HOW WE BREATHE

Breathing in and out may be something you don't think about very much. This may change when you have a cold, an asthma attack, or an illness that makes it hard to breathe. To better understand things like chronic obstructive pulmonary disease (COPD) and asthma, let's see how breathing happens in normal, healthy lungs.

Your lungs are part of what is called the respiratory system, a group of organs and tissues that work together to help you breathe. The respiratory system's main job is to move fresh air with oxygen into your body while removing air with carbon dioxide from your body.

The respiratory system also does other things that are important for breathing, such as:

- Changing the air you breathe in to the right temperature and humidity
- Coughing, sneezing, or swallowing to keep you from breathing in harmful things, to keep your body safe

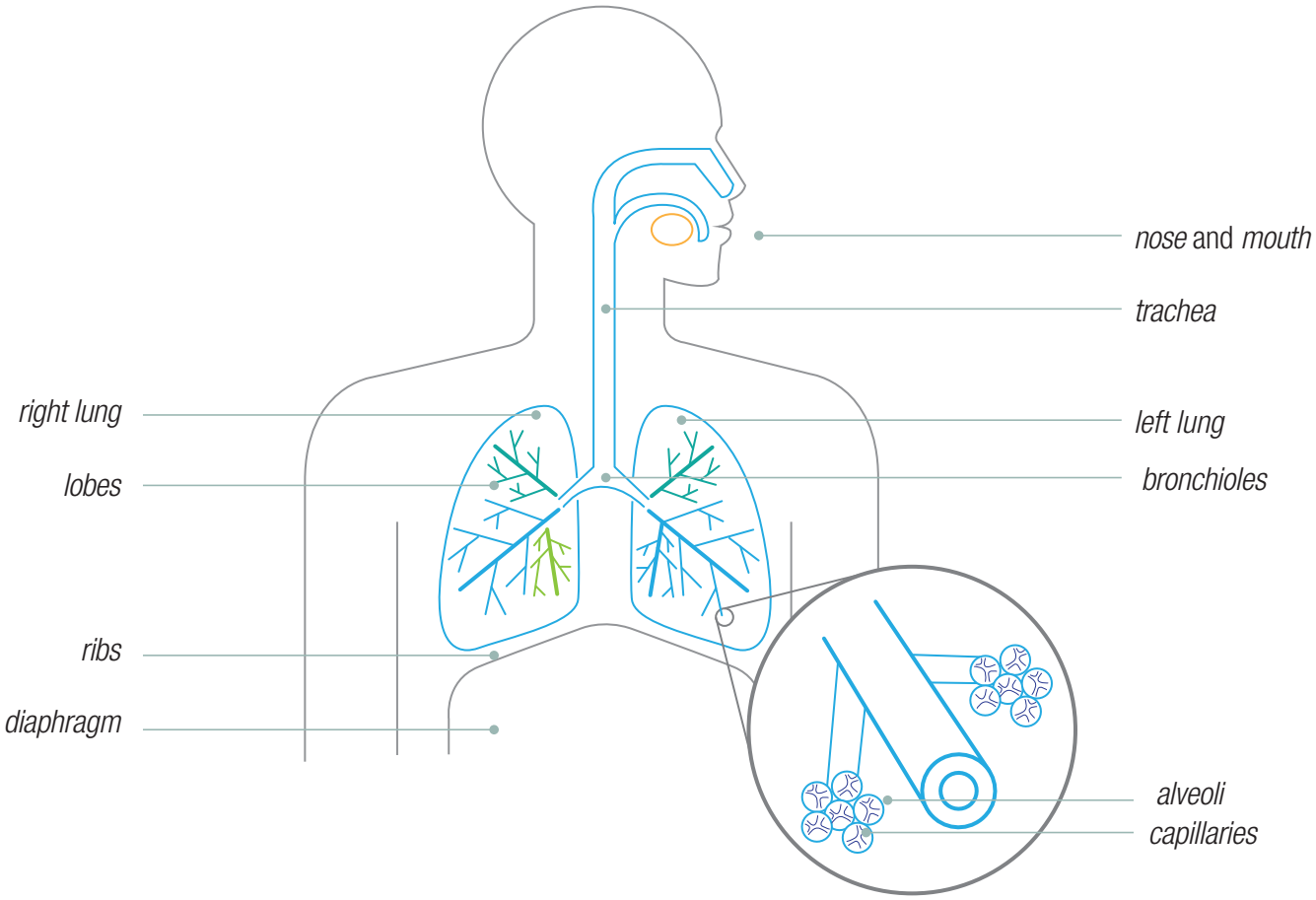
Breathing by the Numbers

Your lungs help you breathe **12 to 15 times** a minute when you are resting—that's over **6 million** breaths in **1 year** alone!

Think of the respiratory system as a pipe in which all parts are connected and each area affects another area.

Here are the parts of the respiratory system:

- Your *nose* and *mouth* bring air into the body. The hairs lining your nose help clean the air you breathe
- Your *throat,* also called the *pharynx,* brings the air from your nose and mouth down to your *windpipe* (also called the *trachea*), which connects the throat to the lungs by 2 main *bronchial tubes*, one for each lung
- These bronchial tubes branch further into *bronchioles*. At the end of the smallest branches are the *alveoli*, or air sacs—these are the destination of air that you breathed in
- *Capillaries* are tiny blood vessels in the walls of the alveoli. Blood passes through these capillaries, entering through your *pulmonary artery* and leaving via your *pulmonary vein.* While in the capillaries, blood gives off carbon dioxide through the capillary wall into the alveoli and takes up oxygen from the air in the alveoli
- You have 2 *lungs*. The right lung is divided into 3 *lobes,* or parts. The left lung is divided into 2 lobes. Air moves in and out of the lungs through the branches of the bronchial tubes
- *Cilia* are very small hairlike projections that line your bronchial tubes. The cilia move like waves and carry mucus and other foreign matter up and out of the lungs to your throat where it is either coughed up or swallowed. Mucus catches and holds the germs and dust that may have invaded the lungs. You get rid of mucus and foreign matter when you cough or sneeze
- Your *diaphragm* is a strong wall of muscle that separates your chest from your stomach. When the diaphragm moves down, it pulls air into the lungs
- Your *ribs* support and protect your chest. They move slightly to let your lungs expand and contract



The inside story of the lungs

When you take in a breath, the air is filled with oxygen. The air goes down your windpipe into the bronchial tubes. These tubes branch out further into thousands of smaller, thinner tubes called bronchioles when they reach the lungs. At the end of the bronchioles are groups of tiny, round air sacs called alveoli.

When the air you breathe in reaches the air sacs, the oxygen passes into tiny blood vessels called capillaries, which run through the alveoli's walls. At the same time, carbon dioxide, the waste that comes from the cells after they use the oxygen, moves out of the capillaries into the alveoli. This is called a gas exchange. Life-sustaining oxygen now fills the blood vessels and is delivered throughout your body. The air that contains the carbon dioxide then moves up and out of your lungs.

The bronchial tubes and air sacs are very stretchy. When you breathe in, each air sac fills up with air like a balloon. When you breathe out, the air sacs deflate.

Lung capacity decreases as you get older. You can help keep lungs healthy by not smoking, eating a healthy diet, exercising, and managing your stress.

AstraZeneca

CCMC®
Commission for Case Manager Certification

WHAT ARE ASTHMA AND SEVERE ASTHMA?

Do you sometimes have trouble breathing, especially at night? Do you have a cough that won't go away? Do you cough at night? Does your chest feel tight? If you have asthma, these symptoms will sound familiar.

Asthma is a long-term disease that causes inflammation in the airways (also called bronchial tubes).

Because of this inflammation, the muscles around the airways become more sensitive to triggers. This may decrease the space in the bronchial tubes, making it hard to breathe in and out. And the smaller the space becomes, the harder it is for you to breathe. You might also make more mucus, making it even harder to breathe.

Some of the cells involved in asthma inflammation are called *neutrophils* and *eosinophils*.

You can get asthma at any age, but it usually starts when you are a child. Over 25 million people have asthma in the United States, and about 7 million of them are children. Asthma due to allergies is the most common type of asthma. About 60% of people with asthma have allergic asthma. African-Americans and Hispanics are most at risk.

Asthma by the Numbers

Every year, asthma causes approximately:

- **1.6 million** visits to the emergency department
- **450,000** hospitalizations
- **46.7 million** absences from work, school, or other activities

Going Deeper

Asthma can be mild, severe, or somewhere in between. To make the best treatment plan for you, healthcare providers refer to types of asthma called *phenotypes*. These are based on your medical history and physical exam. Examples of phenotypes are exercise-induced asthma or obesity-related asthma. Healthcare providers may also refer to *endotypes*, which describe the reason for your asthma, for instance, allergies or an aspirin sensitivity.

Asthma Triggers

Many things can trigger your asthma symptoms or make them worse if you are exposed to them.

Some of the common, everyday things that can trigger an attack are:

- Dust, animal fur, cockroaches, mold, and pollen
- Cigarette smoke, air pollution, and chemicals, including those found in home decor products or sprays
- Aspirin, ibuprofen, and other medications
- Catching a cold or any other lung, ear, sinus, or throat infection
- Physical activity, including exercise
- Conditions such as pauses in breathing while you sleep (called sleep apnea)
- Some preservatives found in foods and drinks

Severe Asthma

Severe asthma is asthma that is difficult to control, even with medication. About 1 in 20 people with asthma have severe asthma.

Up to 50% of people with severe asthma have a high number of white blood cells called eosinophils in their lungs. Eosinophils are a normal part of the body's immune system, but for some people with severe asthma, they can cause inflammation in the airways. Inflamed airways can cause severe asthma attacks and repeated inflammation and attacks can lead to even more attacks and harm the lungs.

Signs that you may have eosinophilic asthma are:

- Using your rescue inhaler a lot to relieve and control your asthma symptoms
- Waking up at night because of your asthma symptoms
- Having to take oral steroids like prednisone for your asthma
- Having had asthma attacks that called for emergency care

A simple blood test can help your doctor determine whether your severe asthma is eosinophilic asthma.

AstraZeneca

CCMC®
Commission for Case Manager Certification

DO YOU HAVE ASTHMA OR SEVERE ASTHMA?

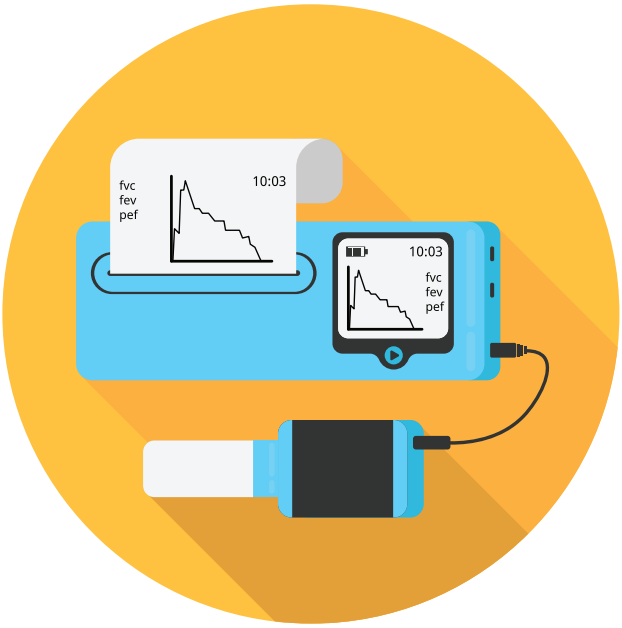
You may have trouble breathing without having asthma. You could have a cold or simply a runny nose instead of asthma. In order to see if you have asthma and not something else, you need to see your healthcare provider.

Your healthcare provider will give you a few tests to see if you have asthma. You will need to answer questions about your personal medical and family medical history. Some of the questions include:

- Do you cough at night or early in the morning, making it hard to sleep?
- Do you make high-pitched, whistling sounds (called wheezing) when you breathe?
- Does your chest feel tight, as if someone were squeezing or sitting on it?
- Do you have trouble catching your breath?

Lung Function Tests For Asthma and Severe Asthma

If your healthcare provider thinks you have asthma, you will need to take a lung function test called spirometry, which measures how much air you breathe in and out and how fast you can breathe out. It is a painless test in which you take in a deep breath, and then blow out as hard as you can into a tube that's connected to a machine called a spirometer. This machine measures how much and how fast you blow out the air. The spirometry test will be repeated in some later office visits to see how well your treatments are working.



Other lung function tests include:

- ***Methacholine challenge test (or bronchoprovocation test)*** sounds complicated, but it is simply a test that sees how responsive your lungs are to things in the environment. You breathe in different amounts of a chemical called methacholine. This chemical narrows the tubes that lead to your lungs in the same way asthma does. Your healthcare provider will stop giving you doses of the chemical if you start having trouble breathing or if there is no change in your breathing after getting the highest dose. This test is usually given in a special lung facility or a doctor's office where trained staff can handle any possible reactions
- ***Fractional exhaled nitric oxide (FeNO)*** test measures the amount of nitric oxide that is breathed out of your lungs. When you breathe air out, some nitric oxide is in your breath. You just breathe normally in and out of a tube attached to a portable device. Measuring the amount of nitric oxide you breathe out is a way for healthcare providers to see if certain inhaled asthma medicines are right for you. FeNO tests may be done in an outpatient asthma-and-allergy specialty clinic

Other Tests for Diagnosing Asthma

Lung testing is important to see if you have asthma. Other tests can narrow down the diagnosis to help make sure you really do have asthma and that you get the right treatment:

- ***Allergen skin tests*** help your healthcare provider see if you have any allergies to such things as pet fur or flower pollen. These tests are usually done by an allergy specialist, who is trained in the best ways to test and treat allergies
- ***Other tests*** will help rule out conditions that only look like asthma

You might see or hear the words **"FEV_1"** and **"FVC"** when getting a lung function test. FEV_1 stands for forced expiratory volume in 1 second. It is a measure taken in the first second of breathing out air in a spirometry test. This number is then compared to your FVC, or forced vital capacity, which is the whole amount of air you can breathe out at once. Among people with asthma, the FEV_1/FVC ratio can be low—or it can be normal. (A low FEV_1/FVC ratio may also indicate COPD.)

Diagnosing Asthma in Small Children

Most children who have asthma start showing symptoms before they are 5 years old. But children often have other childhood conditions that only look like asthma. They might wheeze when they catch a cold, but they won't necessarily go on to have asthma after they've turned 6. The likelihood of your child having asthma is higher if your child already has allergies that result in such reactions as stuffy noses and itchy eyes, food allergies, eczema, and hives.

Diagnosing Eosinophilic Asthma

If you have asthma, you might also have swelling in your airways caused by a high amount of a specific type of white blood cell called eosinophils. This can cause inflammation in the airways. A high amount of eosinophil cells can also cause severe asthma attacks and can harm your lungs.

You may have eosinophilic asthma if you:

- Use your rescue inhaler a lot
- Wake up in the middle of the night because of asthma symptoms such as cough or trouble breathing, or asthma attack
- Have had asthma attacks that needed emergency care

A simple blood test that measures the number of eosinophil cells in your blood can help your healthcare provider see if you have eosinophilic asthma and determine the best treatment options for you.

AstraZeneca

CCMC®
Commission for Case Manager Certification

TREATING ASTHMA AND SEVERE ASTHMA

If you have asthma, you need to take an active role in controlling it. There is no cure for asthma, but by working together as partners for your health, you and your healthcare provider can help keep asthma attacks away. You can make living with asthma easier.

Making an Asthma Action Plan

The first step is to make a plan with your healthcare provider to include:

- Identifying possible triggers that can worsen your asthma—such as dust, pet fur, or cigarette smoke - and avoiding these triggers
- Writing down how your breathing is every day and every night using a peak flow meter
- Recognizing and taking care of symptoms that are getting worse
- Understanding what medications to take and how to take them*
- Seeking emergency help if you need it
- Treating other health conditions that might be making your asthma symptoms worse

*Physical activity plays an important role in being healthy. If your asthma is triggered by exercise, talk to your doctor about how to lower any risks.

Some of the medicines used in asthma:

The medical options for long-term treatment of asthma fall into 3 main categories:

- ***Controller medications*** are used for regular maintenance treatment. They reduce airway inflammation, control symptoms, and reduce future risks such as flare-ups
- ***Reliever (rescue) medications*** are prescribed for all asthma patients to get as-needed relief from asthma symptoms that appear even though you are already taking controller medication. They are also recommended for short-term prevention of exercise-induced asthma. Reducing and, ideally, getting rid of the need for reliever treatment is both an important goal in asthma management and a measure of the success of asthma treatment
- ***Add-on therapies for severe asthma*** may be considered if your symptoms don't go away and you continue to have flare-ups despite using high-dose controller medicine and minimizing asthma triggers

Inhaled Corticosteroids (ICS)

ICSs are usually the first line of defense in patients with asthma who need a controller medication. An ICS may be combined with other medications if symptoms do not lessen. These medicines reduce swelling and mucus production in the airways, making it easier for you to breathe. They ease the irritation you may have on the walls of your airways. When taken long term, corticosteroids may have side effects such as cataracts and osteoporosis. It is important that you rinse your mouth with water immediately after using an ICS to avoid getting oral thrush, a yeast infection in the mouth or throat.

Corticosteroids also come in pill form (oral corticosteroids, or OCS) and may be used for short amounts of time, such as when asthma symptoms worsen.

Combination Medicines

These drugs contain 2 different types of medicine, usually an inhaled bronchodilator and an ICS, together in an inhaler device.

Bronchodilator Medications

These medicines help make your lungs work better. They open up your airways so you can breathe better. They may also improve your ability to exercise.

There are 2 main types of bronchodilators used in asthma treatment:

- ***Beta$_2$-agonists*** relax airway muscles. Short-acting beta$_2$-agonists (SABAs) last about 4 to 6 hours and are often used only when needed for quick relief. They can also be taken before exercising to prevent exercise-induced asthma. If you need to take a SABA more than twice a week for shortness of breath, it may be a sign that your asthma is not well controlled. Long-acting beta$_2$-agonists (LABAs) last about 12 hours or more. LABAs should be taken only in combination with an ICS to treat asthma
- ***Anticholinergics*** are another type of bronchodilator that opens up the airways in the lungs, making breathing easier. Anticholinergics may also reduce the amount of mucus blocking the airways. A long-acting anticholinergic may be prescribed if you have severe asthma

Theophylline is an alternative to SABAs, for the relief of asthma symptoms in adults. Theophylline is not recommended for routine use as it takes longer to work than an inhaled SABA and has a higher risk of side effects than inhaled SABAs.

Healthcare providers may also decide to try putting you on a different treatment regimen, using the medications below as an add-on to your current treatments

- ***Leukotriene receptor antagonists (LTRA).*** These medicines are also taken by mouth and help block the way your body increases inflammation in the airways. They are used both for treatment and prevention of acute asthma attacks

What Does Biology Have To Do With It?

A *biologic* is a type of drug that is made up of complex arrangements of sugars, proteins and/or other components. Biologics are often isolated from natural sources - humans, animals or microorganisms - instead of drugs that are chemically created in a laboratory.

- ***Anti-IgE antibodies.*** This is a class of biologics usually given by injection once or twice a month by a healthcare provider. It can help prevent reactions to asthma triggers. It is an "add-on" drug, which means it is given with other asthma medicines you are already taking
- ***Anti-IL-5 antibodies.*** This is a class of biologics given by injection or infusion that may help ease inflammation in some people with severe eosinophilic asthma. It is an "add-on" drug, which means it is given with other asthma medicines you are already taking

Treating Eosinophilic Asthma

A simple blood test may help your doctor determine if your severe asthma is a specific type called eosinophilic asthma. This could be a major reason why your airways get irritated. The good news is that there are different treatments that can manage eosinophilic asthma. These treatments are available either as an injection or an infusion given in a treatment center. They should be added on to asthma treatments you are already receiving.

AstraZeneca

CCMC®
Commission for Case Manager Certification

MEDICATION ADMINISTRATION FOR COPD, ASTHMA, AND SEVERE ASTHMA

There are different ways to take medicine for COPD and asthma. These can be multiple types of inhalation devices, in addition to medicine that is delivered orally or by injection. You breathe in, or inhale, with these devices. As you inhale, the medicine goes right into your lungs.

We'll review each type of delivery system below:

Pressurized Metered-Dose Inhalers (pMDIs)

A pMDI gives the right amount of medicine to your lungs with each spray or puff. Many pMDIs have a dose counter. This lets you know how many puffs are left.

Pros:

Small and easy to carry; doesn't need a deep, fast breath; dampness doesn't change drug

Cons:

Medication may stick to the back of the throat or tongue; needs shaking and priming

pMDIs With a Spacer

A spacer can be used with a pMDI. It may help to match breathing in with the spray of drug. The medicine you breathe in is sprayed into the spacer. The spacer holds the puff from the pMDI for a few seconds. This means you don't have to both breathe in and spray the pMDI at the same time.

Pros:

Helps get more medicine to the lungs; may reduce the risk of hoarseness or a sore mouth

Cons:

Spacers make pMDIs less portable

Dry Powder Inhalers (DPIs)

A DPI delivers your medicine in a dry powder form. A DPI is activated by your breath. To release the medicine into your lungs, all you have to do is take a deep, fast breath in through the inhaler.

Pros:

Small and easy to carry; you don't need to worry about coordinating your breath at the same time the medication is released; may use single dose capsules of medication so it is easy to tell how many doses are left

Cons:

Needs you to breathe in deep and fast. Not everyone can do that. Medication may stick to the back of the throat or tongue; single-dose models require loading medicine capsules for each use; humidity can cause medication to clump

Breath-Actuated Inhalers (BAIs)

A BAI delivers an automatic spray of medicine when you inhale.

Pros:

Does not require coordination of inhalation and actuation of the canister

Cons:

Larger than a pMDI

Nebulizer

A nebulizer delivers medicine in a fine mist that you breathe in through a mouthpiece or mask that covers your nose and mouth.

Pros:

May be used at any age; is easy to breathe the medicine in; can deliver medications not available in an inhaler

Cons:

Costs more than inhalers; treatment time may be long; parts or tubes may have germs on them; medicine can be wasted when mist comes out from the sides of the mask

Peak Flow Monitor

This is an easy-to-carry, inexpensive, hand-held gadget that is used to measure how much air flows from your lungs when you breathe out one “fast blast” of air. In other words, the monitor shows how forcefully you can push air out of your lungs. You can use the monitor at home and write down the results. Why use a peak flow monitor? The results can help your healthcare provider see if the amount or type of medicine you are taking for your COPD or asthma is working. A peak flow monitor can also let your healthcare provider know if your asthma is getting worse.

IV Infusions or Injections

IV, or intravenous, infusion therapy simply means that a medicine is given slowly through a needle into your vein.

Injections are given with a needle. You can get a subcutaneous injection, which goes under your skin or an intramuscular injection which goes deep into a muscle. You might feel a pinch as your healthcare provider gives you the injection.

AstraZeneca

CCMC®
Commission for Case Manager Certification

YOU CAN QUIT SMOKING!

If you're a smoker, chances are you've heard someone say, "Stop smoking," "Smoking is bad for you," "Just stop!" You probably already know how bad it is for you to smoke. But you just can't seem to quit—even if your healthcare provider has already told you it can make your asthma or COPD worse. In fact, smoking is the number 1 reason people get COPD—and it's also the most common trigger to set off an asthma attack.

If you started smoking as a child or teenager, it can slow down how your lungs grow. It can also put you more at risk for getting COPD as you get older. Tobacco smoke is unhealthy for everyone, especially for people with asthma.

It's also helpful if the places where you live, work, and visit are smoke-free. Secondhand smoke is smoke that comes from other people smoking cigarettes, cigars, or pipes and can also make your COPD or asthma worse.

Did you know that 21% of people with asthma are smokers? If you smoke, quit today!

Tools For Quitting Smoking

Quitting is easier said than done. Smoking is an addiction, like street drugs or alcoholism. It makes you crave a cigarette deep inside you, both physically and mentally. The good news is that there are tools that can help you stop smoking for good:

- ***Nicotine replacement therapy (NRT).*** When you stop smoking, your body has to get used to not having nicotine. That's what nicotine withdrawal is. You may feel cranky, have trouble sleeping, and feel like you have the flu. NRT helps you manage these physical withdrawal symptoms so you can start working on the feelings that you have about quitting, such as anger, sadness, and fear. Studies show that using NRT can almost double your chances of success. The best time to use NRT is when you first quit. Make sure to speak to your healthcare provider before starting NRT. There are some people who should not use NRT.

  NRT comes in several different ways: gum, patches that you put on your skin, sprays, inhalers, and lozenges. You and your healthcare provider can decide which works best for you

- ***Prescription drugs.*** There are some prescriptions that have been found to help you quit by changing the way you think about cigarettes. They help get rid of your need to have a cigarette. Some can be taken while you also take NRT. Others must be started weeks before you decide to quit. Speak to your healthcare provider to see if one of these drugs is right for you

- ***Emotional support.*** Wanting to have a cigarette because you feel sad or depressed or scared is another symptom of withdrawal. But you can find help to manage your feelings, with counselors who understand what you are going through:
  - Telephone-based help with trained counselors, who are available day and night
  - Quit-smoking programs and support groups, such as Nicotine Anonymous® and groups sponsored by the American Cancer Society, the American Lung Association, or your local hospital
  - One-on-one counseling with a trained social worker or psychologist
  - Your family and friends can also lend a helping hand when a craving hits

Try, Try Again

If you try to quit but end up going back to smoking, you're not alone. Many people go back in the first month after quitting because of withdrawal symptoms. In fact, it can take up to 10 tries to finally quit for good!

Other Ways to Quit Smoking

The following methods have worked to help some people quit smoking, but they have not been proven in scientific studies:

- Cold turkey
- Withdrawing slowly
- Tobacco lozenges and pouches
- Hypnosis
- Acupuncture
- Magnet therapy
- Herbs and supplements
- Yoga and meditation

Fifteen years after quitting smoking, your risk of coronary heart disease becomes the same as a non-smoker!

Quitting smoking isn't easy. But millions of people have quit—and you can, too!

AstraZeneca

CCMC® Commission for Case Manager Certification

LIVING WITH ASTHMA OR SEVERE ASTHMA

Having asthma changes how people live. Maybe you can't keep your windows open anymore, even on a beautiful day. Maybe you will begin to wheeze or cough while trying to talk to someone. Maybe you will need to say no when your child begs for a dog or a cat. Not being able to breathe means you cannot do some of the things you used to take for granted every day: walking to the store, doing chores, working, and sleeping. This can certainly make you feel sad, frustrated, or even angry.

With a little planning, you can make your chores easier to do and enjoy some of the things you like to do again.

Top of the List

The most important thing, as you probably already guessed, is to quit smoking if you currently smoke. It's also a good idea to stay away from other people who smoke. These things can irritate your lungs and cause an asthma attack.

If you have asthma, you should try to stay at a normal weight for your body type. Being overweight can make asthma symptoms worse. It also puts you at a greater risk of getting other health problems.

The flu can also cause serious problems if you have asthma. Flu shots and pneumonia vaccines may help lower your risk of infections that can cause asthma attacks.

Pulmonary Rehabilitation

The goal of pulmonary rehabilitation is to help improve the well-being of patients with COPD. A healthcare team offers programs to help patients stay active and carry out their daily activities.

But some of the things that make up pulmonary rehabilitation may also be good for asthma. They include exercise programs and education about asthma and your lungs. So far, there is still no proof to show that pulmonary rehabilitation works in the long term for people with asthma. A clinical study called the Effectiveness of Pulmonary Rehabilitation for Asthma (EPRA) was started in 2017 to see whether pulmonary rehabilitation really does improve asthma and, if so, for how long.

Common Sense Tips

Partner with your healthcare provider to:

- Follow the asthma action plan that you created together
- Make sure you monitor and record your breathing on your peak flow meter
- Learn how to identify and treat attacks early to avoid a more severe attack
- Always take your medicines as prescribed
- Keep track of the number of times you use your quick-relief medicine

Try to keep away from things in your environment, both inside and outside, that may make your asthma worse. Some steps to avoid triggers include:

- Using air conditioning whenever you can to reduce the amount of pollen finding its way indoors, and staying indoors on high-pollen days
- Using a dehumidifier if you live in a damp climate
- Preventing mold by cleaning damp areas in your bathroom and kitchen; getting rid of damp firewood and moldy leaves in the yard
- Keeping your house clean and dust-free; removing carpeting and installing hardwood or linoleum flooring instead, if possible
- Wearing a scarf over your nose and mouth when it's cold outside
- Lowering the amount of pet fur in your house, especially if you are allergic

Talk to other people about your asthma. Support groups made up of people with the same condition as you can give you insights and help you see that you are not alone.

Other tips to keep in mind:

- Create an exercise plan to get in a workout a few times a week. This can strengthen your heart and lungs and help relieve symptoms
- Work with your healthcare provider to control heartburn and gastroesophageal reflux disease (GERD). They can hurt your lung airways and make your asthma symptoms worse

And, above all, remember to call your healthcare provider if your symptoms worsen!

AstraZeneca

CCMC®
Commission for Case Manager Certification

PATIENT SUPPORT

Dealing with a COPD or asthma diagnosis isn't easy. Having to change the way you or your loved one does things can be hard. You might feel confused and have nowhere to turn. But you don't have to go through it alone. The good news is that reliable information is available to help you.

The following websites offer information and other support as well:

COPD, Asthma, and Severe Asthma Education

American Academy of Allergy, Asthma & Immunology
www.aaaai.org

American Lung Association
www.lungusa.com

American Thoracic Society
http://www.thoracic.org/patients/

Asthma and Allergy Foundation of America
www.aafa.org

Centers for Disease Control and Prevention
www.cdc.gov/copd/index.html
www.cdc.gov/asthma

COPD Foundation
www.copdfoundation.org

Global Initiative for Chronic Obstructive Lung Disease (GOLD)
http://goldcopd.org/patients-advocacy-groups/

Health Journey Support
http://www.healthjourneysupport.com/respiratory

National Heart, Lung, and Blood Institute
www.nhlbi.nih.gov/health/health-topics/topics/copd
www.nhlbi.nih.gov/health/health-topics/topics/asthma

Severe Asthma Foundation
www.severeasthmafoundation.com

Quit Smoking Support

American Cancer Society
https://www.cancer.org/healthy/stay-away-from-tobacco.html

American Lung Association
www.lung.org/stop-smoking/

Centers for Disease Control and Prevention
https://www.cdc.gov/tobacco/quit_smoking/

COPD Foundation
http://www.copdfoundation.org/What-is-COPD/Living-with-COPD/Quitting-Smoking.aspx

National Heart, Lung, and Blood Institute
http://www.nhlbi.nih.gov/health/health-topics/topics/smo/strategies

Financial Support

NeedyMeds
www.needymeds.org/

Partnership for Prescription Assistance
www.pparx.org/prescription_assistance_programs/list_of_participating_programs

Patient Access Network Foundation (PAN)
www.panfoundation.org/index.php/en/

Legal Issues

Americans with Disabilities Act
www.ada.gov/

COPD.net
https://copd.net/living/workplace-accommodations-under-the-americans-with-disabilities-act/

Disability Rights Legal Center
http://drlcenter.org/

LawHelp.org
www.lawhelp.org/

Caregiver Support and Guidance

Asthma and Allergy Foundation (AAF)
http://www.aafa.org/page/aafa-affiliated-asthma-allergy-support-groups.aspx

Caregiver Action Network
http://caregiveraction.org

Caring.com
www.caring.com/support-groups/COPD

Caring Today
www.caringtoday.com

National Alliance for Caregiving
http://www.caregiving.org/resources/general-caregiving/

Travel Outreach

Transportation Security Administration
www.tsa.gov/travel/passenger-support

AstraZeneca

CCMC®
Commission for Case Manager Certification

QUESTIONS TO ASK MY DOCTOR ABOUT MY ASTHMA SYMPTOMS

Finding out you have asthma may make you feel overwhelmed. It's not always easy to hear you'll have to take medication and make lifestyle changes. You might find it hard to remember what your healthcare provider says or understand his or her instructions. Bringing someone with you can help you remember the information correctly, so can this list. It offers questions you may want to ask—and gives you space to write down the answers. It might make it easier for you to manage your disease.

What does it mean to have severe asthma?

Does it still make sense to quit smoking if I already have asthma?

Should I get a flu shot or pneumonia vaccine?

How do I know if I am having an asthma attack? How can I avoid them?

People say that exercise can cause asthma. Should I still exercise?

How do I know if I have allergies?

What if I only get asthma symptoms when I exercise?

How do I know if my asthma symptoms are getting worse?

How often should I visit my healthcare provider?

What kind of medicine should I take for my asthma?

How do I take my asthma medicines?

Do I need to follow a special diet if I have asthma?

Will I have asthma for the rest of my life?

If I need to have injections for my asthma, can I give them to myself?

How often can I use my rescue inhaler?

Am I using my inhaler the right way?

AstraZeneca

CCMC®
Commission for Case Manager Certification

CARE FOR THE CAREGIVER

When someone you love is first diagnosed with COPD or asthma, you might feel a sense of relief. At last you know why your loved one has been having so much trouble breathing!

But this sense of relief is short-lived. COPD and asthma are both serious chronic diseases, and you don't want to see your loved one uncomfortable and his or her symptoms getting worse. Soon you may be feeling the stress of always watching out for any triggers that could set your loved one's COPD or asthma off. Or maybe you find it hard to be around someone who can't stop coughing or has trouble sleeping. Or you may see your loved one getting depressed because he or she can't be "normal."

Suddenly, you might find yourself taking days off from work to care for your loved one with COPD or asthma. You might find yourself taking your loved one to the emergency department or the clinic more and more often. You may find that you need to cancel appointments and miss your regular activities because you have to take care of your loved one. This may make you irritable and tired. You might find yourself feeling sad and depressed. In short, you might start feeling burnt out.

Remember:

You can't take care of anyone else if you don't take care of yourself first.

Check out this list of suggestions. They'll not only give you a sense of well-being, but you'll be a better caregiver too.

- **Don't neglect your own health.** It's easy to overlook a doctor or dentist appointment when you're busy taking care of someone else. Make sure you are taking your own medicines and keeping any appointments you've made
- **Get enough sleep.** No one can function well when they haven't had a good night's sleep
- **Ask for help!** Your friends and family are happy to do something for you if it'll make you feel better. Food shopping. Walking the dog. Going to the dry cleaner. These little things might not seem like much to them, but having someone else do them can give you a much-needed break
- **Make some "me" time.** It doesn't have to be a big night out. You can watch a TV show or go see a movie. Take a nap. Read a few pages of a book. Something that is just for you
- **Be on the lookout for any signs of physical and emotional stress.*** Are you feeling tired? Experiencing lower back or neck pain? Are you gaining or losing too much weight? Are you worrying too much or feeling overwhelmed and alone? If any of these symptoms sound familiar, talk to your healthcare provider

*This information is provided as general knowledge only and is not medical advice. If you have questions or concerns, you should talk to your healthcare provider.

AstraZeneca

CCMC®
Commission for Case Manager Certification