. Both forms are harmful to health.

Skin Test (or Blood test): This laboratory test is taken to identify if you have any allergies to pets or dust, mold or pollen.

Spacer: This works with your metered dose inhaler to deliver medication more easily and effectively,

and can reduce side effects. When you use an MDI by itself, more of the medicine is left in your mouth and throat, wasting your dose and causing an unpleasant aftertaste. Spacers hold the medicine between you and the MDI, so that you can inhale it slowly and more completely. Spacers also are called holding chambers.

Spirometry: Test for diagnosing asthma. A spirometer is an instrument that measures the maximum volume you can exhale after breathing in as much as you can. Small spirometers are available for home use, although peak flow meters are more appropriate for most people.

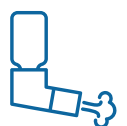
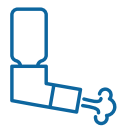
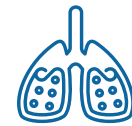
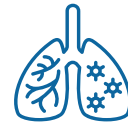
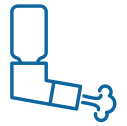
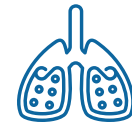
Sputum eosinophils: This laboratory test determines the white blood cells also known as eosinophils found in the mixture of your saliva and sputum (mucus) that occurs while coughing

Steroids: See Corticosteroids.

Stock Albuterol: This term refers to the ability of schools to maintain a supply of asthma medications that can be used for anyone having an asthma emergency.

Thirdhand smoke: Nicotine and other chemicals left on a variety of surfaces by tobacco smoke. It clings to hair, skin, clothes, furniture, drapes, walls, bedding, dust, vehicles and other surfaces, even long after smoking has stopped. It is a health hazard to nonsmokers who are exposed to it, especially children when they inhale, ingest or touch substances containing thirdhand smoke.

Trachea: The major airway that carries air from nose and/or mouth to the bronchi.



CHILDHOOD ASTHMA CONTROL TEST

(For children ages 4-11 years)

STEP 1: Let your child respond to questions 1-4. Complete questions 5-7 yourself.

STEP 2: Write the number of each answer in the score box provided

STEP 3: Add up each score for a total score.

STEP 4: Take the completed test to your child's doctor to talk about the total score.

SCORE

1. How is your asthma today?



0

Very Bad



1

Bad



2

Good



3

Very Good

2. How much of a problem is your asthma when you run, exercise, or play sports?



0

It's a big problem. I can't do what I want to do.



1

It's a problem and I don't like it.



2

It's a little problem but it's ok.



3

It's not a problem.

3. Do you cough because of your asthma?



0

Yes all the time



1

Yes, most of the time



2

Yes, some of the time



3

No, none of the time

4. Do you wake up at night because of your asthma?



0

Yes, all the time



1

Yes, most of the time



2

Yes, some of the time



3

No, none of the time

Please answer the following questions on your own, and without letting your child's responses to the previous questions influence your response.

5. During the past 4 weeks, how many times did your child have any daytime asthma symptoms?

5

Not at all

4

1-3 days

3

4-10 days

2

11-18 days

1

19-24 days

0

Everyday

6. During the past 4 weeks, how many times did your child wheeze during the day because of asthma?

5

Not at all

4

1-3 days

3

4-10 days

2

11-18 days

1

19-24 days

0

Everyday

7. During the past 4 weeks, how many nights did your child wake up because of asthma

5

Not at all

4

1-3 days

3

4-10 days

2

11-18 days

1

19-24 days

0

Everyday

ABOUT YOUR SCORE

If the total score is a 19 or less, it may be a sign that your child's asthma is not as well controlled as it could be. Regardless of the score, bring a copy of this sheet to discuss with your child's doctor at their next visits.

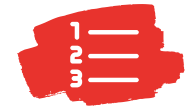
Overview



Many asthma medications come in a small metal canister called a metered dose inhaler (MDI). The inhaler delivers a short burst of the medication to your lungs. Doctors recommend that you use a spacer every time you use your MDI.



A spacer is a holding chamber that attaches to your MDI. Using a spacer with your MDI will deliver the medication to your lungs more effectively. There are many different types of spacers; your health care provider can prescribe and show you how to use the one that is best for you.



The order in which you take your medicine is very important. If your health care provider has given you more than one inhaler (ex. quick-relief and controller), know which one to use when.



You should regularly check the expiration date on your inhaler, and make sure your inhaler always contains medicine. By tracking the number of doses in your inhaler, you will know when to get refills. Most inhalers will give you 200 puffs of medicine.

Using MDIs and Spacers

1 Remove all food, candy, and gum from your mouth.

2 Stand up straight.

3 Remove the cap from your inhaler and spacer. Make sure to clean out any dust or fuzz so there is nothing inside.

4 Shake the inhaler for 5 seconds.

5 Place the inhaler into the spacer. Take a deep breath in and out.

6 Put the spacer in your mouth and seal your lips tightly around the mouthpiece.

7 Press down on your inhaler and take a long, slow breath in.

8 Hold your breath for 10 seconds, then breathe out.

MY ASTHMA ACTION PLAN!

EFFECTIVE DATE: ___ / ___ / ___

MY ASTHMA ACTION PLAN IS A GUIDE THAT HELPS ME AND MY ADULTS MANAGE MY
ASTHMA SYMPTOMS AND RESPOND APPROPRIATELY TO ASTHMA EPISODES

MY NAME: _____ BIRTHDAY: ___ / ___ / ___

PARENT/ GUARDIAN: _____ PHONE: (___) ___ - ___

OTHER EMERGENCY CONTACT: _____ PHONE: (___) ___ - ___

DOCTOR: _____ PHONE: (___) ___ - ___ CAN YOU SELF-MEDICATE: Yes No

MY ASTHMA TRIGGERS:

CHECK OFF THE ITEMS THAT YOU KNOW CAN TRIGGER YOUR ASTHMA:

- | | | | |
|---|---|--|---|
| <input type="checkbox"/> Cigarette smoke/
secondhand smoke | <input type="checkbox"/> Sudden temperature
change | <input type="checkbox"/> Pests - rodents &
cockroaches | <input type="checkbox"/> Strong odors, perfumes |
| <input type="checkbox"/> Respiratory illness | <input type="checkbox"/> Mold | <input type="checkbox"/> Pets - animal dander | <input type="checkbox"/> Cleaning products |
| <input type="checkbox"/> Dust mites, dust | <input type="checkbox"/> Ozone alert days | <input type="checkbox"/> Plants, flowers, cut
grass, pollen | <input type="checkbox"/> Strong emotions |
| <input type="checkbox"/> Exercise | <input type="checkbox"/> Wood smoke | | |

FOODS: _____

OTHERS: _____

KNOW YOUR ZONES:

WE USE THE TRAFFIC LIGHT SYSTEM TO HELP YOU USE YOUR ASTHMA MEDICATIONS
AND KEEP TRACK OF YOUR SYMPTOMS.



GREEN ZONE (GOOD):

Represents your baseline or well-controlled asthma. No symptoms are present and the peak flow measurement is in a good range.



YELLOW ZONE (CAUTION):

Indicates worsening asthma symptoms or peak flow measurements. This section outlines what actions to take when you experience mild to moderate asthma symptoms.



RED ZONE (DANGER):

This zone indicates a severe asthma episodes or very poor peak flow readings. It provides guidance on what steps to take in the event of a severe asthma attack and when to seek emergency medical help.

GREEN ZONE

I FEEL GREAT!

IF YOU HAVE ALL OF THESE

- Breathing is good
- No cough or wheeze
- Slept through the night
- Can work or play

PEAK FLOW ABOVE: _____

USE THESE MEDICATIONS EVERY DAY:

NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY

_____ - _____ - _____ TIMES A DAY

_____ - _____ - _____ TIMES A DAY

FOR ASTHMA WITH EXERCISE TAKE:

_____ - _____ - _____ TIMES A DAY

YELLOW ZONE

I HAVE MILD SYMPTOMS

IF YOU HAVE ANY OF THESE:

- First sign of a cold
- Exposure to a known trigger
- Cough
- Mild wheeze
- Tight chest
- Coughing at night

AND/OR PEAK FLOW FROM _____ TO _____

CONTINUE MY EVERY DAY CONTROL MEDICINE (SAME AS GREEN ZONE)

Increase Dose

NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY

_____ - _____ - _____ TIMES A DAY

OR I TAKE A COMBINATION MEDICINE THAT PROVIDES BOTH QUICK-RELIEF AND CONTROL:

Symbicort® Dulera® (___ strength) Other _____

1 or 2 puffs, up to 4 times a day (up to 6 times a day, if older than 12 years old)

RED ZONE

MY ASTHMA IS GETTING WORSE FAST

IF YOU ARE EXPERIENCING:

- Persistent cough
- Persistent wheeze
- Fast breathing
- Hard to breathe

AND/OR PEAK FLOW FROM _____ TO _____

I TAKE THESE MEDICATIONS & CALL MY DOCTOR:

- Albuterol® (Proair®, Ventolin®, Proventil®) _____ puffs, every 2 to 4 hours as needed for temporary relief of asthma symptoms
- Other Medicine _____

SEE DOCTOR PROMPTLY (ADDITIONAL MEDICINE MAY BE NEEDED)

AND CONTINUE MY EVERY DAY CONTROL MEDICINE (SAME AS GREEN ZONE) Increase Dose

NAME OF MEDICINE: _____ DOSE: _____ WHEN TO TAKE IT: _____ TIMES A DAY

_____ - _____ - _____ TIMES A DAY

CALL 911 OR GO TO THE NEAREST EMERGENCY ROOM IF YOU ARE EXPERIENCING:

- Very hard or fast breathing
- Chest is sucking in between ribs
- Breathing so hard you can't walk or talk
- Nose opens wide with breathing
- Lips or fingernails look blue

DAY CARE PROVIDER CHECKLIST

Sending their child with asthma to day care can cause parents and caregivers to worry. This checklist identifies steps you as a provider can take to ensure a safe and healthy environment for children with asthma and allergies while they are in your care.

AVOIDING OR CONTROLLING DUST MITES	
TASK	COMPLETED
1. Wipe surfaces and furniture with a damp cloth daily (no aerosol “dusting” sprays used).	<input type="checkbox"/>
2. Mop floors daily.	<input type="checkbox"/>
3. Wash small rugs, nap mats, blankets, bed linens and fabric toys in water 130°F (weekly).	<input type="checkbox"/>
4. Prevent children from putting their faces, nap mats, blankets or toys directly on the carpeting.	<input type="checkbox"/>
5. Children’s bed linens, blankets and toys (including stuffed toys or “dress-up” clothes) are washed in water 130°F (weekly).	<input type="checkbox"/>
6. Enclose beds and pillows children sleep on in allergy proof covers.	<input type="checkbox"/>
7. Avoid soft mattresses and upholstered furniture.	<input type="checkbox"/>
8. Curtains, drapes, fabric wall hanging and other “dust catchers” are not hung in child care area. If used, wash weekly in hot water.	<input type="checkbox"/>
9. Wipe window shades daily with a damp cloth. If curtains are used, wash regularly in water 130°F.	<input type="checkbox"/>
10. Avoid clutter. Store books, magazines, toys, supplies and materials in closed cabinets, closed boxes or plastic bags.	<input type="checkbox"/>
AVOIDING OR CONTROLLING ANIMAL SUBSTANCES	
TASK	COMPLETED
1. Do not use feather-stuffed furnishings, pillows, blankets and toys.	<input type="checkbox"/>
2. Do not permit furry pets anywhere on premises (cats, dogs, hamsters, birds, gerbils, etc.).	<input type="checkbox"/>
3. Control cockroaches and mice infestation using preventative practices and least toxic extermination methods.	<input type="checkbox"/>

AVOIDING OR CONTROLLING MOLD AND MILDEW

TASK	COMPLETED
1. Monitor humidity level using a humidity gauge, if possible. Do not use humidifiers.	<input type="checkbox"/>
2. Fix plumbing leaks promptly.	<input type="checkbox"/>
3. Provide ventilation and airflow in rooms and halls every season to avoid musty smell. Check outdoor intake and inside supply vents for blockage.	<input type="checkbox"/>
4. Use exhaust fans in bathrooms, kitchens and basements to help remove humidity.	<input type="checkbox"/>
5. Remove wet carpeting and padding that does not dry within 24 hours to prevent mold growth.	<input type="checkbox"/>
6. Do not use indoor houseplants and foam pillows, which can develop mold.	<input type="checkbox"/>
7. Wipe down bathrooms with diluted chlorine bleach water (daily).	<input type="checkbox"/>

AVOIDING OR CONTROLLING ADDITIONAL ALLERGENS

TASK	COMPLETED
1. Do not use latex gloves. If gloves are used, use only non-powdered, non-latex gloves.	<input type="checkbox"/>
2. Do not use latex balloons, pacifiers, koosh balls or other latex products.	<input type="checkbox"/>
3. Clear outdoor yard and play areas of fallen leaves, compost piles and cut grass.	<input type="checkbox"/>
4. Properly install heating and cooling system filters changed often; follow other service and maintenance guidelines.	<input type="checkbox"/>
5. Clean heating and cooling ducts once a year.	<input type="checkbox"/>
6. If ventilation is adequate, close windows during periods of high pollen count.	<input type="checkbox"/>
7. Vacuum rugs or carpet daily or every other day, when children are not present, with high efficiency vacuum (ideally with a "HEPA" filter).	<input type="checkbox"/>
8. If possible, use air conditioners with clean filters during warm seasons.	<input type="checkbox"/>

AVOIDING OR CONTROLLING CHEMICAL FUMES, FRAGRANCES AND OTHER STRONG ODORS

TASK	COMPLETED
1. Do not allow smoking anywhere on the premises and strictly enforce.	<input type="checkbox"/>
2. Avoid arts and craft materials with fragrances. If using, provide extra ventilation.	<input type="checkbox"/>
3. Do not use air fragrance sprays and “air fresheners.” Open windows or exhaust fans instead.	<input type="checkbox"/>
4. Do not use cleaning supplies and products with strong smells when children are present.	<input type="checkbox"/>
5. Indoor spaces should be ventilated during and after their use.	<input type="checkbox"/>
6. Check new wood furnishings or plastic laminated products for formaldehyde fumes and air out the new products before installation.	<input type="checkbox"/>
7. Shampoo rugs and upholstery with low emission, fragrance-free products and dry thoroughly to prevent mold growth.	<input type="checkbox"/>
8. Apply pesticides with adequate ventilation and when children are not present.	<input type="checkbox"/>
9. Keep office equipment that emits fumes, such as photocopiers, in ventilated areas and away from children.	<input type="checkbox"/>
OTHER SUGGESTED PRACTICES AND POLICIES	IN PLACE?
Implement a policy to ensure every child with asthma has a written Asthma Action Plan on file, listing triggers and medication schedule and emergency instructions.	<input type="checkbox"/>
Train staff to watch for symptoms of asthma and warning signs of asthma, and how to recognize and to respond during emergency situations. Ensure new staff receive this training when hired.	<input type="checkbox"/>
Train staff to administer medication, and the use and care of nebulizers, inhalers and spacers.	<input type="checkbox"/>
Keep medication locked and out of reach of children, but accessible to staff to administer when needed.	<input type="checkbox"/>
Require frequent hand washing and strongly encourage staff to receive annual flu shot.	<input type="checkbox"/>
Implement a perfume, cologne or other scented personal products policy.	

OTHER SUGGESTED PRACTICES AND POLICIES CONT'D	IN PLACE?
Implement staff policy regarding the use of personal care products around children (hairspray, powder, lotion, etc.).	<input type="checkbox"/>
Create policies around third hand smoke (hand washing and changing of clothing) and provide cessation support and resources to staff.	<input type="checkbox"/>
Keep children's personal belonging (coats, extra clothing and other items from their home) separate from play areas to minimize exposure to pet dander and other allergens from their home.	<input type="checkbox"/>
Implement a "no idling policy" for school buses, cars, and deliver trucks on the premises.	<input type="checkbox"/>
Adjust outdoor time for temperature-sensitive children and offer alternate indoor activities.	<input type="checkbox"/>
Be mindful exercise can trigger asthma; keep a close watch on children with asthma during activity.	<input type="checkbox"/>
Check allergen and air pollution levels daily at www.airnow.gov	<input type="checkbox"/>
Aggressively control cockroaches and mice infestation using preventative practices and least toxic extermination methods.	<input type="checkbox"/>
Keep garbage tightly covered and removed promptly to outdoor, enclose trash area so it is not accessible to children.	<input type="checkbox"/>
Place doormats outside all entrances to reduce tracking in of allergens. Remove and store wet shoes and clothing so they do not track wetness into play area.	<input type="checkbox"/>

Sources:

¹Salo PM, Sever ML, Zeldin DC. Indoor allergens in schools and daycare environments. J Allergy Clin Immunol. 2009; 124(2): 185-194.

²2007 Guidelines For The Diagnosis And Management Of Asthma. Third Addition. National Asthma Education and Prevention Program Expert Panel. October 2007.

³Illinois Department of Human Services. A Resource Manual for Schools. 2001. <http://www.dhs.state.il.us/onenetlibrary/27894/documents/schoolhealth/asthma.pdf>



VIRTUAL FIGHT ASTHMA NOW[®]

Virtual Fight Asthma Now[®] is a free asthma management program for children with asthma. The program is designed to give them the tools and knowledge they need to identify and avoid their triggers, manage asthma episodes, and control their asthma on a long-term basis. Virtual Fight Asthma Now (VFAN) is the virtual version of our Fight Asthma Now program for children living outside of the Chicagoland area. This program is self-guided through a bitmoji classroom over the course of 4 lessons, with a supplemental 5th lesson on smoking and asthma. VFAN will be made available for those located outside Chicago or the Cook County area.



TOPICS INCLUDE:

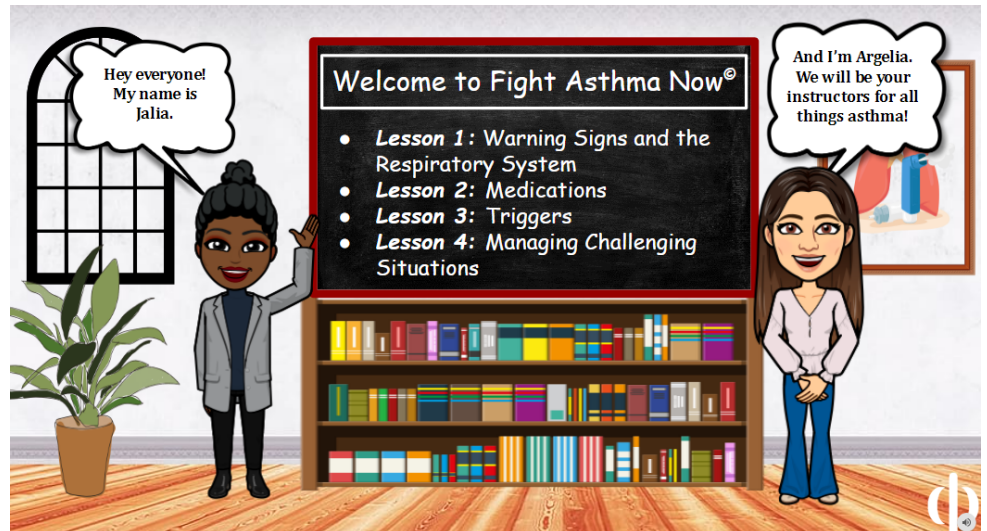
- The respiratory system and the warning signs
- Medication techniques and how to use them
- Identifying and managing asthma triggers
- Managing challenging situations and keeping yourself safe

Audience:

3rd-12th grade students

Format:

Individual, small group, or classroom learning.



For more information,

please visit RespHealth.org/Asthma or contact us at info@resphealth.org.

Get the facts about vaping and e-cigarettes



Vapes, MODs, e-cigs, JUULs. You know them by different names and probably recognize the sweet smell their fruity, candy flavors leave behind. But when it comes to electronic cigarettes, **what you don't know can kill you.**

Consider the facts before you decide to hit a vape.

E-cigarette 'vapor' isn't just water

Scientists have found more than **60 different chemicals** in e-liquids and vape juice. Many of these chemicals are toxic and dangerous – chemicals that can cause cancer and hurt your lungs and heart when you breathe them. Many e-liquids also have addictive nicotine in them. In fact, one JUUL pod contains as much nicotine as a whole pack of cigarettes. That means once you start vaping, you could be hooked for life. Not only is nicotine addictive -- it can damage your brain.



No one makes sure these products are safe

You might assume someone would stop a company from selling you something that will kill you or give you cancer. Or at least that a company can't lie to you about what's in its products. In the case of e-cigarettes, you'd be wrong. Usually the US Food & Drug Administration (FDA) works to make sure companies follow certain safety rules and don't make products that are bad for you. Right now the vaping industry is fighting to keep the FDA from testing its products. What do you think they have to hide?

resphealth.org

The e-cigarette industry tries to manipulate young people

These companies exist to make money. They don't care about your health – they care about your wallet and getting you hooked. So they dress their cigarettes up in new technology and sweet flavors like cotton candy, cupcake, and fruit. They're desperate to make smoking look cool again, and they'll do just about anything to convince you. They study your habits and spend money advertising on Snapchat, YouTube and TikTok. They pay celebrities and social media stars to use their products. All in an effort to get you started.

Big Tobacco companies invest in vape & e-cig companies

Why? Because they already know what health research is just starting to show: vaping makes young people much more likely to smoke regular cigarettes. And they're making a lot of money while they get you addicted to e-cigs, too. Let's look at one example. A pack of four JUUL pods typically costs \$15.99 but can cost as much as \$30 depending on the popularity of the flavor. Young people addicted to JUUL can smoke as many as four pods a week – adding up to \$1500 a year. No wonder Big Tobacco is betting on vapes to hook a new generation of smokers.

What can you do?

Don't fall for it. Don't let companies convince you to sacrifice your health so they can make money. Just because their products smell like candy doesn't make them safe to put in your lungs. Don't be afraid to tell your friends what you've learned. Good friends won't pressure you to do something you don't want to do and will listen to what you say.

Want to take your resistance a step further? Write to your elected officials – whether it's your mayor, state representative, governor or senator – and ask them to write laws that stop companies from lying about the safety of their products and targeting young people. Remember: your voice and opinions matter, & politicians are accountable to people like you.



[resphealth.org](https://www.resphealth.org)

VAPING DEVICES



What Parents Should Know



JUUL

These small devices resemble USB flash drives. Despite their size, JUUL products have dangerous nicotine levels similar to a pack of cigarettes. The vapor they produce does not smell as strong as other devices, making them easier to hide and harder to track.

MODS

Mechanical Modified Nicotine Delivery Systems are a bulkier model of vape pens. They are harder to hide, but offer many flavor options. The ability to change nicotine and heating levels in these devices makes them especially unsafe.



PENS

As their name indicates, these devices are slim and pen-like. These pens offer a wider variety of flavors, which makes them appealing to young people. They are discreet like JUUL products, but produce a more apparent odor.

FLAVORS

Most vaping products use juice-filled pods or cartridges that contain nicotine and other chemicals. Smokers can choose from thousands of flavored e-juices or e-liquids. Flavors are often sweet, helping attract young people to this addictive product.



FOR MORE INFORMATION ON E-CIGARETTES VISIT RESPHEALTH.ORG

ASTHMA WORD SCRAMBLE

Can you unscramble these words to reveal important words related to asthma?

HASMTA

HLAINRE

ESCRAP

LYAELRG

RITESRGG

AEITNOIDMC

AENBRHITG

WNZIEEHG

ICGHUONG

EXSCIERE

DRADEN

LAEUOBRTL

AYRWIA

KEMSO

ASTHMA WORD SEARCH

How many words can you find from
the list below?

F	A	Y	A	F	I	D	S	R	G	N	I	K	O	M	S	W
E	E	B	V	M	W	T	J	L	K	R	Z	Q	Y	S	L	X
M	X	J	M	K	V	Y	T	Z	D	L	V	J	P	I	I	T
A	K	P	U	R	I	J	U	U	Z	B	H	K	D	L	S	C
C	X	R	S	L	S	S	E	N	T	H	G	I	T	E	D	C
Z	W	Q	C	X	E	Z	I	C	R	E	X	E	H	M	B	J
A	H	B	L	H	A	D	R	F	A	E	R	C	G	T	F	P
M	E	L	E	K	K	A	P	S	Y	M	P	T	O	M	S	R
H	E	U	S	R	E	H	T	A	E	W	G	U	K	J	P	E
T	Z	N	B	V	C	I	N	H	A	L	E	R	K	S	V	V
S	I	G	W	X	P	O	L	L	U	T	I	O	N	R	U	E
A	N	S	Y	P	G	L	U	B	X	T	O	G	N	E	G	N
M	G	R	O	R	H	Q	X	G	A	C	K	W	U	G	M	T
N	G	D	N	L	D	Q	T	D	H	R	R	X	O	G	N	E
R	V	L	Z	A	T	Z	A	T	O	I	H	B	S	I	Z	R
U	X	G	W	U	Y	G	B	D	J	V	N	M	H	R	P	G
M	R	T	L	M	N	O	D	V	V	Y	H	G	S	T	W	K

EXERCISE

LUNGS

TIGHTNESS

TRIGGERS

SMOKING

WEATHER

SYMPTOMS

CHEST

INHALER

ASTHMA

MUSCLES

POLLUTION

COUGHING

WHEEZING

RESPIRATORY SYSTEM WORD SEARCH

How many words related to your respiratory system can you find from the list below?

ZGMUFWPVPQHPCFDBAEHCART
ZFRAESSAVXQBL L I R S A R H M K M R
HJKEIRROQAQORASEXPTUNBHJ
TSBVOSABESBEEGASSAPLASAN
DRCLN I L H O M E O S T A S I S U B T L L N
PRSXTQUWHNPVPBUGCUFRXCRQ
OYGJVBLGVKDZ I H Y D R T U N P X P Y
VBFMQ I L U O W Z J R E W L I U T Y J M H O
JFYJKIEAMJVZAJCHRONICZTY
YDSPPCGQXOLTUGRWILCEFTX
WGVAXBAGYVCI I E M V S C Q Z D A N A
WLTERRSADTACOLXLGO I I I Y U L
XTAPHBATGDLQNONUNDS SRASL
NMDPRGBBGBBCQL I Y J U N J A Z G O L
WKAMCNQCGXHHGHRPLRHASVQA
VIDINFYRLEOSPCAPWPTFYVDM
DQGXI J H L M R C W N L P U Y E X T E Y E
LXZMUCZOBPDI LOBIYCSNTPZS
WXTZZBNTXMSIERLIYYRHHHPY
LBDHGPPOVHKMIBKXHRBJCULH
NHKLXUKURQLDTILOEVLANNBP
CTERWKNHZBFBDULJFKYLGDEM
TPCAEFFZEAKZNVKW XKUFTTRE
FYRVHWMREARPSEKKOKWCYTOV

BRONCHIOLE

BRONCHI

ALVEOLI

PHARYNX

LARYNX

TRACHEA

DIAPHRAGM

HOMEOSTASIS

VOCAL CHORDS

CHRONIC

RESPIRATION

NASAL PASSAGE

LUNGS



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