Managing COPD
# Managing COPD

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Talk to your doctor or health care team if you have any questions about your care.  
The Library for Health Information is available to help you find more health information at (614) 293-3707 or e-mail: health-info@osu.edu.
Chronic Obstructive Pulmonary Disease (COPD)

COPD is a lung disease that gets worse over time and makes it hard to breathe. There are two main conditions that cause COPD:

- **Emphysema** causes irritation to the alveoli or air sacs in the lungs. Over time, the air sacs are damaged and this reduces air exchange in the lungs. As a result, it becomes harder to move oxygen into or carbon dioxide out of the blood.

- **Chronic bronchitis** involves irritation and mucus build up in the large and small airways in the lungs. The lining of the airways gets thick and it makes it harder to breathe.

Most people with COPD have both of these conditions.

What does COPD mean?

- **Chronic** means that this disease lasts a long time and it is always present. You can control the progress of the disease but it is not going away.

- **Obstructive** refers to the air flow in and out of your lungs being blocked. This happens because of swelling or extra mucus in your airways.

- **Pulmonary** means the disease is in your lungs.

- **Disease** refers to the damage that has occurred in your lungs. This disease develops slowly. Treatment can ease signs and slow the disease’s progress.

With COPD, the flow of air out of the lungs is blocked. This causes stale air to become trapped in the lungs. The trapping of air makes it harder for the lungs to get enough oxygen out to the rest of the body. There is not a problem of getting enough air in, but rather of getting the air out.

Signs of COPD

- Coughing, with or without mucus
- Wheezing
- Shortness of breath that gets worse with activity
- Chest tightness

For some people, these signs are mild and do not cause serious breathing problems. For others, the signs can be serious enough to limit daily activities.
The main causes of COPD

• Smoking or secondhand smoke
• Working in a polluted environment where you breathe in large amounts of dust, fumes, smoke or gases

Managing COPD

You can treat and manage COPD to help you to feel better and slow the disease’s progress.

• Stay active. Talk to your doctor about attending a Pulmonary Rehab Program to learn more about your disease and exercises to improve your health.
• Quit smoking or avoid being around others who smoke.
• Eat a balanced diet and manage your weight.
• Drink a lot of fluids each day unless your doctor wants you to limit fluids because of other health problems.
• Take your medicines as ordered by your doctor.
• Learn how to manage the stress in your life.
• Talk with your doctor and others on your health care team to develop a COPD action plan for your care if your signs get worse so you know what to do. See page 43 for more information.
• Get a flu vaccine each year and talk to your doctor about getting a pneumonia vaccine.
• Use home oxygen therapy if ordered.

The damage lung diseases cause over time cannot be reversed. As COPD gets worse, lung transplant or surgery to remove part of the lungs may be options to talk about with your doctor.
Exacerbations of COPD

An exacerbation is a worsening or flare up of the signs of your lung disease. You need to know when your signs change to get the help you need as soon as you can. You may need to go to the hospital to get your signs under control.

Changes to watch for

Learn how you feel on a bad day and how you feel when you are having a flare up. Changes in the weather, altitude, emotions or allergies, or forgetting to use your inhaler can cause you to have a bad day. You may cough more, feel more shortness of breath or have more mucus on a bad day.

The most common signs of a flare up include:

- More problems breathing, even when you are resting.
- More wheezing or coughing.
- More mucus or the mucus looks different. Mucus may be more sticky or thicker than usual. It may go from clear to yellow or green, or you may see blood in it.
- Tightness or pain in your chest.
- Swelling in your hands or feet.
- Feeling sleepy, more tired or like you have no energy.
- Being confused, forgetting things or having trouble talking.
- Being irritable or anxious.

Other changes you might have include:

- Faster heart rate.
- Fever.
- Faster breathing rate.
- Fingers or lips are more blue or gray in color.
- Headaches, feeling dizzy or restless.
- The need to increase your oxygen if you are on oxygen.

Learn what signs you have when you have a flare up. Also teach your family and friends about your signs of a flare up. Sometimes your family and friends will notice changes in you before you notice them.

Talk to your doctor to make a COPD action plan to deal with any flare ups.

Causes

A lung infection is the most common cause of a flare up. The infection may be from a virus or a bacteria. Often it may start with a viral infection that can also cause more bacteria to grow to result in both types of infection.

Other causes may include:

- Cold or sinus infection.
- Air pollution.
- Other lung problems.
Have a COPD action plan

Work with your doctor to make a plan for how you should change your care to treat a flare up.

The plan may include:

- Changing the dose or how often you take a medicine you usually take.
- Adding a steroid medicine.
- Taking an antibiotic for a bacterial infection.
- Taking oxygen.
- When to call your doctor or go to the hospital.

See page 43 for more information.

Ways to reduce flare ups

You will not be able to prevent all flare ups, but you can reduce how often they occur and how serious they are.

Follow these tips:

- Wash your hands often, especially after you use the bathroom, before you eat or handle any food and after you sneeze or cough. Use water and soap and scrub for at least 15 seconds. Rinse with clean water and dry with a clean towel.
- Avoid people who have colds or any other infections.
- Get the flu vaccine each year. Talk with your doctor about also having a pneumonia vaccine.
- Take your medicines as ordered by your doctor to keep your lungs working as well as they can.

Things to avoid during a flare up

- Do not wait more than 24 hours to call your doctor if your signs continue or get worse.
- Do not smoke or use tobacco and avoid being around others who smoke.
- Do not take extra doses of theophylline, such as in Theo-dur or Senophylline. Taking more than your doctor ordered could cause serious problems.
- Do not take any cough suppressants or medicines with codeine.
- Do not use over the counter nasal sprays for more than 3 days.
How Your Lungs Work

The **respiratory system** is made up of large airways (bronchi), small airways (bronchioles), lung tissue, blood vessels (capillaries) and muscles.

The **lungs** are organs that take in oxygen molecules from the air when you inhale and circulate them in your bloodstream to meet your body’s energy needs. When you exhale, the lungs remove a waste gas, called carbon dioxide. The right lung has three lobes and the left lung has two lobes to make room for your heart. Together, they hold a total of 4 to 6 liters of air.

The air (oxygen) you breathe in travels down through your:

- Nose and mouth
- **Trachea** (windpipe)
- Right and left main **bronchus** (major airways)
- **Bronchi** (large airways)
- **Bronchioles** (small airways)
- **Alveoli**: these small “grape-like” sacs are where oxygen and carbon dioxide molecules are exchanged during breathing. Alveoli sacs are surrounded by **capillary blood vessels**. Both lungs are made up of millions of these thin tissue air sacs.

The **diaphragm** muscle helps the lungs expand in the chest cavity when you inhale (breathe in) by contracting and pulling down. When you exhale (breathe out), the muscle relaxes to allow air flow out of the lungs.
Mucus production by **goblet cells**, and small hairs, called **cilia**, line the respiratory system. They filter out debris and small particles, and decrease the risk of infection.

**Obstructive lung disease** occurs with airway inflammation, increased mucus production or air-trapping due to over-inflation of the air sacs. With air-trapping, the air sacs are not able to get air out when you exhale.

**Oxygen and carbon dioxide exchange**

When you inhale, oxygen molecules transfer through thin lung tissue to enter capillary blood vessels. They attach to **hemoglobin**, a protein in red blood cells, and travel around the body in the bloodstream to be used as energy by your cells, muscles and organs.

Hemoglobin carry carbon dioxide molecules, a waste product, back to the lungs. There they transfer through thin lung tissue to be exhaled out of the lungs.

**Restrictive lung disease** occurs when oxygen and carbon dioxide is inhibited due to lung tissue scarring or thickening. Other restrictive lung diseases may be due to body shape and increased weight.
Environmental Tips

There are irritants in the environment that may make breathing more difficult. Some can be avoided and some cannot. Become aware of irritants and avoid or limit your exposure.

Smoking
Smoke from tobacco products irritates the lining in your lungs. Mucus is produced, which may plug your lungs. In time, this leads to infection and may cause permanent lung damage. Avoid secondhand smoke and if you smoke, stop. Emphysema and bronchitis are largely diseases of smokers. No matter how long you have smoked, coughing and sputum may decrease when you quit.

Pollution
Watch for air quality alerts. These alerts are issued when there is potential for high pollution levels. People with lung disease need to stay inside to limit exposure to unhealthy air. Smoke from tobacco products is another form of pollution. Ask your family and friends not to smoke around you.

Aerosol sprays
Aerosol sprays, such as room fresheners, deodorants and oven cleaners, pollute the air in your home. Breathing in these products is irritating to your lungs. These products linger in the air making them hard to avoid. Substitute aerosol spray in your home for products that can be poured or rubbed.

Fumes
Avoid fumes that may irritate your lungs. Ventilate your cooking stove by turning on the exhaust fan or opening a nearby window to draw the cooking fumes out of the house.

Humidity
If you live in a humid area and have mildew or mold in the house, you may want to dehumidify your home. Air conditioning will do this, or you can use a dehumidifier. If your house is too dry, it can dry out the mucus linings of your airways. Use a humidifier to add moisture to the air.

Dust
Avoid activities that raise dust, such as sweeping, dusting, driving on dirt roads and mowing grass. If you must get involved in a dusty job, wear a scarf or handkerchief over your nose and mouth or buy a surgical mask to wear. This helps to filter the air that you inhale. Also, regularly clean filters in air conditioners and furnaces.

Extremely cold weather
Cold air can irritate the bronchial tubes and cause coughing. When you go outdoors in very cold weather (less than 40 degrees Fahrenheit), breathe through a scarf or handkerchief held over your nose. This will help warm the air as it enters your lungs.
Pulmonary Rehab as Part of Your Care

Your doctor may suggest that you take part in a Pulmonary Rehab Program to improve your breathing and strength. The program will help you learn about your disease and how exercise can help you to feel better.

Locations

- **Center for Wellness and Prevention**
  
  2050 Kenny Road, Suite 1010
  Columbus, OH 43221
  **614-293-2820**
  
  Located in the Pavilion of the Martha Morehouse Medical Plaza
  
  Monday, Wednesday and Friday mornings and afternoons

- **CarePoint East**
  
  543 Taylor Avenue, Room 3068
  Columbus, OH 43203
  **614-688-6307**
  
  Located north of University Hospital East, close to I-670
  
  Monday, Tuesday and Thursday afternoons

What to expect

We will call you to schedule 3 visits:

- **A testing visit:** Blood, breathing and exercise tests are done to check your lungs.
- **An evaluation visit:** A six-minute walk is done to plan program goals for you. You are also seen by a doctor.
- **An orientation group class:** This class is an overview of the program. You also start your exercise plan.

The program lasts 8 weeks, with class 3 times each week. Classes focus on exercise and managing your disease. Your exercise plan includes weight training and aerobic exercise. Morning and afternoon class times are offered. Choose a time that best fits your schedule. Plan 1.5 to 2.5 hours for each class.
Breathing Retraining

Breathing retraining can help reduce feeling short of breath and tired, and help you use less energy in your daily tasks. Practice this breathing for 10 to 15 minutes each day. Rest as needed between breaths.

Pursed lip breathing
This type of breathing helps during exercise or any activity that may cause you to feel short of breath. It keeps your airways open longer as you exhale to release trapped air in your lungs. Practice this when you are resting, so you can use it when you feel short of breath.

Follow these steps:
1. Breathe in through your nose and feel your lungs fill with air.
2. Purse your lips together as if you were going to whistle or blow out a candle.
3. Breathe out slowly through your pursed lips. It should take 2 to 3 times longer to breathe out than it take to breathe in.
4. You may need to adjust your breathing rate and how much you purse your lips to help your comfort.

Diaphragmatic breathing
This type of breathing strengthens your diaphragm and stomach muscles to clear trapped air in your lungs.

Follow these steps:
1. Lie or sit down in a comfortable position, relaxing your neck and shoulder muscles.
2. Place one hand on your chest and the other hand at the bottom of your ribs just above your waistline. Use your hands to feel the movements as you breathe.
3. Take a breath in through your nose and feel your hand on your stomach move outward. Do NOT let your shoulders move up. Do NOT expand your chest. Think about expanding your lungs in all directions.
**Patterned breathing**

This type of breathing moves the air in a pattern in and out of the lungs. It controls your shortness of breath during a burst of strenuous activity, like:

- Lifting or pushing objects
- Climbing a step or two
- Standing up from a seated position
- During strength training with upper and lower body exercises

With patterned breathing, you breathe out during the hardest part of the activity, such as lifting a weight. Remember to never hold your breath during activity.

**Example 1: Standing up from a seated position.**

1. Inhale while you are seated.
2. Exhale as you stand up.

**Example 2: Lifting a laundry basket.**

1. Inhale when bending down to grab the basket.
2. Exhale as you stand up, holding the basket.
Balancing rest and activity when coping with COPD is very important. Saving energy, also called energy conservation, allows you to accomplish everyday tasks. You may need to change how and when you do a task in order to not put unrealistic work demands on your body. The way you do a job is as important as what you do.

Remember to Plan, Prioritize and Pace yourself through each task:
- **Plan** out your daily schedule.
- **Prioritize** your tasks, so you get the most important things done first.
- **Pace** yourself, so you can get more done.

Apply the **3 Ps of saving energy** and the below tips to your daily life to help make tasks easier.

### General tips
1. Sit when doing a task. Standing takes more energy.
2. Do work with your arms instead of your legs. Working with your legs takes more energy.
3. Wait 30 minutes after eating before doing a task. Work done after a meal causes more demand for oxygen to your heart.
4. Avoid doing activities in temperatures above 80 degrees F with humidity and below 20 degrees F. Extremes of heat and cold have a dangerous effect on the heart.

### Pace yourself to save energy
1. Get at least 6 to 8 hours of sleep each night.
2. Rest for 20 to 30 minutes at least twice a day. If you get tired, stop and rest for 15 minutes whether you have finished the task or not.
3. Alternate easy tasks with hard tasks or spread a task out over the day.
4. Focus your energy on the things you can do.
5. Ask for help if the demands on your energy are too much. Hire help as needed.
6. Avoid stress.
Use labor-saving methods and devices to save energy

1. **Sit to work as much as possible.** Avoid crossing your legs. This interferes with blood returning to the heart.
   - Sit at a counter or table to prepare food.
   - Use a riding mower.
   - Sit in a stool at a work bench.
   - Sit to dress, shave, do hair, put on make-up and dry off after a shower.
   - Sit to iron.
   - Use a shower bench to sit and a hand-held shower head in the shower.

2. **Organize work areas:**
   - Keep cleaning materials on each floor
   - Store garden tools in the garage
   - Store shaving equipment and cosmetics near the sink and mirror
   - Store seldom used equipment out of the way
   - Store frequently used items in the kitchen at chest height to avoid bending and stretching

3. **Get rid of unnecessary work:**
   - Use a dishwasher.
   - Let dishes soak instead of scrubbing.
   - Use commercial pre-wash instead of scrubbing.
   - Air dry dishes rather than hand dry.
   - Cut open sealed bags. Do not tear them.
   - Wear no-iron permanent press clothes.
   - Use long handled mops, dusters and dustpans.

4. **Use automatic or electric appliances:**
   - Use an electric can opener, mixer, clothes dryer, sander, riding mower, electric saw and dishwasher.
   - Use cruise control when driving.
   - Use a rubber mat or wet towel under your mixing bowls to help steady them while stirring or mixing.

5. **Use good lighting and ventilation.**
6. **Use wheels to move things:**
   - A shopping cart for groceries
   - A garbage can on wheels
   - A cart for cleaning or repair supplies or to move heavy bags or laundry

7. **Use both hands to:**
   - Lift objects, such as from the oven or refrigerator.
   - Push objects.

8. **Use proper body mechanics:**
   - Slide rather than lift.
   - Relieve back strain by keeping one foot up on a low stool while standing.
   - Use good posture when driving.
   - Do not lean forward unsupported. Instead rest your elbows on counter tops.
   - Bend at the knees to lift.

9. **Shopping tips:**
   - Make a list first.
   - Organize list by store aisle.
   - Shop at less busy times.

10. **Dressing and bathing tips:**
    - Wear button up clothing.
    - Wear loose clothing for easier breathing.
    - Sit while putting on shoes and socks.
    - Wear slip on shoes. Use a long-handled shoe horn and sock aid.
    - Use a terry cloth robe instead of a towel to dry off.
    - Use a shower bench to sit and a hand-held shower or a long-handled sponge.
    - Wear low-heeled shoes with shock absorbers.
    - Use an elevated toilet seat.
Healthy Eating for People with Lung Disease

Oxygen plays a central role in helping your body turn the carbohydrates, proteins and fats in the foods you eat into energy. Carbon dioxide is a byproduct of that process. Carbohydrates produce the most carbon dioxide and fats produce the least.

Tips for healthy eating
Since what you eat can affect your breathing, your doctor or dietitian may recommend that you:

- Eat 3 small meals and 1 or 2 snacks a day.
  - Women: 300 to 500 calories/meal
  - Men: 400 to 600 calories/meal
  - Snacks: 100 to 250 calories

  Eating smaller meals and snacks will allow your lungs room to expand when you breathe and help you to maintain a healthy weight.

- Eat a variety of healthy foods like vegetables, fruits, whole grains, low-fat dairy products and lean protein foods.

- Servings sizes are listed on a food product’s Nutrition Facts food label. Similar foods have the same serving size. This allows the consumer to compare foods more easily. Is your serving size the same as the one on the label? All nutrition information on the label is based on 1 serving. Be aware that many packaged foods have more than one serving in them!

- Eat two servings of protein like milk, meats, fish, poultry, eggs, beans and nuts each day to support respiratory muscle strength.

- Eat less carbohydrates to help you breathe easier.

- Limit foods high in added sugars like candy, cake, cookies and soft drinks.

- Eat less foods that cause gas if you feel bloated or short of breath. This includes raw apples, asparagus, beans, broccoli, cabbage, carbonated drinks, cauliflower, corn, cucumbers, melons, raw onions, peas and peppers.

- If you are working to lose or maintain your weight, choose mono- and polyunsaturated fats, like canola, olive and safflower oils, over saturated fats like butter and animal fat.

Nutrients to look for: fiber
Dietary fiber is found in plant products. It adds bulk to your diet and makes you feel full faster, helping you to control your weight. It helps digestion and helps prevent constipation. Increase your fiber intake slowly to 25 to 35 grams a day to avoid abdominal discomfort. Good sources of fiber include whole grains, nuts and seeds, and fruits and vegetables.
Nutrients to limit: sodium

Avoid eating foods high in sodium if you have high blood pressure, heart disease or heart failure. Too much sodium increases blood pressure. Eat a very low sodium diet or less than 2,000 milligrams of sodium a day. Read food labels to help you plan low sodium meals and snacks, and cook at home. **Always check with your doctor before drastically changing your diet.**

- **Limit use of table salt.** Table salt is the most common source of sodium in the diet. One teaspoon of salt has 2,300 mg of sodium.
- **Avoid packaged, processed foods,** which are high in sodium. These include condiments, frozen meals, lunch meats, canned foods, and ready-to-eat cereals, breads and baked goods.
- Sodium occurs naturally in foods. Fresh fruits, vegetables, meats and rice often have low sodium content. **Most foods in your diet should come from these food groups.**
- **Use herbs and spices to flavor your foods** instead of salt.
- **Avoid fast food meals,** which are high in sodium.

### Nutrients to look for: calcium

If you are taking a steroid or have osteopenia or osteoporosis, eat 4 servings of calcium-rich foods a day. Good sources of calcium include:

<table>
<thead>
<tr>
<th>Food</th>
<th>Serving size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td>1 cup</td>
</tr>
<tr>
<td>Yogurt, fruit flavored</td>
<td>1 cup</td>
</tr>
<tr>
<td>Frozen yogurt</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Cottage cheese</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Colby, cheddar and jack cheeses</td>
<td>1 ounce</td>
</tr>
<tr>
<td>American cheese</td>
<td>1 ounce</td>
</tr>
<tr>
<td>Swiss cheese</td>
<td>1 ounce</td>
</tr>
<tr>
<td>Non-fat dry milk powder</td>
<td>1 Tbsp</td>
</tr>
<tr>
<td>Clams</td>
<td>3.5 ounces</td>
</tr>
<tr>
<td>Sardines, canned with bones</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Shrimp</td>
<td>3.5 ounces</td>
</tr>
<tr>
<td>Orange</td>
<td>1 medium</td>
</tr>
<tr>
<td>Calcium-fortified orange juice</td>
<td>6 ounces</td>
</tr>
</tbody>
</table>
**Maintain a healthy weight**

Maintaining a healthy weight is important for your overall health. It can help you control your breathing problems, help you feel good about yourself and give your body energy.

**What should my weight be?**

Body mass index (BMI) estimates what your weight should be for your height. It does not take into consideration that muscle mass is heavier than fat and may skew the result, such as for people with a lot of body muscle (body builders). *Ask your doctor what is a healthy weight for you.*

Our staff can help you calculate your BMI:

\[
\text{Weight in pounds} \times 703 = \text{___________ (BMI)}
\]

- Underweight = less than 18.5
- **Normal = 18.5 - 24.9**
- Overweight = 25.0 - 29.9
- Obese = 30.0 or more

**If you need to lose weight:**

Weight gain can be a problem for people with lung disease due to lack of physical activity, poor diet and certain medicines. Tips for weight loss:

- Follow guidelines at [www.choosemyplate.gov](http://www.choosemyplate.gov) and ask for the handout, *Healthy Weight, Healthy Living.*
- Eat a diet low in saturated fat and sugar.
- Avoid fried and fast food meals, which contain a lot of sodium, fat and sugar.
- Be physically active. Choose activities you like and do what you can, at least 10 minutes at a time.

**If you need to gain weight:**

Weight loss can be a problem for people with advanced lung disease. You may need more calories than someone without breathing problems. Tips to increase your weight:

- Eat 250 to 500 more calories a day.
- Eat calorie dense foods, such as those with a high fat content. Examples include high fat dairy products (ice cream, whole milk, butter), oils, nuts and peanut butter.
- Avoid drinking a lot of fluids before and during meals, which will fill you up.
- Use meal supplements, such as Ensure or Boost.
Bronchodilators: beta-agonists and anti-cholinergics

Beta-agonists: These medicines relax and open the air passages in your lungs to help make breathing easier. Some medicines in this group include:

- **Short acting medicines that work in 5 to 15 minutes:**
  - Accuneb, Novaplu Hentol HFA, ProAir HFA, Proventil, Proventil HFA, ReliOn Ventolin HFA and Ventolin HFA (generic name: albuterol) to be used with a nebulizer or a metered dose inhaler (MDI)
  - Alupent (generic name: metaproterenol) to be used with a nebulizer or a metered dose inhaler (MDI)
  - Xopenex, Xopenex HFA and Xopenex Pediatric (generic name: levalbuterol) to be used with a nebulizer or a metered dose inhaler (MDI)

- **Long acting medicines that work in 15 minutes to 2 hours:**
  - Arcapta Neohaler (generic name: indacaterol) to be used with a dry powder inhaler (DPI)
  - Foradil Aerolizer, Perforomist (generic name: formoterol) to be used with a dry powder inhaler (DPI) or a nebulizer
  - Serevent Diskus (generic name: salmeterol) to be used with a dry powder inhaler (DPI)

Anti-cholinergics: These medicines are used on a regular schedule to prevent bronchospasms, but they are not used when a quick response is needed. Some medicines in this group include:

- **Short acting medicines that work in 5 to 15 minutes:**
  - Atrovent HFA (generic name: ipratropium) to be used with a metered dose inhaler (MDI)

- **Long acting medicines that work in 15 minutes to 2 hours:**
  - Spiriva (generic name: tiotropium) to be used with a dry powder inhaler (DPI)
  - Tudorza Pressair (generic name: aclidinium bromide) to be used with a dry powder inhaler (DPI)
**Combination beta-agonist and anti-cholinergic:** These medicines combine the two types of bronchodilators. **Some medicines in this group include:**

- **Short acting medicines that work in 5 to 15 minutes:**
  - Combivent Respimat and Duoneb (generic name: albuterol sulfate/ipratropium bromide) to be used with an inhaler and a nebulizer
- **Long acting medicines that work in 15 minutes to 2 hours:**
  - Anoro Ellipta (generic name: umeclidinium/vilanterol) to be used with a dry powder inhaler (DPI)

**Anti-inflammatory medicines: inhaled and systemic corticosteroids**

**Inhaled corticosteroids:** These medicines prevent asthma attacks and reduce inflammation of the airways. They are like hormones made in your body. Rinse your mouth with water and spit the water out after using these inhalers to prevent mouth sores or white patches, called thrush, in the mouth or throat. **Some medicines in this group include:**

  - Aerobid, Aerobid M and Aerobid-M (generic name: flunisolide) to be used with a metered dose inhaler (MDI)
  - Alvesco (generic name: ciclesonide) to be used with a metered dose inhaler (MDI)
  - Asmanex Twisthaler (generic name: mometasone furoate) to be used with a dry powder inhaler (DPI)
  - Beclovent, QVAR and Qvar (generic name: beclomethasone) to be used with a metered dose inhaler (MDI)
  - Flovent, Flovent Diskus and Flovent HFA (generic name: fluticasone) to be used with a metered dose inhaler (MDI) or dry powder inhaler (DPI)
  - Pulmicort Flexhaler and Pulmicort Respules (generic name: budesonide) to be used with a dry powder inhaler (DPI) or a nebulizer

**Systemic corticosteroids:** These medicines treat flare-ups, also called exacerbations. These medicines are like hormones made in your body. They are most often used for a short time. **Some medicines in this group include:**

  - Deltasone, Predni SONE Intensol, Prednicot, Rayos and Sterapred DS (generic name: prednisone) to be taken as a liquid or pill
  - Medrol (generic name: methylprednisolone) to be taken as a pill
Combination inhaled medicines: corticosteroids and long acting beta-agonists (LABA) compounds

These medicines have 2 different kinds of medicines combined in the inhaler. They work together to treat lung disease and are taken as scheduled doses. Some medicines in this group include:

- Symbicort (generic name: budesonide/formoterol fumarate)
- Breo Ellipta (generic name: fluticasone furoate/vilanterol trifenate)
- Advair Diskus, Advair Diskus 100/50, Advair Diskus 250/50, Advair Diskus 500/50 and Advair HFA (generic name: fluticasone propionate/salmeterol xinafoate)
- Dulera (generic name: formoterol fumarate/mometasone furoate)

Methylxanthines

These medicines open the airways and make it easier to breathe. Some medicines in this group include:

- Elixophyllin, Senophylline, Theo-24, Theo-Dur and Uniphyl (generic name: theophylline) to be taken as a pill, capsule or liquid.

Leukotriene modifiers

These medicines stabilize immune responses for people with asthma. They are taken on a daily schedule to treat asthma and prevent attacks, but they will not stop an asthma attack once it starts. Some medicines in this group include:

- Singulair (generic name: montelukast) to be taken as a packet, pill or chewable tablet
- Accolate (generic name: zafirlukast) to be taken as a pill
- Zyflo and Zyflo CR (generic name: zileuton) to be taken as a pill
Oxygen Safety at Home

Oxygen itself does not burn. Oxygen can feed a spark and cause it to become a large fire in seconds. **To be safe at home, follow these fire safety guidelines.**

- **Do NOT smoke or allow anyone to smoke in the room where oxygen is being used.** A spark could ignite the oxygen, setting your face and oxygen tubing on fire!
- **Avoid open flames.** Do NOT store oxygen tanks within 10 feet of open flames, such as fireplaces, wood-burning stoves and gas stoves. When cooking, wear your tubing behind your head and down your back.
- **Use caution when using electrical equipment.** Do NOT use equipment with frayed cords or electrical shorts. They could cause a spark.
  - Use **battery powered** razors and hair dryers when using oxygen.
  - Hair dryers should be used on a **cool setting only**.
  - If you must use an electric razor or hair dryer, be sure to use it at least 5 to 10 feet away from the oxygen.
  - Do NOT use an appliance with a control box, such as a heating pad. Control boxes may throw sparks.
- **Avoid static electricity.**
  - Avoid nylon or woolen clothing that is more likely to cause static electricity.
  - Use a humidifier in winter to add moisture to dry air in your home.
- **Store and handle oxygen properly.** Store tank and liquid oxygen away from heat and direct sunlight. Secure tanks with chain as arranged by your home care therapist. Place tanks in a secure holder in an upright position.
- **Never apply any oily substance,** such as petroleum-based lip products, Vaseline, Blistex or Chapstick, **to your nose, lips or the lower part of your face.** They are highly flammable. You may use saline-based products to ease dry or irritated nostrils, such as Ocean saline nasal spray or K-Y liquid lubricant.
Nebulizer Treatments

You may receive medicine through a nebulizer treatment, also called a breathing treatment or aerosol treatment. A nebulizer changes liquid medicine into a fine mist to let you breathe it into your airways. Most often the breathing treatments are given to help you breathe easier.

How often you have a treatment depends on how short of breath you are, the amount of wheezing you have and the type of medicine you take.

How to take a treatment

Sit down during your treatment. The treatment can be done with a mask or mouthpiece depending upon what works best for you.

- **If using a mouthpiece**, place the mouthpiece in your mouth past your teeth. Make a seal around the mouthpiece with your lips.
- **If using a mask**, place it over your mouth and nose.

You will see a fine mist when the treatment is started. Relax and breathe normally. Every 4 to 5 breaths, take a deep breath and hold it a few seconds. Then exhale completely. Continue until no mist is present.

Tap the nebulizer cup at times to be sure all the medicine is nebulized. The treatment will last about 10 to 20 minutes.

Remember to cough and bring up loose mucus at the end of your treatment.
Treatments in the hospital

A respiratory therapist will give you your breathing treatment in the hospital as your doctor orders. The therapist will use different nebulizers, based on the type of medicine ordered. Some nebulizers break the medicine into even finer particles.

The nebulizer used in the hospital does not require cleaning. It will only be used for your treatment. It is thrown away and replaced every few days, or when it is dirty.

Treatments at home

Follow these steps to do your treatment at home:

1. Wash your hands with soap and warm water. Rinse and dry your hands.

2. Gather your medicine and the right nebulizer for that medicine.

3. Check your medicine label to be sure it is the right medicine name. Also check that you have the correct dose or strength of medicine your doctor ordered. Look at the expiration date on the label and be sure that your medicine is not out of date. If the date is past, you need to get new medicine.

4. Remove the top of the nebulizer cup.

5. Measure your medicine and put it into the nebulizer cup. Use only the amount of medicine your doctor ordered. Put the top back on the cup.
6. Connect the tubing from the machine to the bottom of the cup. Connect the tubing for the mask or mouthpiece to the top of the cup.

7. Check your pulse before your treatment and write it down.

8. Turn the nebulizer on and breathe in the medicine. It is best to sit down and try to relax while you breathe.

9. Stop the treatment if:
   - Your pulse rate gets much faster.
   - You feel light headed, dizzy or shaky.

10. Wait a few minutes and if the signs go away, restart the treatment. If the signs do not go away, or if they come back when you restart the treatment, call your doctor. You may need to change your medicine or dose.

11. Clean your equipment after each treatment. Rinse the parts of the nebulizer cup and mouthpiece or mask under warm running water. Shake off the excess water and place parts on clean paper towels to air dry. Cover the parts with another clean paper towel until your next treatment.
   - You will need to do some more cleaning of your equipment at home. That is in the next section of this handout.

12. Wash your hands with soap and warm water. Rinse and dry your hands.

**Clean your equipment to prevent infection**

**One time each day:**
- Wash parts with antibacterial dish washing liquid detergent and warm water.
- Rinse parts well with warm running water.
- Place parts on paper towels to air dry. Cover with a clean paper towel until your next treatment.

**On Mondays, Wednesdays and Fridays:**
- **Mix up a white vinegar solution using 1 part white vinegar and 3 parts distilled water.**
  - For example, mix 1 cup of white vinegar with 3 cups of water in a container.
  - You can store any extra white vinegar solution in a tightly sealed container in your refrigerator and use it for up to one week.
  - Soak the pre-washed parts in white vinegar solution for 30 to 40 minutes. All parts should be completely covered by the solution while soaking.
  - Rinse the parts well with warm running water.
  - Place the parts on clean paper towels to air dry. Cover lightly with a second clean paper towel until your next treatment.

If you have any questions about your nebulizer treatment, ask your health care provider.
Respimat Soft Mist Inhaler (SMI)

The soft mist inhaler (SMI) gives medicine deep into your lungs. Talk to your health care provider if you have questions about how to use your inhaler.

Parts of the inhaler

Use the pictures as a guide as you review the parts of your inhaler. Check the instructions that come with your inhaler each time you open a new one to be sure nothing has changed.

How to get the inhaler ready

1. Wash your hands well with soap and water. Rinse with clean water and dry your hands with a towel.

2. Open the inhaler package and remove the plastic inhaler and metal cartridge. Set the cartridge to the side.

3. Push in on the Safety Catch button and pull the clear base off.
4. Write in the date you should discard the inhaler on the label on the back of the inhaler. You should discard the inhaler 3 months after you put the cartridge in.

5. Pick up the cartridge and push the narrow end into the inhaler. Put the cartridge end on a table or counter top and push down. The cartridge will stick out just past the inhaler when it is in correctly.

6. Put the clear base back on the inhaler. You should not take the inhaler apart after you have it ready for use.

How to prime the inhaler

At times, you will need to prime the inhaler to insure you get the right amount of medicine with each dose. **Prime the inhaler if:**

- **It is new.**
- **You have not used the inhaler for more than 3 days.**
  Follow steps 1 to 4 to get the inhaler ready for use.
- **You have not used the inhaler for more than 21 days.**

**Follow these steps:**

1. Hold the inhaler upright with one hand on the cap and one hand on the clear base.

2. Turn the clear base in the direction of the white arrows on the label until it clicks. It will be about half a turn.
3. Open the orange cap.

4. Point the inhaler away from you towards the ground and press the dose release button.

5. Close the cap and then repeat steps 1 through 4 until you see a spray of mist.

6. When you see the spray, repeat steps 1 through 4 three more times to be sure the inhaler is ready to use.

7. After you prime the new inhaler, you will have 120 doses left.

**How to take your dose**

1. Hold the inhaler upright with one hand on the cap and one hand on the clear base.

2. Turn the clear base in the direction of the white arrows on the label until it clicks. It will be about half a turn.
3. Open the orange cap.

4. Breathe out and close your lips around the mouthpiece, pointing the inhaler to the back of your throat. **Do not cover the air vents.**

5. Push the dose release button while taking in a slow deep breath through your mouth.

6. Hold your breath for 10 seconds or as long as you can.

7. Remove the inhaler and put the cap back on the mouthpiece.

8. Rinse your mouth with water and then spit the water out. **Do not swallow the water.**

9. Put the inhaler away until your next dose is due.
How to use your inhaler

1. Shake gently and remove the cap from the mouthpiece.
2. Hold the inhaler upright and flip open the lever or take off the cap.
   - If the inhaler is new or has not been used in the last 48 hours it must be primed. Point the inhaler away from you. Lift the lever on top of the canister. Push the test fire slide button on the bottom while holding the inhaler upright. Lower the lever and repeat the steps to release the second prime spray.
3. Tilt your chin up slightly and breathe out.
4. Place your lips around the mouthpiece and begin breathing in slowly.
5. Breathe in slowly through your mouth for 3 to 5 seconds. The inhaler will release a puff of medicine.
6. Hold your breath for 10 seconds and then breathe out slowly.
7. Close the flip lever and replace the cap over the mouthpiece.

How to care for your inhaler

You inhaler has many doses of medicine, so it is important to keep it in good working order. Use these tips to take care of your inhaler:

- Store it in a cool, dry place away from heat.
- Wipe off the mouthpiece with a dry tissue to keep it clean.
- Once a week, turn the inhaler upside down and tap so that the spray hole can be seen. Clean the hole if it gets clogged with a dry cotton swab.
- Keep the inhaler at room temperature.

How long will the inhaler last?

Check the canister label to see how many puffs of medicine it contains.

Figure out how many puffs you will use each day. Divide the number of puffs in the canister by the number you will use each day. This is how many days the canister will last.
For example, if your canister has 200 doses and you take 2 puffs, 4 times each day, that is 8 puffs a day. Dividing 200 by 8 equals 25, so the canister will last 25 days.

Write the date on the canister when you start using it so you can figure out when you will need to replace it.

**Throw the canister away after you have used the number of days or puffs in the canister even if it sounds like more medicine is left.** A chemical additive will be left in the canister after the medicine is gone.

### Other tips

Keep track of how many doses are left by circling the start date on a calendar or writing down how many doses you use a month. **Call your pharmacist for a refill before your inhaler is empty.**

Bring your inhaler to your appointments so you can show your health care provider how you use the inhaler. Let them know if you are having problems using your MDI. If you use more than one inhaled medicine, ask about the order in which to take these medicines.

Check the expiration date and do not use the medicine after it expires.
Spray Canister Metered Dose Inhaler (MDI)

Metered dose inhalers (MDI) are filled with a medicine that can be inhaled into the lungs. The spray canister MDI has the medicine in a small metal canister under pressure. The canister is placed in an L-shaped plastic holder, called an adapter, for use. When the canister is pressed down in the holder, the medicine sprays out.

How to use your inhaler

If you are using a spacer with your inhaler, see the next page.

1. Shake the inhaler.

2. Remove the cap. If the canister is brand new or you have not used it for several days, spray it into the air 2 or 3 times to prime it.

3. Hold the inhaler upright with the mouthpiece facing you.

4. Tilt your chin up slightly and breathe out.

5. Open your mouth and hold the inhaler 1 to 2 inches from your mouth.

6. Begin breathing in slowly through your mouth while you push down on the canister. Breathe the medicine into your lungs slowly.

7. Hold your breath for 10 seconds to let the medicine get deep into your lungs.

8. Repeat if more than 1 puff is ordered. Wait at least 1 minute between puffs.

9. Place the cap over the mouthpiece.

10. If the medicine is a steroid, rinse your mouth with water and spit the water out.
How to use a spacer with your inhaler

A spacer is a hollow tube that attaches to your inhaler. The spacer holds the medicine from your inhaler until you are able to breathe it into your lungs. A spacer helps more of the medicine get into your lungs where it is needed. A spacer is also good for people who have trouble pressing the inhaler and taking a breath at the same time.

You will need a prescription from your doctor to get a spacer. Most pharmacies will have spacers or be able to get one for you. Check with your doctor or pharmacist if you have questions about using a spacer.

1. Shake your inhaler.
2. Remove the cap from your inhaler and the spacer.
3. Hold the inhaler up and place the mouthpiece into the large end of the spacer.
4. Breathe all the way out.
5. Put your lips around the mouthpiece of the spacer.
6. Press down on the canister of your inhaler one time and take in a slow, deep breath. **If you hear a whistling sound, you are breathing in too fast and need to slow down.**
7. Hold your breath for 10 seconds. Take the spacer out of your mouth.
8. Breathe out slowly.
9. Wait at least 1 minute and repeat if another puff is ordered.

How to care for your inhaler

You inhaler has many doses of medicine, so keep it in good working order. Use these tips to take care of your inhaler:

- Store it in a cool, dry place away from heat.
- Wipe off the mouthpiece with a dry tissue to keep it clean.
- Once a week, turn the inhaler upside down and tap, so the spray hole can be seen. Clean the hole with a dry cotton swab if it gets clogged.
How to clean the spacer

Medicine builds up inside the spacer. The spacer must be kept clean to work well. **Clean the spacer when it is cloudy inside or at least one time each week.** If you use the spacer for more than one medicine, you may need to clean it every 2 to 3 days.

1. In a pan or bowl that is large enough to hold your spacer, place a few drops of antibacterial liquid dish washing soap and add warm water.
2. Place the spacer in the water to soak for 5 to 10 minutes.
3. Take the spacer apart and wash the pieces in the soapy water.
4. Rinse the parts well with clean water.
5. Shake to remove excess water and sit the spacer parts on a paper towel to air dry.
6. Make sure all parts are dry before putting it back together and using it.

When to replace a spacer

Ask your doctor for a new prescription to replace your spacer if:

- The spacer is cracked.
- Any rubber parts harden, curl or crack.
- Any part is broken or missing.
- The film inside the spacer will not come off with cleaning.

Other tips

Keep track of how many doses are left by circling the start date on a calendar or writing down how many doses you use a month. **Call your pharmacist for a refill before your inhaler is empty.**

Bring your inhaler to your appointments so you can show your health care provider how you use the inhaler. Let them know if you are having trouble using the MDI. If you use more than one inhaled medicine, ask about the order in which to take these medicines.

Check the expiration date and do not use the medicine after it expires.

How long will the inhaler last?

Check the canister label to see how many puffs of medicine it contains.

Figure out how many puffs you will use each day. Divide the number of puffs in the canister by the number you will use each day. This is how many days the canister will last. For example, if your canister has 200 doses and you take 2 puffs 4 times each day, that is 8 puffs a day. Dividing 200 by 8 equals 25, so the canister will last 25 days.

Write the date on the canister when you start using it, so you can figure out when you will need to replace it.

Throw the canister away after you have used the number of days or puffs in the canister even if it sounds like more medicine is left. A chemical additive will be left in the canister after the medicine is gone.
How to use your inhaler

1. Turn the cover and lift off.

2. Hold the Turbuhaler with the mouthpiece up.

3. Twist the grip fully to the right as far as it will go. Then, turn it fully to the left until you hear a “click”.

   If your inhaler is brand new, it may need to be primed before you use it. Ask your pharmacist or see the package insert to see if your inhaler needs to be primed. Prime it by turning the grip at the bottom to the right and then left until it clicks. Repeat one more time, and it will be ready for use.

Turbuhaler Dry Powder Inhaler (DPI)

Dry powder inhalers (DPI) are filled with powdered medicine that is inhaled into the lungs. For the Turbuhaler DPI, the powder comes in a pre-filled holder that is punctured before inhaling. You must inhale fast and deep to pull the medicine out of the holder and deep into your lungs. Inhaled medicine is a good way to take medicine because it can begin working in the lungs right away. There are fewer side effects with inhaled medicine compared to pills or liquid forms of medicine.
4. Turn your head away from the inhaler and breathe out.

5. Seal your lips around the mouthpiece and inhale fast and deep. Do not tilt the inhaler too far.

6. Repeat steps 2 through 5 if a second dose is ordered.

7. Replace the cover and twist shut.

8. If the medicine is a steroid, rinse your mouth with water and spit the water out.

How to care for your inhaler
• Do not place your Turbuhaler in water.
• Wipe the mouthpiece off with a dry tissue or cloth if needed.
• Keep the Turbuhaler at room temperature.

How long will the inhaler last?
• The Turbuhaler contains 200 doses of medicine.
• A red mark appears at the top of the window when there are 20 doses of medicine left in the inhaler. When the red mark is at the bottom of the window, the inhaler is empty. Throw it away.
• Throw away the inhaler 45 days after removing it from the wrapper or when the red mark is at the bottom of the window, whichever comes first.

Other tips
• Keep track of how many doses are left by circling the start date on a calendar or writing down how many doses you use a month. Call your pharmacist for a refill before your inhaler is empty.
• Bring your inhaler to your appointments so you can show your health care provider how you use the inhaler. Let them know if you are having trouble using it. If you use more than one inhaled medicine, ask about the order in which to take these medicines.
• Check the expiration date and do not use the medicine after it expires.
Discus Dry Powder Inhaler (DPI)

Dry powder inhalers (DPI) are filled with powdered medicine that is inhaled into the lungs. For the discus DPI, the powder comes in a pre-filled holder that is punctured before inhaling. You must inhale deeply to pull the medicine out of the holder and deep into your lungs.

Inhaled medicine is a good way to take medicine because it can begin working in the lungs right away. There are fewer side effects with inhaled medicine compared to pills or liquid forms of medicine.

How to use your inhaler

1. Hold the discus flat, like holding a sandwich or hamburger.
2. Slide the cover open using your thumb.
3. Tilt your chin up slightly and breathe out.
4. Press down on the lever until it clicks.
5. Place your lips around the discus mouth piece and inhale deeply.
6. Hold your breath for 10 seconds.
7. Close the discus until your next dose.
8. If the medicine is a steroid, rinse your mouth with water and spit the water out.
How to care for your inhaler

- Do not place the discus in water.
- Wipe the mouthpiece off with a dry tissue or cloth if needed.
- Keep the discus at room temperature.

How long will the inhaler last?

- A small window on the discus shows the number of doses left in the discus.
- Discard 1 to 2 months after the discus is removed from the foil package.

Other tips

- Keep track of how many doses are left by circling the start date on a calendar or writing down how many doses you use a month. **Call your pharmacist for a refill before your inhaler is empty.**
- Bring your inhaler to your appointments so you can show your health care provider how you use the inhaler. Let them know if you are having trouble using it. If you use more than one inhaled medicine, ask about the order in which to take these medicines.
- Check the expiration date and do not use the medicine after it expires.
Capsule Aerolizer Dry Powder Inhaler (DPI)

Dry powder inhalers (DPI) are filled with powdered medicine that is inhaled into the lungs. For the capsule aerolizer DPI, the powder comes in a capsule that is punctured before inhaling. You must inhale fast and deep to pull the medicine out of the holder and deep into your lungs.

Inhaled medicine is a good way to take medicine because it can begin working in the lungs right away. There are fewer side effects with inhaled medicine compared to pills or liquid forms of medicine.

How to use your inhaler

1. Open the plastic medicine holder.
2. Open the capsule from the foil wrap and place the entire capsule in the bottom of the holder.
3. Close the holder.
4. Breathe out and press the side buttons once to puncture the capsule to release the powder.
5. Seal your lips over the mouth piece. Do not tip the holder too far.
6. Inhale at a medium speed. You will hear the capsule “rattle” in the bottom.

7. Hold your breath for 10 seconds.
8. Repeat steps 5 through 7 if the capsule is not empty.
9. Open the holder and throw away the empty capsule.

**How to care for your inhaler**
- Wipe the mouthpiece off with a dry tissue or cloth if needed.
- Never wash the holder.
- Replace the holder every month with your prescription refill. Throw the old one away.

**Other tips**
- Each capsule is a single dose of medicine. **Do not swallow the capsules.**
- Handle the capsules with dry hands and keep them away from moisture.
- Do not breathe into the holder.
- Keep track of how many capsules are left by circling the start date on a calendar or writing down how many you use a month. **Call your pharmacist for a refill before your capsules run out.**
- Bring your inhaler to your appointments so you can show your health care provider how you use the inhaler. Let them know if you are having trouble using it. If you use more than one inhaled medicine, ask about the order in which to take these medicines.
- Check the expiration date and do not use the medicine after it expires.
# My Medicine Schedule

## Sample medicine schedule

<table>
<thead>
<tr>
<th>Medicine name</th>
<th>How much I take (dose)</th>
<th>How often (frequency)</th>
<th>Other instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiriva</td>
<td>1 pill</td>
<td>Every morning</td>
<td></td>
</tr>
<tr>
<td>Symbicort</td>
<td>2 puffs</td>
<td>Every 6 hours while awake</td>
<td></td>
</tr>
<tr>
<td>Combivent</td>
<td>2 puffs</td>
<td>As needed</td>
<td></td>
</tr>
<tr>
<td>Albuterol</td>
<td>2 puffs</td>
<td>Call doctor if I need to take more often</td>
<td></td>
</tr>
</tbody>
</table>
## My medicine schedule

<table>
<thead>
<tr>
<th>Medicine name</th>
<th>6a</th>
<th>7a</th>
<th>8a</th>
<th>9a</th>
<th>10a</th>
<th>11a</th>
<th>12p</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
<th>4p</th>
<th>5p</th>
<th>6p</th>
<th>7p</th>
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</table>

## About my medicines

<table>
<thead>
<tr>
<th>Medicine name</th>
<th>How much I take (dose)</th>
<th>How often (frequency)</th>
<th>Other instructions</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
# My COPD Action Plan

Doctor: ________________________________  Phone Number: _____________

Emergency Contact Phone Number: ________________________________

<table>
<thead>
<tr>
<th>I’m doing well.</th>
<th>Action:</th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Breathing without shortness of breath.</td>
<td>• Continue my current medicines.</td>
</tr>
<tr>
<td>❑ Able to do daily activities.</td>
<td></td>
</tr>
<tr>
<td>❑ Mucus is easy to cough up.</td>
<td></td>
</tr>
<tr>
<td>❑ Able to exercise as my health care provider directed.</td>
<td></td>
</tr>
</tbody>
</table>

| I feel worse due to my COPD.  
I have:                                      | Action:                                                                                      |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Shortness of breath.</td>
<td>• Continue my current medicines.</td>
</tr>
<tr>
<td>❑ Problems doing daily activities.</td>
<td>• Add these rescue medicines to help ease shortness of breath and wheezing:</td>
</tr>
<tr>
<td>❑ More coughing or wheezing.</td>
<td></td>
</tr>
<tr>
<td>❑ Mucus that is thicker or discolored.</td>
<td></td>
</tr>
<tr>
<td>❑ Fever.</td>
<td></td>
</tr>
<tr>
<td>❑ Less appetite.</td>
<td></td>
</tr>
</tbody>
</table>

| I feel I am in danger.  
I have one or more of these signs:       | Action:                                                                                      |
|-----------------------------------------|--------------------------------------------------------------------------------------------|
| ❑ I feel like I can’t breathe! I have  
  severe shortness of breath.           | • Take rescue medicine and call 911 or emergency medical services now!                     |
| ❑ Not able to do daily activities.      |                                                                                            |
| ❑ Chest pain.                           |                                                                                            |
| ❑ Confused, slurred speech.             |                                                                                            |
| ❑ Feel faint.                           |                                                                                            |