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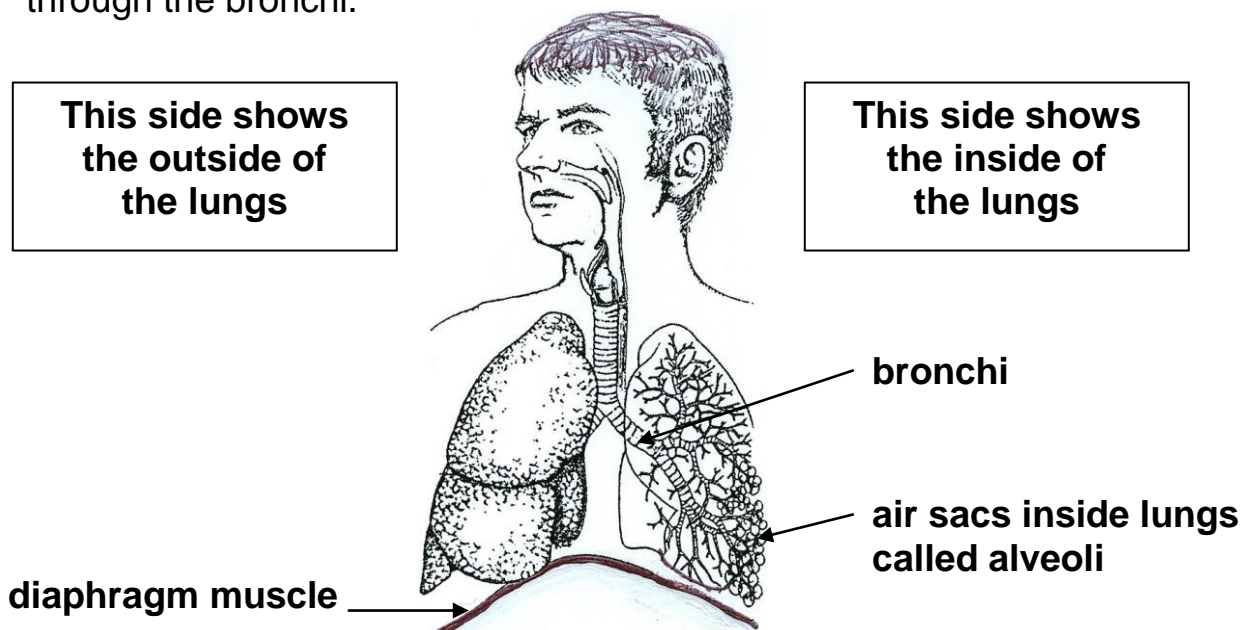
## Chronic Obstructive Pulmonary Disease ~ COPD ~

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### What is chronic obstructive pulmonary disease?

Before answering this question it is important to learn some medical words and see the parts of the body involved. Below is a picture of the outside and inside of the lungs.

The bronchi are the large airway tubes that take oxygen to the tiny air sacs called alveoli. The alveoli or air sacs also pick up carbon dioxide from the blood. You then breathe carbon dioxide out of your body through the bronchi.



Chronic Obstructive Pulmonary Disease is also called COPD. COPD is a term used to describe a group of lung problems that cause a reduction in the movement of air through the airways.

The conditions included in this term are: emphysema, chronic bronchitis, bronchiectasis, poorly controlled asthma and cystic fibrosis.

## **What is emphysema?**

Emphysema is a disease of the air sacs. When a person with normal lungs breathes in and out, the air sacs and airways open and relax because they are like elastics.

When a person has emphysema, the air sacs collapse because they have lost elasticity. When this happens, air is trapped in the lungs. Over the years, the lungs tend to get bigger. As this happens, the diaphragm and rib muscles also stretch and do not work as well.

As emphysema gets worse, some lung tissue in the small airways and alveoli is destroyed. Small blood vessels that surround the air sacs are also destroyed. This means that there is less surface area for the exchange of oxygen and carbon dioxide.

As part of your treatment, you will learn how to do “pursed lip breathing”. This helps the trapped air move out of your lungs and allows fresh air in.

## **What is chronic bronchitis?**

Chronic bronchitis is a disease of the airways. The bronchial tubes are lined with a thin layer of mucus. This helps trap any foreign particles you breathe in. Mucus and particles are moved out of the lungs by the action of tiny hair-like structures called cilia. Cilia work all of the time moving mucus and particles towards the mouth.

When you have chronic bronchitis, there is extra mucus in the bronchial tubes. This produces a chronic cough, sputum and shortness of breath. The extra mucus leaves less room for air to get through. Thick mucus plugs may form and close the small airways.

Swelling and narrowing of the airways also slows down the action of the cilia making it hard for them to move mucus and particles out of the lungs. This slows the flow of air in and out making it harder for oxygen to pass from the air into the blood.

## **What is bronchiectasis?**

In bronchiectasis, the airways are damaged by infection. Scar tissue replaces the walls of the airways.

Normally, the bronchial tubes are lined with a thin layer of mucus. This helps trap any foreign particles you breathe in. Mucus and particles are moved out of the lungs by the action of tiny hair-like structures called cilia. Cilia work all of the time moving mucus and particles towards the mouth.

When you have bronchiectasis, the cilia are destroyed. The scar tissue and airway muscles are not able to push this pooled mucus up to the throat to be coughed out. With this extra mucus and bacteria collecting, infections often happen.

People with bronchiectasis often cough up large amounts of mucus every day.

## **What is asthma?**

Asthma is an inflammatory condition in the airways which causes shortness of breath, chest tightness, wheezing, coughing and production of mucus. In many people, the airways are very sensitive to substances or events called triggers. The airways swell, produce mucus and the muscles in the airways tighten.

If asthma is not controlled, the airways may become permanently damaged.

## **What is cystic fibrosis?**

Cystic fibrosis is a genetic disorder which causes an over-production of mucus. This often leads to infections that damage the airways.

## What are the early warning signs of a COPD flare-up?

You can often tell when a flare-up is about to begin. You may notice increased shortness of breath, sore throat, cough, tiredness and cold symptoms.

If you catch a flare-up in time, it can be easier to treat. Treating a flare-up early can also save you from having to go to the hospital. The key is to pay attention to the early warning signs of a flare-up.

### Early warning signs of a COPD flare-up are:

- feeling more short of breath than usual
- yellow, green or brown sputum
- an increase in the amount, thickness and stickiness of sputum
- a fever
- needing to sleep sitting up instead of lying down
- morning headaches, dizziness, trouble sleeping
- swollen ankles or feet or feeling bloated or swollen in your abdomen – you may feel like you have to loosen your belt or waistband
- feeling unwell
- feel sleepy during the day or fall asleep when you did not expect to
- have personality changes such as feeling confused, restless, agitated or forgetful



**Family members and friends should also watch for these signs as they may see them before you do.**



### **Remember . . .**

- **If you have any of these signs, contact your doctor or health care provider right away.**

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## Treatment of Chronic Obstructive Pulmonary Disease

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Since there are many causes for COPD, there are many treatments. Your treatment will depend on your health problem. You will follow the best treatment care plan for your own problem. The goal of treatment is to improve your breathing and airflow. Members of your health care team will help you meet your goals.

**Here are some things you can do to help yourself.**

### Learn how to breathe

- Slow your breathing. Make sure breathing out takes longer than breathing in. Try not to force the air out. As you breathe out, tighten your lips as if you are breathing out through a straw. This is called pursed lip breathing. If you have emphysema, make sure you breathe out with pursed lips.
- Do not hold your breath. Breathe normally in and out when you do your daily activities such as shave, apply makeup, climb stairs, lift things and bend over.

### Cough and clear your sputum

- If you have sputum, you must cough it up. You should try to cough sputum up at least 4 times a day. Try taking some water before you cough.
- If you cough up blood, contact your doctor.

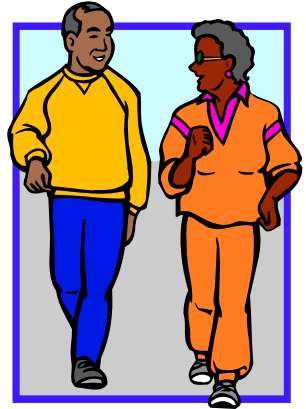
### Avoid things that affect your breathing

- If you smoke, you must stop. If you continue to smoke you will continue to damage your lungs.
- Avoid strong smelling sprays, perfumes, fumes and things you are allergic to.
- Cover your nose and mouth when you go into cold air.
- Stay indoors on high pollution days.



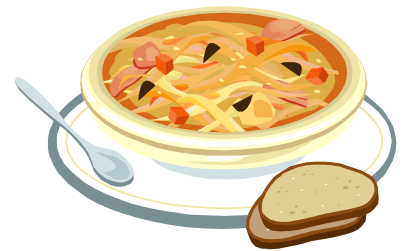
## Start and Maintain an Exercise Program

Regular exercise is very important. Muscles that are in good condition work better and produce less carbon dioxide. Exercise helps you use your oxygen better. You may learn to adjust your medication before and during exercise. For example, many people use a bronchodilator inhaler before they begin to exercise. This opens the airways to help them breathe better.



## Eat a Balanced Diet

It is important for you to follow a proper diet for your weight and height. Extra weight makes it harder for you to breathe. Some people find shortness of breath makes it hard to eat enough food. Ask to speak to a Dietitian to get help with a meal plan.



## Attend Your Clinic Appointments

Please bring all of your pills, inhaled medications and devices such as an Aerochamber<sup>®</sup> to each appointment.

When you come for your visits be prepared.  
Make sure you know:

- All of the medications you currently take
- The medications that will expire and need re-ordering by a member of your health care team

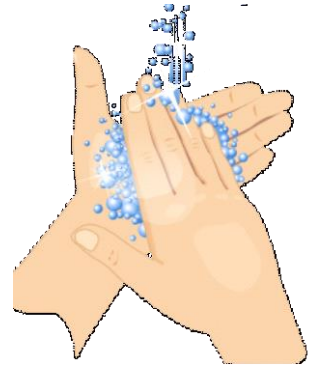


## Practice Good Hand Hygiene – Prevent Infection

It is important to wash hands often to prevent infection.

Wash hands:

- Before and after eating
- After using a bathroom
- After coughing or sneezing
- When entering or leaving a hospital, health care centre or doctor's office



Remind others to wash their hands too.

### Steps to Washing Hands

1. Wet hands with warm water.
2. Apply soap.
3. Rub hands together for 20 seconds. Wash fingertips, nails and between fingers.
4. Rinse with warm water for 10 seconds.
5. Dry hands with a paper towel.
6. Use a clean paper towel to turn taps off.

**Clean surfaces in your home that people touch often.**



**Notes and Questions – Be Involved:**
