



CalvertHealth[®]

Chronic Obstructive Pulmonary Disease Guide

Helping You Take Charge of Your Health



COPD Survival Guide

Keep This Copy

Bring this handbook with you to your healthcare provider appointments.

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Chronic Obstructive Pulmonary Disease

What is COPD?

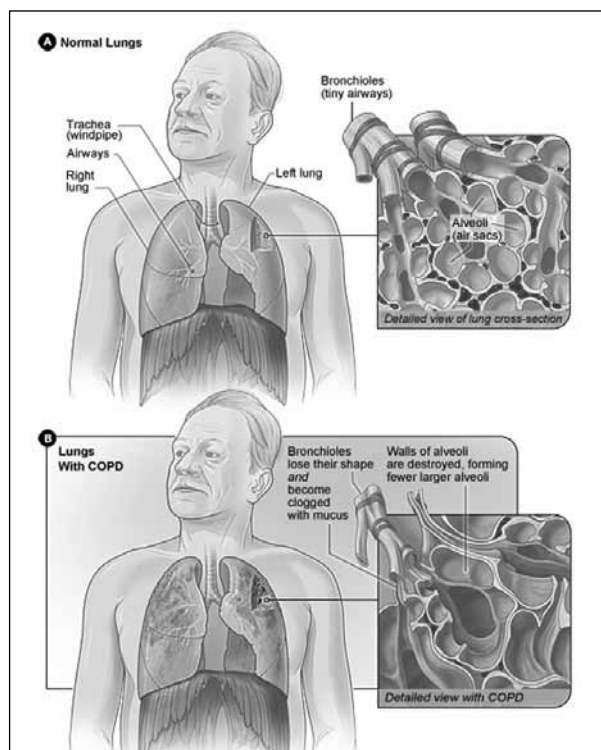
Chronic Obstructive Pulmonary Disease (COPD) is a medical condition that causes breathing problems. COPD includes chronic bronchitis and emphysema. COPD damages the bronchial tubes and alveoli in your lungs. The damage makes it harder for oxygen to get into your bloodstream and for you to breathe.

How COPD Affects the Body

Living with COPD is not easy for most people. It is a serious illness that can greatly affect your way of life. It doesn't mean that you can't enjoy your life. Together with your healthcare provider, you can learn ways to improve your breathing and fitness and prevent worsening of the disease. It takes commitment to improve your health, and it is up to you to take control!

Causes of COPD

- Smoking is the most common cause, and second-hand smoke can also contribute to breathing problems
- Work-related chemicals and things in the environment, such as coal dust
- Indoor air pollution from fuels used for heating and cooking in poorly ventilated homes
- Inherited disorders and or chronic infection in childhood can lead to breathing problems in adults

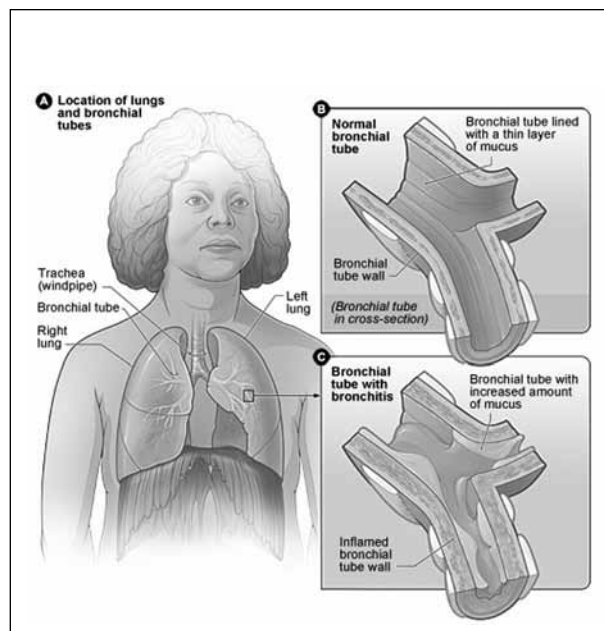


Source: National Heart, Lung, and Blood Institute, National Institutes of Health.

Symptoms of COPD

Patients with COPD usually notice problems with coughing or increased production of mucus first, followed by feeling shortness of breath during walking or climbing stairs. Over time, breathlessness becomes worse, and people often stop doing the things that make them feel that way. People with COPD are also at risk for heart disease due to the strain put on their heart. Swelling of the legs and ankles are also common. Although there is no cure, these symptoms can be managed and your quality of life can be improved!

Source: National Heart, Lung, and Blood Institute, National Institutes of Health.



How to Manage COPD and Prevent Exacerbations

An exacerbation is when your COPD symptoms suddenly get worse. You may have a harder time breathing, your cough may get worse, and you may cough up more sputum. You may have a fever, increased heart rate or feel sleepy. An exacerbation may be caused by a lung infection, air pollution, or other lung irritants. Sometimes the cause of an exacerbation is unknown. Your caregiver may change your treatment to help relieve exacerbations.

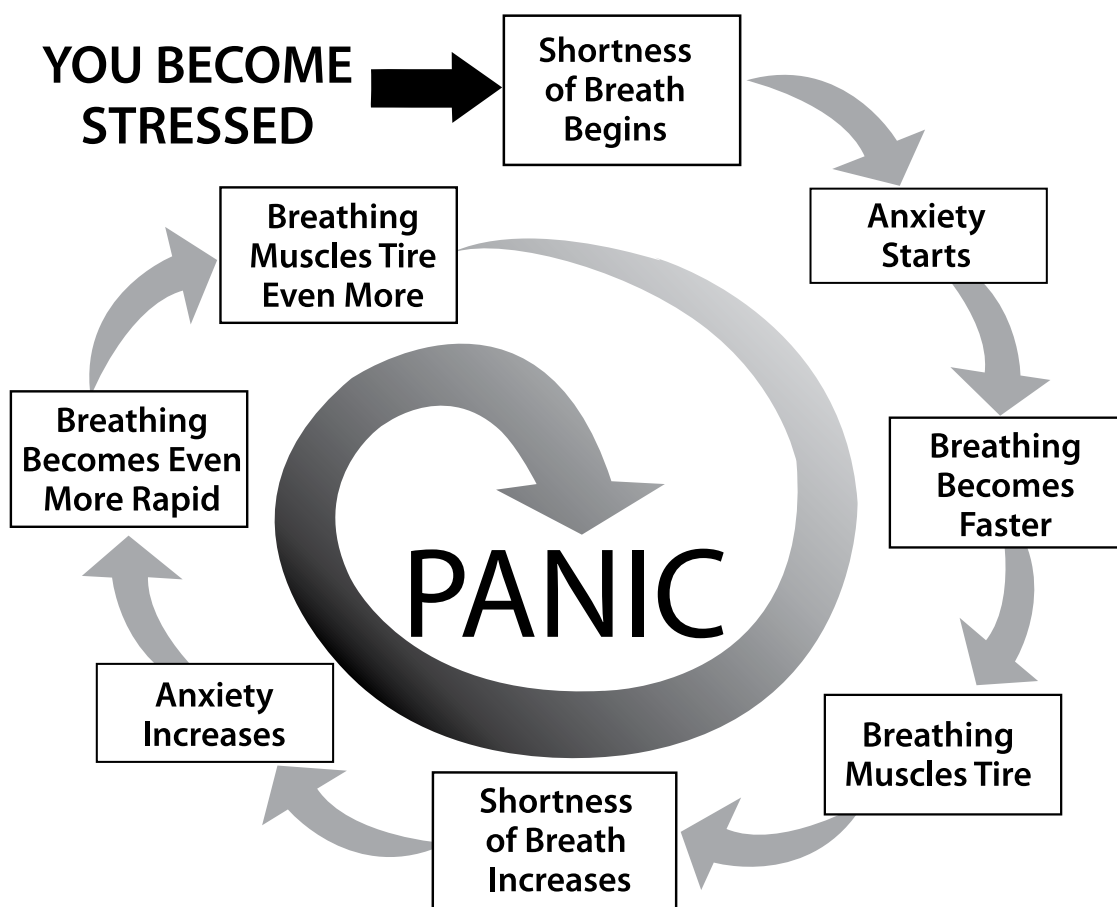
1. Avoid cigarette smoke and other irritants: Do not smoke or breathe in smoke from other people's cigarettes. Wear protective gear if your workplace has dust and chemicals that bother you. Stay inside when air quality is bad.

2. Good nutrition: Maintaining good health is impossible without eating the right foods. Speak with your healthcare provider or a nutrition specialist if you need help planning healthy meals. Some people with COPD find it helpful to eat several small meals throughout the day and avoid gas-producing foods so they do not push the stomach into the lungs. Also, drink plenty of fluids to keep mucus thin. Maintaining a healthy weight is important. Weight gain can restrict your lung's movement and make you feel more short of breath. Increased weight also causes you to use more energy during activity.

3. Vaccines: Many people with COPD get ill during flu season. To prevent influenza (flu), get the influenza vaccine each year as soon as it becomes available. The pneumococcal vaccine is given to adults 65 years and older to prevent pneumococcal disease, such as pneumonia. This vaccine needs to be repeated every 5-7 years.

4. Conserve energy: Learn to pace yourself to avoid getting worn out throughout the day. Move slowly and use a cart on wheels to move dishes and do laundry to avoid carrying lots of things. Invest in a shower stool for bathing, and use assistive devices, such as a long-handled reacher to avoid bending.

5. Control stress: Feeling stressed can make shortness of breath worse. When you have trouble catching your breath, anxiety can cause you to breathe faster and lead you to panic. Try yoga, meditation, or listening to relaxing music. Get comfortable, close your eyes, and imagine yourself in a relaxing place doing something you love. Control your breathing using the pursed-lip technique.



6. Use pursed-lip breathing: pursed-lip breathing can be used anytime you feel short of breath. It can be especially helpful before you start an activity.

- Relax the muscles in your neck and shoulders. Take a deep breath in through your nose to a count of two.
- Slowly breathe out through your mouth to a count of four, with your lips slightly puckered as if you are blowing out candles.
- Repeat this exercise several times.



7. Talk to your healthcare provider and develop a treatment plan that works for you.

This may take some time to personalize. Knowing when to get medical treatment can keep your symptoms from worsening, keep you out of the hospital, and help you recover faster. Knowing your medications and what they do is a big piece of this puzzle.

Emotional Support

Having good days and bad days is normal with COPD. Know your limits, and stay in control of your mental and physical health. Surround yourself with family, friends and healthcare workers. We are here to help!

- Keep doing the things you enjoy
- Stay involved with friends and family
- Educate yourself so you can share with others
- Know when to seek help for depression

Oxygen

Not all patients that have COPD have to wear oxygen. However, having too little oxygen in your blood is not good. Symptoms include sleepiness, headaches, and shortness of breath to name a few. There are many different devices that make oxygen very easy to wear and continue with an active lifestyle. You can travel with oxygen, and there are a few simple safety rules to follow when you are wearing it.

- Don't smoke or allow others to smoke around you.
- Don't use oil-based lotions or ointments. They are flammable! Use water-based products instead.
- Don't use aerosol sprays, such as air freshener or hairspray while using oxygen.
- Follow the rules that the home care company tells you about when they deliver your oxygen.
- Keep the oxygen away from sources of heat or flame.

Pulmonary Rehabilitation

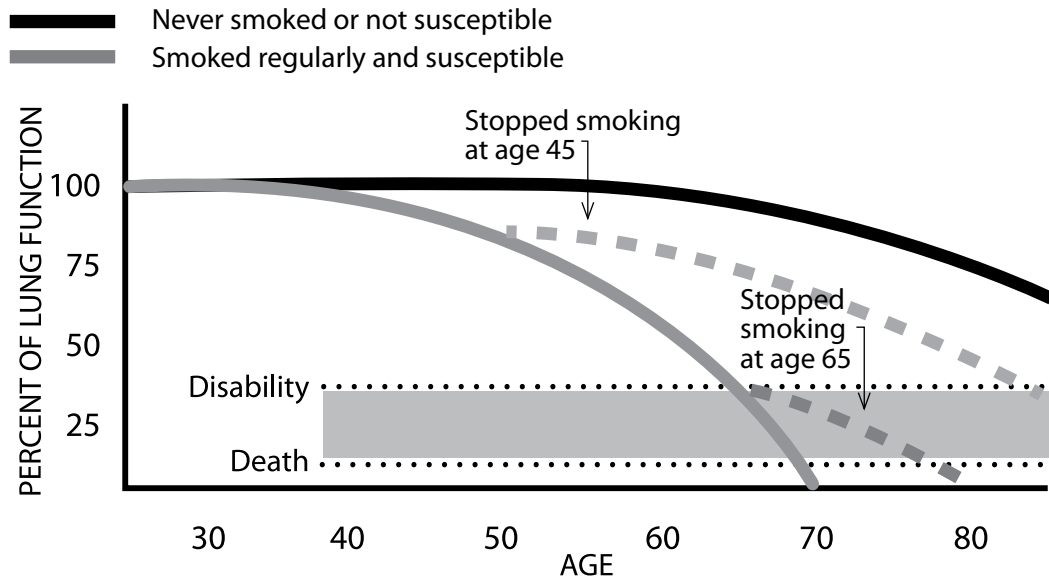
COPD makes the lungs and heart work harder to carry oxygen to all parts of the body. Because of this, you should control your weight and reduce heart and lung strain. CalvertHealth Medical Center offers a Pulmonary Rehabilitation Program that may help you reduce the impact of COPD by teaching you how to control or reduce breathlessness and recondition the body so that you feel less short of breath.

The program offers a structured and monitored training environment, nutrition counseling, and education about maintaining and improving lung function. They may also help you quit smoking, provide education and emotional support, and show you techniques for reducing and controlling breathing problems.

How Smoking Affects your Lungs and COPD

The graph below illustrates the change in lung function over time for smokers, non-smokers and smokers who quit. Each point on the line represents the average level of lung function for each group at a particular age. Peak lung function is achieved at age 25 and it then decreases.

For example, at 60 years of age, a non-smoker has nearly 100% lung function, while a smoker has 50% and a smoker who quit at age 45 has about 75%.



Source: webmd.com/lung/copd by Healthwise Staff WebMD Medical Reference from Healthwise

Goals of Pulmonary Rehab

- Improve quality of life
- Obtain more independence
- Reduce hospitalizations
- Reduce respiratory symptoms
- Reverse anxiety and disease-related stress
- Increase knowledge about COPD
- Increase exercise ability
- Return to work (for some)

Contact your primary care provider if:

- You have a fever or other cold/flu symptoms
- You have trouble talking or doing your usual activities because it is hard to breathe
- You have a more severe cough or a change in the color of your mucus
- You wheeze more than is normal for you
- You have a bluish tint to your skin, lips, or nails
- You have swelling in your legs or ankles
- You have questions about your condition or care

Seek care immediately or call 911 if:

You are confused, dizzy, or feel like you may pass out or you have the following symptoms of a heart attack:

- Squeezing, pressure, or pain in your chest that lasts longer than 5 minutes
- Discomfort or pain in your back, neck, jaw, stomach, or arm
- Trouble breathing
- Nausea or vomiting
- Lightheadedness or a sudden cold sweat, especially with chest pain or trouble breathing



Sample Exercises for COPD

The importance of exercising when you have COPD is often overlooked. Because an exercise program can help your body utilize oxygen more efficiently and improve your overall quality of life, exercise should quickly become an essential part of your COPD treatment plan.

How to get started

Getting started: Before beginning any type of exercise program, *it is important to speak with your healthcare provider to make sure the program you choose is safe.* If there are reasons that may prevent you from doing certain types of exercises, your healthcare provider can discuss possible alternatives that may better suit you.

Identify how far you can go: When you first start to exercise, you may quickly become fatigued. Don't be discouraged. It is important that you initially learn what level of exercise you are safely comfortable with. As your endurance level builds, you will be able to exercise longer with less effort.

Setting goals: You will reap the greatest rewards from exercising if you work toward a reachable goal. Determine what your goals are by writing them down. Keep your goals in mind when you hit a rough spot that may cause you to feel discouraged. Whether your goals are to breathe better or to rely less on others, identifying your goals will help you better accomplish them.

Breathing During Exercise

Doing pursed-lip breathing during exercise will help you maintain adequate oxygen levels and reduce shortness of breath. In addition, always try to exhale, or breathe out, during the most difficult part of the exercise, and inhale, or breathe in, during the easiest part of the exercise.

Recognizing Signs of Overexertion

Stop exercising if you notice any of the following signs of overexertion:

- Unusual or an increasing level of shortness of breath
- Chest discomfort or chest pain
- Burning, pressure, tightness or heaviness in your chest
- Unusual pain in your jaw, neck, shoulders, arms or back
- A racing feeling in your heart
- Heart palpitations (feeling that your heart is skipping a beat)
- Lightheadedness or dizziness
- Nausea
- Feeling more tired than usual
- Unusual pain in the joints

All older adults should perform only modest amounts of overhead arm work, but such movements should be even more limited for those who have COPD.

A participant who has an inhaler should use it according to their healthcare provider's instructions to prevent or minimize exercise-induced asthma.

SIDE ARM RAISE

This exercise will strengthen your shoulders and make lifting groceries easier.

- You can do this exercise while standing or sitting in a sturdy, armless chair.
- Keep your feet flat on the floor, shoulder-width apart.
- Hold hand weights straight down at your sides with palms facing inward. Breathe in slowly.
- Slowly breathe out as you raise both arms to the side, shoulder height.
- Hold the position for one second.
- Breathe in as you slowly lower your arms.
- Repeat 10-15 times.
- Rest; then repeat 10-15 more times.



TIP

As you progress, use a heavier weight and alternate arms until you can lift the weight comfortably with both arms.

Source: NIH publication No. 11-4258

WALL PUSH-UP

These push-ups will strengthen your arms, shoulders, and chest. Try this exercise during a TV commercial break.

- Face a wall, standing a little farther than arm's length away, feet shoulder-width apart.
- Lean your body forward and put your palms flat against the wall at shoulder height and shoulder-width apart.
- Slowly breathe in as you bend your elbows and lower your upper body toward the wall in a slow, controlled motion. Keep your feet flat on the floor.
- Hold the position for one second.
- Breathe out and slowly push yourself back until your arms are straight.
- Repeat 10-15 times.
- Rest; then repeat 10-15 more times.



Source: NIH publication No. 11-4258

CHAIR DIP

This pushing motion will strengthen your arm muscles even if you are not able to lift yourself up off the chair.

- Sit in a sturdy chair with armrests with your feet flat on the floor, shoulder-width apart.
- Lean slightly forward; keep your back and shoulders straight.
- Grasp arms of chair with your hands next to you. Breathe in slowly.
- Breathe out and use your arms to push your body slowly off the chair.
- Hold position for one second.
- Breathe in as you slowly lower yourself back down.
- Repeat 10-15 times.
- Rest; then repeat 10-15 more times.



Source: NIH publication No. 11-4258

SIDE LEG RAISE

This exercise strengthens hips, thighs, and buttocks. For an added challenge, you can modify the exercise to improve your balance.

- Stand behind a sturdy chair with feet slightly apart, holding on for balance. Breathe in slowly.
- Breathe out and slowly lift one leg out to the side. Keep your back straight and your toes facing forward. The leg you are standing on should be slightly bent.
- Hold position for one second.
- Breathe in as you slowly lower your leg.
- Repeat 10-15 times.
- Repeat 10-15 times with other leg.
- Repeat 10-15 more times with each leg.



TIP

As you progress, you may want to add ankle weights.

Source: NIH publication No. 11-4258

KNEE CURL

Walking and climbing stairs are easier when you do both the Knee Curl and Leg Straightening exercises. For an added challenge, you can modify the exercise to improve your balance.

- Stand behind a sturdy chair, holding on for balance. Lift one leg straight back without bending your knee or pointing your toes. Breathe in slowly.
- Breathe out as you slowly bring your heel up toward your buttocks as far as possible. Bend only from your knee and keep your hips still. The leg you are standing on should be slightly bent.
- Hold position for one second.
- Breathe in as you slowly lower your foot to the floor.
- Repeat 10-15 times.
- Repeat 10-15 times with other leg.
- Repeat 10-15 more times with each leg.



TIP

As you progress, you may want to add ankle weights.

Source: NIH publication No. 11-4258

LEG STRAIGHTENING

This exercise strengthens your thighs and may reduce symptoms of arthritis of the knee.

- Sit in a sturdy chair with your back supported by the chair. Only the balls of your feet and your toes should rest on the floor. Put a rolled bath towel at the edge of the chair under thighs for support. Breathe in slowly.
- Breathe out and slowly extend one leg in front of you as straight as possible, but don't lock your knee. Flex foot to point toes toward the ceiling. Hold position for one second.
- Breathe in as you slowly lower leg back down.
- Repeat 10-15 times.
- Repeat 10-15 times with other leg.
- Repeat 10-15 more times with each leg.



TIP

As you progress, you may want to add ankle weights.

Source: NIH publication No. 11-4258

Exercise and Everyday Activities Go Together

Exercise and physical activity are good for your health. In addition, improving your endurance, strength, balance, and flexibility can help you do many of your everyday activities.

For example:

Endurance activities will make it easier for you to:

- Push your grandchildren on the swings
- Vacuum
- Rake Leaves



Strength training can maintain your ability to:

- Carry a full laundry basket from the basement to the second floor
- Carry your smaller grandchildren
- Lift bags of mulch in the garden



Flexibility, or stretching, exercises make it possible for you to:

- Look over your shoulder to see what's behind you as you back the car out of the driveway
- Make the bed
- Bend over to tie your shoes



Balance exercises can help you:

- Stand on tiptoe to reach something on the top shelf
- Walk up and down the stairs
- Walk on an uneven sidewalk without falling

Source: NIH publication No. 11-4258

Understanding Your Medications

Help your healthcare provider develop a medication treatment plan that works for you. What you tell your healthcare provider about your problems, activities, family and lifestyle will help determine the best plan. Always carry a current list of your medications with you that includes any allergies you may have. It is helpful if you keep a journal of your symptoms and what you were doing when the feeling started. Include anything that you did to make the feeling better. COPD medications can be expensive. Talk to your provider about programs the drug companies can offer you to off-set the cost.



COPD Medications Commonly Used

There are several types of medications used to help manage the symptoms of COPD. They work in different ways to help keep your airways open to improve the shortness of breath you experience with flare-ups of COPD. Some have also been shown to reduce the number of flare-ups. There are three main ways these medications are taken; by mouth as a tablet or capsule, inhaled using a device called an inhaler or inhaled with a machine, which creates tiny droplets using a nebulizer. Below is a list of the different categories of medications with possible side effects and tips for using them safely to get their maximum effect.

Bronchodilators

A. Short-Acting Bronchodilators

Inhaled beta-2 agonist: These inhalers provide quick relief. They start to work in minutes, but last only 4 to 6 hours. They are sometimes called “rescue medications.” If you are prescribed one of these, it is recommended you keep it on you at all times. Use it as prescribed when you have shortness of breath. If you need to use your rescue inhaler more than prescribed, call your healthcare provider to discuss other options.

Generic Name	Brand Name	Side Effects
Albuterol	Proventil® ProAir® Proventil HFA® Ventolin®	Faster heart beat Headache Shaking (tremors)
Levalbuterol	Xopenex®	Faster heart beat Headache Shaking (tremors)

B. Anticholinergics

These medications affect nerve impulses sent by the vagus nerve. When the vagus nerve is stimulated, the airway can narrow. This group of medications blocks this stimulation and relaxes the airways. It works in 5 to 15 minutes and lasts for 4 to 6 hours. It is a short-acting inhaler or nebulized medicine, but not short enough to be a “rescue inhaler.”

Generic Name	Brand Name	Side Effects
Ipratropium	Atrovent®	Dry mouth Bitter taste

If you have an allergy to soy products or peanuts, you should not use Ipratropium. Be sure to tell your healthcare provider and pharmacists about all your allergies.

C. Long-Acting Inhaled Bronchodilators

These bronchodilators last from 12 to 24 hours depending on which product you are prescribed. They keep your symptoms under control and are usually used on a regular basis and **not** “as needed.” They generally do not provide quick relief. **Do not** take them for an acute attack.

Generic Name	Brand Name	Side Effects
Salmeterol	Serevent®	Shaking (tremors), Trouble sleeping, Faster heart beat. Muscle cramp Nausea
Arformoterol	Brovana®	Shaking (tremors), Trouble sleeping, Faster heart beat, Muscle cramp, Nausea
Olodaterol	Striverdi Respimat®	Shaking (tremors), Trouble sleeping, Faster heart beat, Muscle cramp Nausea

D. Long-Acting Anticholinergic

There are two medications in this category at this time. Like the long-acting bronchodilators, they should **not** be used for immediate relief of breathing problems. **Tiotropium** comes as a powder in a capsule but it is not to be swallowed. The capsule is to be inserted into the inhaler device called the HandiHaler. The Web has instructions on how to use this inhaler at www.spiriva.com. **Aclidinium** is typically used twice a day by inhalation.

Generic Name	Brand Name	Side Effects
Tiotropium	Spiriva HandiHaler® Spiriva Respimat®	Dry mouth, Constipation, Faster heart rate, Blurred vision, Eye pain or redness, Trouble urinating
Aclidinium	Tudorza Pressair®	Dry mouth, Constipation, Faster heart rate, Blurred vision, Eye pain or redness, Trouble urinating

E. Oral Bronchodilators and other Medications for COPD

These are taken by mouth. They are used in addition to inhaled medication to provide better symptom management. They work by relaxing the muscles around the airways and reducing inflammation.

Generic Name	Brand Name	Side Effects
Albuterol	Proventil® Volmax® VoSpire ER®	Faster heart beat
Roflumilast	Daliresp®	Changes in mood, Insomnia Anxiety, Weight loss
Montelukast	Singulair®	Headache, Dizziness, Rash Nasal Congestion

F. Steroids

These medications help to reduce the swelling and inflammation in the lungs which make it difficult to breath. They can be given as tablets by mouth, inhaled or even by injection.

Inhaled steroids: these usually cause fewer side effects than oral and injectable steroids because very little enters the blood when inhaled. These should **NOT** be used for fast relief of shortness of breath.

It is important to take these as directed whether you are having problems with your breathing or not.

It is also recommended that you gargle with mouthwash or water after each dose to prevent yeast infections in the mouth and throat.

Generic Name	Brand Name	Side Effects
Beclomethasone dipropionate	Beclovent® QVAR® Vanceril®	Hoarseness Yeast infections in the mouth
Budesonide	Pulmicort Turbohaler®	Hoarseness Yeast infections in the mouth
Flunisolide	Aerobid®	Hoarseness Yeast infections in the mouth

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Fluticasone	Flovent®	Hoarseness Yeast infections in the mouth
Triamcinolone	Azmacort®	Hoarseness Yeast infections in the mouth

Oral Steroids: Oral steroids can slow down the work of your adrenal glands. But when COPD symptoms suddenly get worse, oral or intravenous steroids are often needed. It is **important** to take steroids **exactly** as your healthcare provider says. **Do not** stop taking any steroid medicines without talking to your healthcare provider first.

Generic Name	Brand Name	Side Effects
Prednisone	Many brand names	<p>Short-term use: Bigger appetite Retaining fluid Weight gain Nausea or vomiting Stomach upset or ulcers Blood sugar changes</p> <p>Long-term use: High blood pressure Thinning of bones Cataract Muscle weakness Easier bruising Slower wound healing</p>
Methylprednisolone	Medrol Dose pak®	<p>Short-term use: Bigger appetite Retaining fluid Weight gain Nausea or vomiting Stomach upset or ulcers Blood sugar changes</p>

G. Combined Inhaled Medicines

Many inhaled medicines are available for COPD. Because most people require both a long-acting bronchodilator and a steroid, OR a combination of two bronchodilators, there are a number of inhalers which combine these medications into one inhaler.

Generic Name	Brand Name	Directions
Salmeterol and Fluticasone	Advair® Wixela	Do not use more than every 12 hours Not a rescue medication. Rinse mouth out with water after each dose.
Formoterol and Budesonide	Symbicort®	Do not use more than every 12 hours Not a rescue medication. Rinse mouth out with water after each dose.
Albuterol and Ipratropium	Combivent® DuoNeb® (use with nebulizer)	Do not spray near eyes Can be used as a rescue inhaler for shortness of breath
Fluticasone and Vilanterol	Breo Ellipta®	Do not use more than once a day Not a rescue medication Rinse mouth out with water after each dose
Fluticasone, Umeclidinium and Vilanterol	Trelegy Ellipta	Do not use more than once per day Not a rescue medication Rinse mouth out with water after each dose

H. Expectorants and Mucolytics

Expectorants (ex-PECK-ter-ents) and mucolytics (my-ko-LIT-iks) help to thin and move secretions out of the lungs and airways. For some people drinking, 6 to 8 glasses of water a day can have the same effect and it costs less. Check with your healthcare provider before adding these to your regimen. If you retain fluid or have heart failure, you must be careful about drinking fluids.

Generic Name	Brand Name	
Guaifenesin	Robitussin ®/ Mucinex®	Expectorant
Acetylcysteine	Mucomyst®	Mucolytics

Smoking Cessation: Medications

There are a number of different medications available which can support you in your desire to quit smoking. Nicotine replacements like patches and gums, as well as the anti-depressant medication Bupropion SR have been shown to double your chances of succeeding ¹

Medication	How It Works	How to Use It	Duration of Treatment	Side Effects
Nicotine gum (Nicorette®)	Nicotine absorbed through the gums Peaks in 20-30 minutes Replaces some of the nicotine from cigarettes to ease withdrawal symptoms	"Bite & park" 1 piece of gum every 1-2 hours Light smoker: Use 2 mg (<= 20 cigarettes per day) Heavy smoker: Use 4 mg (> 20 cigarettes per day) Stop smoking before you start	Several weeks to several months or longer if necessary	Mouth / jaw soreness Hiccups Stomach upset Lightheadedness Throat and mouth irritation
Nicotine patch (Habitrol®, Nicoderm®, Nicotrol®)	Nicotine absorbed through the skin Peaks in 2-4 hours Replaces some of the nicotine from cigarettes to ease withdrawal	Lighter smokers (<=20 cigarettes per day) : start with 7-14 mg patch applied daily (5-10mg for the Nicotrol). Heavy Smoker (> 20 cigarettes per day) start with 21 mg (15 mg for Nicotrol) for 4- 8 weeks. Then decrease dose to lowest dose which manages your symptoms	8-12 weeks or longer if necessary	Redness, itching or burning where the patch was applied Headache Trouble sleeping or vivid dreams
Bupropion SR (Zyban®)	Works in the reward center of the brain to reduce cravings Peaks in 7-10 days	Typical dosing is 150mg SR by mouth every morning for 3 days then twice a day Start 7-14 days before quit date 30% success rate	7-12 weeks or longer if necessary	Trouble sleeping Dry mouth Nervousness Rash Constipation Changes in mood or behavior (rare)
Varenicline (Chantix®)	Works to reduce symptoms of nicotine withdrawal and the urge to smoke. It also block the effects of nicotine from cigarette if you start smoking again.	Your healthcare provider will start with low doses with increases every 3 days til you are taking 1mg by mouth twice a day. Begin 1 week before your planned quit date. Take with food and a full glass (8 oz) of water. Contact your healthcare provider if you notice changes in behavior (very rare)	12 weeks	Nausea Trouble sleeping or vivid dreams Constipation Flatulence Vomiting Changes in mood or behavior (rare)

1. Hughes JR *et al.* Recent advances in the pharmacotherapy of smoking. JAMA 1999; 281:72-6.

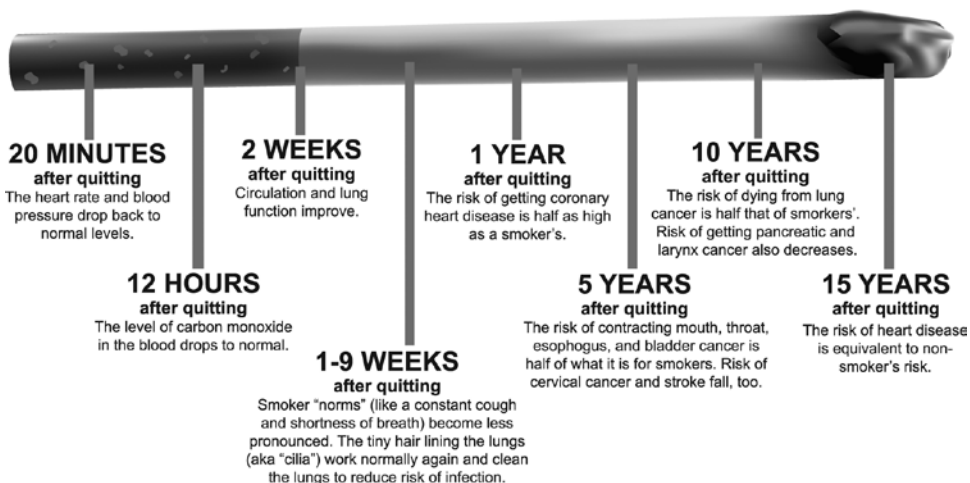
YOU CAN STOP SMOKING

Every year, three million smokers give up cigarettes. With the right attitude, preparation, and knowledge, you can be one of them. The main step in the process of quitting is deciding to start.

Quitting isn't easy. You need all the help you can get. Here are some tips that should make it a little easier. Whatever you do, don't give up if you don't succeed the first time around. This is not unusual, and not an indication of failure.

- Write down the benefits of quitting (blood pressure drops to normal, pulse rate drops to a normal rate, body temperature of the hands and feet increases to normal, carbon monoxide levels in the blood drop to normal, oxygen levels in the blood increase to normal, chance of a heart attack decreases, ability to taste and smell improves).
- Set a date to quit. Try not to pick a holiday or the day of a party.
- Ask your healthcare provider about nicotine patches or for other medications.
- Find an ex-smoker for support.
- Buy gum or toothpicks to keep your mouth and hands busy.
- Ask friends or family members not to smoke inside your home or car.
- If your spouse smokes, ask him/her to join you in quitting.

WHAT HAPPENS WHEN A SMOKER QUILTS A 15 YEAR TIMELINE



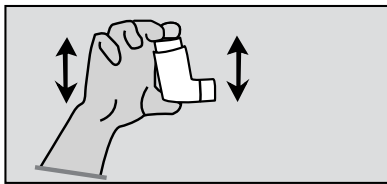
Understanding Your Devices

Delivery devices: There are many ways the medications are packaged. If you do not see the device you use listed in this book, please ask your healthcare provider for instruction.

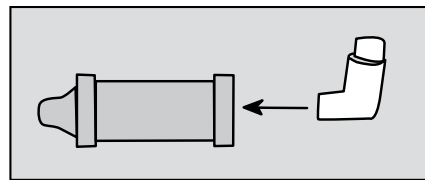
Why Use a Spacer with Your Inhaler?

When an inhaler is used alone, the medicine ends up in the mouth, throat, stomach and lungs. When an inhaler is used with a spacer device, more medicine is delivered to the lungs.

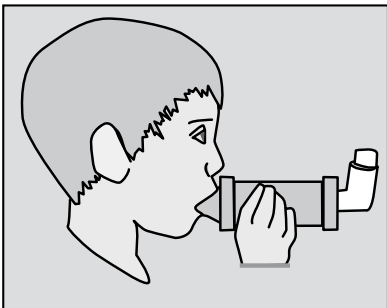
Metered-Dose Inhaler: How to Use with a Spacer



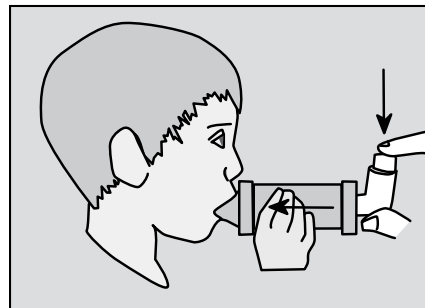
1. Shake the medicine.



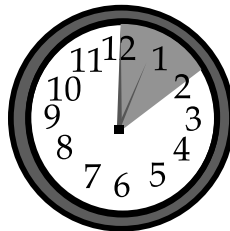
2. Insert the mouthpiece of the inhaler into the rubber-sealed end of the spacer.



3. Breathe all of the air out of your lungs. Then put the spacer into your mouth between your teeth. Make a tight seal around the mouthpiece with your lips.

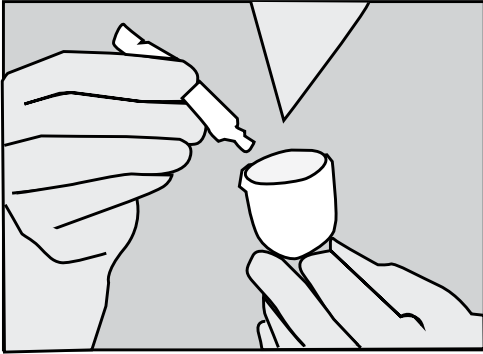


4. Press the Metered-dose inhaler down once to release a spray of medicine. The medicine will be trapped in the spacer. Breathe in slowly and deeply.

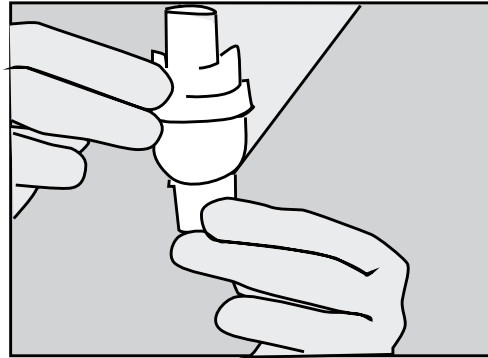


5. Hold your breath for 5 to 10 seconds and then breathe out slowly. If you cannot hold your breath, another method is to breathe in and out slowly for 3 to 5 breaths.

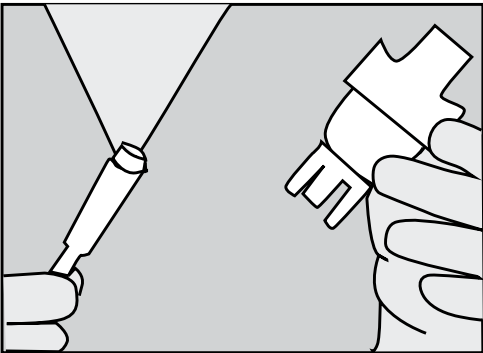
How to Use a Nebulizer



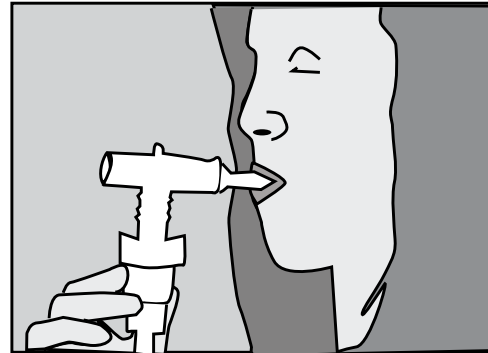
1. Put medicine into the medicine cup.



2. Attach the mouthpiece or mask to the medicine cup.



3. Attach the medicine cup to the compressor tubing.



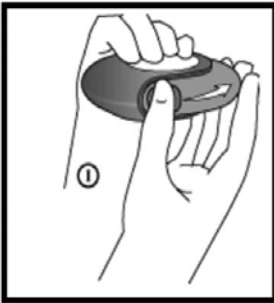
4. Place the mouthpiece in your mouth or place the face mask over your nose and mouth. Breathe through your mouth until all of the medicine is gone.

Ask your healthcare provider or pharmacist if you should wear gloves when you use a nebulizer to give medicine to someone else.

How to Use Your Diskus

A diskus holds asthma medicine. The diskus is the most common type of dry powder inhaler. Advair is the name of a medicine that comes in a diskus.

1. OPEN



- Push away on the thumbgrip until the mouthpiece is fully exposed.

2. CLICK



- Slide the lever away from you until it clicks.
- Make sure you don't close or tip your diskus.

3. INHALE



- Breathe out to empty your lungs.
- Put the mouthpiece in your mouth.
- Breathe in quickly and deeply, then hold your breath while you slowly count to 10.
- Rinse your mouth with water and spit it out.

How to Use a Handihaler

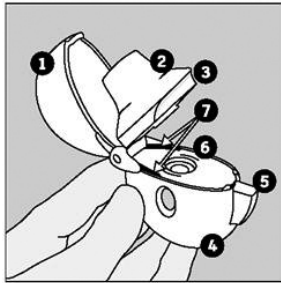


FIGURE A
 1. Cap
 2. Mouthpiece
 3. Capsule Chamber
 4. Green Piercing Button

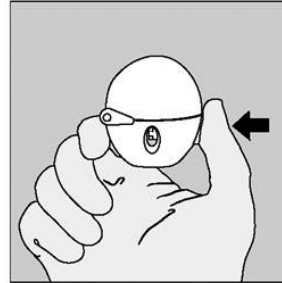


FIGURE B
 Push the green piercing button to release cap.



FIGURE C
 Pull open the cap.



FIGURE D
 Lift up on the mouthpiece to reveal the clear capsule chamber.

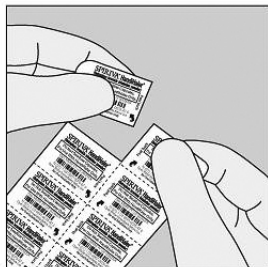


FIGURE E
 Break off one blister packed capsule at a time.



FIGURE F
 There is an arrow in the bottom right corner of each blister pack. Peel back the thin label from here to release the capsule. You may have to pierce the foil with your fingernail to get to the capsule.

How to Use a Handihaler *continued*

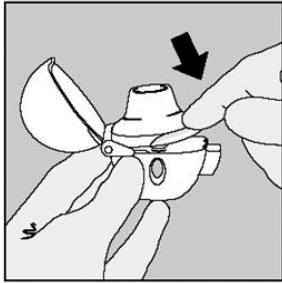


FIGURE G
Place the capsule in the capsule chamber. Close the mouthpiece over the chamber and push it down until it clicks in place.

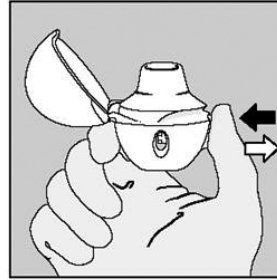


FIGURE H
Firmly push the green piercing button twice to puncture the capsule.

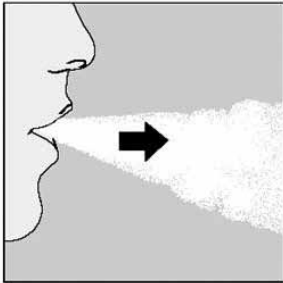


FIGURE I
Take a normal breath in and slowly exhale all of your air.

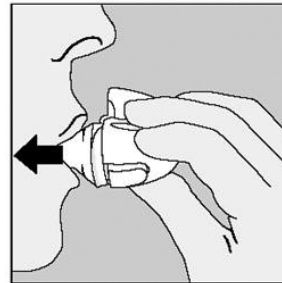


FIGURE J
Put the mouthpiece in your mouth and take a slow deep breath in. If you are able, hold your breath to a count of 5.

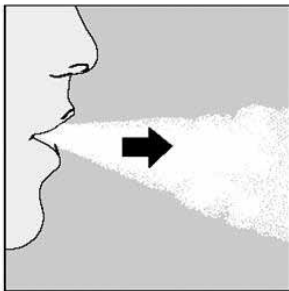


FIGURE K
Exhale all of your air slowly again.

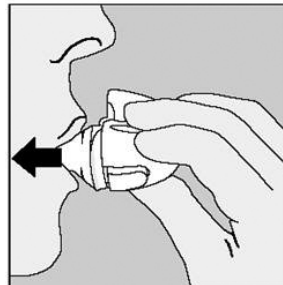


FIGURE L
Put the mouthpiece in your mouth a second time and take another slow deep breath in.

NOTE: After you have finished, discard the capsule in the trashcan. Do not re-load your handihaler until it is time to take it again. The capsules are sensitive to temperature, moisture, and light. Make sure your hands are clean and dry before handling this medication.

Nutrition Therapy for COPD

Shortness of breath, coughing and chest discomfort may make it difficult for you to eat enough to maintain your weight. It is important to try to take in adequate calories and nutrients daily to help maintain, or restore nutritional well-being. Don't forget to consider your other health issues when adjusting your dietary intake.

Calories – consume enough calories daily to maintain weight.

- Try to divide your daily foods into 5-6 small meals, or into 5-6 large snacks.
- Drink healthy beverages that add calories. For example, milk, shakes, eggnog, and instant breakfast.
- Drink nutritional supplements to support daily calorie intake.
- Add cream, butter, margarine, olive oil and salad dressing to vegetables for calories. Try adding gravy, sauces or cheese to entrées.
- Use 2 percent or whole milk for drinking, cooking and baking.

Protein - choose foods rich in protein to help support the immune system and prevent muscle wasting.

- Primary sources of protein are meat, fish, eggs, poultry, legumes and dairy products.
- Add skim milk powder to milk, cereal, eggs, soups, gravies and casseroles for extra protein.
- Add chopped meats, cheese or legumes to soups and casseroles and vegetables.
- Have nut butters, bean dips, cottage cheese or other cheeses as snacks.

Fluids – drinking adequate fluids daily will help to thin pulmonary secretions and keep the body hydrated.

- Try to have a minimum 8-12 cups of caffeine-free liquids per day (64-88 ounces a day).
- Drinking plain water is the body's preferred fluid, but juice, decaffeinated coffee and tea are also acceptable.
- Milk is a good source of fluid and provides other helpful nutrients – protein, carbohydrates, calcium, Vitamin D and phosphorus.
- If you are “retaining fluid” ask your dietitian to help you plan what to eat and drink. Fluid retention can also be caused by overeating salt.

Sodium – An excess amount of sodium chloride, also known as table salt, can cause fluid retention (edema), increased blood pressure and shortness of breath.

- Do not add salt while cooking or to the food at the table.
- Read the sodium content on the labels. Look for products having less than 140 mg sodium per serving or labeled “low sodium.”
- Avoid cured, smoked, and canned meats, such as, bologna, bacon, sausage, Spam™, ham, salami and hot dogs
- Avoid foods with visible salt, pretzels, saltines, chips and nuts.
- Avoid canned vegetables, soups and vegetables juices.
- Do not use seasoned salt, meat tenderizer, MSG, soy sauce, Old Bay® and barbecue sauce and other condiments high in sodium.

Calcium – helps to regulate lung function, muscle contraction and blood clotting. Bone strength, immune system and transportation of nerve impulse are also affected by calcium intake.

- Recommended intakes for both men and women up to age 50 years of age – 1,000 mg per day. Over age 50 – men and women need 1,200 mg per day.
- Dairy products are the best sources of calcium.

Vitamin D – essential for calcium absorption.

- Recommended intake of Vitamin D for men and women from age 19-70 is 600 IU per day. Over 70 years of age they need 800 IU.
- Milk is the best source of Vitamin D. Two cups of milk meets the daily adult need for Vitamin D.
- Eggs, fortified cereals and margarine are good sources of Vitamin D.

Magnesium – important mineral that is involved in blood clotting, muscle contraction and protein production. It is the chemical “fuel” that makes muscles work. Also, magnesium works with calcium to regulate bronchial activity.

- Recommended daily intake of magnesium for adults between the ages of 19-30 years old is 400 mg for men and 310 mg for women. For those over the age of 31, the recommendation is 420 mg for men and 320 mg for women daily.

- Dark green vegetables are natural rich sources of magnesium. Whole grains, beans, peas, lentils, tofu and some seafood are also good sources.
- Chocolate contains moderate amounts.

Potassium – helps with muscle contractions, especially important to the heart muscle. High and low levels of potassium can cause irregularities in the heartbeat.

- Milk, yogurt, tomatoes, cantaloupe, bananas, citrus fruits, prunes, potatoes and spinach are all good sources of potassium.
- Some diuretics can cause the kidney to excrete large amounts of potassium in urine. If you take a diuretic, you may need to have your potassium level checked on a regular basis.

Source: Information adapted from The Academy of Nutrition and Dietetics materials



Frequently Asked Questions

Q: How does my healthcare provider know that I have COPD?

A: There are many non-invasive tests used by medical staff to diagnose COPD including: chest X-ray, pulmonary function testing and blood test. These tests may be done while you are in the hospital or at your healthcare provider’s office.

Q: What are pulmonary function tests?

A: Pulmonary function tests are a group of tests that measure how well the lungs take in and release air and how well they move gases such as oxygen from the atmosphere into the body’s circulation. Some lung diseases (such as emphysema, asthma, chronic bronchitis, and infections) can make the lungs contain too much air and take longer to empty. These tests are done to diagnose certain types of lung disease; reported in percentages. Eighty percent of a predicted value or less is considered an indication of a lung disease. Talk to your healthcare provider about the meaning of your specific test results.

Q. How do I measure how short of breath I am so that my healthcare provider understands?

A. The MMRC, Modified Medical Research Council Dyspnea Scale, uses a simple grading system to consider someone’s level of shortness of breath. Please look at the box to understand this “grading” system where ‘0’ is least and ‘4’ is most short of breath.

MMRC Dyspnea Scale

Grade	Description of Breathlessness
0	I only get breathless with strenuous exercise.
1	I get short of breath when hurrying on level ground or walking up a slight hill.
2	On level ground, I walk slower than people of the same age because of breathlessness, or have to stop for breath when walking at my own pace.
3	I stop for breath after walking about 100 yards or after a few minutes on level ground.
4	I am too breathless to leave the house or I am breathless when dressing.

Q. Are there stages of COPD?

A. There are four stages of COPD: Mild, moderate, severe and very severe. The stages of COPD define the disease according to its severity. Staging is generally done through pulmonary function testing.

In **Mild COPD**, there may be mild airflow limitation but you may be unaware that lung function has started to decline. You may not yet have any COPD symptoms, or you may have symptoms of chronic cough and excessive mucus. People at this stage are not likely to associate symptoms with the disease process and therefore, rarely seek treatment.

In **Moderate COPD**, airflow limitation worsens and you may start to notice symptoms, particularly shortness of breath upon exertion along with cough and sputum production. It is during this stage most people typically seek medical treatment.

In **Severe COPD**, limitation of airflow significantly worsens, shortness of breath becomes more evident and COPD exacerbation is common. If you reach this stage, you may notice a decrease in your activity tolerance and an increase in fatigue.

In **Very Severe COPD**, quality of life is greatly impaired and COPD exacerbations are life-threatening. Airflow limitation is severe and chronic respiratory failure is often present at this stage that may lead to complications with your heart.

Q. What is my life expectancy?

A. Although no one can accurately predict your life expectancy after a COPD diagnosis, the prognosis of the disease depends upon several factors, most importantly, whether or not you still smoke. If you continue to smoke after your diagnosis, your lung function will decline more rapidly and the disease will progress much faster than if you were to quit completely. Other factors associated with COPD life expectancy are your degree of airway obstruction, your shortness of breath, your body mass index (BMI), and your exercise tolerance.

Q: Will my lungs repair themselves if I quit smoking?

A: Unfortunately, COPD is an irreversible process. Once diagnosed, the damage is done and the lungs do not repair themselves. But smoking cessation is the best way to slow the progression of the disease and increase survival in people with COPD. Benefits of quitting begin almost immediately after putting out your last cigarette.

By using your Survival Guide – you too – can help prevent a COPD exacerbation and future hospitalizations.

Your Lungs Matter to Us

CalvertHealth Services Available to You

Case Management

All patients admitted to CalvertHealth Medical Center will receive a visit from a case manager. Working with your healthcare provider and case managers can provide information about healthcare agencies and other services available to you. They will help arrange for your discharge and make sure you have the support you need to care for yourself after you leave the hospital. If you would like to talk with a case manager, please ask your healthcare provider or nurse or call **410.535.4858** or **301.855.1012**, ext. 4858. If you know the name of your case manager, you can call x8235.

Transition to Home

All patients discharged from CalvertHealth Medical Center are eligible to receive transitional care services from our Transition to Home team. This is a special program to help people after they are discharged, and is designed to improve care for patients with chronic health conditions. The Transition to Home program is a FREE service and can help you recover, understand and manage medications better, help prevent being readmitted to the hospital, make a plan for any and all follow-up appointments with your primary care healthcare provider and specialist, and help you maintain the good care that has been received here at the hospital once you are home. This can be accomplished through coaching phone calls from our nurses. This service is different from other services such as home health or physical therapy. This team does not provide skilled services, but rather helps support you and your family with management skills and education to help you be better prepared to take care of your health conditions and needs. You can call **410.414.2725** to reach the Transition to Home team.

Pulmonary Rehabilitation

CalvertHealth Medical Center offers comprehensive pulmonary rehabilitation. Monitored exercise training teaches you how to exercise safely, improve pulmonary endurance and stamina, increase muscle strength, and improve joint flexibility. We also provide education and counseling about COPD and how to modify your risk factors to decrease your chances of another exacerbation.

Our team approach includes:

- Telemetry monitored exercise training
- Blood pressure monitoring before, during, and after exercise
- Individualized exercise programs
- Nutrition counseling
- Tobacco cessation
- Weight reduction
- Medication consultation
- Stress management
- Risk factor education

Most insurance plans are accepted. Call **410.414.4527** or **301.855.1012** ext. 4527 for more information.

Blood Pressure Screening

This screening can identify adults with an increased risk of cardiovascular disease due to high blood pressure. Please call **410.535.8233** or **301.855.1012**, ext. 8233 for more information.

Smoking Cessation Programs

The Calvert County Health Department offers a FREE comprehensive Smoking Cessation Program. The eight-week program uses a combination of behavioral counseling, nicotine replacement patches and Chantix®. The patches and Chantix® are provided free of charge only to individuals who are registered, attend and participate in the program. Contact the Calvert County Health Department at **410.535.5400**, ext. 359 for more information.

1-800-QUIT NOW (**1.800.784.8669**) or www.smokingstopshere.com is a free program offered by the State of Maryland Department of Health and Mental Hygiene. This program is a four-step process that offers information, support, counseling, encouragement and, if necessary, smoking cessation tools or products such as medications, gums or patches.

Substance Misuse Treatment Services

The health department is committed to providing access to effective substance misuse treatment services to residents of all ages in Calvert County. We also want to build a system that supports research-based prevention strategies and activities at the community level.

Treatment Services

- Comprehensive substance abuse evaluations and assessments
- Referrals to residential treatment and other community services
- Individual, group and family therapy
- Drug testing urinalysis and breathalyzers for clients in treatment
- Crisis walk-in services to provide immediate intervention
- Intensive outpatient treatment program
- Detention Center treatment services
- Drug abuse education

Please call **410.535.3079** or email SubstanceAbuseCCHD@dhmh.state.md.us for further information.

Diabetic Education

Certified diabetic educators teach the CalvertHealth Medical Center Diabetes Self-Management Program, which includes nutrition education, medication management, glucose monitoring and help setting and achieving personal goals. This program requires a healthcare provider referral and is certified by the American Diabetes Association. Classes are held at the Community Wellness Department at CHMC (basement level). Call for **410.414.4809** or **301.855.1012**, ext. 4809 for more information or to register for a class.

Patient and Diabetes Education Support Group

The Diabetes Support Group meets the 3rd Thursday of each month from 7-9 p.m. at CalvertHealth Medical Center. For topics and speakers, call **410.414.4783**.

Additionally, CalvertHealth Medical Center staff is available to address concerns related to managing your illness or condition and to assist you and your family in preparation for discharge. Social workers can provide counseling for the personal, social, emotional and financial stresses you may have as a result of your illness or injury. Notify your healthcare provider or nurse if you are interested in speaking with a social worker.

Making Life Decisions: Palliative Care, Hospice and 5 Wishes

Palliative Care

Palliative care is a relatively new field in healthcare that is different from Hospice. The patient and their family can receive supportive services at any time in the disease process, not just for support at the end of life. In fact, patients are often continuing to seek treatment for their illness. The palliative care team works in conjunction with the healthcare provider and can offer assistance with treatment of pain and other symptoms, assistance with communication, support for patients and families in medical decision-making and in navigating the complex medical system, and emotional and spiritual support.

Hospice

Calvert Hospice cares for those in our community who are living with a serious, life-limiting illness. We provide expert medical care, pain and symptom management, emotional and spiritual support. Care is personalized to the individual needs and wishes of the patient. Calvert Hospice is focused on caring, compassion, dignity and the patient's quality of life. Patients are supported in living their final months, weeks and days amid familiar surroundings, pain-free, with dignity surrounded by their loved ones and friends. Additionally, Calvert Hospice provides bereavement support for all members of our community who are anticipating or grieving the loss of a loved one.

Five Wishes

Five Wishes is the first living will that talks about your personal, emotional, and spiritual needs as well as your medical wishes. It lets you choose the person you want to make healthcare decisions for you if you are not able to make them for yourself. Five wishes lets you say exactly how you wish to be treated if you get seriously ill. It was written with the help of the American Bar Association's Commission on Law and Aging, and the nation's leading experts in end-of-life care. These are available through Transition to Home.

Important Phone Numbers

Healthcare Provider

Name _____ Phone Number _____

Name _____ Phone Number _____

Home Health Agency

Name _____ Phone Number _____

Local Support Groups

Name _____ Phone Number _____

Name _____ Phone Number _____

For more information, contact:

American Lung Association:

www.lungusa.org

National Library of Medicine MedlinePlus:

<http://www.nlm.nih.org/medlineplus/copd>





RESOURCES

The American Cancer Society	1.800.227.2345	cancer.org
The American Lung Association	1.800.586.4872	lungusa.org
The American Heart Association	1.800.242.8721	americanheart.org
Community Wellness Department at CHMC	410.535.8233	CalvertHealthMedicine.org
Calvert County Health Department	410.535.5400	CalvertHealthMedicine.org





My Personal Medication Record

Keep It Handy!

List all prescription, over-the-counter drugs, vitamins and herbs. Bring this to every healthcare provider's appointment and if you go to the emergency room or hospital. Date _____

Name and Dose of Medication	This Medicine is for my	How Much and How Often?			Notes / Questions
		Morning	Noon	Evening	
<i>Example: Simvastatin 40 mg</i>	<i>Example: High cholesterol</i>	 <i>Ex: 1 pill</i>			 <i>Example: Ordered by Dr. Brown / After I brush my teeth</i>

Prescription, over-the-counter drugs, vitamins and herbs continued...

Name and Dose of Medication	This Medicine is for my	How Much and How Often?				Notes / Questions
		Morning	Noon	Evening	Bedtime	
<i>Example:</i> Simvastatin 40 mg	<i>Example:</i> High cholesterol	 <i>Ex: 1 pill</i>				<i>Example: Ordered by Dr. Brown / After I brush my teeth</i>

DRIVING DIRECTIONS

From Anne Arundel County

Rt. 2 south to Rt. 4 at Sunderland. Rt. 4 south to Prince Frederick. Left on Hospital Road at traffic light.

From Charles County

MD-231 toward Prince Frederick/Hughesville. At traffic circle, take 3rd exit onto Prince Frederick Blvd. At second traffic circle, take the 1st exit onto MD-231 E/Prince Frederick Rd. Turn left at Rt. 4 north. Right on Hospital Road at traffic light.

From St. Mary's County

Rt. 2/4 north across the Thomas Johnson Bridge. Continue north to Prince Frederick. Right on Hospital Road at traffic light.



This facility is accredited by The Joint Commission on Accreditation of Healthcare Organizations. If you would like to report a concern about the quality of care you received here, you can contact The Joint Commission at **1.800.994.6610**.

CalvertHealth Medical Center does not discriminate with regard to patient admissions, room assignment, patient services or employment on the basis of race, color, national origin, age, gender identification, religion, disability or sexual orientation.

El Centro Médico de CalvertHealth no discrimina con respecto a admisiones de pacientes, asignaciones de habitaciones, servicios al paciente o empleo sobre la base de raza, color, origen nacional, religión, discapacidad, edad, sexo, incapacidad, identificación de género o sexual orientación.

Trung tâm Y tế CalvertHealth không phân biệt đối xử về việc nhập viện của bệnh nhân, phân công tại phòng, dịch vụ bệnh nhân hoặc việc làm dựa trên chủng tộc, màu da, nguồn gốc quốc gia, tôn giáo, khuyết tật, tuổi, giới tính, khuyết tật, nhận dạng giới tính hay khuynh hướng tình dục.



CalvertHealth®

100 Hospital Road, Prince Frederick, MD 20678

410.535.4000 301.855.1012

Maryland Relay Service 1.800.735.2258