



Chronic Obstructive Pulmonary Disease (COPD)

MU Patient Education Series

Definition:

Chronic obstructive pulmonary disease (COPD) is a lung disease that causes your breathing to deteriorate over time. There is a decreased amount of air flowing in and out of the airways due to decreased lung elasticity, extra mucous, thick and swollen airway walls or destroyed air sacs. Emphysema and chronic asthmatic bronchitis are the two main conditions that make up COPD. Most patients acquire both forms of the disease.

CAUSES:

The leading cause of COPD is long-term, excessive exposure to lung irritants, which aggravate and damage the lungs and airways. Smoking is the most common and direct cause of COPD. The more you smoke, the more likely you are to acquire COPD, although some heavy smokers never get the disease. Individuals who are exposed to secondhand smoke, heavy air pollution, dust, factory fumes or gases, or improper ventilation are also susceptible to COPD. There is also a rare group of people with a deficiency of a liver protein called alpha-1 antitrypsin (ATT) who have a greater tendency to develop COPD. COPD can also, but rarely, be seen in people with asthma. Asthma is a lung disease that inflames and narrows the airways. If left untreated, asthma has the potential to lead to COPD.

WHO IS AT HIGH RISK FOR COPD?

As mentioned before, smoking is the leading cause of COPD. The majority of COPD victims were or are smokers. If COPD runs in your family and you are a smoker, you are at especially high risk to develop the disease. Adults over 40 are more likely to acquire COPD. Most people who develop COPD when they are under 40 have an ATT deficiency.

SIGNS/SYMPTOMS:

Because COPD is a progressive condition, which develops over time, the symptoms begin to appear slowly and mildly. As the condition worsens, symptoms become more prevalent and severe. Some of the more common COPD symptoms include:



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- A heavy cough (mucous may or may not be present)
- Exhaustion
- Shortness of breath
- Chest tightness
- Wheezing
- Chronic respiratory infections
- Frequent infection with the flu

DIAGNOSIS/TESTS:

Once your symptoms reach a level severe enough to require a visit to your physician, you will be tested for the disease. You will receive a COPD diagnosis based on an inquiry about your medical history, a physical examination and test results. Be honest with your doctor about your daily habits, such as smoking, because this information can be crucial when making a diagnosis. Your doctor will likely examine your breathing to listen for wheezing or other abnormal chest noises.

After the medical history discussion and physical examination, your doctor will likely give you a pulmonary function test. Spirometry is the most common lung function test. Spirometry measures how much air you can breathe in and out, how quickly you can do it and how efficiently your lungs are delivering oxygen to your blood. During the spirometry, you will be connected to a machine and will be asked to breathe into a tube connected to it. The machine will then measure your breathing and will immediately deliver your results. This is a painless, easy way to test for COPD even before your symptoms present themselves. Other tests such as chest X-rays, blood tests or chest CT scans can be performed. These tests can get a deeper look at what is going on inside your body.

TREATMENT/CARE:

COPD is a disease that still lacks a cure. Fortunately, though, there are treatments and lifestyle alterations that can greatly improve your condition and your quality of life! Some of the treatment methods include:

- Individuals with COPD must quit smoking
- Medications such as inhalers to open up airways, inhaled steroids to decrease inflammation, and anti-inflammatory medicines
- Steroids by mouth or through an IV
- Oxygen therapy to relieve the workload of your lungs
- Nebulizer to relax your airway muscles
- Antibiotics can help fight bacterial infections when necessary
- Pulmonary rehabilitation to teach your lungs to breathe differently
- Walking to increase your strength level



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- Avoiding the freezing air
- Maintaining a healthy diet
- Reducing your exposure to lung irritants
- Surgery can be used if absolutely necessary
- Taking vitamins or other nutritional supplements
- Staying up-to-date with your vaccinations because diseases such as the flu/pneumonia can pose great harm for patients with COPD

COPD is a disease that exacerbates over time. It is important to follow your treatment plan in order to control your symptoms and prevent them from worsening. The closer you follow your treatment plan, the healthier you will stay!

PREVENTION:

Similar to a treatment plan, if you follow a prevention plan, you will be on the right track towards decreasing your chances of acquiring COPD or reducing the severity of your already present symptoms. The number one prevention method for COPD is to quit smoking! As mentioned before, smoking is the number one cause of COPD; so by eliminating smoking you will significantly decrease your risk of acquiring COPD. In addition to smoking, other lung irritants can cause COPD. If you eliminate factors such as air pollutants, chemical fumes and dust from your life, you will be greatly reducing your risk. Other irritants such as paint and insect repellent can also be harmful. Make sure to stay updated with your vaccinations because the flu and/or pneumonia with COPD is not a healthy combination!

CALL YOUR HEALTHCARE PROVIDER IF:

Remember that COPD is a progressive and surprising illness. You could feel great one day and could have trouble walking across the room the next. It is highly important to stay alert and aware of your body and your symptoms. Make sure to call your doctor immediately if your symptoms worsen or change suddenly—he or she can prescribe medications and/or treatment options for you or give you tips to make your breathing easier. Seek medical attention if you notice more coughing or a change in your mucus or if you have a hard time breathing.

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