Living Well with
Chronic Lung Disease

A Guide for Pulmonary Rehabilitation
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Chapter 1: Living with Chronic Lung Disease

You CAN Live Well!

When you have chronic lung disease, it can be hard to do things that used to be easy. Things like climbing a flight of stairs. Playing a round of golf with friends. Keeping up with your kids or grandkids. If this sounds familiar, there’s good news. Pulmonary rehabilitation can help you breathe easier, get stronger, and do more in your daily life. You’ll be glad to know you don’t have to live this way anymore.

What Is Chronic Lung Disease?

Chronic lung disease is an ongoing problem that keeps you from breathing normally. Many conditions are considered chronic lung disease. These include emphysema, chronic bronchitis, asthma, restrictive lung disease, and cystic fibrosis. If you have chronic lung disease, you probably also have dyspnea—the medical word for shortness of breath. You may have even started avoiding certain activities because you’re afraid of getting short of breath. This is very common. You’ll be glad to know you don’t have to live this way anymore.

What Is Pulmonary Rehabilitation?

Pulmonary rehabilitation (rehab) is a program that will teach you to live and breathe better with chronic lung disease. The program is run by a team of medical professionals who are specially trained to treat people with lung disease. With the team’s help, you’ll learn about your condition and gain skills to help you manage it. Pulmonary rehab often takes place in a group setting. This means you’ll have help and support from others with many of the same concerns, fears, and goals as you.
You’ve been given this workbook because your healthcare provider thinks pulmonary rehab is right for you. Pulmonary rehab gives you the tools to help you breathe better and do more in your daily life. This workbook will help you put these tools to good use. It also supports what you learn in the program and gives you a place to write down notes and questions. You’ll learn:

- Techniques for breathing better.
- How to do the things you want to without shortness of breath getting in the way.
- When, how, and why to take your medications.
- Safe ways to exercise, so you can get stronger and increase how much you can do in your daily life.
- Ways to stay motivated, so you can work toward your goals.

Contact Information
You can keep track of contact names and phone numbers here.

Primary care doctor’s name
Phone

Pulmonologist’s name
Phone

Pulmonary rehab program contact person*
Phone

Pulmonary rehab program address

*If a pulmonary rehab program isn’t available, this workbook can still help. With your healthcare provider’s guidance, it will teach you some of the same skills and techniques you would learn in a formal program.
Learning About Your Lungs

To get the most out of treatment, it helps to know what’s going on in your lungs. The lung’s job is to get air and gases into and out of the body. Chronic lung disease interferes with this process.

Healthy Lungs

Inside the lungs there are branching airways made of stretchy tissue. Each airway is wrapped with bands of muscle that help keep it open. The airways get smaller as they go deeper into the lungs. The smallest airways end in clusters of tiny balloon-like air sacs (alveoli). These clusters are surrounded by blood vessels.

When You Breathe

When you inhale (breathe in), air enters the lungs. It travels down through the airways until it reaches the air sacs. When you exhale (breathe out), air travels up through the airways and out of the lungs.

What the Lungs Do

The air you inhale contains oxygen, a gas your body needs. When this air reaches the air sacs, oxygen passes into the blood vessels. Oxygen-rich blood then leaves the lungs and travels to all parts of the body. As the body uses oxygen, carbon dioxide (a waste gas) is produced. The blood carries this back to the lungs. Carbon dioxide leaves the body with the air you exhale. The process of getting oxygen into the body and carbon dioxide out is called gas exchange.

How Mucus and Cilia Clean the Lungs

The cells in the lining of the airways produce a sticky secretion called mucus. The mucus traps dust, smoke, and other particles from the air you breathe in. The cells have tiny hairs called cilia. These sweep mucus up the airways to the throat, where it’s coughed out or swallowed. This process helps to clean the airways and prevent infection.
Chronic Lung Disease

- **Chronic Obstructive Pulmonary Disease**
  Obstruction (blockages) in the airways makes breathing harder and can affect gas exchange. Chronic obstructive pulmonary disease (COPD) is a category of diseases usually caused by smoking:

  - **Chronic bronchitis.** More mucus is produced than normal. Mucus builds up, blocking the airways. The airways may also become inflamed (swollen), so there’s less space for air to pass.

  - **Emphysema.** Damaged airways lose their stretchiness (elasticity) and get baggy. They may collapse when you exhale, trapping air in the sacs. This trapped air makes breathing harder. Over time, the air sacs lose their clustered shape. This may mean less oxygen enters the blood vessels.

- **Asthma**
  The airways become inflamed (swollen) and narrowed. The muscles surrounding the airways go into spasm and tighten. This makes it hard for air to pass through the airways.

- **Restrictive (Interstitial) Lung Disease**
  Scarring makes the lungs and airways stiff and rigid. This makes breathing harder and may interfere with oxygen entering the blood vessels.

- **Other Conditions**
  Cystic fibrosis, bronchiectasis, lung cancer, and other chronic lung diseases can also be treated with pulmonary rehab. Rehab also benefits people who have had or are preparing for lung surgery.

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**When Cilia Are Damaged**
Smoking harms the cilia that line the airways. Damaged cilia can’t sweep mucus and particles away. Some cilia are even destroyed. This damage makes the problems described above even worse. If you quit smoking, though, remaining cilia may start working again.
Your Diagnosis and Treatment

To confirm a diagnosis of chronic lung disease, your doctor starts by asking about your symptoms and doing a physical exam. Tests are then ordered to find out more about your lungs. Based on your doctor’s findings, a treatment plan is developed just for you.

Tests You May Have

- **Pulmonary function tests** measure the flow of air into and out of your lungs, and the volume of air your lungs can hold.
- **Pulse oximetry** shows how much oxygen is in your blood (oxygen saturation). This may be done at rest, as well as during and after exercise.
- **Arterial blood gas tests** measure levels of oxygen and carbon dioxide in your blood.
- **Chest x-rays** show the size and shape of your lungs. They can also show certain problems in the lungs.
- **CT (computed tomography) scans** produce images of the lungs that are more detailed than x-rays.
- Other tests:

My Diagnosis

Even if you have the same symptoms as others in your pulmonary rehab program, chances are you don’t all have the same lung disease. It’s good to know your diagnosis. This way you can understand why certain treatments have been prescribed.

My diagnosis: _________________________________
The Role of Treatment

Treatment will help reduce your symptoms and improve the quality of your day-to-day life. There are many types of treatment for chronic lung disease. Your doctor will prescribe the best options for you. Together, these options make up your treatment plan. This plan will help you manage chronic lung disease in all parts of your daily life. The pulmonary rehab team will help you understand your treatment plan and teach you how to make good use of it.

Your Role

Your doctor and pulmonary rehab team are here to help. But the success of treatment comes down to you. As part of your treatment, you’ll learn breathing techniques to help your lungs work as well as possible. You’ll learn exercises to increase strength and endurance (how much you can do). And you’ll learn tricks for conserving energy so you can do more of the things you want to. These are just a few of the tools that pulmonary rehab will give you. Your job is to put these tools to good use.

My Treatment Plan

Some treatments help in all cases of chronic lung disease. Others are prescribed just for you, based on your condition and your symptoms. The result is an individual treatment plan tailored to your needs. Your pulmonary rehab team can help you check off the items below that are part of your plan.

- Breathing retraining
- Exercise
- Energy conservation and pacing techniques
- Medications
- Treatment for anxiety or depression
- Stress management and relaxation techniques
- Help coping with emotional issues
- Special diet
- Symptom management and prevention
- Peak flow monitoring
- Avoiding irritants and/or allergens
- Help for sleep disorders
- Airway clearance techniques
- Oxygen therapy
- Quitting smoking
- Other: ___________________________
- Other: ___________________________
- Other: ___________________________
- Other: ___________________________
Chapter 1: Living with Chronic Lung Disease

Getting Started with Pulmonary Rehabilitation

Pulmonary rehab covers all aspects of your treatment plan. The program is designed by a team of medical professionals who are committed to helping people with chronic lung disease. They will teach you the skills you need to live and breathe better. To put these skills to good use, you may need to make some changes to your lifestyle. The team will help you set realistic goals so you can make these changes gradually and effectively.

The Pulmonary Rehab Program

Most pulmonary rehab programs take place in a hospital or clinic. Each session can cover a variety of topics. These may include education about lung disease, exercise, techniques for breathing better and conserving energy, and emotional support. If you’re not in a formal program, this workbook, along with your healthcare provider, can guide you.

Team Members

The pulmonary rehab team usually includes doctors, nurses, and respiratory therapists. The team may also include exercise specialists, physical and occupational therapists, dietitians, pharmacists, and counselors. Although most programs take place in a group setting, these team members will help you one-on-one when you need it.
Making Changes That Work for You

To reach your goals, you’ll probably need to make a few changes to your lifestyle. These tips can help make changes go more smoothly:

- **Expect new emotions.** It’s common to resist or feel angry or scared about having to make changes. You’re not alone. Share your feelings with the pulmonary rehab team and people close to you.

- **Prepare yourself for slow, steady progress.** Change doesn’t happen overnight. To feel your best, you need to commit yourself to practicing your new skills. Over time, you’ll be stronger, have more control of shortness of breath, and be able to do more. But only if you keep at it.

- **Get support.** You don’t have to go it alone. Get support from family and friends as you try new things. Tell the people in your life how they can help you reach your goals. Share your ideas and tips for success with other members of your pulmonary rehab group. And don’t be embarrassed to ask for help.

### My Goals

Are there things you can’t do now that you’d like to be able to do when your pulmonary rehab program is finished? Check off the statements below that may apply to you. Keep these goals in mind when you hit rough spots.

I want to:

- [ ] Breathe better.
- [ ] Understand my lung disease and what I can do to feel better.
- [ ] Have energy to enjoy my children and grandchildren.
- [ ] Rely less on others.
- [ ] Do everyday activities such as walking upstairs with less shortness of breath.
- [ ] Be stronger.

- [ ] Return to my hobbies and leisure activities.
- [ ] Be healthier and more active so I can enjoy my retirement.
- [ ] Quit smoking.
- [ ] Feel less anxious about my condition.
- [ ] Travel and enjoy myself.
- [ ] Make fewer visits to the hospital or emergency room.

Other goals:

__________________________________________________________

__________________________________________________________

__________________________________________________________
Chapter 2: Breathing Retraining

Pursed-Lip and Diaphragmatic Breathing

Breathing retraining means learning techniques that decrease the work of inhaling and exhaling. These techniques help move more air into and out of the lungs with each breath. Pursed-lip and diaphragmatic breathing help to lessen shortness of breath during exercise and other daily activities. With practice, you’ll be able to use these techniques during everything you do.

Pursed-Lip Breathing

Inhaling through the nose and exhaling through pursed lips makes breathing easier. Pursed-lip breathing can also help you regain control if you’re having trouble catching your breath. You can practice breathing this way anytime, anywhere. If you’re watching TV, practice during the commercials. Try to practice several times a day. Over time, pursed-lip breathing will feel natural.

1. Relax your neck and shoulder muscles. Inhale slowly through your nose for at least 2 counts.

2. Pucker your lips as if to blow out a candle. Exhale slowly and gently through your pursed lips for at least twice as long as you inhaled.

Try This

Need help getting the hang of pursed-lip breathing? Try blowing bubbles! Get a bottle of kids’ bubbles that comes with a wand. Then follow the steps above. What do your bubbles look like? If you have lots of little ones, you’re breathing too fast. No bubble? You’re not breathing hard enough. Aim for one slow, big bubble that hangs on the wand.
Diaphragmatic Breathing

If you watch a baby sleep, you’ll see the baby’s stomach rise and fall with each breath. Babies naturally breathe with the diaphragm (the dome-shaped muscle under the lungs). With chronic lung disease, you may start using your accessory muscles (a combination of muscles in the chest, shoulders, and neck) instead. Using more muscles takes more effort and makes shortness of breath worse. You can and should learn to breathe with the diaphragm again. Because you’ll be using only one muscle to breathe instead of many, you’ll use less energy.

1 Sit or lie on your back so you feel at ease. (At first, this technique may be easiest to do lying down.) Inhale slowly through your nose. Count to 2. As you inhale, your stomach should move out.

2 Breathe out through pursed lips. Count to 4. As you exhale, you should feel your stomach move in.

Try This

You can build strength in the diaphragm the same way you do in any muscle—by working against resistance. Once you’ve mastered diaphragmatic breathing, try a little weight training! Lie on the bed with a weight on your stomach and do a few minutes of diaphragmatic breathing. Start with a lighter weight, such as a bag of dried beans. Work up to a heavier weight, such as a small bag of flour.
Chapter 3: Exercise

Taking the First Steps

Exercise has helped thousands of people with chronic lung disease regain more control over their lives. It can help you, too! You’ll get started in pulmonary rehab. The pulmonary rehab team will help you set safe, realistic goals. To have lasting results, you must make a lifelong commitment to exercise. This means you must keep up with it even after your pulmonary rehab program has ended.

Assessing Your Needs

Before you get started in the exercise program, the pulmonary rehab team will assess your needs. You will be asked about your health history, symptoms, and physical limitations. If you have joint pain or any other health problems, be sure to discuss them with the team. This lets the pulmonary rehab team make sure you stay safe and comfortable during exercise.

How Far Can You Walk?

The pulmonary rehab team needs to know how much you can safely do right now. To find out, you may have a 6-minute timed-distance walk test. This is not a race. It involves walking on a flat surface, such as a hallway or short track. The test shows how far you can walk in 6 minutes, and what symptoms occur. A team member will ask about your shortness of breath and if you are in any pain. Your heart rate and oxygen saturation levels will be checked, too. During the test, you can stop and rest if you need to. Once you catch your breath, keep going.

Your Oxygen Levels

A pulse oximeter is a small instrument that measures the amount of oxygen in your blood. A small sensor probe placed on your finger or forehead measures blood oxygen levels before, during, and after your walk test. This information helps your team determine whether or not supplemental oxygen should be prescribed for you. You may need supplemental oxygen during exercise even if you don’t use it at other times. If you already use oxygen, you may need a different flow rate during exercise. To learn more about prescribed oxygen, see Chapter 11.
An Exercise Program Just for You

You’ll follow an exercise program that’s been specially designed for people with chronic lung disease. This program will be tailored to your own needs. In other words, it’s an exercise program just for you. And you’ll have support every step of the way.

- **Starting out:** The staff will help you get started slowly and safely. With each exercise session, you’ll do a little more than you did the time before.

- **In the long run:** You’ll probably work up to about 30 to 60 minutes of exercise a day, most days of the week. You’ll likely be exercising at the pulmonary rehab facility as well as at home.

Achieving Your Goals

Exercise will be most rewarding if you’re working toward a goal. Look back at the goals you wrote on page 9. Talk to the pulmonary rehab team about how exercise can help you meet these. Sometimes it helps to break up big goals into smaller ones. Say your long-term goal is to play a round of golf. To approach this, you could start with a smaller goal of hitting a bucket of balls. When you’ve mastered that goal, you could move on to playing a few holes. Each time you meet a smaller goal, you’re one step closer to reaching the big one.

What’s Stopping Me?

It’s easy to think of reasons why exercise is hard. Try to face your fears and excuses head-on. What’s stopping you from exercising? Write down anything that comes to mind. For each, try to think of at least 2 possible solutions.

What’s stopping me: *Fear of becoming short of breath.*

Possible solutions: Do pursed-lip breathing during exercise. Stop and rest when I need to.______________________________
______________________________

What’s stopping me: ____________________________

Possible solutions: ____________________________
______________________________

What’s stopping me: ____________________________

Possible solutions: ____________________________
______________________________

What’s stopping me: ____________________________

Possible solutions: ____________________________
______________________________
Learning the Basics

Your exercise program will include a variety of activities that work different parts of the body. You’ll be taught how to measure your effort, how to stay safe, and how to track your progress as you work toward your goals.

Types of Exercises

- **Flexibility exercises or stretching** (page 18) help improve range of motion, posture, and breathing. Stretching may also reduce muscle soreness caused by endurance or strengthening exercises.

- **Endurance or aerobic exercise** (page 20) helps improve the function of your lungs and heart. Walking, biking, and swimming are endurance exercises. They build stamina, which helps you do more in daily life.

- **Strengthening or resistance exercise** (page 22) helps build muscles, improve strength, and maintain bone health. Lifting weights and working with stretchy resistance bands are good ways to increase strength. Then common activities such as lifting a grocery bag, opening a heavy door, or standing from a seated position will take less effort and cause less shortness of breath.

Breathing During Exercise

Try to use pursed-lip breathing during exercise. Exhale during the exertion part of the exercise. This is when you’re using the most effort. For instance, when doing biceps curls, exhale as you lift the weights and inhale as you return your arms to start position. Never hold your breath!

Checking Your Heart Rate

You may be told to monitor your heart rate. Press two fingers (not your thumb) on the inside of your wrist. Count the number of beats you feel for 10 seconds. Multiply the number of beats by 6. This is your heart rate (the number of times your heart beats each minute). You’ll be told what the rate should be when you exercise. This number is your target heart rate.

**My target heart rate:** ____________________________
Measuring Shortness of Breath (Dyspnea)

The **Dyspnea Scale** measures shortness of breath. While you exercise, notice how hard you are working to breathe. How short of breath do you feel? Then pick the number and words on the scale that best reflect how you feel at your current level of effort. For instance, if your shortness of breath is very slight, you’re at level 1. If you feel severely short of breath, you’re at level 5. If you can’t breathe at all, you’re at level 10. Use the Dyspnea Scale to help pace your workout. Unless the pulmonary rehab team says something else, try to keep your effort level around 4 to 5 on the scale.

---

**Dyspnea Scale**

Rate your shortness of breath:

0  
None  

0.5  
Very, Very Slight  

1  
Very Slight  

2  
Slight  

3  
Moderate  

4  
Somewhat Severe  

5  
Severe  

6  

7  
Very Severe  

8  

9  

10  
Very, Very Severe

---

Rating Your Level of Perceived Exertion (RPE)

The numbers on the **RPE scale** correspond to heart rate during exercise. This scale lets you gauge how hard you are working. While exercising, think about your level of physical effort. How hard are your muscles working? Is your level of effort very light or somewhat hard? Try to exercise at the level specified by your rehab team. Most people will be told to stay within the highlighted range (13 to 15).

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**The Borg RPE Scale**

<table>
<thead>
<tr>
<th>Level</th>
<th>How it feels</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>No exertion at all</td>
</tr>
<tr>
<td>7</td>
<td>Very light</td>
</tr>
<tr>
<td>8</td>
<td>Light</td>
</tr>
<tr>
<td>9</td>
<td>Somewhat hard</td>
</tr>
<tr>
<td>10</td>
<td>Hard (heavy)</td>
</tr>
<tr>
<td>11</td>
<td>Very hard</td>
</tr>
<tr>
<td>12</td>
<td>Extremely hard</td>
</tr>
<tr>
<td>13</td>
<td>Maximum exertion</td>
</tr>
</tbody>
</table>

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Scale used with permission from Gunnar Borg ©1985.
Chapter 3: Exercise

Tips for Getting Started

These pages can help you safely get started with exercise. Follow these tips at the pulmonary rehab facility and at home.

Preparing for Your Workout

- Plan your workout for the time of day when you normally have the most energy.
- Dress for comfort. Wear shoes that support your feet.
- Use a bronchodilator if one has been prescribed. For best results, use it 20 to 30 minutes before exercise or any other strenuous activity.
- Clear your lungs of mucus if needed. (See Chapter 10.)
- Use oxygen if it’s prescribed for use during activity. Increase the flow rate ONLY if your doctor has told you to. (Increasing it on your own can be dangerous.)
- Check the weather before you start. On warm or humid days, reduce your workout, rest more often, and drink extra fluids. Exercise earlier in the day, before it gets hot. If it’s cold outside or if air quality is poor, exercise indoors. Walk inside your home or in a mall.

A Safe Workout

1. Start with a warm-up. This gets your muscles ready for exercise. The warm-up can consist of lower intensity exercise that targets the specific muscles you will be using during your workout.

2. After your warm-up, progress to higher intensities of activity. Remember to pace yourself and do pursed-lip breathing.

3. End with a cool-down. Toward the end of your workout, decrease the intensity so your body can cool down. Then do some stretches to help relax your muscles and limit muscle soreness.

4. Rest and relax. (See page 34 for tips.) This is a good time to practice pursed-lip breathing.

My Starting Goal

My starting goal is:

__________ minutes of exercise,

__________ days a week.
Doing More Over Time

Work toward a goal of 30 to 60 minutes of exercise, most days of the week. Here are some ways to reach that goal:

- Make exercise part of your daily routine.
- Attend the maintenance exercise sessions of your pulmonary rehab program. If this isn’t possible, join a gym or exercise with a partner.
- Keep exercise interesting by doing things you find enjoyable.
- Wear a watch and keep a diary to track your progress. Set small goals to challenge yourself.
- Increase your workout by a little bit each week, until you’ve reached your goal.
- Once your workouts have reached their goal length, increase intensity (how hard you work). For example, walk up a gentle slope instead of on flat ground.

To Stay Safe During Exercise

- Follow the guidelines your pulmonary rehab team has set for you.
- Drink plenty of water before, during, and after exercise.
- Keep your rescue inhaler with you. Use it if you need to.
- Remember that shortness of breath is okay, as long as you can talk and are in control of your breathing. If you have increased shortness of breath, slow down. If it continues, stop and rest.

Special safety note: This workbook contains exercises like those done in many pulmonary rehab programs. Not all of these exercises are safe for all patients. Check with your pulmonary rehab team or your doctor before trying any new exercises.
Increasing Flexibility

Increasing your flexibility helps prevent joint stiffness, improves balance and posture, and makes moving easier. When doing these stretches, move slowly and smoothly. Exhale gently through pursed lips during the effort phase of each stretch.

■ Head Tilt

1 Sit or stand with your shoulders relaxed. Breathe in.
2 Slowly lower your chin as you blow out. You'll feel a stretch in the back of your neck.
3 While inhaling, return to starting position. Then exhale, slowly moving your head right and left as if you are saying “no.”

Special instructions: ____________________________

■ Shoulder Rolls

1 Stand with your shoulders relaxed. Put your hands on your hips or keep your arms at your sides (whichever is more comfortable).
2 Breathe in. Slowly breathe out while rolling your shoulders forward. Continue until you’re done exhauling, then relax your shoulders.
3 Repeat step 2 while rolling your shoulders backward.

Special instructions: ____________________________
**Calf Stretch**

1. Stand facing a wall with your feet side by side. Put your arms out at shoulder level. Rest your hands against the wall with your elbows slightly bent. (Don’t push against the wall.) Do pursed-lip breathing throughout this stretch.

2. Step back with your left foot. Gently lower your heel to the floor. Keep your toes pointing forward and your right knee slightly bent. You’ll feel the stretch in the back of your left calf (lower leg).

3. Hold the stretch for 15 to 30 seconds while doing pursed-lip breathing.

4. Return to starting position. Repeat the stretch using your right leg.

**Special instructions:** This stretch can also be done while holding on to the back of a sturdy chair.

---

**Quadriceps Stretch**

1. Stand, holding on to a sturdy chair or countertop for balance. Inhale.

2. While exhaling, reach back and grasp the ankle (or pant leg) that’s farthest from the chair. Pull your leg back until your knees line up. Keep your hips facing forward and your bent knee pointed toward the floor. You’ll feel the stretch in your thigh.

3. Hold until you finish exhaling. Then inhale while slowly lowering your leg.

4. Repeat the stretch as many times as instructed. Then turn and grasp the chair with your other hand. Repeat the stretch with your other leg.

**Special instructions:**

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11502_mech_Pg1_37_1202.indd   19
2/13/12   10:21 AM
Increasing Endurance

Endurance exercises help to condition your muscles. These are aerobic exercises, meaning they help your body use oxygen better. Over time, they’ll help you have more energy and less shortness of breath.

Recumbent Step Program

1. Adjust the seat. You should have a slight bend at the knee when the foot pedal is fully forward. Set the arm handles to maintain a slight bend at the elbow.

2. Place your feet squarely on the pedals. Push with your leg muscles. Most of the work should be done with the muscles in your thighs.

3. Set the resistance to low and step at a comfortable rate.

Special instructions: ____________________________

Riding a Stationary Bicycle

1. Adjust the seat so your knees are only slightly bent when the pedals are at their lowest points.

2. Begin to pedal at a comfortable pace. Do pursed-lip breathing as you pedal.

3. In time, your pulmonary rehab team may suggest adding resistance to make your muscles work harder.

Use the bike for _______ minutes.

Special instructions: ____________________________

_____________________________
Using a Treadmill

1. Make sure you know how the treadmill works before using it. The pulmonary rehab team can show you.

2. Start walking at a comfortable pace. Do pursed-lip breathing as you walk.

3. As you get stronger, your pulmonary rehab team may suggest increasing speed or adding elevation.

Walk for _______ minutes.

Special instructions: ________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Home Walking Program

1. Start slowly. Build up to your normal rate. Increase your rate when possible. When you are ready to work harder, begin walking up a small incline or hill.

2. Do pursed-lip breathing and pace yourself while walking.

3. Finish by stretching your arms and legs. Try to hold each stretch for 20 seconds.

Walk for 20 to 30 minutes unless the rehab team tells you differently.

Special instructions: ________________________________
________________________________________________________________________
________________________________________________________________________

Wear walking shoes and begin walking on a level surface. If you use oxygen, be sure to keep it with you.
Increasing Strength

Building muscle strength will allow you to do many activities with less effort. As a result, you may find that you’re more active but have less shortness of breath.

**Resistance Work**

1. Stand with feet slightly apart. Hold both ends of a resistance band, and raise your hands to chest height.
2. Exhale through pursed lips as you stretch the band outward. Stop when you feel tension between your shoulder blades.
3. Inhale, holding this position. Then exhale as you squeeze your shoulder blades together.
4. Inhale as you slowly return to start position. Repeat as directed.

Special instructions: ___________________________
______________________________
______________________________
______________________________

**Biceps Curl**

1. Stand or sit with a weight in each hand. Keep your arms straight, very close to your sides, with your palms facing forward. Inhale.
2. Exhale as you slowly bend your arms and lift the weights to shoulder level.
3. Inhale while you slowly return to the starting position. Repeat as directed.

Special instructions: ___________________________
______________________________
______________________________
______________________________

Wrap the band around your hands to start. Keep your wrists and forearms horizontal to the ground. Also, remember not to lift your shoulders during this exercise.

If you don’t have weights at home, use water bottles, bags of dried beans, or soup cans instead.
**Side Lift**

1. Stand straight and hold on to a sturdy chair with one hand. Inhale.

2. Exhale as you lift your foot to the side. You only need to lift it a few inches. Keep your toes pointing forward. Hold the lift until you're finished exhaling.

3. Inhale while bringing your leg back to your side. Repeat as directed. Then switch sides.

Special instructions: ________________________________

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**Leg Raise**

1. Lie on your back. Your pulmonary rehab team can teach you how to get up and lie down safely. A mat and pillow may keep you more comfortable.

2. Bend one knee. Keep the other leg straight.

3. Inhale. Then while exhaling, lift your straight leg until your knees are lined up.

4. Inhale while you lower your leg. Repeat as directed. Then switch legs.

Special instructions: *If you're not comfortable lying on the floor, this exercise can also be done sitting in a chair.*

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Keep Moving!
You’ve taken the first steps. Now you need to stay on track. Think about what you can do to make exercise a way of life. How can you work it into your daily routine? How can you make it more enjoyable? The suggestions below may lead to some ideas of your own.

Make Exercise Part of Your Day…

☐ Start your day with some simple stretches before you get out of bed.
☐ Go to your favorite store and walk up and down the long aisles.
☐ While watching TV, stretch your arms and legs.
☐ Park your car a little farther from a store and walk the rest of the way.
☐ Take the stairs instead of waiting for the elevator.
☐ Add up the minutes of moderate activity you do all day.

Try your own ideas:

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

…And Make It Fun!

☐ Visit with friends by walking around the neighborhood together.
☐ Take your dog for a walk in the park.
☐ Walk through a museum, mall, or zoo with your family.
☐ Bowl, fish, or golf with friends.
☐ Put a photo of your kids or grandkids near your exercise spot for motivation.
☐ Read a book or magazine while you ride an exercise bike.
☐ Listen to a comedy tape while you exercise.

Try your own ideas:

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
My Exercise Log
Make photocopies of this chart to track your progress. Throughout the week, fill in the activities you do each day.

<table>
<thead>
<tr>
<th>Date</th>
<th>Flexibility (stretching)</th>
<th>Endurance (walking, biking)</th>
<th>Strengthening (weights, bands)</th>
<th>Other Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monday</td>
<td></td>
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<td>Wednesday</td>
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<td>Friday</td>
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<td></td>
</tr>
<tr>
<td>Saturday</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Chapter 4: Energy Conservation

Ways to Save Energy

By doing some of your routine tasks more efficiently, you can do more with less shortness of breath. It’s even okay if you’re short of breath sometimes. You can learn to work through this without limiting your activities. As you go about your day, remember to Plan, Prioritize, Position, and Pace.

Plan Ahead

Planning your day saves time and energy. It also helps you avoid last-minute rushing.

• Write down your plans for the day or even the week.
• Figure out your best times for being active. You may have the most energy in the late morning. If so, cook dinner then and heat it up later. You could also prepare extra food and freeze it.
• Plan rest breaks after meals and throughout the day.
• Switch between lighter and heavier activities.

Write your own ideas for planning ahead in your daily life:

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Prioritize Your Efforts

Use your energy wisely. And be realistic about how much you can do. Be sure to save energy for the things that matter most to you.

• Ask yourself: Do I need to do this? If the answer is “yes,” go ahead. But keep in mind, the answer can also be “no.”
• Decide which tasks can be done less often. Can you take turns with someone else?
• Learn which tasks you need help with. Can someone assist you with certain tasks?

Write your own ideas for setting priorities:

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Position Yourself

Set up your work space so you can do more with less energy.

- Use work surfaces that are at a comfortable height.
- Sit down whenever you can, not just for lengthy tasks.
- Keep items you use often, such as medications, handy.
- Store items between shoulder and waist level. This way you can limit climbing, bending, and reaching.
- Put items back in their set places. Ask other family members to do the same. This prevents lengthy searches.

Write your own ideas for setting up your work area:

Pace Yourself

To be most efficient, work at a relaxed, steady pace.

- Break tasks into small steps.
- Combine activities. For instance, use a single bowl to mix, bake, serve, and store in.
- Use a cart you can roll from room to room to hold all the things you need. This way you don’t have to go back and forth. Some carts have seats so you can rest when you get tired.
- Use slow, smooth movements, especially when you’re using increased effort.

Write your own ideas for keeping up a steady pace:

Remember to Breathe

Do you rush through your tasks? A lot of people do this hoping to avoid shortness of breath. Rushing actually uses more energy and makes shortness of breath worse. So take it slow and remember to breathe!

- Use pursed-lip breathing while you perform a task.
- Exhale when you use effort. For instance, breathe out as you lift a grocery bag. Once you’re holding the bag, breathe in.
- Don’t hold your breath. Instead, focus on your breathing.
- Exhale as long as you can between breaths. Concentrate on exhaling longer than you inhale. This helps you take slow, deep breaths. (If your breathing is shallow, you don’t take in as much air.)
- Remember, it’s okay to be short of breath. Don’t panic. Remember that you’re in control. Just pace yourself and do your pursed-lip breathing.
Moving Smarter

How you use your body can help you save energy. Move as slowly as you need to. Don’t hold your breath. As you move, do pursed-lip breathing. If you have trouble with the activities on these pages, your doctor may tell you to use a rescue inhaler.

Sitting and Standing

- To sit, back up until the backs of your legs touch the chair edge. Inhale. Bend forward slightly from the hips (not the waist). Exhale as you use your leg muscles to lower your body onto the chair. Scoot back.

- To stand, scoot to the edge of the chair. Lean forward slightly so your nose is over your toes. Inhale. Then, while exhaling, push yourself up using your arms (against the arms of the chair or your thighs).

- Keep in mind it can be harder to get into and out of chairs that are very low, deep, or soft.

Climbing Stairs

- Inhale before taking the first step. As you exhale, straighten your leg and raise your body to the next step. Keep your feet flat as you step up. Continue climbing until you finish exhaling. Then inhale before taking the next step.

- Use railings for support. Stop and rest if you need to.

- If you’re carrying oxygen, try using a portable unit with a shoulder or hip strap. Or put the oxygen unit in a backpack.

Lifting and Carrying

- Get close to the object you’re lifting. Bend at the hips and knees if you need to. Inhale and get a good grip. Then exhale as you lift, using your legs to raise both the object and your body.

- Carry the load close to your body. Hold it so that you can see where you’re going.

Pushing and Pulling

- When you push something, move your whole body along with the object. For instance, hold the handle of the vacuum cleaner with both hands. Then walk with it to vacuum.

- Sometimes pulling is easier than pushing. Try pulling an object such as an oxygen canister instead of pushing.

Getting Out of Bed

- If you’re lying on your back, roll onto your side. Move your whole body as a unit. Don’t twist.

- Move to the side of the bed. Inhale.

- As you exhale, press down with your arms to raise your body. Gently swing both legs to the floor.

- Inhale as you straighten your legs to stand. Then exhale and push off the bed with your hands.

- If you need to, hold on to something to steady yourself.

Getting Into Bed

- Back up until the backs of your legs touch the edge of the bed.

- Inhale and bend forward slightly from the hips. Exhale as you lower your body into a sitting position on the bed.

- Inhale. Then exhale as you lower yourself onto your side. Use your arm for support. Move your body as a unit, allowing your feet to lift onto the bed.

- If you want to sleep on your back, roll onto your back without twisting.


Chapter 4: Energy Conservation

Around the House

Your home can be rearranged to help you conserve energy and stay safe. Consider the suggestions on these pages. Get help from family and friends as needed.

In the Bedroom

- If your bedroom is upstairs, think about moving it to the first floor. If this isn’t possible, set up your day so that after going downstairs you don’t have to go back up until bedtime.
- Adjust the bed height. Your feet should touch the floor when you sit on the edge of the mattress.
- Have a piece of sturdy furniture next to the bed. It should be the same height as the bed. If needed, you can use it for support as you get into and out of bed.
- Make one side of the bed first, then the other. Or leave the bed unmade and cover it with a comforter.
- Keep a lamp on the nightstand or over the bed. The switch should be easy to reach.
- Put clothes in drawers that are between waist and shoulder level.
- Adjust the height of closet racks so hangers are easy to reach.
- Sit down to dress and undress. You may be shown how to use aids such as a reacher and a long-handled shoehorn.
- Keep your inhaler by your bed for nighttime and early morning use (as needed).

Showering

- Ask your doctor or pulmonary rehab team if you should use your rescue inhaler before taking a shower. If you’re on oxygen, use it when you shower. Set the flow rate prescribed for your activity level.
- When showering, sit on a waterproof stool.
- Have grab bars installed to help you get in and out of the shower safely.
- Get a hand-held shower nozzle.
- Place a shelf within easy reach to hold soap, shampoo, and other bath items.
- Steam makes breathing harder. To reduce steam, use warm water instead of hot. Also run a fan or keep the window or door partly open.
- Put on a terry cloth robe as soon as you get out of the shower. This makes drying off easier.
Moving from Room to Room

- Keep pathways and doorways clear.
- Place a chair in the hallway (on the way to the bathroom, for instance). Stop and rest if you need to.
- Keep hallways and stairs well lit.
- Have sturdy pieces of furniture or securely attached handrails along the hallway for support, if needed.

Finding Solutions

Are there obstacles in your living space that you need help working around? Write down any problems you’ve noticed at home. Your pulmonary rehab team can help you resolve these.

In the bedroom: ________________
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In the bathroom: ________________
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In the kitchen: ________________
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______________________________
______________________________

In other parts of the house: ______
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______________________________

Setting Up Your Kitchen

- Sit on a stool when working at the counter.
- Make sure the items you use most (such as a microwave or coffee maker) are easy to reach.
- Keep pots and pans where you can get them without reaching or bending (such as on the stove).
- Use appliances such as a blender, electric can opener, and dishwasher to make cooking and cleaning easier.
- Bake, steam, or broil instead of frying.
- Keep jar openers and other aids handy.
- To move a pot or other heavy object, put it down on a potholder. Then pull the potholder across the counter.
Running Errands

The energy conservation skills you’re learning can be used for grocery shopping and other errands, too. Just remember what you’ve learned—Plan, Prioritize, Position, and Pace. Keep in mind that walking in the store counts as part of your daily exercise.

Shopping

- Pick a stable shopping cart. Lean on the cart to rest as you shop. If you use oxygen, put the unit in the cart.
- Shop with a buddy or get help from a store clerk. Have this person get items from top and bottom shelves. If needed, he or she can also shop detergent aisles for you so you can avoid any strong odors.
- Shop fairly often so you can limit the number of items you need to purchase. This way you won’t have as much to carry and put away.
- Ask that your bags be packed light. If you need help loading your car, don’t be afraid to ask.

Try This

Unable to shop? There are other ways to get the things you need. Check the phone book or the Internet for home delivery services. The suggestions below can help you get started. Your doctor or pulmonary rehab team may also have ideas.

- Contact Meals on Wheels to ask about having meals delivered to your home.
- Call your local grocery store and pharmacy and ask if they make deliveries.
- Buy clothes, books, and other items from mail-order catalogs or the Internet.
- Ask at your church or senior center about programs that can help.
- Ask friends and family members if they can help with errands when you don’t feel like shopping.
- Find out if your health insurance offers a mail-order program for prescriptions.

Other ideas: 

__________________________
__________________________
__________________________
Breaking the Dyspnea Cycle

When you’re having trouble breathing, it’s natural to get anxious and start to panic. Then you become even more short of breath. This common sequence is known as the dyspnea cycle. Over time, this cycle can affect your independence, emotional health, and quality of life. The skills you’re gaining in pulmonary rehab will help you break the cycle.

Understanding the Cycle

When you’re short of breath, your muscles get tense. This makes it harder to take a deep breath. You may worry that you’re not getting enough air. Anxiety makes you breathe faster, which makes shortness of breath worse. You may even start to panic. Often, people try to prevent this cycle by limiting activity, staying at home, and avoiding anything that could cause shortness of breath. Over time, these limitations can take away many of the joys of life.

How to Break the Cycle

- Use pursed-lip breathing (Chapter 2) to control a shortness-of-breath attack. Relaxation techniques (page 34) can also help.
- Conserve your energy and pace yourself, so you can do more before becoming short of breath (Chapter 4).
- Exercise, so your body can start to handle more activity with less shortness of breath (Chapter 3).

Coping with Depression and Anxiety

The dyspnea cycle often leads to feelings of depression and anxiety. You may be sad or frustrated that you can’t do as much as you used to. You may be afraid of becoming short of breath, or even that you’ll suffocate. Feelings like these are very common when you have chronic lung disease. You don’t have to go on feeling this way. Depression and anxiety can be treated. Share your feelings with your doctor or pulmonary rehab team. Just talking about this may help you feel better. And medications and other treatments are available if needed. When depression and anxiety are under control, your overall health will improve.
Tips for Managing Stress

Stress can be caused by a number of things in your life. Learning to follow your treatment plan, dealing with your daily routine, and trying to catch your breath can all be sources of stress. When you’re under stress, the airways in your lungs narrow. This makes breathing harder. You can’t remove all stress from your life. But you can reduce it. Doing so will help you breathe easier.

Learn Relaxation Techniques

Your body needs relaxation to reduce stress and help prevent the dyspnea cycle. Try to plan for 20 minutes of relaxation every day. This time is just for you. Sit or lie comfortably. Limit distractions such as phones. Listen to soft music or just sit in silence. Try relaxation techniques such as the ones below. You may want to take a yoga or meditation class. Also remember that pursed-lip and diaphragmatic breathing can be relaxing. Practicing relaxation techniques now will help you relax more easily when you need to—such as when you’re short of breath.

Progressive Relaxation

1. Find a quiet room. Sit in a comfortable chair or lie on your back.
2. Breathe in slowly through your nose and out through pursed lips. Try to relax more with each breath.
3. Tighten the muscles in your feet. Notice how this feels. Hold the tension while you inhale.
4. Exhale while relaxing the tightened muscles. Notice how relaxed they feel.
5. Repeat steps 3 and 4 with another muscle group. Progress from your feet, calves, and thighs to your stomach, arms, and hands, and all the way up to your forehead.

Visualization

1. Find a quiet room. Sit in a comfortable chair or lie on your back.
2. Picture yourself feeling warm and relaxed. Choose a peaceful setting that appeals to you and use your senses to fill in the details. If you imagine a tropical beach, listen to the waves crashing on the shore. Feel the sun on your face. Smell the salt air. Dig your toes in the sand.
3. Try to hold this image in your mind. If other thoughts enter your mind, relax and refocus. Let the invading thoughts fall away. Concentrate on your breathing.
Remember the 4 A’s

There are 4 main skills that help you manage stress. When dealing with stressors (the things that cause you stress), keep these 4 A’s in mind:

- **Avoid** a stressor when you can. For instance, if someone is smoking when you’re trying to quit, leave the room.

- **Alter** how you deal with a stressor. If you’re stressed because the phone keeps ringing, turn the ringer off and let the answering machine pick up. You can return the calls later.

- **Accept** a stressor you can’t change, such as having to take daily medication. Remind yourself that your feelings of grief or frustration are normal.

- **Adapt** to some stressors by changing how you feel about them. Instead of focusing on how hard you assume a new exercise program will be, think about the benefits and how much better you’ll feel.

Keep a Stress Diary

What are your stressors? Are you scared of becoming short of breath? Concerned about taking your medications? Worried about exercising? Angry at having to quit smoking? Are there other issues causing you stress that have nothing to do with your lungs? By identifying your stressors, you can start to cope with them. Keeping a stress diary can help you do this.

My Stress Diary

For a few days, write down each time you feel yourself getting stressed. How did you react? Can you think of a new way to respond? Write down how you could handle the stressor the next time.

<table>
<thead>
<tr>
<th>Stressor</th>
<th>Old Response</th>
<th>New Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortness of breath</td>
<td>Got frustrated and</td>
<td>Reschedule for tomorrow, focus</td>
</tr>
<tr>
<td>made me cancel lunch</td>
<td>angry</td>
<td>on taking care of myself today</td>
</tr>
<tr>
<td>with friends</td>
<td></td>
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</tr>
</tbody>
</table>
Your Emotional Health

It’s important to take care of yourself emotionally as well as physically. Remember that your pulmonary rehab team, family, and friends are here to help. Don’t be afraid to share your feelings and ask for support.

Regaining Control

Sometimes you may feel like you don’t have any control over your life and your health. The skills you learn in pulmonary rehab will help you regain some control. These suggestions may also help:

- Keep doing the things you enjoy. When you’re planning your day, make sure to include some activities that are just for fun.

- Stay involved with friends and family. This may mean inviting people over to your house more often. Talk about your feelings with people close to you.

- Learn as much as you can about your lung disease. The more you know, the more control you’ll have. Pulmonary rehab is a valuable resource—make the most of it!

- You might feel your family and friends don’t understand the changes you’re facing. Share what you learn with the people in your life. Bring loved ones with you to the doctor and to pulmonary rehab. Let them know how they can help with treatment.

- Take an active role in your care. Bring up any questions or concerns about your treatment plan with your doctor or pulmonary rehab team. If treatment isn’t meeting your needs, other options may be available.

Making Your Wishes Known

An advance medical directive is a legal document that allows you to stay in control of your treatment even if you can no longer express your wishes. In an advance directive, you outline the treatment you want if your health gets worse. You also name the person you want to make healthcare decisions for you if you’re not able to do so. This can be hard to think about. But you may feel more secure about the future once you’ve made your wishes known. Your doctor or pulmonary rehab team can help you start the process.
Staying Intimate

Even if you use oxygen, having chronic lung disease doesn’t mean you have to give up being intimate. Keep the following in mind:

- You and your partner may both feel better if you communicate your feelings and concerns. Don’t be afraid to talk to your doctor or pulmonary rehab team, too.
- Sex may feel better if you wait until you’re rested. Use positions that require less energy, such as lying on your side or your back.
- Prepare for sex as you would for exercise. Use your inhaler beforehand if one has been prescribed. Clear your lungs of mucus if needed. If you use oxygen, set the flow rate for activity.
- It’s okay if you don’t feel like having sex. You can show your love in other ways. Try hugging, giving a backrub, or just telling your partner how much you care.

What Your Family and Friends Can Do

Chronic lung disease also affects the people close to you. Your loved ones may serve as helpers, caregivers, or sources of support. And just as you need help managing chronic lung disease, they may need help, too. Here are some things your family and friends can do:

- Learn as much as they can about your condition. This will help your family and friends know what to expect and how they can help.
- Join you at pulmonary rehab. This way, they can see firsthand what you’re learning to do. It will also give them a chance to ask questions.
- Talk to your doctor. Then they can make sure they understand their roles in your treatment plan.
- Make sure to take care of themselves, too. There are support groups and other resources for caregivers. It may help to contact the resources listed on page 60.
Chapter 6: Medications

Types of Medications

There are many medications that can help with chronic lung disease. These pages will help you understand why you’re taking all the medications your doctor prescribes. Ask a member of the pulmonary rehab team for help filling in the names of the medications you’re taking.

<table>
<thead>
<tr>
<th>Types of Medications</th>
<th>How They Work</th>
</tr>
</thead>
</table>
| Bronchodilators                                   | • Relax and open airways  
• Increase movement of cilia to help clear mucus  
• Help prevent exercise-induced wheezing  
• Help stop attacks                               |
| Short-acting beta-2 agonists (SABA)               |                                                                            |
| Long-acting beta-2 agonists (LABA)                | • Relax and open airways  
• Take effect more slowly and work longer than short-acting beta-2 agonists  
• Increase movement of cilia to help clear mucus  
• Help prevent exercise-induced wheezing          |
| Anticholinergics                                  | • Relax and open airways  
• Take effect more slowly than short-acting beta-2 agonists                  |
| Methylxanthines                                   | • Stimulate the diaphragm and breathing  
• May be useful if symptoms occur during sleep  
• Are long-acting                                                                         |
| Corticosteroids                                   | • Reduce inflammation and swelling in airways  
• Reduce mucus production  
• Decrease sensitivity of airways to irritants and allergens                      |
| (These are not the same as the anabolic steroids used by some athletes.)            |                                                                            |
| Selective phosphodiesterase-4 (PDE-4) inhibitor  | • Reduce inflammation and swelling in airways  
• Reduce mucus production  
• Decrease sensitivity of airways to irritants and allergens                  |
| Combination Medications                           | • Combine effects of different types of medication                          |

Be Smart About Alternatives

You may have heard about herbal supplements or over-the-counter products that are supposed to help with lung conditions. Keep in mind that “natural” doesn’t mean safe. Herbs, extracts, or supplements can interact with medications you’re taking. And some over-the-counter products may cause organ damage. If you want to try an alternative treatment, talk to your doctor or pulmonary rehab team first.
<table>
<thead>
<tr>
<th>Examples of Medications</th>
<th>Possible Side Effects and Special Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>INHALED: albuterol sulfate (ProAir, Proventil HFA, Ventolin HFA); levalbuterol HCl (Xopenex HFA); metaproterenol sulfate; terbutaline sulfate</td>
<td>Trembling, nervousness, insomnia, fast heartbeat, or increased blood pressure. Should be taken before other bronchodilators and inhaled corticosteroids.</td>
</tr>
<tr>
<td>INHALED: formoterol fumarate (Foradil); indacaterol maleate (Arcapect Neohaler); salmeterol xinafoate (Serevent)</td>
<td>Fast heartbeat, headache, nervousness, or trembling. Do not use for quick relief. Do not take more often than prescribed.</td>
</tr>
<tr>
<td>INHALED: ipratropium bromide (Atrovent HFA); tiotropium bromide (Spiriva)</td>
<td>Nervousness, dizziness, drowsiness, headache, upset stomach, constipation, or dry mouth.</td>
</tr>
<tr>
<td>INHALED: beclomethasone dipropionate (QVAR); budesonide (Pulmicort); flunisolide (Aerospan HFA); fluticasone propionate (Flovent HFA)</td>
<td>Very little enters bloodstream, so few side effects. Do not use for fast relief of shortness of breath. Must be used every day; rinse mouth and spit after use. Do not stop using without consulting your doctor. High doses must be tapered, not stopped abruptly.</td>
</tr>
<tr>
<td>SWALLOWED: methylprednisolone (Medrol); prednisone (many brand names)</td>
<td>Enter bloodstream, so may cause insomnia, mood changes, skin bruising, weight gain, stomach problems, high blood pressure, glaucoma, cataracts, osteoporosis, or high blood sugar. Always take with food or milk. Do not stop using without consulting your doctor. High doses must be tapered, not stopped abruptly.</td>
</tr>
<tr>
<td>SWALLOWED: roflumilast (Daliresp)</td>
<td>Diarrhea, nausea, headache, insomnia, back pain, reduced appetite, dizziness. Do not take for sudden breathing problems (acute bronchospasm). Not to be taken by persons younger than 18.</td>
</tr>
<tr>
<td>INHALED: fluticasone propionate plus salmeterol xinafoate (Advair); budesonide plus formoterol fumarate (Symbicort)</td>
<td>Varies depending on medication. Talk to your healthcare provider.</td>
</tr>
</tbody>
</table>

This table is not a complete list of COPD medications and does not imply endorsement of any type or brand. It also does not include all actions, adverse reactions, precautions, side effects, or interactions for these medications. Only your healthcare provider can prescribe these medications. Talk to your healthcare provider or pharmacist about the possible side effects and drug or food interactions of any medication you use. New medications are constantly being developed. If yours is not on this chart, check with your healthcare provider.
Using an Inhaler

Many lung medications are fine mists, sprays, or powders that must be breathed into the lungs. These medications are often taken with inhalers. Make sure you know how to use the inhaler you’re given. A plastic holding tube called a **spacer** is used with some inhalers to direct the medication into your lungs. This way you get more of the medication. To help prevent infection, clean your inhaler and spacer often. The pulmonary rehab team will show you how.

### Metered-Dose Inhalers (MDIs) with Spacers

1. Remove the caps from the inhaler and spacer. Shake the inhaler well and attach the spacer. If the inhaler is being used for the first time or has not been used for a while, prime it as directed by its maker.

2. Breathe out normally. Put the spacer between your teeth and close your lips tightly around it. Keep your chin up.

3. Spray 1 puff into the spacer by pressing down on the inhaler. Then slowly breathe in through your mouth as deeply as you can. This should take 3 to 5 seconds. (If you breathe in too quickly, you may hear a whistling sound in the spacer.)

4. Take the spacer out of your mouth. Hold your breath for a count of 10 (if possible). Then slowly breathe out. If a second dose is prescribed, wait at least 30 seconds before taking the next puff.

### MDIs Without Spacers

1. Keep in mind that MDIs work best with spacers. But if you don’t have a spacer with you, follow these steps:

2. Shake the inhaler and remove the cap. Breathe out through your mouth.

3. Put the inhaler mouthpiece in your mouth and close your lips tightly around it. (Or, hold the inhaler 1 to 2 inches from your open mouth if told to do so by your healthcare provider.)

4. Spray 1 puff by pressing down on the inhaler while breathing in deeply through your mouth for about 5 seconds. Hold your breath for a count of 10 (if possible). Then breathe out slowly.
When to Replace Your MDI

Check your inhaler to see how many puffs it contains. Keep track of how many puffs you use.

If you use your inhaler only once in a while:
- Photocopy this page. Cut out the card at right along the dotted line. Tape the card to your inhaler.
- Fill in or check off a bubble each time you take a puff.

If you take a certain number of puffs each day:
- Divide that number into the total number of puffs in the inhaler. This tells you how many days the inhaler will last.
- Mark on a calendar the date the inhaler will run out.

Example:

\[
\begin{align*}
\text{Number of puffs in new canister} & : 200 \\
\text{Number of puffs taken each day} & : 4 \\
\text{Number of days medication will last} & : 50
\end{align*}
\]

My Inhaler:

\[
\begin{align*}
\text{Number of puffs in new canister} & : \\
\text{Number of puffs taken each day} & : \\
\text{Number of days medication will last} & :
\end{align*}
\]

☐ Dry-Powder Inhalers (DPIs)

1. Load the prescribed dose of medication by following the instructions that come with the inhaler.

2. Breathe out normally, holding the inhaler away from your mouth. Hold your chin up.

3. Put the mouthpiece between your lips. Breathe in quickly and deeply through the inhaler—not through your nose. You may not feel or taste the medication as you breathe in. This is normal.

4. Take the mouthpiece out of your mouth. Hold your breath for a count of 10.

5. Breathe out slowly—but do not breathe out through the inhaler. Moisture from your breath can make the powder stick inside the inhaler. Also, be sure to close the inhaler and store it in a dry place.
Using a Nebulizer

Another way some lung medications are taken is with a machine called a **nebulizer**. If your doctor prescribes this, you’ll be referred to a medical equipment company. They’ll set up the nebulizer and show you how to use and clean it. Your pulmonary rehab team can also help you learn to use and care for the nebulizer.

How Nebulizers Work

A nebulizer changes liquid medication into a fine mist. This is delivered into the lungs through a plastic mouthpiece or mask. Nebulized medication is taken for several minutes, instead of the short burst of medication you get from an inhaler. There are many types of nebulizers available, including portable ones. Your doctor will prescribe the type that’s best for you. Make sure to read and follow the instructions that come with the nebulizer. Your doctor, pulmonary rehab team, or medical equipment company can answer any questions.

Cleaning Your Nebulizer

It’s important to clean your nebulizer equipment. If you don’t, germs can collect on the nebulizer and you could get an infection. Follow the cleaning instructions that come with your nebulizer.

Nebulized Medications

You may take some medications with a nebulizer, and others with an inhaler. Write down the names of medications for which a nebulizer has been prescribed. Also write down when and why those medications should be taken. Your doctor or pulmonary rehab team can help.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
My Medication Chart
Fill in the chart below to keep track of all your medications (including those for other health problems). Make sure to keep this chart up to date. Add any new medication or changes to your dosage as they’re made. Share this list with any new healthcare provider you visit.

<table>
<thead>
<tr>
<th>Name of Medication</th>
<th>Reason for Taking</th>
<th>Dose</th>
<th>How Often to Take</th>
<th>When to Take</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample: Long-acting bronchodilator</strong></td>
<td>Maintenance</td>
<td>2 puffs</td>
<td>2 times a day</td>
<td>Morning and bedtime</td>
</tr>
<tr>
<td><strong>Sample: Short-acting bronchodilator</strong></td>
<td>Rescue</td>
<td>2 puffs</td>
<td>As needed</td>
<td>When I’m short of breath</td>
</tr>
</tbody>
</table>

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A cold or other respiratory infection can be more serious for you than for someone who doesn’t have chronic lung disease. You could get very sick and might even need to go to the hospital. It’s impossible to prevent infection completely. But you can take precautions to reduce your chances of getting sick.

**Wash Your Hands Often**

Most germs spread through touch. Try to keep your hands away from your mouth and face. To prevent germs from spreading, wash your hands often.

- Use warm water and plenty of soap. Work up a good lather. Clean your whole hand, under your nails, between your fingers, and up your wrists. Wash for at least 10 to 15 seconds. Don’t just wipe—rub well. Then rinse. Let the water run off your fingertips, not up your wrists.

- Dry your hands well with clean paper towels. When in a public restroom, use paper towels to turn off the faucet and open the bathroom door so you don’t get germs on your hands again. Throw the paper towels away when you’re done.

**Use Hand Sanitizer Between Washings**

When you’re not near a sink, you can clean your hands with hand sanitizer, waterless soap, or wet wipes. This is especially good to do after touching things that a lot of other people have touched, such as supermarket carts or door handles. Then wash your hands the first chance you get.

**Try This**

You’ve heard of singing in the shower—how about singing at the sink? Sing or hum “Twinkle, Twinkle, Little Star” while you wash your hands. Don’t rinse until the song is over. This will help you lather long enough to wash away germs.
Care for Your Teeth and Gums

Germs in the mouth can lead to infections in other parts of the body. To protect yourself:

• Brush your teeth at least twice a day, once in the morning and once before you go to bed. Brush for 2 to 3 minutes each time. Floss at least once a day.
• See the dentist at least every 6 months, even if you have dentures.
• Ask your dentist if you should use mouthwash, a tongue scraper, or other products.
• Get a new toothbrush every 2 to 3 months. Also replace your toothbrush after getting over an infection.

Take Care of Sinus Problems

Drainage from the sinuses goes through the nasal cavity and into the lungs. This means germs in the sinuses have direct access to the throat and lungs. To reduce your risk:

• Talk to your doctor about using an over-the-counter saline spray if you have sinus drainage. Follow the directions on the package.
• Your doctor may recommend taking antibiotic or decongestant medication. (Don’t use these medications unless your doctor says to.)

Get Vaccinated

You can get the following vaccines from your doctor’s office, clinic, or pharmacy:

• Get a flu shot every year. The flu vaccine can run out, so make sure to get your shot early in the season.
• Get a pneumonia vaccination. If you’ve already received this, ask your doctor if you need another one.

Stay Aware of Germs

It’s impossible to avoid all germs. But you can reduce your exposure to them. Try to stay away from crowds in the winter when more people are sick. Avoid shaking hands with or spending time near people who may have respiratory infections, such as colds or the flu. Keep in mind that children often bring germs home from school or daycare. Remember to wash your hands. Also, keep your inhaler and spacer clean.
In Case of Infection

No matter how hard you work to prevent infection, you’re bound to get sick sometime. Watch for any changes in your health. This way you can spot an infection and start treatment right away.

Warning Signs to Watch For

These warning signs are your body’s way of saying you may have an infection:

- Increased shortness of breath, wheezing, or coughing
- Mucus that has increased, has changed color, is bloody, or has an odor
- Feeling more tired than usual
- Chest tightness that does not go away with your normal medications
- Fever, chills, or night sweats
- Sore throat
- Muscle aches and pains or headaches
- A change in peak flow numbers (if peak flow monitoring is part of your treatment plan)

An Infection Action Plan

Ask your doctor what you should do if you notice warning signs of an infection. Write the instructions here. Your action plan may involve taking different medications from usual, monitoring your symptoms, and seeing the doctor.
If you’re waking up a lot at night or don’t feel rested the next morning, you may have a sleep disorder. There are many reasons you may not be getting a good night’s sleep. Lung disease or other problems can make it harder to breathe at night. Age, certain medications, and not getting enough exercise can also affect sleep.

Tips for Sleeping Better
If you’re having trouble sleeping, these tips may help:

• Do pursed-lip and diaphragmatic breathing in bed. This will relax you and help you fall asleep.
• Don’t drink caffeine any later than lunch.
• Try to go to sleep and wake up at around the same time every day. This helps your body establish a sleep cycle.
• Avoid napping during the day. This can affect your sleep cycle.
• Wear comfortable, loose pajamas.
• Keep pets out of the bedroom if they bother you at night.
• If shortness of breath is keeping you awake, use a bronchodilator before going to bed. Also try sleeping propped up on pillows or a foam wedge.
• Pull your shades down. If the room isn’t dark enough, get blackout shades.
• If you take medications at bedtime, talk to your doctor about changing this. The medications may be keeping you awake.

CPAP and BiPAP
To help you sleep, your doctor may prescribe a CPAP (continuous positive airway pressure) or BiPAP (bilevel positive airway pressure) device. The machine sends a gentle flow of air through a nasal mask while you sleep. This air goes through your nose and into your lungs, keeping airways open.

Tips for Using CPAP and BiPAP
• If your mask doesn’t fit or feel right, talk to your doctor or the vendor about adjusting it or trying a new one. Custom-made masks are also available.
• These devices work best if your nose is clear. If you have allergies or other problems that block your nose, get those treated.
• If the device doesn’t feel good or work well at first, don’t stop using it. Ask your doctor or someone from your medical equipment company for ways to help make it work for you.
Chapter 9: Nutrition

Staying Healthy with Good Nutrition

Good nutrition helps keep you healthy. Your weight and the foods you eat relate directly to how much energy you have. But shortness of breath during meals can keep you from getting the nutrition your body needs. A dietitian or other member of the pulmonary rehab team can work with you to set up a healthy meal plan that includes foods you like.

What You Should Eat

Try to maintain a balanced diet that includes a variety of these foods:

- **Protein**, such as meat and soy products, helps build muscle mass.
- **Dairy products**, such as milk, cheese, and yogurt, help keep bones and teeth strong. Dairy is also high in protein.
- **Fruits and vegetables** give you the vitamins you need to stay healthy.
- **Breads and starches** (carbs) help you sustain energy. Carbs that are also high in fiber, such as whole-grain breads, may have longer-lasting effects than other carbs.
- **Fluids** keep you hydrated. Drinking fluids may also thin mucus. It’s good to drink 6 to 8 glasses of water a day (unless told otherwise by your doctor).

If You’re Having Trouble Eating

The stomach sits right under the diaphragm. A full stomach makes it harder for the diaphragm to move down. This can make breathing more difficult. Here are some tips that may help:

- Eat smaller meals throughout the day. This way your stomach doesn’t get as full and your lungs have more room to expand.
- Chew slowly with your mouth closed. This helps you avoid swallowing air.
- Try to avoid or limit foods that cause gas. Gas makes the stomach swell and press on the diaphragm. These foods can include onions and cabbage. Not all foods have the same effects on all people. Keep track of the ones that cause problems for you.

Vitamins and Supplements

If you’re not getting enough vitamins and nutrients, you may be told to take them in pill form. Supplement drinks can also help you get the nutrients you need without getting too full. Make sure to talk to your doctor or a member of the pulmonary rehab team before trying any over-the-counter vitamins or supplements.
If You Have Acid Reflux

A lot of people with chronic lung disease have problems with acid reflux. This can cause symptoms such as coughing, heartburn, and upset stomach. Here are some things you can do:

- Limit foods that increase acid in the stomach. These include spicy foods, caffeinated drinks, and alcohol.
- Avoid lying flat just after eating. At night, use pillows or a foam wedge to prop yourself up. Or, have the head end of the bed frame placed on blocks that are at least 6 inches high.
- Talk to your doctor or a dietitian about developing a special diet to avoid acid reflux. Also ask your doctor about medications that may help.

Why Your Weight Matters

Being underweight can decrease energy. This makes it harder to be active and makes you more prone to infection. And being overweight can increase shortness of breath. So you should try to stay at a healthy weight. Weighing yourself regularly helps you do this.

Tips for Weighing Yourself

- Each time you weigh yourself, do so at the same time of morning, after using the bathroom and before eating. Try to wear the same clothes.
- Write your weight on a piece of paper that’s kept near the scale. This will help you see any changes in your weight over time.
- Call your doctor if you are steadily losing weight (without trying to), or if you gain 3 to 5 pounds in 1 week.

Weighing Yourself

Work with your doctor or a dietitian to establish your goal weight. Then weigh yourself as often as instructed by your doctor or pulmonary rehab team. This may be once a day, once a week, or another time frame.

My goal weight: ______________

How often to weigh:  □ Daily  □ Weekly  □ Other: _______________________________
Chapter 10: Airway Clearance

Techniques for Airway Clearance

Airway clearance techniques may be prescribed to help move mucus up and out of the airways. Clearing the airways helps relieve shortness of breath and coughing. It also helps keep the lungs clean, which is especially important if you have a respiratory infection. For best results, use your rescue inhaler (if one has been prescribed) before doing these techniques.

☐ Coughing Techniques

How these are done: You cough in special ways that help move mucus up the airways. A common technique is shown below.

When to do: 

Special instructions:

The “Huff” Technique

This coughing technique can be done by itself. It should also be done along with the techniques on the next page, if those are prescribed.

1 Sit on a chair with both feet on the floor. Have a box of tissues handy. Take a slow, deep breath through your nose. Hold the breath for a moment before moving on to step 2.

2 To exhale, open your mouth and make a “huff” sound in your throat. (This is the same way you might breathe to clean a pair of glasses.) Huff 2 to 3 times as you exhale. Relax for a few seconds. Then repeat the steps as needed.
Postural Drainage

**How it’s done:** You lie in certain positions to drain mucus from the lungs with gravity. Take slow, deep diaphragmatic breaths while in these positions. When you need to cough, use the “huff” cough.

**When to do:**

**Positions to use:**

**Special instructions:**

---

PEP Therapy

**How it’s done:** You blow into a hand-held device. Doing so changes pressures inside the lungs and loosens mucus. Some devices have different settings. Your doctor will tell you which setting to use.

**When to do:**

**Device prescribed:**

**Setting:**

**Special instructions:**

---

Wearing a Vibrating Vest

**How it’s done:** You wear a vest that vibrates (oscillates) the chest and airways to loosen mucus. Many types of vests are available.

**When to do:**

**Setting:**

**Special instructions:**

---

Along with postural drainage, the following may be done to loosen mucus:

- You or a helper may clap lightly on your chest. This is called **chest percussion**.
- A vibrating device may be held against your chest.

While wearing the vest, you can do other activities, such as reading.
Using Oxygen

If test results show there’s too little oxygen in your blood, supplemental oxygen may be prescribed. This is inhaled through a nasal cannula (lightweight tube with two hollow prongs that fit into the nose).

Compressed Oxygen

What it is: Oxygen gas stored in a pressurized tank.
When to use it: __________________________________________
Special instructions: _____________________________________

An Oxygen Concentrator

What it is: A machine that plugs into an electrical outlet or is battery operated. It takes oxygen from the air and concentrates it. Several types of concentrators are available.
When to use it: __________________________________________
Special instructions: _____________________________________

Liquid Oxygen

What it is: Oxygen that’s maintained in liquid form at a very low temperature. The oxygen is converted to gas before it reaches you.
When to use it: __________________________________________
Special instructions: _____________________________________

Your Oxygen Prescription

Oxygen is a medication. Your doctor will tell you how much to use for each activity. Don’t change the amount unless you’re told to. Ask your doctor to write your prescription below.

During activity: ___________  At rest: ___________  While sleeping: ___________
Oxygen makes fire burn hotter and faster. So, it’s important to reduce chances of fire when you’re using oxygen. Follow the safety guidelines below.

**DO’s**

Do keep the oxygen unit at least 5 feet away from anything that could start a fire. This includes matches, lit candles, cigarettes, gas burners, fireplaces, or other sources of flame.

Do keep the oxygen unit at least 5 feet away from sources of heat such as space heaters, steam pipes, furnaces, and radiators.

Do ask the medical equipment company if you should keep the unit away from appliances such as TVs, computers, and radios.

Do turn off the oxygen unit completely when it’s not in use.

Do keep the unit away from direct sunlight.

---

**DON’Ts**

Don’t smoke, and don’t allow others to smoke in your home.

Don’t use vapor rubs, petroleum jelly, or oil-based hand lotion. These are flammable. Use water-based products instead.

Don’t oil the oxygen unit. And don’t use it with oily or greasy hands.

Don’t use aerosol sprays such as air fresheners or hairspray near the oxygen unit. Aerosols are very flammable.

Don’t use oxygen while cooking with gas. Ask your medical equipment company about other types of cooking.

Don’t place a liquid oxygen canister on its side. The liquid inside the canister can evaporate.
Chronic lung disease shouldn’t stop you from traveling, visiting family and friends, and enjoying yourself—even if you use oxygen. You just need to be prepared. Changes in altitude and climate can affect breathing. This may require changes to your treatment, so talk to your doctor and pulmonary rehab team about your plans. While traveling, remember to keep exercising and using the skills you’ve learned in pulmonary rehab.

My Travel Checklist

Before Traveling

☐ Get your prescriptions filled. Bring enough medication for your entire trip.

☐ Get copies of your prescriptions. Ask your doctor if you might need prescriptions for any other medications while traveling.

☐ Bring a list of your medications. You can photocopy the one on page 43 after filling it out.

☐ Ask your doctor what to do in case of infection. Refer to your action plan on page 46. Your doctor may prescribe emergency medications just in case.

☐ Call your insurance company. Make sure you’ll have coverage where you’re going.

☐ Get a portable nebulizer (if needed).

While Traveling

☐ Wear a medical ID bracelet. This should list your medical conditions and any medications you’re allergic to.

☐ Use hand sanitizer often. This helps kill germs and prevent infection.

☐ Keep your medications in your carry-on bags. This way you’ll have them if you get separated from your checked luggage.

☐ Use your rescue inhaler before you get up to move around (if one has been prescribed). For example, use it before getting off the plane.

☐ Stretch with your arms and legs if you’re sitting for a long time. This helps keep your blood moving. Try using your ankles and feet to spell out each letter of the alphabet.
Traveling with Oxygen

Traveling with oxygen takes a little extra planning. Contact your doctor’s office for a copy of your oxygen prescription and any other paperwork you need. Call your medical equipment company if you need oxygen delivered.

**By Car**
- DO NOT smoke or let anyone else smoke in the car.
- Open the windows a crack so air can circulate.
- Place a liquid oxygen unit upright on the floor or on the seat beside you. Secure it as well as you can. (Try using the seat belt.)
- Put extra oxygen units behind the seat. Don’t put them in the trunk—it’s too hot.

**By Plane**
- Call the airline well in advance. For a fee, some airlines will supply you with oxygen. Certain airlines allow you to take a portable oxygen concentrator with you for use during flight.
- Arrange for oxygen to be delivered to your destination and to any layovers. Airlines only supply oxygen while you’re in the plane—not in the airport.

**By Ship**
- Call the cruise line ahead of time. Tell them you’ll be traveling with oxygen.
- Be prepared to provide a letter from your doctor, a copy of your oxygen prescription, and any other paperwork that’s requested.
- Arrange for oxygen units to be delivered to the cruise ship.

**By Bus or Train**
- Call the carrier in advance and tell them you’re traveling with oxygen.
- You can likely take your own oxygen on board. You may need to show a copy of your prescription first.

---

**Try This**

Planning a trip? Start by surfing the Internet! Most airlines, bus lines, and cruise lines have websites that include their oxygen guidelines. You can also type “travel with oxygen” into a search engine. If you find sites you like, add them to your browser’s “favorites” menu so they’re easy to find. Or write the site’s address (called a “URL”) below. If you don’t use the Internet at home, many public libraries have free Internet access. A librarian can help you get started.

Site name: _____________________________________________________________
URL: __________________________________________________________________
Site name: _____________________________________________________________
URL: __________________________________________________________________

---

55
Preparing to Quit

You may be wondering why you should stop smoking now that damage has already been done. The reason is, even now, quitting may be the most important thing you can do for your health. Your lung health will start to improve the same day you stub out your last cigarette. Quitting smoking isn’t easy. But millions of people have quit. You can, too! The information on these pages can help. If you’ve already quit, these pages can help you stay on track.

Talk to Your Doctor

As you prepare to quit, see your doctor. Ask about medications or other products to make quitting more comfortable. Oral medications can help you get through the first few months of not smoking. And you may want to try a nicotine replacement product such as a patch, gum, inhaler, lozenge, or nasal spray. Your doctor may also know of local support groups, smoking cessation classes, or other resources that can help.

My Reasons to Quit

It’s easier to quit when you keep in mind all your reasons for quitting. Check off the statements that apply to you. Read the list every day, and add to it if you can. This can help you decide to quit and stay quit for good.

☐ I’ll breathe better.
☐ I’ll be less at risk of lung cancer, heart attack, and stroke.
☐ I’ll save money.
☐ My lung disease will progress more slowly.
☐ I’ll have fresher breath.
☐ My clothes, car, and house will smell better.
☐ My family and friends won’t be at risk from secondhand smoke.
☐ Over time, I’ll have less mucus, shortness of breath, and wheezing.

Other reasons: ____________________________________________________________

________________________________________________________
Track Your Triggers

Do certain emotions, like frustration, trigger your urge to smoke? How about certain people or places? Knowing the situations that make you want to smoke can help you avoid them in the future. For one day, write down each time you smoke or have the urge to smoke. Record the time of day and what you were doing just before you had the urge. Do you see any patterns? Think about ways you can avoid or deal with these triggers.

<table>
<thead>
<tr>
<th>Time</th>
<th>What I Was Doing</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 am</td>
<td>Drinking morning coffee</td>
</tr>
<tr>
<td>11:00 am</td>
<td>Driving</td>
</tr>
<tr>
<td>2:00 pm</td>
<td>Watching television</td>
</tr>
<tr>
<td>7:30 pm</td>
<td>Just finished dinner</td>
</tr>
</tbody>
</table>

Here are some examples of common triggers. Keeping a list like this will show you what makes you want to smoke.

Have a “Quit Plan”

Quitting takes patience and a plan. You’ll boost your chances of success by deciding on your “quit plan” ahead of time. Plan when you’ll quit, how you’ll deal with urges to smoke, and who you’ll ask to help support you. Your doctor and pulmonary rehab team can work with you to develop this plan. Even if you’ve already quit, it’s easy to slip back into smoking. Have a plan to help you stay off cigarettes for good.

My Quit Contract

When you’re ready to stop smoking, you may find a “quit contract” helpful. Signing a contract can make you feel a stronger commitment to quitting. Ask a friend or family member to witness your signing. Be sure to ask someone who believes you can quit.

I, _________________________________, will quit smoking on ______________________ and will call my support person for help if I slip and smoke again.

My signature:

__________________________________________

My support person’s signature:

__________________________________________
Working Through Withdrawal

Don’t be surprised if you cough more and have more mucus when you first quit smoking. This happens because the lungs are cleaning themselves. You’ll also likely go through a short period of withdrawal as your body adjusts to not having cigarettes. Remember, this will pass. Talk to your pulmonary rehab group about what you’re going through. Chances are they know exactly how you feel.

Be Prepared

Nicotine is a powerful and addictive drug. Since your body is used to the effects of nicotine, not smoking can bring on a few weeks of withdrawal. This can cause symptoms such as mood swings, lower energy, and trouble thinking clearly. Don’t worry. These symptoms will go away. Using quit-smoking products such as nicotine replacement can help ease the symptoms of withdrawal.

Keep Yourself Busy

Being active is a great way to distract yourself when you get the urge to smoke. A little activity makes you less likely to want a cigarette. It’s also good for you. Here are some things you could try:

- Play a game with your kids or grandkids
- Walk around the block
- Garden for a few minutes
- Stretch your arms and shoulders
- Drink a glass of water
- Take a few deep breaths of fresh air outside
- Exercise (see Chapter 3 for tips)

Munch on Low-Fat Snacks

The low-fat snacks described below will keep your mouth busy while your urges to smoke pass. Best of all, in small helpings they won’t make you gain weight.

- **Crunchy snacks:** Try apple slices, carrot or celery sticks with nonfat dip or dressing, pretzels, rice cakes, or air-popped popcorn.
- **Sweet snacks:** Try angel food cake, sweet fruits like bananas and pineapple, low-fat cookies or muffins, sugarless gum, or hard candy.
- **Creamy snacks:** Try fat-free pudding, yogurt, or applesauce.

Learn from Slip-Ups

What if you slip up and have a cigarette? A slip doesn’t mean you’ve failed. Look at it as a chance to learn. What were you doing when you smoked? Were you with a smoker? Were you lonely? If you find the reason for your slip, you can make a plan for how to deal with it. Then get right back on track. Any time you slip into smoking again, take control and put the cigarette out. If you tried to quit before and didn’t succeed, don’t doubt yourself this time. Use what you’ve learned to stay on track.
Get Lots of Support

Support from family, friends, and members of your pulmonary rehab group can help you feel positive and stay quit. Here are some things to try:

- Ask a friend if you can call and talk when you get an urge.
- Ask family members not to keep cigarettes in the house.
- Ask a friend or family member who smokes to quit with you. Also find out if others in your pulmonary rehab group are trying to quit. You can support each other.

My Withdrawal Action Plan

It helps to think through your plan for getting through withdrawal. Write down some of the ways you’ll cope—without smoking.

Activity to try, instead of smoking: *I’ll exercise.*

__________________________________________

__________________________________________

__________________________________________

Low-fat snacks to try: *Carrot sticks.*

__________________________________________

__________________________________________

__________________________________________

Other actions to take to help me quit: *Try a nicotine replacement product.*

__________________________________________

__________________________________________

__________________________________________
These resources can help you learn more about chronic lung disease, pulmonary rehab, and what you can do to breathe better. They can also help you find support groups in your area.

- **Alpha-1 Foundation**
  877-228-7321 | www.alpha-1foundation.org

- **American Academy of Allergy, Asthma & Immunology**
  www.aaaai.org/conditions-and-treatments.aspx

- **American Association of Cardiovascular and Pulmonary Rehabilitation**
  www.aacvpr.org

- **American Cancer Society**
  800-227-2345 | www.cancer.org

- **American Lung Association**
  800-586-4872 | www.lungusa.org

- **Asthma and Allergy Foundation of America**
  800-727-8462 | www.aafa.org

- **Coalition for Pulmonary Fibrosis**
  888-222-8541 | www.coalitionforpf.org

- **Cystic Fibrosis Foundation**
  800-344-4823 | www.cff.org

- **Emphysema Foundation for Our Right to Survive (EFFORTS)**
  www.emphysema.net

- **National Heart, Lung, and Blood Institute**
  301-592-8573 | www.nhlbi.nih.gov

- **National Home Oxygen Patients Association**
  www.homeoxygen.org

- **National Jewish Health**
  800-222-5864 | www.nationaljewish.org

- **National Lung Health Education Program**
  www.nlhep.org

- **Pulmonary Education and Research Foundation (PERF)**
  www.perf2ndwind.org

- **Pulmonary Hypertension Association**
  800-950-3698 | www.phassociation.org

- **The Pulmonary Paper**
  800-950-3698 | www.pulmonarypaper.org

- **Second Wind Lung Transplant Association, Inc.**
  888-855-9463 | www.2ndwind.org

- **Smokefree.gov**
  800-784-8669 | www.smokefree.gov

- **Well Spouse Association**
  (for family members and other caregivers)
  800-838-0879 | www.wellspouse.org

- **YourLungHealth.org**
  www.yourlunghealth.org
<table>
<thead>
<tr>
<th>My Questions</th>
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<td>You’re likely to have questions that you want to ask your doctor or pulmonary rehab team. You can write these below.</td>
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### Questions about chronic lung disease

**What can I do to keep my lung disease from getting worse?**

### Questions about exercise

**What should I do if I get short of breath during exercise?**

### Questions about daily activities

**Can you suggest any local stores that deliver groceries?**

### Questions about medication or oxygen use

**How much oxygen should I use during activity?**

### Questions about breathing retraining or airway clearance

**Why do I get dizzy when I do pursed-lip breathing?**

### Other questions

__________________________________________________________________________________________

__________________________________________________________________________________________

__________________________________________________________________________________________
Glossary of Terms

**Allergen** A substance that causes inflammation in the lungs. Allergens include pollen, animal dander, dust mites, and mold. Not everyone is bothered by allergens. You should try to avoid any that cause you problems. Your doctor will help you learn which ones these are.

**Alveoli** Clusters of balloon-like air sacs at the ends of the airways in the lungs.

**Asthma** A condition in which the lungs are very sensitive. Airways in the lungs may be chronically inflamed and get very small when irritated. This makes breathing harder.

**Asthma flare-up** Also called an “asthma attack.” When irritated, the airways swell and make extra mucus. Muscles around the airways tighten. You may wheeze and have trouble breathing. Rescue medications should be used when this happens.

**Bronchial tubes** Branching airways in the lungs. The smallest of these are called bronchioles.

**Bronchiectasis** A condition in which the small airways become inflamed and enlarged and the cilia are destroyed. Mucus builds up and the lungs are more likely to become infected.

**Bronchospasm** When the muscle surrounding the airways goes into spasm. This occurs when you have asthma.

**Capillaries** Blood vessels surrounding the air sacs. Oxygen and carbon dioxide gases pass through capillaries on the way into and out of the lungs.

**Carbon dioxide (CO₂)** A waste gas that must be exhaled out of the body. When you can’t exhale well, carbon dioxide may build up in the body and cause damage.

**Chronic bronchitis** A long-term condition in which the airways produce more mucus than they should. This keeps air from flowing normally.

**Cilia** Tiny hairs that line the airways. These sweep mucus up and out of the lungs. Cigarette smoke can damage and paralyze cilia.

**COPD (Chronic Obstructive Pulmonary Disease)** A category of diseases in which obstructions (blockages) in the lungs make breathing harder. COPD includes chronic bronchitis, emphysema, bronchiectasis, and chronic asthma.

**Cystic fibrosis** An inherited condition in which thick mucus clogs the lungs.

**Dyspnea** The medical word for shortness of breath, or feeling breathless.
**Emphysema** A condition in which the air sacs (alveoli) are damaged and become loose and baggy. Some are destroyed. Air can’t travel into and out of the lungs as easily.

**Exacerbation** A period of worsened symptoms, usually due to a respiratory infection.

**Gas exchange** When oxygen passes from the air sacs into the bloodstream and carbon dioxide passes from the bloodstream into the air sacs.

**Inhaler** A device that delivers medication through the mouth and into the lungs. Common types of inhalers include metered dose inhalers (MDIs) and dry-powder inhalers (DPIs).

**Irritants** Substances containing particles that irritate the airways, such as smoke, smog, aerosol sprays, and perfume. The lungs respond to irritants by swelling and making more mucus. People with chronic lung disease should avoid irritants when possible.

**Mucus** A secretion in the lining of the airways. It traps dust, smoke, and other particles that are inhaled. Mucus, along with the harmful particles, is coughed up or swallowed. This helps keep the lungs clean.

**Nebulizer** A machine that changes medication into a fine mist that can be inhaled.

**Oxygen (O₂)** A gas your body needs in order to function.

**Oxygen saturation** A measure of the amount of oxygen in the blood.

**Pulmonary** Having to do with the lungs.

**Pulse oximetry** A test that shows the amount of oxygen in the blood.

**Respiratory** Having to do with breathing (respiration).

**Restrictive lung disease** A condition in which air sacs in the lungs are scarred and become stiff. Air can’t get into the scarred air sacs as easily, making it harder to take a deep breath. Also referred to as “interstitial lung disease.”

**Spacer** A plastic tube often used with metered dose inhalers (MDIs), which helps to ensure that most of the medication is inhaled.

**Trapped air** Air that gets trapped in the air sacs and can’t get out of the lungs. Trapped air flattens the diaphragm and makes breathing more difficult.
Keep Living Well!
Your pulmonary rehab program won’t last forever. But the benefits of pulmonary rehab will be ongoing—as long as you keep exercising and using the skills you’ve learned.

Tips for Staying on Track

- Find out if your pulmonary rehab program offers follow-up support, education, and maintenance exercise sessions. If they do, go!
- Keep exercising. If your program doesn’t offer maintenance exercise, think about joining the local YMCA, a gym, or an exercise class instead. Ask some of the friends you’ve made in pulmonary rehab if they’ll come with you.
- Think back to your long-term goals (page 9). Which ones have you met? Which are you still working toward? Do you have any new goals to aim for?
- Keep conserving your energy by Planning, Prioritizing, Positioning, and Pacing.
- Take some quiet time to relax every day.
- Keep taking your medications as directed. If new medications are prescribed, remember to update the chart on page 43.
- Review this workbook every so often. This will help you brush up on the skills you learned in pulmonary rehab. And it will remind you of how far you’ve come.

My Comments
Take some time to think about your experience in pulmonary rehab. Were there parts of the program you really liked? Parts you had trouble with? You can use this space to write notes about anything you want to share with the team. By sharing your comments, you’ll help make the program even better for future participants.

What I liked most about the program:

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- 
- 

What I liked least:

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- 
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Other comments for the team:

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- 
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This program conforms to the guidelines of the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) as part of a comprehensive pulmonary rehabilitation program.

Take our Patient Survey. Help us help other patients. Please visit www.kramesurvey.com to provide your feedback on this booklet.

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