



LIVE WELL WITH COPD

How to Manage and Live a Healthy Life with COPD

**C
O
P
D**

chronic
obstructive
pulmonary
disease

TOOLKIT



COPD by the Numbers

Clear facts to start the conversation - then what symptoms to watch for.

11.7M+

U.S. adults diagnosed with COPD

360K

People with COPD in Alabama alone

#6

Leading cause of death in the U.S.

More than **11.7 million** adults in the United States have been diagnosed with Chronic Obstructive Pulmonary Disease (COPD), which includes chronic bronchitis and emphysema, and millions more have it but have not yet been diagnosed. In Alabama alone, **360,000** people have COPD, enough to fill Bryant-Denny Stadium more than three times.

COPD is the sixth leading cause of death in the United States, causing **138,825 deaths in 2021**. Rates are roughly **seven times higher** among current smokers than among people who have never smoked. Early diagnosis and proper management can help slow the disease's progression and improve quality of life.

People with COPD Often Have:

- Constant coughing (with or without mucus) or wheezing
- Chest tightness or trouble taking a deep breath
- Recurrent lung infections
- Loss of energy
- Blue or gray coloring around the lips and fingernail beds ("cyanosis")
- Unintentional weight loss

TIP

These symptoms usually develop slowly over many years, so it's easy to mistake them for simply getting older.

Who Is at Greatest Risk?

Smokers and former smokers have the greatest risk, but some non-smokers get COPD too - often a genetic form called **Alpha-1 Antitrypsin Deficiency (AATD)**.

Sources: [American Lung Association](#) / [CDC - COPD Trends Brief: Prevalence & Mortality](#); [American Lung Association COPD Risk Factors](#)



What Is COPD?

Chronic Obstructive Pulmonary Disease, or COPD, is a chronic condition that lasts for your lifetime. There's no cure yet, but it can be treated with medicine and lifestyle changes that help control symptoms and slow how the disease progresses. Getting treatment early helps you live longer and feel better.

Genetics & Other Risks

Genetics (AATD) also plays a role - about **25%** of people with COPD never smoked, and only about **33%** of smokers ever develop COPD. Having COPD also puts you at greater risk for other conditions (co-morbidities) such as heart disease, diabetes, and lung cancer, so it's important to keep those under control too.

People at Higher Risk for Developing COPD Include:

Current or former smokers

Women

Non-Hispanic whites

History of asthma

75% What Causes COPD?

OF
CASES

About 75% of COPD cases are linked to lung damage from long-term cigarette smoking. Other causes include cigar and pipe smoking, secondhand tobacco smoke exposure, indoor and outdoor air pollution, and exposure to toxic chemicals, dust, and fumes. These substances irritate the airways and lungs, which results in chronic inflammation and eventual scarring of the airways and alveoli.

What's Happening in Your Lungs?



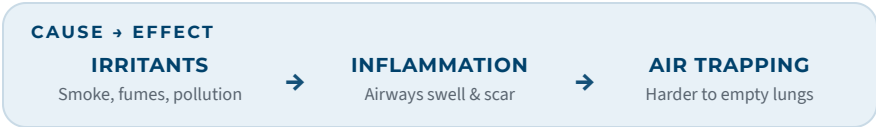
People with COPD have difficulty pushing air out of their lungs. This is called **air trapping**, and it means it takes more muscle strength and energy to breathe - both at rest and during activity.

Alveoli are the small air sacs at the end of your airways, where oxygen and carbon dioxide are exchanged with each breath. With COPD, the alveoli are often damaged, so gas exchange suffers and you can end up with low oxygen and/or elevated carbon dioxide levels in your blood.



Two Conditions Under the COPD Umbrella

Many people have a mix of both emphysema and chronic bronchitis.



CONDITION 1

Emphysema

Destruction of the small air sacs (alveoli), normally seen in heavy smokers over many years.

- An early sign is shortness of breath with light activity or when lying down.
- As it progresses, weight loss is common as patients use more energy just to breathe.
- There may or may not be a cough producing small amounts of mucus.

DAY-TO-DAY IMPACT

People with COPD often have trouble sleeping, which leaves them tired during the day. Talk with your care team if nighttime symptoms or daytime fatigue are getting in the way of living well.

CONDITION 2

Chronic Bronchitis



Common in smokers; its main symptom is a cough that brings up a large amount of mucus.

- Shortness of breath is common but usually relieved by rest.
- Lying down usually makes the cough worse, so many patients sleep sitting up.
- In the late stages of chronic bronchitis, the skin can take on a blue color due to lack of oxygen.

Remember

1

COPD is treatable - early care slows progression.

2

Symptoms can look like “just aging.” Ask anyway.

3

Smoking is the top cause - but not the only one.

4

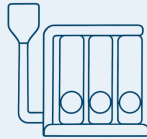
Emphysema + chronic bronchitis often overlap.

6 Common Diagnostic Tests

Beyond spirometry, your care team has other tools to confirm COPD, rule out other causes, and see how it's affecting your body.

CHECKLIST

Six
Common
Diagnostic
Tests



- 1 Pulmonary Function Tests (PFTs)
- 2 Chest X-rays
- 3 CT scans
- 4 Arterial Blood Gas Analysis
- 5 Six-Minute Walk Test
- 6 Alpha-1 Antitrypsin Deficiency (AATD) Blood Test

GOOD TO KNOW

You likely won't have all six diagnostic tests - your care team picks which ones you need based on your symptoms and history. Ask your pulmonologist which tests you had, what your FEV1 result was, and what GOLD stage you're at, so you have those numbers on hand for future appointments.

HOW SEVERITY IS DECIDED

How Severe Is Your COPD?

There are four stages of COPD - mild, moderate, severe and very severe. Your severity level is based on your Pulmonary Function Test results, your symptoms, and other health problems (co-morbidities) you may have. Your care team uses this, along with tests like spirometry, chest X-rays, and others, to figure out the right level of care for you - you'll learn more about these tests in the pages ahead.

MILD

MODERATE

SEVERE

VERY SEVERE

1

Pulmonary Function Tests (PFTs)

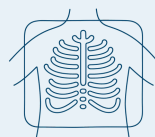


Determine how well and how much air you move out of your lungs and how well oxygen enters your body.

- The spirometry test can detect COPD before you even have symptoms - you blow into a tube and a machine measures **FVC** and **FEV1**.
- The diffusion test measures how well oxygen is absorbed by your blood. Lung volume testing determines how much air your lungs can hold and push out.

2

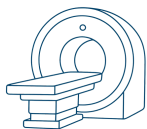
Chest X-Rays



Can rule out other causes of shortness of breath and show the shape and size of your lungs, which could suggest emphysema.

3

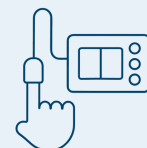
Computed Tomography (CT) Scans



Show more detail than chest X-rays. They help determine emphysema and help with detection of lung cancer.

4

Arterial Blood Gas Analysis



Measures the oxygen and carbon dioxide levels in your blood.

5

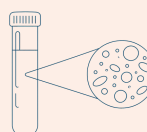
Six-Minute Walk Test



Measures how far you can walk in six minutes (exercise tolerance) and whether you need oxygen when you exercise.

6

AATD Blood Test



Tests for a blood deficiency to determine if you have the genetic form of COPD.

Spirometry Grades (GOLD Stages)

To check how well your lungs work, your doctor will look at your spirometry results. These results have four grades, too:



GOLD 1

Mild



GOLD 2

Moderate



GOLD 3

Severe



GOLD 4

Very severe

THE STAGING SYSTEM

What GOLD Means



GOLD stands for the Global Initiative for Chronic Obstructive Lung Disease, the international group that sets the standard staging system for COPD severity.

After Diagnosis

Getting a
diagnosis is good
news, not bad



Although there's no cure for COPD right now, you can still live a good life - and your care team is here to support you in this journey.

Now that you have a diagnosis, small steps make a real difference:

- 1 Learn about your COPD - starting with this toolkit
- 2 Consider joining a COPD support group, in person or online
- 3 Share this toolkit with family so they can help when you need it
- 4 Write down questions before your appointments
- 5 Call your care team whenever you have concerns

What Are PFTs Used For?

Pulmonary Function Tests (PFTs) are the main way doctors measure how well your lungs are working - and the spirometry test within them can catch COPD before you even notice symptoms.

Pulmonary Function Tests Are Used To:



- Compare your lung function to normal lung function
- Identify early changes in lung function so treatment can be adjusted
- Detect narrowing in the airways
- Determine if a medication (bronchodilator) would help open the airway and improve lung function
- Determine your ability to tolerate surgery and/or medical procedures

Preparing for the Test



- ☐ If you still smoke, don't smoke for at least 1 hour before the test and don't let anyone smoke around you
- ☐ Don't drink alcohol for at least 4 hours before the test
- ☐ Don't exercise heavily for at least 30 minutes before the test
- ☐ Don't wear tight clothing
- ☐ Don't eat a large meal within 2 hours before the test
- ☐ Ask which medications you should take or skip on the day of the test
- ☐ If you're on oxygen, you'll usually be asked to be off it during the Diffusion and Body Plethysmography tests

BEFORE YOU GO

If you have issues with claustrophobia, mention it to your healthcare provider before testing.

What the Test Will Do

- Measure how much air you can breathe into your lungs
- Measure how much air you can quickly blow out of your lungs
- Diffusion studies will assess how well oxygen moves from your lungs into your blood
- Body Plethysmography measures how much air is in your lungs after a deep breath and after breathing all the way out - this requires sitting in a booth with large windows, breathing through a mouthpiece.

During the Test

- 01 You'll be given instructions - if any part isn't clear, ask staff to repeat or explain it
- 02 You'll be doing a lot of deep breathing and may become tired - this is expected
- 03 If you become light-headed or dizzy, stop immediately and tell the staff

Understanding Your Results



Results are based on your height, weight, age, and gender, and compared against "predicted values" (taller people and males tend to have larger lungs). Your lungs grow until your mid-twenties, then lung function falls gradually every year - your results will be tracked over time to see if you've had a change.

THE TWO KEY NUMBERS

FVC

FORCED VITAL CAPACITY

Measures how much air you can forcefully breathe out after a full breath in.

KEY NUMBER

FEV1

FORCED EXPIRATORY VOLUME IN 1 SECOND

Measures how much of that air you can blow out in the first second - it helps determine how severe your COPD is and what care you need.

AATD Genetic Condition

Alpha-1 Antitrypsin Deficiency (AATD) is the genetic form of COPD, confirmed with a simple blood test.

WHAT IT IS

A Genetic Form of Emphysema



AATD is a genetic condition that can result in an inherited form of emphysema. People with this condition don't have enough of a protein called Alpha-1 Antitrypsin, made in the liver, that protects the lungs so they can work normally. Without this protein, the lungs can become damaged by smoke, dust, and fumes. People often have liver damage with AATD.

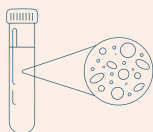
SYMPTOMS

What You May Notice

Lung symptoms usually appear after age 30, but may emerge earlier. The first symptom is normally shortness of breath with activity - others can include wheezing, decreased exercise tolerance, a productive cough, recurrent infections, and sometimes bronchiectasis.

DIAGNOSIS

A Simple Blood Test



Diagnosis is done with blood tests. If your AAT level is low, you may have another blood test called a genotype or phenotype. Repeat blood tests aren't necessary.

AATD & Severity

Once COPD is confirmed, your care team also grades how severe it is - which shapes the care plan you'll see in the Treatment section next.

Next: **Treating COPD** - medicines, lifestyle changes, and the care options tailored to your stage.

My Care Team



Fill in your pulmonologist, pharmacy, and emergency contacts on one card. Keep it where you can find it fast.

ROLE	NAME	PHONE NUMBER
Pulmonologist		
COPD Navigator	Kim DeVilbiss, CCNS-BC	251-633-0573
Allergist		
Primary Care		
Pharmacy		
Home Health		
Oxygen Company		
Emergency Contact		

Treatments Overview

There is no single fix for COPD. Effective care combines several treatments, tailored to your symptoms and health history.



Some, like your maintenance inhaler, are part of your daily routine, while others are reserved for flare-ups or apply only to select patients. The list below introduces every option, with details on each in the pages ahead.

TREATMENT OPTIONS AT A GLANCE

- **Smoking Cessation:** the most important step you can take.
- **Inhaled Medications:** maintenance and rescue inhalers or nebulizers.
- **Corticosteroids:** reduce airway inflammation during a flare-up.
- **Antibiotics:** treat bacterial infections that worsen symptoms.
- **PDE4 Inhibitors:** suppress inflammatory activity.
- **Pulmonary Rehabilitation:** education plus supervised exercise.
- **Sleep Studies:** identify Obstructive Sleep Apnea.
- **Oxygen Therapy:** corrects low oxygen levels.
- **Noninvasive Ventilation:** assists breathing with a mask-delivered device.
- **Surgical Options:** lung volume reduction or transplant.
- **Alpha-1 Antitrypsin Infusions:** weekly IV infusions for the genetic form of COPD.
- **Research Options:** clinical trials for emerging treatments.
- **Other Medical Conditions:** keeping co-morbidities under control.
- **Chronic Care Management:** 24/7 access to a care team.
- **Hospitalizations:** steps to stay safe during a hospital stay.
- **Transitional Care Management:** coordinated follow-up after discharge.
- **Palliative Care:** improves quality of life and comfort.

Smoking Cessation



Quitting smoking is the single most important thing you can do to slow COPD's progression and improve your symptoms - and you don't have to do it alone. All forms of smoking - cigarettes, cigars, marijuana, e-cigarettes, hookah pipes, and secondhand smoke - irritate your lungs and must be avoided.

Most people need help to quit, and those who use an aid to quit are more successful. Talk to your pulmonologist about what methods are available.

READY TO BUILD A QUIT PLAN?

The Smoking Cessation section later in this education covers the vaping warning, the year-by-year benefits of quitting, a full step-by-step quit plan, withdrawal symptoms, and what to do if you slip.

Inhaled Medications



Inhaled medications such as bronchodilators and corticosteroids do most of the day-to-day work of keeping your airways open and calm.

Maintenance inhalers are used every day; rescue inhalers are for when breathing suddenly gets worse.

The two main classes are bronchodilators and corticosteroids. Inhaling these medications is the most efficient way for them to reach your airways and lungs - they're given through an inhaler or a nebulizer.

Maintenance (Every Day, Long-Acting) Inhalers

These are used every day, even when you're breathing well. Bronchodilator medications relax the muscles around your airways, helping keep your lungs open and making it easier to breathe.

These medications work best if they stay in your lungs all the time.

SOME COMMON MAINTENANCE INHALERS

- tiotropium (Spiriva®)
- umeclidinium (Incruse Ellipta®)
- umeclidinium/vilanterol (Anoro Ellipta®)
- tiotropium/olodaterol (Stiolto Respimat®)
- glycopyrrolate/formoterol (Bevespi Aerosphere®)
- budesonide/formoterol (Symbicort®)
- fluticasone/salmeterol (Advair®)
- fluticasone/vilanterol (Breo Ellipta®)

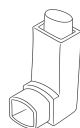
Rescue (As-Needed, Quick-Relief, Short-Acting) Inhalers

These are used when your breathing gets worse - they act fast. Carry this inhaler with you at all times; it helps you feel better quickly when you can't catch your breath.

SOME COMMON RESCUE INHALERS

- albuterol (Ventolin®, Proventil®, or ProAir®)
- ipratropium (Atrovent®)

Types of Inhalers



- **Mist inhalers (puffers)** - often used with a spacer to make sure the mist reaches your lungs instead of just your mouth
- **Dry powder inhalers** - medication in powder form instead of mist, coming in a disc-shaped or egg-shaped device

INHALER MEDICATION TIPS

- In general, use a spacer with a mist inhaler
- If you have one - clean it monthly with soap and warm water (or the dishwasher, top rack only), and replace it every 6 to 12 months
- Make sure you refill your medication on time so you don't run out
- If your inhaler contains a steroid, rinse your mouth with water, swish, gargle, and spit after using it
- Most inhalers have a small number on the back showing how many puffs are left - check it often

For step-by-step instructions on using your specific inhaler, see the inhaler technique guides next.

Dry Powder Inhaler (DPI) Technique

Follow these steps for disc- or capsule-style dry powder devices. Common mistakes are noted under each step.

1 Load the dose - Follow your device's loading step - this might mean twisting the base, clicking a lever, or piercing a capsule, depending on your inhaler. Check the device's dose counter to confirm it's ready.

2 Don't shake it - Unlike a mist inhaler, shaking a DPI isn't necessary and can disturb the powder.
Common mistake: shaking out of habit from using a mist inhaler.

3 Breathe out fully, away from the device - Empty your lungs completely before bringing the mouthpiece to your mouth.
Common mistake: breathing out into the mouthpiece, which can blow the powder dose away or add moisture that clumps it.

4 Seal your lips tightly around the mouthpiece - Close your lips fully around it - don't cover any air vents on the device with your fingers.
Common mistake: a loose seal lets air in around the powder instead of through it.

5 Inhale fast and deep - Take one quick, hard, deep breath in through your mouth.
Common mistake: this is the opposite of a mist inhaler - breathing in slowly won't pull the powder deep into your lungs.

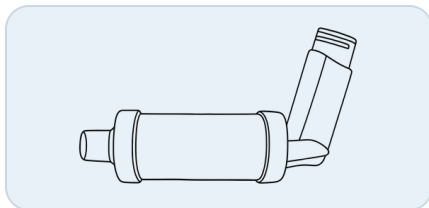
6 Hold your breath for 10 seconds - This gives the powder time to settle in your airways.
Common mistake: exhaling right away, before the medication has had a chance to reach your lungs.

7 Breathe out slowly, away from the device -
Common mistake: breathing out into the mouthpiece, which can leave moisture in the device.

8 Check the dose counter and store properly - Confirm the dose was taken, then close or cap the device. Keep DPIs dry - unlike mist inhalers, moisture can ruin the powder. Don't store one in the bathroom or a humid place.

Mist Inhaler with Spacer

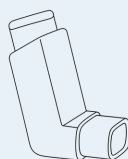
A spacer helps the mist reach your lungs instead of just your mouth.



- 1 **Check the Dose Counter** - Don't use the inhaler if it reads zero - that means it's empty and needs replacing.
- 2 **Prime If Needed** - Prime a brand-new inhaler before first use (or if you haven't used it in 7+ days, or if it's been dropped). Shake it for 10 seconds and spray 2-4 puffs into the air, per your medicine's instructions. Priming doesn't waste doses.
- 3 **Shake the Inhaler** - Shake the inhaler to mix the medicine before each use.
- 4 **Prepare the Inhaler** - Remove the cap from the inhaler, and make sure the mouthpiece and spacer are clean with nothing inside them.
- 5 **Attach the Spacer** - Insert the inhaler into the open end of the spacer, and remove the spacer's mouthpiece cap.
- 6 **Breathe Out** - Sit or stand up straight, then breathe out fully, away from the spacer.
- 7 **Position the Spacer** - Hold the inhaler with your pointer finger on top and thumb on the bottom, tilt your head back slightly, and place the spacer mouthpiece in your mouth above your tongue. Close your lips tightly around it.
- 8 **Press and Begin Breathing In** - Press down once on the inhaler to release the medicine, and begin breathing in through your mouth right away.
- 9 **Breathe In Slowly** - Breathe in slowly and deeply for 3-5 seconds. If the spacer whistles, you're breathing in too fast.
- 10 **Hold Your Breath** - Remove the spacer from your mouth and hold your breath for up to 10 seconds.
- 11 **Breathe Out** - Breathe out slowly through your mouth.
- 12 **Repeat If Needed** - Wait about one minute, then repeat the steps if you're taking another puff.
- 13 **Rinse Your Mouth** - Rinse your mouth with water and spit it out (especially important if the medicine contains a steroid).
- 14 **Store the Inhaler** - Replace the caps and store the inhaler in a cool, dry place. Clean the spacer according to its package instructions.

Without Spacer Technique

If you don't have a spacer, timing your breath with the puff is especially important.



- 1 **Check the Dose Counter** - Don't use the inhaler if it reads zero - that means it's empty and needs replacing.
- 2 **Prime If Needed** - Prime a brand-new inhaler before first use (or if you haven't used it in 7+ days, or if it's been dropped). Shake it for 10 seconds and prime according to your medicine's instructions.
- 3 **Shake the Inhaler** - Shake the inhaler to mix the medicine before each use.
- 4 **Prepare the Inhaler** - Remove the cap from the inhaler, and make sure it's clean with nothing inside the mouthpiece.
- 5 **Breathe Out** - Breathe out fully, away from the device, to empty your lungs.
- 6 **Position the Inhaler** - Put the inhaler mouthpiece directly in your mouth, above your tongue, and close your lips tightly around it.
- 7 **Press and Begin Breathing In** - Press down once on the inhaler as you begin breathing in through your mouth - timing matters here, since there's no chamber to hold the dose for you.
- 8 **Breathe In Slowly** - Continue breathing in slowly and deeply for 3–5 seconds.
- 9 **Hold Your Breath** - Hold your breath for 10 seconds.
- 10 **Breathe Out** - Breathe out slowly.
- 11 **Repeat If Needed** - Wait about one minute, then repeat the steps if you're taking another puff.
- 12 **Rinse Your Mouth** - Rinse your mouth with water and spit it out (especially important if the medicine contains a steroid).
- 13 **Store the Inhaler** - Replace the cap and store the inhaler in a cool, dry place.

Ask your care team to watch your technique - small form fixes can make a big difference in how much medicine reaches your lungs.

Corticosteroids, Antibiotics & PDE4 Inhibitors

Beyond your daily inhalers, three other types of medication may come into play - mostly during flare-ups or for managing inflammation.

Corticosteroids



These reduce airway inflammation and are used when there's an exacerbation (flare-up) of your COPD symptoms. They're not to be confused with the anabolic steroids used by bodybuilders. Corticosteroids are non-habit forming and are a necessary part of treatment during a flare-up - they come in both inhaled and pill form.

Antibiotics

Antibiotics are given for bacterial infections that can worsen COPD symptoms. It's important to finish the entire prescription, even after you're feeling better, to reduce the risk of developing resistant bacterial infections. Antibiotics aren't given for viral infections, like the common cold, since they don't work against those.

PDE4 Inhibitors

PDE4 inhibitors suppress inflammatory functions in the cells involved in COPD.

Pulmonary Rehabilitation

Pulmonary rehab is the most important non-medication treatment for COPD. It combines education, support, and supervised exercise to help improve your quality of life and reduce flare-ups. See the Pulmonary Rehabilitation section for full details on the program.

SLEEP APNEA, OXYGEN & BREATHING SUPPORT

If you snore, feel tired during the day, or wake up gasping, a sleep study may find Obstructive Sleep Apnea. If your oxygen level runs low, you may need oxygen therapy - while active, while sleeping, or all the time. If breathing gets harder as COPD progresses, noninvasive ventilation can help.

Do You Snore? It Could Be Sleep Apnea

Obstructive Sleep Apnea (OSA) is a common problem that disrupts your breathing while you sleep, temporarily stopping or decreasing your breathing and lowering your oxygen level. These pauses can wake you up or prevent deep, restful sleep.

Signs of OSA include: loud snoring, daytime sleepiness, choking or gasping during sleep, waking up short of breath, waking up several times a night, morning headaches, high blood pressure, poor memory, trouble concentrating, or mood swings from sleepiness and fatigue.

If you have some or all of these symptoms, a sleep study (polysomnogram) may be ordered. This involves going to a special lab where your breathing, heart rate, and oxygen level are monitored while you sleep. Treatment depends on how severe your OSA is - often starting with lifestyle changes like losing weight, quitting smoking, changing your sleep position, or avoiding alcohol.

If those aren't enough, you may be prescribed a Continuous Positive Airway Pressure (CPAP) device to wear while you sleep, which blows into your airway to keep it from blocking.



Oxygen Therapy



If your oxygen level is low at rest or with activity, you'll be prescribed oxygen therapy. You may need it only while active, only while sleeping, or all the time. Oxygen helps you catch your breath, be more active, sleep better, have more energy - and live longer.

Oxygen can be delivered two ways: by machine (must be plugged in) or by tank (portable).

OXYGEN SAFETY

Oxygen is flammable. Never smoke while using oxygen or use it near a stove or fireplace, and keep a fire extinguisher nearby in the house.

Noninvasive Ventilation

If your COPD progresses and breathing becomes more difficult, noninvasive ventilation can help. This device assists your normal breathing, letting you breathe deeper and push more air out when you exhale. It works on the same principle as a CPAP machine, delivered through a mask, but with more advanced settings. There are many mask varieties, and your respiratory therapist will help you find the one that's most comfortable and works best for you.

SURGERY, INFUSIONS & RESEARCH

Most people manage COPD with medication and rehab, but a smaller group of patients have other options worth knowing about - surgery, infusions for a genetic form of COPD, and clinical trials. It's also important to keep any other health conditions you have under control.

Surgical Options



Surgery is an option for a select group of patients with COPD. In severe emphysema, large "bubbles" called bullae can form in the lungs - a bulla is a permanent, air-filled space that can grow over time and, if large enough, limit the movement of healthy lung tissue.

- **Lung volume reduction surgery** removes the damaged lung tissue, giving the remaining healthy tissue room to expand.
- **Lung transplant** is another option for younger people with very severe lung disease.

Alpha-1 Antitrypsin Infusions

For patients with the genetic disorder Alpha-1 Antitrypsin Deficiency (AATD), weekly intravenous infusions of purified, pooled human plasma Alpha-1 Antitrypsin may be recommended.

Research Options



While there's no cure for COPD, you may have access to new treatments being developed through clinical trials. Talk to your pulmonologist about research studies currently being conducted, or call our research department.



Ask your pulmonologist which options fit your stage and health history.

Other Medical Conditions



It's important to take good care of your overall health. If you have high blood pressure, heart disease, diabetes, and/or asthma, keeping these conditions under control matters just as much as managing your COPD directly.

Care Coordination Programs



Living with COPD often means juggling multiple conditions and providers. These programs exist to make that easier - from ongoing phone support between visits, to help right after a hospital stay, to comfort-focused care at any stage of your illness.

Chronic Care Management

Chronic Care Management (CCM) is designed for Medicare-eligible patients with multiple medical problems. It gives you a direct line to a medical professional for your health care needs, and is approved by Medicare and most Medicare replacement programs.

With CCM, our staff works with you and all of your providers via telephone to help manage your care, including:

- Refilling prescriptions faster
- Ordering medical supplies
- Making and coordinating appointments
- Clinical monitoring and answering questions for you and your family
- Education and self-management skills for living with chronic conditions
- A care plan with disease-specific goals to help prevent hospital stays

You're in control of your healthcare - if at any time CCM doesn't feel like it's benefiting you, you're welcome to withdraw. If you're interested, contact your provider for a referral.



Hospitalizations



Our goal is to keep you well enough that you don't need to be hospitalized, but if your symptoms - or an unrelated reason - send you there, a few steps can keep you safer:

01

Have a family member or friend stay with you as much as possible

02

Bring an up-to-date list of your medications, over-the-counter drugs, and supplements

03

Make sure your armband is correct, and that staff check it before giving you anything

04

Protect yourself from infection - make sure everyone who touches you washes their hands

05

Don't let visitors with flu or cold-like symptoms come see you

06

Speak up if something doesn't seem right or you don't understand something

Transitional Care Management



Transitioning in and out of the hospital is stressful, and one in five hospitalized patients is readmitted within 30 days of discharge. COPD patients face extra challenges - multiple inhaled medications with unique devices, other conditions like cardiac or renal disease, and care coordination across several specialists.

Pulmonary Associates' Transitional Care Management program is aimed at helping ensure ongoing, uninterrupted care after you leave the hospital, when your treatment, equipment, or even doctors may change.

Our Goals

- Reduce and control your symptoms
- Increase your physical activity and exercise tolerance
- Educate you about COPD and prevent future complications
- Help you breathe easier and take control of your COPD

What to Bring After a Hospital Stay

Your medications (including inhalers), any friends or family who are part of your support team, and - most importantly - your questions; we'll get you the answers you need.

Palliative Care



Palliative Care is an approach for improving quality of life for patients and families facing a life-threatening illness. It works to improve symptoms like pain, breathlessness, or cough, and also helps with psychological, spiritual, or emotional needs.

This care is available at any time during treatment and can coincide with medical treatments like oxygen therapy and inhalers. It's available in the hospital, nursing home, rehab facilities, and at home.

HERE'S WHAT TO EXPECT FROM THE PROGRAM

- We'll call you within two business days of hospital discharge to make sure you're getting better, obtained all the medication prescribed at discharge, and received a follow-up appointment with your pulmonary provider within 7-14 days
- We'll review the use of your inhalers and other COPD medications with you
- If you smoke, our tobacco cessation specialists will assist you in quitting
- If you use oxygen, CPAP, or a Bilevel Positive Airway Pressure (BiPAP) machine, we'll review your needs and help with any equipment issues
- We'll review your needs and options for physical activity, including whether you need pulmonary rehabilitation
- We want to provide the best support possible to help you achieve your overall wellness goals

NEXT IN THE TOOLKIT

Pulmonary Rehabilitation - the most important non-medication treatment for COPD, with education, support, and supervised exercise.

Keep this Treating section with your action plan. Bring your inhalers to every visit so your care team can check technique.

Program Overview

Pulmonary rehab is the most important non-medication treatment for COPD. It's an outpatient program combining education, support, and supervised exercise - usually four to eighteen weeks, normally covered by insurance, and it should be repeated every 18 months to keep your muscle strength up.



Why It Matters Even After You Finish

Once you complete the program, it's vital to keep building your muscle strength - just like keeping your leg muscles strong helps you avoid falling, keeping the muscles that help you breathe strong makes a real difference. Your diaphragm is the muscle that does most of your breathing work. Keeping it "in shape" lets you take deeper breaths.



What the Program Covers

- How to stay healthy with COPD
- Different breathing techniques
- More about your medications
- Nutrition to help your lungs
- How to stay relaxed and manage stress
- About oxygen therapy
- What to do if your oxygen levels decrease during exercise
- How to travel safely with COPD

Maintaining muscle strength through exercise reduces fatigue, helps you sleep better, and reduces depression - all of which increase your endurance and let you live life to the fullest.

DAILY GOAL

Aim for 30 minutes of physical activity a day. Three 10-minute sessions work just as well as one continuous 30-minute session, so break it up however fits your day.





Building Strength Safely

Use different activities on different days so you're working different muscles and building strength evenly. Some days you won't be able to do as much as the day before - that's okay. Do what you can, then try to build again the next day.

Having an "exercise buddy" - a family member, friend, neighbor, or co-worker - helps you stay committed and keeps things from getting boring. Remember to use pursed-lip breathing (in through your nose, out through pursed lips like blowing bubbles) whenever you exercise.

How Hard Is Hard Enough?

Use the Rating of Perceived Exertion (RPE) scale to guide your intensity. You want your breathlessness and fatigue after exercising to land between 4 and 6 - not gasping for air, but slightly short of breath. Anything less and you won't build muscle strength.

Rating of Perceived Exertion (RPE) Scale

- | | |
|---|---------------------|
| 0 | Rest |
| 1 | Really Easy |
| 2 | Easy |
| 3 | Moderate |
| 4 | Challenging |
| 5 | Hard |
| 6 | Harder |
| 7 | Really Hard |
| 8 | Really, Really Hard |
| 9 | Maximum |

Target zone for building strength: **4 to 6**
(Challenging to Harder).



Some Examples of Activities Include:

- Walking, preferably outside if the weather is nice as a change of scenery helps reduce depression. If the weather is too hot/humid, it's raining, or if the pollen level is too high (and you have allergies), walk inside. You can go to a mall or a store and do your walking if the weather does not permit walking outside and then you still get that "change of scenery"
- Riding a stationary bicycle with low or moderate resistance
- Slowly walking upstairs taking rest breaks when you get out of breath
- Participating in low impact physical activities like yoga, tai chi, dancing, water aerobics, bowling, etc.
- Doing household chores like vacuuming, dusting, washing dishes, doing the laundry, gardening, grocery shopping, etc.



Doing one of these every day will keep you from becoming exhausted if you were to try to do them all in one day

Staying Motivated & Breathing Right

Having an "exercise buddy" can help you exercise more, not become bored and help you stay committed! Ask a family member, friend, neighbor or co-worker to be your "buddy". Remember to use your pursed-lip breathing techniques (breathe in through your nose and out through your mouth as if you are blowing bubbles) when you are exercising.



Monitoring Your Intensity

You need to monitor the intensity of your physical activity. Using the Rating of Perceived Exertion (RPE) scale on [page 26](#) as a guide, you want your level of breathlessness and fatigue after exercising to be between 4 and 6. The goal is not for you to be gasping for air when you exercise but you want to be slightly short of breath or you will not build muscle strength.

Your Exercise Program

A regularly performed exercise program is more therapeutic than the best medication. A good all-around program has three parts, and each one plays a different role in helping you breathe easier and stay independent.



- 1 Warm-up** - Activities that require minimal exertion, like walking in place or gentle stretching. Always start here before anything more strenuous.
- 2 Cardiovascular** - Exercises that get your heart rate up - walking, a stationary bicycle, or climbing stairs - build endurance and daily stamina.
- 3 Muscle strengthening** - Targeted exercises for your arms, chest, shoulders, and core - muscles you rely on for every activity, including breathing itself.

Some Exercise, Every Day

You should do some form of exercise every day. The goal is to increase your activity little by little. You'll have days when you can't do as much as the day before - that's okay. Do as much as you can on those days, then try to build again the next day.

Having an "exercise buddy" - a family member, friend, neighbor, or co-worker - helps you exercise more, stay committed, and keeps things from getting boring.

Whatever you're doing, remember to use pursed-lip breathing: in through your nose, out through pursed lips, as if you're blowing bubbles.

Warm Up First

Warm-up activities require minimal exertion - think walking in place or gentle stretching. Always start here before anything more strenuous.

CARDIOVASCULAR

Getting Started

Cardiovascular exercise gets your heart rate up and builds the endurance you use every day. Here's how to build up safely and know when you're pushing too hard.

Good Symptoms to Have When Exercising

- Light to moderate shortness of breath
- Sweating
- Legs feeling hot or tired
- Light muscular or joint pain

These are all normal.

Bad Symptoms - Stop and Call Your Doctor!

- Chest pain
- severe joint pain
- dizziness
- heart palpitations
- severe or prolonged shortness of breath
- headache

If any of these appear, stop or reduce the activity and notify your physician.

Build Your Cardio Daily

Cardiovascular exercises get your heart rate up - riding a stationary bicycle, walking, or going up and down stairs. A pedometer is a good way to track progress.

- 1 Find your baseline** - Wear a pedometer for three consecutive days (one should be a weekend day), record your steps each day, and average the three.
- 2 Set your first goal** - Aim to increase your daily steps by 1,000 within one month. If you reach it early, add another 1,000.
- 3 Work toward 10,000** - That's the ideal goal, but your condition may not allow it - and that's okay. Do as much as your breathing allows, aiming for at least 5,000 steps a day.

Climbing Stairs

Stairs make you short of breath faster than flat walking, but they build leg muscle quicker too. Hold the handrail without pulling on it, use pursed-lip breathing (especially on stairs), and take rest breaks if you get more than slightly short of breath - then resume once your breathing settles.



Other Ways to Stay Active

- Walking outside when weather allows - a change of scenery helps reduce depression. Walk inside (a mall or store works well) if it's too hot, humid, rainy, or pollen counts are high
- Riding a stationary bicycle with low or moderate resistance
- Low-impact activities like yoga, tai chi, dancing, water aerobics, or bowling
- Household chores - vacuuming, dusting, dishes, laundry, gardening, grocery shopping. Spreading these across the week keeps you from wearing yourself out doing them all in one day



How Hard Should It Feel?

See the RPE scale on [page 26](#): Use the Rating of Perceived Exertion (RPE) scale to guide your intensity - you want your breathlessness and fatigue after exercising to land between 4 and 6. Any less and you won't build muscle strength.

Remember to breathe out twice as long as you breathe in, and never hold your breath while exercising.

Muscle Strengthening Exercises

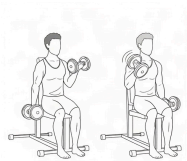
Muscles are needed for every activity, including simply breathing, so building and maintaining strength helps you stay independent and reduces your fall risk. Aim to do these exercises at least three times a week, moving slowly and exhaling during the most strenuous part of each move - never hold your breath while exercising.

Start with 12 repetitions per exercise, adding a second set once the first becomes easy. If you're using weights, begin with just 1-2 pounds and increase gradually from there.



Upper Body Exercises

BICEPS

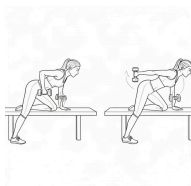


Alternate Seated Biceps Curl

Position:

- Sit on a chair with a weight in each hand.
- Keeping your elbows close to your side, raise the weight up to your shoulder keeping your upper arm still.
- Alternate arms.
- Do 12 repetitions with each arm.

TRICEPS

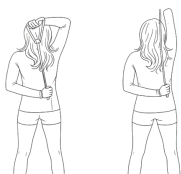


Triceps Kickback

Position:

- Hinge forward from a split stance or bench, upper body nearly parallel to the floor.
- Bend your elbow to 90 degrees, weight hanging down, upper arm still.
- Extend your arm straight back, then return to start.
- Do 12 repetitions, then repeat with the other arm.

TRICEPS



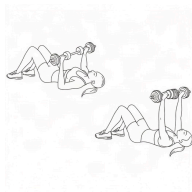
Overhead Triceps Extension (Band)

Position:

- Stand with your back straight.
- Hold the band's upper end behind your head, lower end behind your back.
- Keeping your lower hand still, extend your upper arm straight up overhead.
- Do 12 repetitions, then switch arms and repeat.

Upper Body Exercises

PECTORALS

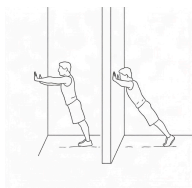


Pectoral Press

Position:

- Lie on your back with a weight in each hand at chest level.
- Extend your arms up towards the ceiling and then back down.
- Repeat for 12 repetitions.

PECTORALS

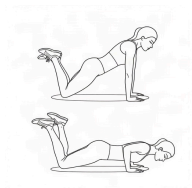


Wall Push-Up

Position:

- Standing with your arms out straight and with your hands against the wall at shoulder level, slowly bend your elbows while keeping your body straight.
- Push against the wall to return to your initial position.
- Repeat for 12 repetitions.

PECTORALS



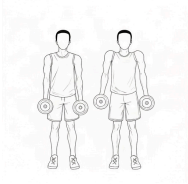
Modified or Half Push-Up

Position:

- Stretch out on the floor on your hands and knees.
- Slowly bend your elbows while keeping your knees on the ground.
- Push back up to the initial position.
- Repeat for 12 repetitions.

Upper Body Exercises

SHOULDER GIRDLE

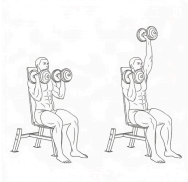


Weighted Shoulder Roll

Position:

- Stand or sit with a weight in each hand at your side.
- Raise your shoulders and roll them backwards.
- Repeat for 12 repetitions.

SHOULDER GIRDLE

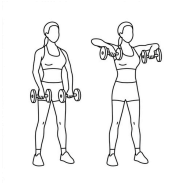


Overhead Press

Position:

- Stand or sit with a weight in each hand at shoulder level.
- Extend one arm straight up, then lower it and repeat with the other arm.
- Repeat for 12 repetitions.

SHOULDER GIRDLE



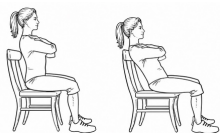
Upright Row

Position:

- Stand or sit with a weight in each hand with your arms straight down.
- Keeping your hands by your sides, raise your elbows as far up as possible.
- Lower your elbows and repeat for 12 repetitions.

Abdominal Exercises

ABDOMINALS

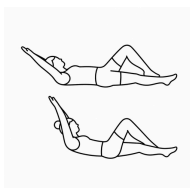


Seated Trunk Lean Back

Position:

- Sit on a chair (or stool) with your arms crossed on your chest.
- Lean back keeping your stomach muscles tight and then return to the starting position.
- Repeat for 12 repetitions.
- Keep your chin close to your chest during this exercise.

ABDOMINALS

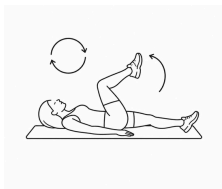


Partial Sit-Up

Position:

- Lie on your back with your legs bent.
- Extend your arms upwards then raise your head and shoulders off the floor and then lower head and shoulders back to the floor.
- Repeat for 12 repetitions.
- You may use a small pillow for neck support if necessary.

ABDOMINALS



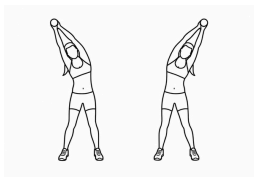
Air Bike

Position:

- Lie on your back and raise your knees up.
- "Pedal" in the air with your legs (bending and extending them one at a time) for 12 repetitions.
- You may use a small cushion under your neck and lower back if necessary.

Flexibility Exercises

TRUNK

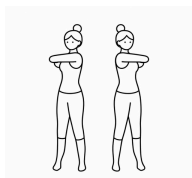


Standing Side Bend

Position:

- Stand with your feet apart, slightly wider than your shoulders, cross your arms on your chest.
- Slowly tilt your body to one side back to the center and then over to the other side.
- Hold each sideways pose for 20 - 30 seconds.
- Do twice.

TRUNK

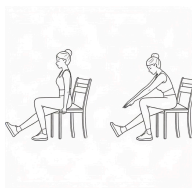


Standing Torso Twist

Position:

- Stand straight with your arms crossed and turn your shoulders and your head as if you are trying to look behind you.
- Hold for 20 - 30 seconds and then look over your other shoulder.
- Repeat.

HAMSTRINGS



Seated Hamstring Stretch

Position:

- Sit on a chair with one leg stretched out with the heel resting on the floor.
- Slowly bend forward until you feel a slight discomfort behind your leg.
- Hold for 20 - 30 seconds.
- Repeat with the other leg for 2 repetitions.

Balancing Exercises

BALANCE

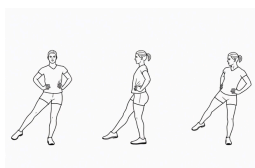


Heel-to-Toe Stand

Position:

- While standing, place one foot in front of the other with the heel touching the toes of the other foot.
- Hold for 30 seconds.
- Switch foot position and repeat.
- Stand next to a wall or a chair so that you can hold onto it in case you lose your balance.

BALANCE



Single Leg Balance (3 Way Reach)

Position:

- While standing, place feet shoulder-width apart.
- Move one foot as though you are drawing a triangle on the floor, touching each angle with the tip of your toes.
- Repeat 5 times with each leg.
- As your balance improves, try this exercise without touching the floor as you move your foot to each angle.
- Stand next to a wall or a chair so that you can hold onto it in case you lose your balance.

BALANCE



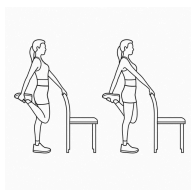
Single Leg Stance

Position:

- Standing with your feet close together, slightly lift one knee balancing on the other leg.
- Hold for 10 - 20 seconds and repeat with the other leg for 2 repetitions.
- Stand next to a wall or a chair so that you can hold onto it in case you lose your balance.

Balancing Exercises

QUADRICEPS



Standing Quadriceps Stretch

Position:

- Stand with one knee resting on a chair.
- Tilt your pelvis forward until you feel a stretch in your front thigh.
- Hold for 20 - 30 seconds.
- Repeat with the other leg for 2 repetitions.

PECTORALS



Doorway Pectoral Stretch

Position:

- Stand in the doorway with your arms behind you holding on to the door frame.
- Tilt your body forward until you feel a stretch along your chest and arms.
- Hold for 20 - 30 seconds, return upright and then repeat.



Activity Tracker Log

WEEK OF _____

Record one row per day. Effort is rated on the RPE scale on [page 26](#) from 0 (rest) to 9 (maximum effort).
Target zone: 4–6.

DATE	ACTIVITY	DURATION (MIN)	EFFORT (RPE 0-9)	NOTES

Bring this log to your next appointment to talk through your activity with your care team.

Managing COPD

As with many chronic conditions, you will have good days and bad days with COPD. The bad days are referred to as "flare-ups" or exacerbations. These episodes are when your COPD gets worse for a while. If you have an exacerbation:

- Refer to your action plan
- Rest
- Do your breathing exercises (pursed-lip breathing)
- Use your rescue inhaler

Call our office when you notice your breathing is getting worse than usual. Signs to watch out for include:

- Increased shortness of breath
- Wheezing more than usual
- Your rescue medications are not making your symptoms better
- Coughing more or coughing up phlegm or mucus that is a different color or if it has an odor
- Fever
- Your legs are swelling more than usual

Call 911 If:

- you are breathing very fast and hard and your rescue medication is not helping
- your chest feels tight for more than 5 minutes
- your lips, hands, or feet turn blue
- you cannot finish a sentence in one breath

Action Plan

This plan is one that you will make with your pulmonologist and will be very specific.



These are steps you should take at the first sign of a "flare-up" (or exacerbation):

STEP 1 is taking your rescue inhaler

STEP 2 is calling us if the rescue inhaler does not work or if you are using the rescue inhaler frequently

Fill-in form: Complete the *My COPD Action Plan* handout with your care team — it is included at the end of this toolkit (and as a [printable download](#)).

You may be given instructions to take steroids or an antibiotic when you have an exacerbation. Steroids should not be taken every day due to side effects so only take as directed. These should be reserved for the occasional exacerbation episode - your pulmonologist will give you specific instructions on how to take these medications and it is vital that you do exactly as instructed.



Preventing Exacerbations

Not all exacerbations can be prevented, but there are ways to decrease the severity and frequency of the episodes:

- If you smoke, get help to quit
- Avoid being around others who have a cold or the flu
- Wash your hands with antibacterial soap and water for 15 seconds (singing happy birthday is a good way to time your handwashing) or use an alcohol-based sanitizer.
- If your hands feel "grubby" or are visibly dirty, you should use soap and water instead of the alcohol sanitizer.

Breathlessness

Breathlessness is also called shortness of breath or dyspnea. This is an uncomfortable and scary sensation but your lungs are not damaged by being breathless. This may come on suddenly or may happen with activity.



Treatment includes taking your rescue inhaler, doing breathing exercises, exercising and sometimes, oxygen.

Pursed-Lip Breathing

Pursed-lip breathing helps you slow down your breathing and allows you to take a deeper breath. You should practice this breathing technique so that when you are breathless you will be able to perform it without having to try to remember how to perform the exercise.

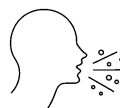
STEP 1 is to breathe in through your nose and count "One... two...".

STEP 2 is to breathe out slowly through your mouth with your lips puckered (purse) as if you were blowing bubbles and count "One... two... three... four".

STEP 3 is to repeat Steps 1 and 2.

After doing these four or five times, your breathing should be slower and you should feel like it is easier for you to breathe. Breathing in and out slowly is the key to performing this exercise correctly.

Huff Cough



If you are having a more productive cough than normal, it is recommended that you perform the Huff Cough. This technique will help you clear the mucus (or phlegm) out of your lungs. This method helps prevent you from getting tired out like you do from normal coughing.



Huff Cough

STEP 1 is to do the pursed-lip breathing technique three or four times to slow your breathing.

STEP 2 is to let your belly push out as you take a slow, deep breath. Fill your lungs almost all the way.

STEP 3 is to hold your breath while you count to 4.

STEP 4 is to tilt your chin up and open your lips.

STEP 5 is using your belly to push the air out of your lungs in short, quick bursts making a sound like "huh, huh, huh".

Remember, slow and steady wins the race! Drink plenty of water before and after you exercise. If the humidity level is high, exercise inside. Have an exercise buddy - this helps keep you going and motivated.

Make sure that when you are exercising you do not hold your breath. This is a habit that some people develop when picking up items or doing certain activities. You want to breathe out whenever you are doing the most strenuous part of the activity. Remember that it is important to try to breathe out twice as long as you breathe in. Sitting in front of a fan when you have a breathlessness spell may ease the spell and have it not last as long.

Build Up Your Strength

It may seem strange that we want you to exercise when activity causes you to be short of breath but, if you do not exercise, your muscles become weak which will make the breathlessness even worse. You'll want to start off slow and stop when you become more short of breath.

Use your pursed-lip breathing technique and when you are able to breathe comfortably, continue your exercise. Try to do one more repetition or walk one more minute each day so that you gradually build up your strength and muscle mass.

What to Report to Your Pulmonologist Regarding Your Breathlessness

1. When did it start?
2. What makes it better and what makes it worse?
3. If you have a productive cough, is the amount of sputum/mucus coughed up more or less and has the color or thickness of the sputum/mucus changed and does the sputum/mucus have an odor?

Nutrition

Healthy eating helps you feel better, breathe easier, and get sick less often. The 2025-2030 Dietary Guidelines for Americans introduced a new, inverted food pyramid: protein, dairy, and healthy fats now share top billing with vegetables and fruits as the foods to eat most, while whole grains sit at the narrower base. Highly processed foods and added sugars are called out specifically as things to cut back on.

Build Your Plate

Protein · Dairy · Healthy Fats

1.2-1.6 g protein/kg/day · Dairy 3 servings/day · olive oil, nuts, seafood, avocado (sat. fat <10% of calories)

Vegetables & Fruits

3 servings/day · 2 servings/day

Whole Grains

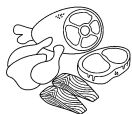
2-4 servings/day

Source: Dietary Guidelines for Americans, 2025-2030 (HHS/USDA) [dietaryguidelines.gov](https://www.dietaryguidelines.gov)

The new pyramid flips the old model. Protein, dairy, and healthy fats are now grouped at the widest part of the pyramid, right alongside vegetables and fruits, meaning these are the foods to build most of your day around. Whole grains have moved to the narrowest tier at the bottom, still part of a healthy pattern, but no longer the foundation.

Lean protein or full-fat dairy is good for your body and heart under the new guidance, which raised recommended daily protein intake and eased earlier low-fat dairy defaults. Skinless chicken breasts, ground turkey, fish, eggs, tofu, and dairy are all solid go-to choices. A portion of meat is about 3 oz., roughly the size of a deck of cards. The [American Heart Association](#) recommends 6 oz. of meat protein a day, while the [American Institute for Cancer Research](#) recommends no more than 18 oz. of lean red meat (92% fat-free) per week to reduce the risk of stomach or colon cancer.

Whole grains still matter for fiber and feeling full. Think whole wheat bread, whole wheat pasta, oatmeal, and brown rice, but they now make up a smaller share of the plate than protein, dairy, healthy fats, vegetables, and fruits combined.



Protein

Build meals around protein, lean or otherwise. Vary with poultry, fish, eggs, beans, peas, nuts, seeds, and lean red meat in moderation.

Vegetables & Fruits

Eat a variety of fresh, frozen, or dried produce daily. Now weighted equally with protein and dairy as a top priority. Go easy on fruit juice.



Whole Grains

Still worth including, at least 3 oz. of whole grain bread, cereal, rice, or pasta daily, but now a smaller part of the plate. Look for "whole" before the grain name on the ingredient list.



Dairy

Full-fat and low-fat dairy are both supported under the new guidance. Choose what works for you; if you can't have milk, choose lactose-free products or other calcium sources.



Limit

The new guidelines specifically call out highly processed foods and added sugars as things to cut back on, more directly than previous editions.

Healthy Fats

Favor olive oil, fish, nuts, and avocado. Solid fats like butter are used more freely under the new guidelines than before, in moderation.



Reduce Sodium Intake

Eating too much salt makes your body hold onto water, which can increase shortness of breath and make your body swell. Try using fresh herbs and lemon juice to season your food instead of salt - and keep the salt shaker off the dining room or kitchen table.



Eat Slowly

Your body senses that it's full quicker if you eat slowly. Feeling very full makes it harder to breathe.

Water, Caffeine & Soda

Aim for eight 8-ounce glasses of water a day, and go easy on soda, tea, and coffee - the caffeine, sugar, and (in diet sodas) the artificial sweeteners all carry their own risks.



How Much Water You Need

The recommended daily amount of water is eight 8-ounce glasses - 64 ounces a day. You should limit sodas, tea, and coffee.

Too Much Caffeine Can Cause:

- Anxiety
- Insomnia
- Digestive issues, such as loose stools or diarrhea, which can lead to dehydration and gastric reflux
- Muscle breakdown
- Addiction
- High blood pressure
- Rapid heart rate
- Rebound fatigue
- Frequent urination and urgency, which can also lead to dehydration



Why Soda Is Worth Limiting

Too much soda can cause:

- Weakened bones
- Rotten teeth
- Obesity
- Elevated blood sugar levels (hyperglycemia)
- Slow digestion, which blocks nutrient absorption
- Dehydration
- Cancer risk - the caramel coloring may contain a possible carcinogen known as 4-methylimidazole



Diet sodas contain aspartame, which can cause:

- Seizures
- Multiple sclerosis
- Diabetes
- Emotional disorders
- Metabolic syndrome
- A lowering of your good cholesterol level (HDL)
- An increase in cravings

Ideal Body Weight

Being overweight can lead to shortness of breath and fatigue during activities, and make certain tasks more difficult. Being underweight can also cause problems, since you may not have enough muscle mass to exercise. Ask your healthcare provider what your ideal body weight is - based on your height, sex, and bone structure - or use the formulas below.



Estimate Your Ideal Body Weight

These formulas give a rough estimate - your care team's read on your ideal weight will also factor in your bone structure and overall health.

Male

110 lbs + 5 x (height in inches - 60)

Example: 6 ft tall: $110 + 5 \times (72-60) = 170$ lbs

Female

100 lbs + 5 x (height in inches - 60)

Example: 5'5" tall: $100 + 5 \times (65-60) = 125$ lbs

Dairy & Bloating Triggers

Your diet can affect the severity of your COPD symptoms - even healthy foods can make breathing more difficult. Not all foods affect people the same way, so it's worth tracking what triggers bloating or thicker mucus for you.



If you notice you feel bloated, or your mucus is thicker after eating certain foods, write those foods down and avoid them going forward.

Here are the first two things to look at:

1. Dairy

Foods like milk, cheese, and yogurt may cause existing mucus to become thicker. They're important for strong bones, though - instead of eliminating them, eat them in moderation and increase your water intake to help thin your mucus.

2. Bloating

Excess gas can increase pressure on your diaphragm, which can increase your shortness of breath. Carbonated beverages, greasy fried foods, and cruciferous vegetables (broccoli, cabbage, kale, brussels sprouts, cauliflower, bok choy) are notorious for causing gas and bloating. Instead of those vegetables for vitamins C and A, try citrus fruits, carrots, squash, and sweet potatoes.

Processed Meats & Food Allergies

Nitrates in processed meats can worsen COPD symptoms and increase cancer risk. If certain foods trigger a cough, wheezing, or trouble breathing, you may have a food allergy worth avoiding - and a few dietary patterns can lower your overall COPD risk.

Processed Meats

Processed meats contain nitrates, which can lead to an exacerbation of your COPD symptoms and the progression of the disease - nitrates can also increase cancer risk. Limit or eliminate foods high in nitrates, like hot dogs, bacon, and cold cuts/processed lunch meats. Look for "nitrate-free" on the label.



Food Allergies

The most common food allergens are eggs, nuts, wheat, cereals containing gluten, milk, peanuts, tree nuts (hazelnuts, walnuts, pecans), soybeans, shellfish, and other seafood (crab, shrimp, lobster, snails, oysters). If you experience a cough, shortness of breath, wheezing, or difficulty breathing after eating certain foods, you're probably allergic and need to avoid that food.



Foods That Decrease the Risk of Developing COPD

A high intake of whole grains, polyunsaturated fatty acids, nuts, and long-chain omega-3 fatty acids (herring, salmon, mackerel, tuna, nuts, seeds, legumes, grains, fruits, and vegetable oils) may help your COPD. You also want a low intake of red and processed meats, refined grains, and sugar-sweetened drinks to reduce COPD risk.

Track Your Patterns

Use the Eating & Aggravated Breathing Log on page 48 to note what you ate, when symptoms began, and what they felt like.





Eating & Aggravated Breathing Log

Note what you ate, whether symptoms followed, and how long after. Check any symptom that applied that day.

DATE	FOOD / DRINK	TIME OF MEAL	TIME SYMPTOMS BEGAN	COUGH	WHEEZE	SHORT OF BREATH	BLOATING	NOTES
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	
				☐	☐	☐	☐	

Bring this log to your next appointment to talk through your patterns with your care team.

Smoking Cessation

Why Quit Smoking?

It's never too late to quit, and most people try several times before it sticks. Using medication roughly doubles your odds, and weaning off cigarettes works just as well as quitting cold turkey.

The Time to Quit Is Now

Quitting smoking isn't easy. Most people try several times before they're able to quit - and it's never too late. It's okay to ask for help. Research shows that using medications increases your chances of quitting and reduces withdrawal symptoms. Weaning off cigarettes versus quitting cold turkey has the same success rate.

Vaping Isn't a Safe Way to Quit

Electronic cigarettes/devices aren't safe and shouldn't be used to help you quit smoking. Their e-liquids are primarily propylene glycol - a chemical used in antifreeze, plastics, and perfumes - and the vapor is irritating and toxic to the lungs, especially flavored e-liquids containing diacetyl (linked to "popcorn lung").

The vapor also delivers formaldehyde, acetaldehyde, acrolein, toluene, NNN and NNK, plus tiny heavy metal particles (tin, mercury, lead, nickel) from the device's casing and heating element. These devices aren't regulated by the FDA, and labels claiming "no nicotine" have been shown to be false - these liquids do contain nicotine. The only FDA-approved nicotine-replacement products are the patch, gum, and lozenge.



Reasons to Quit

- Smoking causes cancer, heart disease, stroke, lung disease, hip fractures, gum disease, cataracts, erectile dysfunction, diabetes, pregnancy complications (including miscarriage and birth defects), and death
- It's responsible for more than 480,000 deaths per year in the U.S. - about 1,300 per day
- It decreases lifespan by 10 years
- It's expensive - A pack-a-day habit runs about \$340 per month, totaling roughly \$4,000 a year and over \$80,000 across 20 years

Benefits of Quitting

The benefits start almost immediately and keep building for the rest of your life. Within a year, your risk of heart disease is cut in half and your lung function has already improved. By year two or three, your risk of heart attack and stroke looks the same as someone who never smoked. Cancer risks keep dropping for over a decade - and by year fifteen, your lung cancer risk and life expectancy match a non-smoker's.

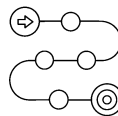
**See the full timeline on page 53:
1st 20 minutes to 15 years out**

Your Quit Plan & Coping with Cravings

A little planning goes a long way - set a quit date, tell the people around you, and have a plan for the moment a craving hits. Cravings almost always pass within a few minutes.

Your Plan to Help You Quit

- Set a quit date within two weeks
- Get your quit-smoking medication filled ahead of your quit date, if needed
- Tell family, friends, and co-workers, and ask for their support and understanding - including not giving you a cigarette even if you ask.
- Plan to spend time around non-smoking friends and family
- Remove all tobacco products, lighters, and ashtrays from your home, office, car, etc.
- Buy healthy snacks to have on hand for cravings
- Develop new habits or a hobby for the times you'd normally smoke (e.g., go for a walk instead of smoking after a meal)
- Avoid alcohol - it usually contributes to a relapse
- If others in your household smoke, ask them to quit with you, or at least not smoke in the house or around you
- Write down your reasons for quitting and put the list on your fridge, your desk, and in your car



Why Is It So Hard to Quit?

Nicotine in cigarettes is very addictive. Habits are routines, and once we develop a habit, it's hard to stop - which is why replacing the habit of smoking with a healthier alternative, like walking, helps.

Withdrawal Symptoms & Handling a Relapse

Most withdrawal symptoms fade within a few weeks. If you do slip up, it's not the end of the world - the goal is to learn from it and try again.

Coping with Cravings

What to do when a craving hits:

- Take a deep breath and practice your breathing exercises
- Take a walk
- Call a friend or family member
- Think about something that makes you feel good
- Chew a piece of gum or grab a healthy snack, like fruit
- Distract yourself - play a game, hold a straw, look at photographs
- Write down the reasons you want to quit

What to Expect: Withdrawal Timeline

Most people feel bad when they first quit.

Here's roughly what to expect:

- **8 hours after your last cigarette:** you may feel cranky, on edge, and hungry, with trouble concentrating and tiredness. Your blood oxygen level is now normal, and carbon monoxide/nicotine levels have dropped by about half.
- **24 hours:** still cranky, coughing more than normal. Your chance of a heart attack starts to decrease.
- **48 hours:** nerve endings begin to regrow, and your sense of taste and smell start to sharpen.
- **3 days:** still coughing as your lungs clear out pollutants, but breathing gets easier.
- **A few weeks:** exercise gets easier - your lungs hold more air and you have more energy.
- **A few months:** you're less tired, your cough is better, and breathing is much easier.

Remember

Cravings for a cigarette usually go away after **3 to 5 minutes**.

Ready to commit to a date? Print the quit-smoking checklist, and log your cravings with the craving log.



Other Withdrawal Issues

- **Concentration issues:** Nicotine is a stimulant. Usually lasts one to two weeks.
- **Constipation:** Drink plenty of water and eat whole grains, fruits, and vegetables. Lasts one to two weeks.
- **Coughing / dry throat:** Extra mucus clears out cigarette chemicals - a sign your lungs are healing. Drink water to ease it.
- **Hunger:** Cravings can feel like hunger. Drink water and eat at regular meal times instead of substituting food.
- **Irritability / anxiety / depression:** Usually eases in two to four weeks. Nicotine replacement and exercise both help.
- **Sleep issues:** Nicotine affects sleep depth. A warm bath, no evening caffeine, and deep breathing before bed can help.
- **Tiredness:** Nicotine is a stimulant, so fatigue is common until your body adjusts. Exercise helps.

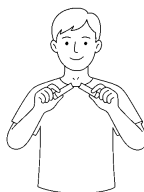
Chest Tightness

This can be caused by nicotine craving BUT, if it does not go away after three to five minutes, you need to be seen by a healthcare professional. Unfortunately, your smoking history does make you at risk for heart disease so this symptom **MUST NOT** be ignored.

If You Have a Relapse, Now What?

First of all, it's not the end of the world - don't be too hard on yourself.

- Identify what triggered you to smoke that cigarette, and try to avoid that situation in the future
- Get rid of any remaining tobacco products and start again
- Consider getting help from a support group, like 1-800-QUITNOW (1-800-784-8669)
- Don't give up - as William Edward Hickson said in the 1800s: "If at first you don't succeed, try, try again"



Want to See How Far You've Come?

See What happens when you quit - a timeline on page 53 for the minute-by-minute and day-by-day changes your body goes through.



What Happens When You Quit - Timeline

FIRST DAY

20 Minutes

Blood pressure drops to normal, pulse rate drops to normal, and the temperature of your hands and feet increases to normal.

8 Hours

Carbon monoxide level in your blood drops to normal, and oxygen level in your blood increases to normal.

24 Hours

Still cranky, coughing more than normal. Your chance of a heart attack starts to decrease.

48 Hours

Nerve endings start to regrow, and your ability to smell and taste is enhanced.

72 Hours

Breathing becomes easier, and lung capacity increases.

WEEKS TO A YEAR

2 Weeks To 3 Months

Blood circulation improves, walking becomes easier, and lung function increases by 30%.

1 To 9 Months

Coughing, sinus congestion, and shortness of breath decrease.

1 Year

Risk of heart disease decreases by 50%, and your lung function has improved.

YEARS

2-3 Years

Risk of death by heart disease decreases 25%, and risk of heart attack and stroke is now similar to non-smokers.

5 Years

Risk of mouth, esophageal, throat, and bladder cancer reduces by 50%.

10 Years

Risk of lung cancer reduces by 50-70%.

15 Years

Risk of lung cancer and life expectancy are now the same as non-smokers.



Quit-Smoking Checklist

Check off each step as you complete it. Use the notes line under each step to fill in what applies to you.

☐

Pick a quit date

NOTES (OPTIONAL)

☐

Identify smoking triggers and avoid them

NOTES (OPTIONAL)

☐

Plan for what to do when the urge to smoke hits

NOTES (OPTIONAL)

☐

Ask about medications to help with quitting smoking

NOTES (OPTIONAL)

☐

Tell friends, family, and co-workers and ask for their help

NOTES (OPTIONAL)

This checklist is for general education and does not replace guidance from your care team.

Cigarette Craving Log

Fill in one row each time a craving hits. Most cravings pass within three to five minutes.

[illegible]

Living Well with COPD

Living Well with COPD

This is worth doing at any stage of COPD - mild or severe - not just if your disease has progressed. It's never too early to talk with your family about your healthcare wishes, in case you're ever critically ill and unable to make decisions yourself. This conversation is hard, but it's one of the most generous things you can do for the people who love you.

Why This Conversation Matters

Sitting down with your family to discuss your wishes won't be easy, but it will be a relief for them later, when the situation actually arises. It takes a real burden off your family - they'll know they're simply carrying out your wishes, rather than having to guess or decide for you. There's a tremendous amount of guilt that comes when these conversations haven't happened and a family thinks they know what you'd want, but isn't sure. Having this discussion in advance puts everyone on the same page and helps avoid family conflict later.

Questions to Discuss with Your Family

These aren't easy subjects, but it's a vital conversation to have with the people close to you.



- What treatments do you want, and which do you not want?
- Do you want to be on a breathing machine (long term or short term) - if you have trouble breathing?
- Do you want to be fed through a tube into your stomach?
- Do you want CPR if your heart were to stop?
- Would you want dialysis if your kidneys were to fail?
- Would you want chemotherapy or radiation if you were diagnosed with cancer?

Traveling with COPD

Keep your medications with you, plan ahead if you use oxygen, and never travel alone - a flare-up is much easier to handle with someone there to help.

Traveling with COPD

Air Travel

Keep your medication in your carry-on bag - never pack it in checked luggage that goes in the cargo hold. If you use oxygen, alert the airline ahead of time and check their rules on in-flight oxygen use.



Traveling by Car

Ride with the windows up and use the air conditioning when it's hot - this keeps exhaust fumes and other pollutants out of your lungs. If you use oxygen, keep it next to you and buckle it in if possible, so it doesn't become a projectile in a sudden stop or accident.



Traveling on a Cruise Ship

If you're on oxygen, check with the cruise line about their oxygen policy before you book.



Whatever you're doing, it's never a good idea to travel alone - it's important to have someone there to help if you have a flare-up. Traveling is exhausting even without a chronic condition, so go slow, take rest breaks, and see a doctor as soon as you can if you start to feel bad.

Emergency Preparedness

Just like you'd get your home ready for a storm, it's worth having a kit ready for your COPD - extra medication, an up-to-date med list, and a few masks on hand.



Building Your Kit

Keep your care team's numbers close by. Use the My Care Team card.

Living on the Gulf Coast, we know how important it is to be ready for hurricane season. Just like you get your home ready for a storm, it's important to have that same readiness for your chronic condition.

Be prepared with a kit that includes:

- Extra medications (and oxygen, if you use it) - especially your inhalers and rescue inhalers
- An up-to-date list of your medications
- If you live alone, make sure friends and neighbors know you might need help
- Face masks on hand for exposure to fumes, illness, or mold - look for ones labeled National Institute for Occupational Safety and Health (NIOSH) and N95, which filter out the smallest particles. Flooding almost always brings mold, which is very irritating to your lungs, so a mask helps reduce that irritation
- Emergency contact numbers, including police, fire department, and your power company

Emergency Kit Checklist

Just like getting your home ready for a storm, it's worth keeping a kit ready for your COPD. Check off each item as you pack it, and store the kit where you can grab it fast.

KIT LOCATION

LAST PACKED

REVIEWED

MEDICAL SUPPLIES

- ☐ **3-day supply of medications**
Include your inhalers and rescue inhaler.
- ☐ **Backup oxygen supply**
Extra tubing and cannulas, if you use oxygen.
- ☐ **Backup power for equipment**
Spare battery for your oxygen concentrator or nebulizer.
- ☐ **Up-to-date medication list**
Include doses and how often you take each one.
- ☐ **NIOSH- and N95-labeled face masks**
National Institute for Occupational Safety and Health (NIOSH) rated masks filter out the smallest particles from fumes, illness, or mold.

DOCUMENTS & CONTACTS

- ☐ **Insurance card and photo ID copies**
- ☐ **Advance care plan**
Your healthcare wishes.
- ☐ **My Care Team card**
Filled in and up to date.
- ☐ **Emergency contact numbers**
Police, fire department, and your power company.

HOME & COMMUNICATION READINESS

- ☐ **Neighbor or friend on alert**
Make sure someone nearby knows you may need help.
- ☐ **Flashlight and extra batteries**
- ☐ **Portable phone charger or battery bank**
- ☐ **Water and non-perishable snacks**
A few days' supply.
- ☐ **Way to track weather updates**
A weather radio or reliable app.

Keep this checklist with your COPD action plan, and refresh the kit each hurricane season.

Notes

My COPD Action Plan

Complete this plan with your care team.

PATIENT NAME _____

DATE COMPLETED _____

Review this plan at every visit. Symptoms below are common examples, not a complete list — tell your care team about anything new or different for you.

GREEN ZONE — I am doing well today

SYMPTOMS MAY INCLUDE:

- Usual activity and exercise level
- Usual amount of cough and phlegm
- Sleeping well at night
- Appetite is good

ACTIONS:

- ☐ Take daily medicines as prescribed
- ☐ Use oxygen as prescribed
- ☐ Keep up your regular exercise and diet plan
- ☐ Avoid tobacco products and other inhaled irritants

☐ **THIS IS ME TODAY**

YELLOW ZONE — I am having a bad day or a flare-up

SYMPTOMS MAY INCLUDE:

- More breathless than usual
- Less energy for daily activities
- More, or thicker, phlegm/mucus
- Using quick-relief inhaler more often
- More swelling in ankles
- More coughing than usual, or a “chest cold” feeling
- Poor sleep, or symptoms waking you up
- Poor appetite, or your medicine isn't helping

ACTIONS:

- ☐ Continue your daily medicines
- ☐ Use quick-relief inhaler as directed below
- ☐ Use oxygen as prescribed and get extra rest
- ☐ Use pursed-lip breathing
- ☐ Avoid smoke, vaping, and other irritants
- ☐ Call your provider if symptoms don't improve

☐ **THIS IS ME TODAY**

QUICK-RELIEF INHALER EVERY ____ HOURS _____

ANTIBIOTIC (NAME / DOSE / DURATION) _____

ORAL STEROID (NAME / DOSE / DURATION) _____

RED ZONE — I need urgent medical care

SYMPTOMS MAY INCLUDE:

- Severe shortness of breath, even at rest
- Can't do any activity because of breathing
- Can't sleep because of breathing
- Fever or shaking chills
- Confusion or unusual drowsiness
- Chest pain, or coughing up blood

ACTIONS:

- ☐ **Call 911 or seek emergency care now.**

WHILE WAITING FOR HELP, ALSO:

ADDITIONAL INSTRUCTIONS FROM YOUR CARE TEAM:

My COPD Management Plan

GENERAL INFORMATION

NAME	DATE
EMERGENCY CONTACT	PHONE
CARE PROVIDER	PHONE

HEALTH ASSESSMENT

WEIGHT (LBS)	FEV1 % PREDICTED	O2 SAT. W/ EXERCISE
--------------	------------------	---------------------

Tested for Alpha-1? ☐ Yes ☐ No

GENERAL LUNG CARE

Tobacco use (incl. e-cigarettes): ☐ Never ☐ Past ☐ Current

TYPE	MIN/DAY	DAYS/WK
Exercise plan: ☐ Yes ☐ No		
PULMONARY REHAB — DATE LAST ATTENDED		

GOAL WEIGHT
Diet plan: ☐ Yes ☐ No

MEDICATIONS FOR COPD

PURPOSE	MEDICINE	HOW MUCH	WHEN

OXYGEN

RESTING	INCREASED ACTIVITY	SLEEPING
---------	--------------------	----------

OTHER HEALTH CONDITIONS

☐ Anemia	☐ Anxiety/panic	☐ Arthritis
☐ Blood clots	☐ Cancer	☐ Depression
☐ Diabetes	☐ GERD/acid reflux	☐ Heart disease
☐ High blood pressure	☐ Insomnia	☐ Kidney/prostate
☐ Osteoporosis	☐ Sleep apnea	☐ Other

ADVANCE CARE PLANNING

ADVANCE DIRECTIVE / HEALTHCARE POWER OF ATTORNEY ON FILE