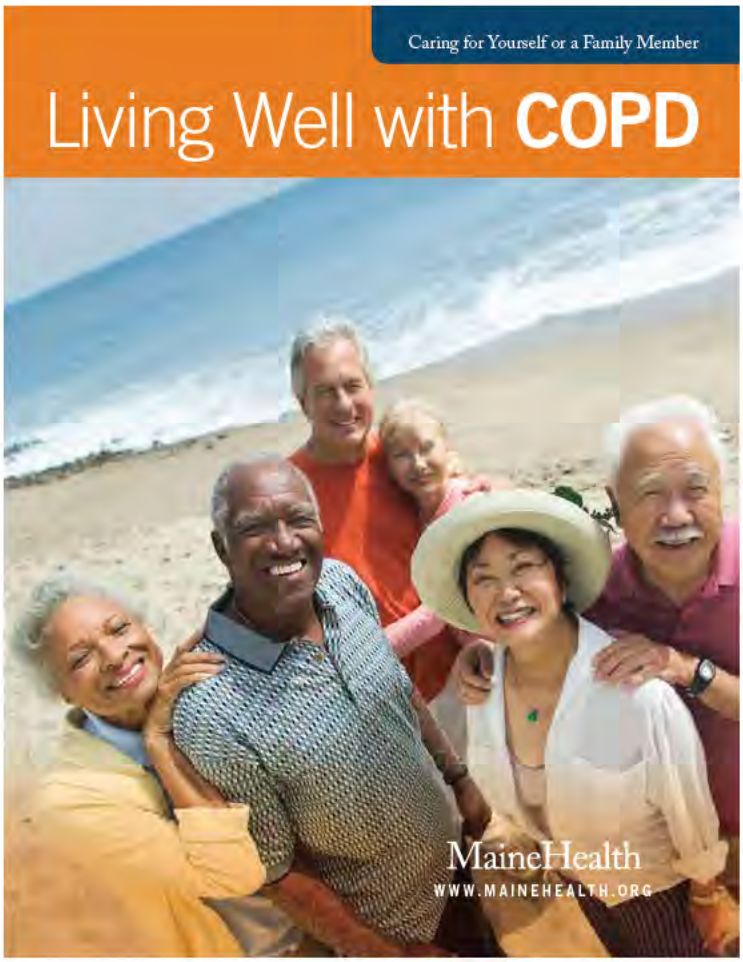
Living Well with COPD

This information is part of the MaineHealth Living Well with COPD patient education book.



This book was created for patients and their families to help them manage their lung disease.

Your doctor or nurse chose this section because they felt it would be most helpful for you.

There are 10 sections in the COPD book and a list of definitions in the glossary section. Share this information with family, friends and those who help care for you.

SECTION 1

Healthy Lungs and Lung Disease

In This Section:

- How Lungs Work
- What Is COPD?
- Glossary

MaineHealth
WWW.MAINEHEALTH.ORG

1 Healthy Lungs and Lung Disease

Your lungs are part of a group of organs and tissues that all work together to help you breathe. This system is called the respiratory system. The job of the respiratory system is to move oxygen from the air into your blood and get waste gases out of your body. Oxygen is very important to your heart, brain, muscles and all other parts of your body.

Good health habits like making healthy food choices, exercising and reducing the stress in your life will help you breathe easier.

How Lungs Work

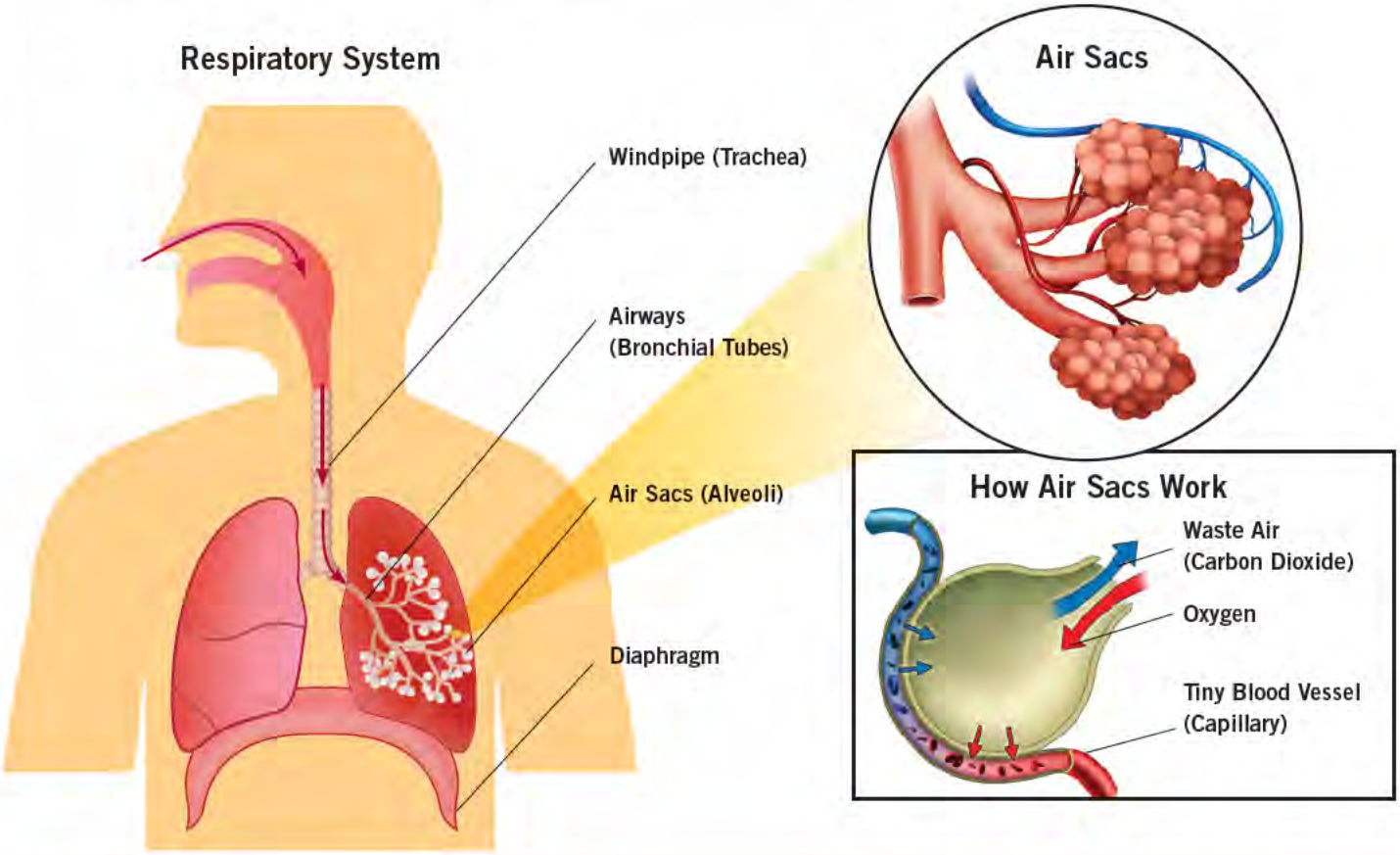
With healthy lungs, you breathe air in through your nose and mouth, and air travels down your windpipe **(trachea)**, through your air passages or airways **(bronchial tubes)** and to the air sacs **(alveoli)** deep within your lungs.

The air sacs are elastic and get bigger (expand) and smaller (contract) easily, like blowing up a balloon and allowing it to deflate. There are tiny blood vessels all around the air sacs. Oxygen from the air you breathe passes easily into the blood vessels. The blood then carries the oxygen to all parts of your body.

As your body uses oxygen, waste air called **carbon dioxide** (CO_2) is made. The waste air is carried by the blood vessels back to your lungs and passes into the air sacs. When you breathe out, the waste air is exhaled up your airways and out of your lungs.

Most of the work of breathing is done by a large muscle called the **diaphragm.** The diaphragm sits below your lungs and moves down as you breathe in and up as you breathe out.

Your airways have special cells that help keep your lungs free of dust and infection. These cells make mucus **(sputum)** that traps dirt and germs. Tiny hairlike structures called cilia sweep mucus up into your larger airways and windpipe to make coughing up mucus easier.



What Is COPD?

COPD stands for Chronic Obstructive Pulmonary Disease. COPD includes emphysema, bronchitis and asthma. You may have only emphysema, only bronchitis or only asthma, or you may have more than one of these lung diseases at the same time.

Most people don't realize they have COPD at first. The signs start slowly. As COPD gets worse, you may feel short of breath when doing simple things like making your bed or washing your hair. Many people blame their lack of energy or limited breath on aging. They may cut back on or stop doing activities they enjoy like shopping with their friends, attending their grandchildren's events or gardening.

Chronic Obstructive Pulmonary Disease

C Chronic: disease that cannot be cured by medicines and does not go away

O Obstructive: damage to the airways that makes breathing out difficult and may cause you to trap air in your lungs

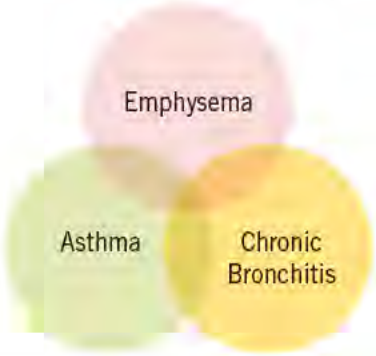
P Pulmonary: related to the lungs

D Disease: illness or condition

Symptoms of COPD:

- shortness of breath climbing stairs or walking
- breathing faster or harder to catch your breath
- mucus when you cough
- feeling tired or lacking energy
- coughing
- wheezing
- colds that last for weeks instead of days

COPD is another word for asthma, emphysema and chronic bronchitis, and can be any combination of these diseases.



Asthma is a disease of the airways.

When asthma is not under control:

- your airways become swollen and can fill with mucus
- your airways become narrow from the mucus
- the muscles around the airways tighten, making it hard to breathe out

Emphysema is a disease that damages your air sacs and causes airways to narrow or become blocked.

Emphysema causes:

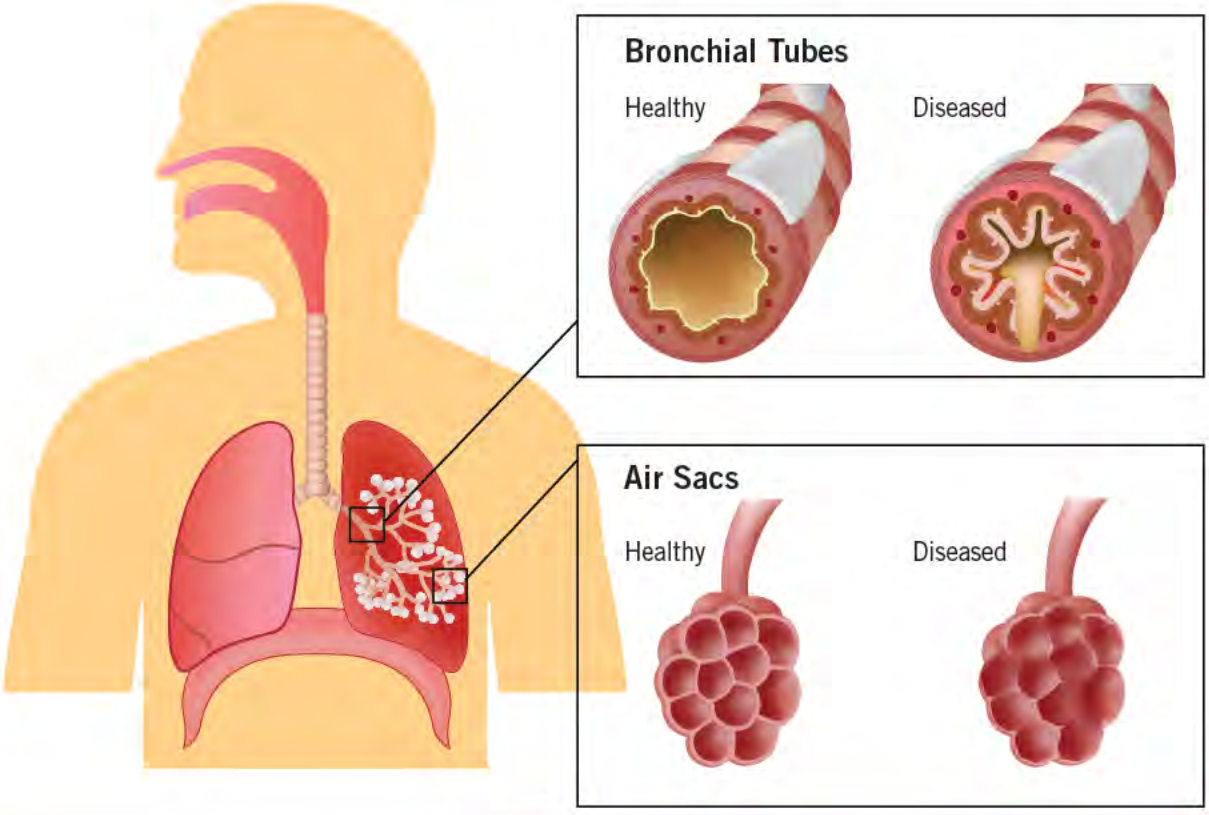
- your air sacs to not open and close easily
- **air trapping** in your lungs, making breathing out difficult
- oxygen in your blood to be low and waste air to build up

Chronic bronchitis is a disease that damages the airways.

Chronic bronchitis causes:

- airways to become irritated and swollen
- a buildup of mucus that can block airways, making it difficult to get air in and out

COPD is not reversible. The lung damage you have will not go away with medicine, but there are many things you can do to keep the damage from getting worse. Diagnosing COPD early and working with your doctor will help you to stay healthy and to continue doing the things you enjoy.



Glossary

Advance directives (sometimes called living wills): forms that you fill out once you decide what is important to you if you should get into a health crisis

Air trapping: when it is difficult to exhale completely

Allergic rhinitis: runny nose caused by allergies

Alpha-1 antitrypsin deficiency: a genetic disease that can cause COPD

Alveoli: air sacs

Arteries: blood vessels that carry oxygenated blood away from the heart to the body's cells, tissues and organs

Arterial blood gas (ABG): a blood test from an artery that measures how well your lungs are able to move oxygen into your blood and remove carbon dioxide from your blood

Asbestos: mineral that can be woven into fabrics and is used in fire-resistant and insulating materials such as brake linings

Bone density test: x-ray that measures bone loss

Bronchial tubes: air passages or airways

Bronchodilators: medicines that make you breathe better by relaxing the muscles in your air passages and keep them from squeezing

Carbon dioxide: waste air

Cardiopulmonary resuscitation: emergency lifesaving procedure that is done when someone's heart has stopped

Cataracts: clouding of the lens in your eye

Comorbidities: other chronic diseases a person has that make treating chronic disease more difficult

Continuous flow oxygen: oxygen that runs constantly through a tube into your nose and throat

Continuous positive airway pressure (CPAP): a device prescribed by a doctor or nurse to treat OSA

COPD Action Plan: a guide to help you recognize the early signs of a flare-up and what you should do when a flare-up occurs

Coronary arteries: blood vessels that supply oxygen-rich blood to your heart muscle

Coronary artery disease: a disease in which a waxy substance called plaque builds up inside your coronary arteries

Cor pulmonale: a condition that causes the right side of the heart to fail

CT scan: a picture of the inside of a part of your body

Diabetes: a condition in which your body does not make enough insulin or does not use insulin correctly

Diaphragm: a large muscle that sits below your lungs and does most of the work of breathing

Dose: amount of medicine

Echocardiogram: an **ultrasound** of the heart

Electrocardiogram: a test that checks for problems with the electrical activity of your heart

Energy conservation: saving energy

Esophagus: passage that connects the mouth and the stomach

Exacerbation: flare-up of your symptoms

Expectorant: medicine that loosens mucus so it's easier to cough up

Gastroesophageal reflux disease (GERD): acid reflux

Glaucoma: a condition of increased pressure within your eyeball, causing gradual loss of sight

Healthcare agent: the person you want to speak for you if you cannot speak for yourself

Heart failure: a condition in which your heart can't pump enough blood to meet your body's needs

Hospice: care for people closer to the end of life who want their treatment focused on comfort

Hypertension: high blood pressure

Inflammatory: swelling

Inhaler: device that contains medicine as a mist or powder

Insulin: hormone that carries sugar into your cells so that it can be used for energy

Intravenous: in a vein

Long-acting (controller) medicines: medicines taken once or twice a day that prevent shortness of breath

Lung transplantation: surgically replacing one or both of your lungs

Lung volume reduction surgery: surgically removing diseased parts of one or both of your lungs

Mucolytics: medicines that break up mucus

Nebulizer: device that turns liquid medicine into mist

Nicotine replacement: medicines that replace the nicotine you do not get when you quit smoking

Obstructive sleep apnea (OSA): a condition that causes you to have periods when you stop breathing during sleep

Osteoarthritis: mechanical wear and tear on joints

Osteoporosis: illness that makes your bones brittle and fragile

Oxygenated: combined or mixed with oxygen

Palliative care: care provided at any stage of an illness focused on preventing suffering, managing symptoms and coordinating communication between the many caregivers

Peripheral vascular/arterial disease: a condition of the blood vessels that supply the legs and feet. It leads to narrowing and hardening of the **arteries.** This causes decreased blood flow, which can injure nerves and other tissues.

Pneumonia: lung infection

Pollutants: waste materials that are harmful to air, soil or water

Physician Orders for Life-Sustaining Treatment (POLST): a medical order stating a patient's wishes regarding treatments that are commonly used in a medical crisis

Pulmonary hypertension: high blood pressure in the arteries of the lungs

Pulse dose oxygen: oxygen that flows when you breathe in through your nose and stops when you breathe out

Pulse oximeter: a machine that measures the oxygen in your blood with a clip that goes on your finger, toe or earlobe

Quick-relief (rescue) medicine: medicine that starts to work in a few minutes and lasts a few hours

Reflux: when stomach acid backs up and irritates the esophagus

Rheumatoid arthritis: when your immune system mistakenly attacks the lining of your joints, causing a painful swelling that can eventually result in joint deformity

Secondhand smoke: smoke from a burning cigarette, cigar, pipe or hookah

Silica: a very common mineral found in many materials common on construction sites, including soil, sand, concrete, masonry, rock, granite and landscaping materials. The dust created by cutting, grinding or drilling can cause lung disease and cancer.

Sinusitis: swelling of the air cavities within the passages of the nose. Sinusitis can be caused by infection, but also can be caused by allergies and irritation of the sinuses.

Spirometry: a test to see how well your lungs are working

Sputum: mucus in your lungs

Stroke: when blood flow to an area of your brain is cut off

Suppressant: medicine to help you cough less

Thirdhand smoke: tobacco particles that stay on surfaces long after burning tobacco has been put out

Thrush: infection of the mouth and throat

Trachea: windpipe

Ultrasound: a test that uses sound waves to see inside your body

Vaping devices: electronic cigarettes, cigars and pipes that produce steam vapor when smoked