The Symptoms of COPD and What Causes Them

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COPD Symptoms to Be Aware Of

If you suspect you have chronic obstructive pulmonary disease or if you already have a formal chronic obstructive pulmonary disease (COPD) diagnosis, you are probably familiar with the symptoms of COPD – wheezing and having a hard time breathing.

However, there are several other symptoms that are characteristic of COPD that a physician will look for when diagnosing COPD.

It is also helpful to understand what COPD is – it isn't just a blanket term for the inability to breathe with age, as I've heard it defined before.

So, let's discuss what is COPD, important facts you need know about COPD, COPD symptoms you need to be aware of, and how to treat or manage COPD symptoms.

COPD by the Numbers

First, let's talk numbers.

It is estimated that 64 million people worldwide have COPD – and 30 million of those are Americans. In 2011, the greatest prevalence of Americans suffering from COPD were situated in the Midwest and the Southeast – specifically Kentucky and Alabama, while the lowest rates were in Washington and Minnesota.

Smoking is linked to 80 percent of COPD deaths – and female smokers are 13 times more likely to die from COPD than non-smokers. Men are not immune – they are 12 times more likely to die from COPD than non-smokers. COPD is the third leading cause of death in the US – it is third only to cancer and heart disease.

COPD is expensive – in 2010, it cost the USA approximately $49.9 billion. Yes, billion.

In a survey of people with COPD, 51 percent of people said that they were limited in their ability to function at their job, and 70 percent stated it limited their physical activity.

This may seem like a no-brainer, but the leading cause of COPD is smoking. There are other causes, but 90% of all COPD cases are related to smoking. That doesn't necessarily mean that all smokers go on to develop COPD – approximately 20% of smokers eventually develop COPD.

While our rates of smoking have gone down over the years, the rate at which we develop COPD is actually expected to increase – especially in women. Why? Women are working in increasingly more toxic environments – environments that only men typically used to work in. It is now believed that men and women have *about* as equal of a risk of developing COPD.

What Is COPD?

Chronic obstructive pulmonary disease (COPD) is a progressive condition that affects the lungs, making it difficult to breathe. It is considered a chronic condition and progressive – meaning that there is no known cure and it gets worse over time.

COPD includes two conditions simultaneously – emphysema and chronic bronchitis.

- **Emphysema** means that walls surrounding the alveoli (air sacs) have become damaged, causing the alveoli to become floppy. This damage causes the damage to the walls of the alveoli as well, leading to fewer alveoli, causing a reduction in gas exchange.
- **Chronic bronchitis** causes the walls of the lungs to be chronically irritated and inflamed. Thick mucus is continually formed.

Rather than saying the person has both emphysema and chronic bronchitis, the term “COPD” was created. The severity of the illness varies person-to-person, as it is with any chronic condition.

What Causes COPD?

It is common knowledge that cigarette smoking is the leading cause of the development of COPD. However, up to 25 percent of people who develop COPD have never smoked.

For those people, other risk factors can increase the likelihood of developing COPD.

Exposure to lung irritants such often contributes to the development of COPD; examples include chemical fumes, dust, and pollution.

Having been born prematurely can, unfortunately, put you at a higher risk of developing COPD later in life; this is called neonatal chronic lung disease.

Alpha-1 antitrypsin (AAT) deficiency is a rare genetic condition that can predispose people to develop COPD, as well as cirrhosis and necrotizing panniculitis. Alpha-1 antitrypsin is an enzyme made by the liver.

This enzyme helps protect the body’s organs from harmful effects of other proteins. When the AAT proteins aren’t in the correct shape, they get stuck in the liver, they are unable to get to the lungs – causing COPD and liver conditions.

People with AAT deficiency who don’t smoke can typically expect to start getting symptoms in their 80s – but people who have AAT deficiency and add smoking to the mix can begin getting COPD symptoms as early as their 30s and 40s.

People do not typically realize that they have AAT deficiency until symptoms develop – unless they are aware of their family history. Current estimates suggest that there are 100,000 people in the US with AAT deficiency. This deficiency does not seem to affect one ethnic group over another – it has been detected in all populations.

The Alpha-1 Foundation note that having this deficiency does not necessarily mean becoming ill – avoiding other risk factors can reduce the risk of developing COPD. They state, “Early diagnosis and avoiding risk factors, such as cigarette smoking, can help prevent Alpha-1 from causing disease.”

Symptoms of AAT deficiency-related to the lungs may include:

- Bronchiectasis.
- Year-round allergies.
- Shortness of breath.
- Chronic bronchitis.

- Recurring chest colds.
- Less exercise tolerance.

Symptoms of AAT deficiency-related to the liver may include:

- Unexplained liver disease and elevated liver enzymes.
- Jaundice.
- Vomiting blood.
- Ascites (swelling) of the abdomen.

So, now that we know what COPD is and what causes it, let's discuss the symptoms of COPD.

What Are the Symptoms of COPD?

COPD typically is present, without symptoms, for a while. By the time symptoms are present, significant lung damage has already occurred – and this can continue to worsen if you are a smoker and continue to smoke, and/or if you do not seek medical treatment.

The hallmark symptom of COPD is a daily cough with sputum production for at least three months a year, for two consecutive years. The timeframe is important because this helps to differentiate from a lingering cold, chronic environmental allergies, and other respiratory illnesses.

Next page: Learn about the symptoms of COPD, how COPD is diagnosed and more.

COPD Symptoms You Need to Be Aware Of

Dyspnea

Dyspnea is shortness of breath during everyday activities. Often, when we're aging, we chalk up shortness of breath to the aging process – we think, "Oh, well, I can't walk these hallways as easily as I used to because I'm getting old!"

Well, friends, shortness of breath is not a *normal* part of the aging process and signifies something is wrong with the lungs, whether it be COPD or another condition.

Frequent Respiratory Infections

If you find yourself heading to your physician or to the urgent care clinic for yet *another* course of antibiotics, it may be time for an evaluation of COPD. And if you do indeed of COPD, you may recover from the infections a bit more slowly, especially if you have pneumonia.

You are more susceptible to lung infections (particularly pneumonia) because of the narrowed airways and inflamed alveoli – bacteria, viruses, and fungi can get trapped. Here are symptoms of respiratory infections to watch for:

- Fever greater than 100.4 degrees Fahrenheit.
- Increased shortness of breath, especially if you sense that your heart rate is also increased.
- Changes in the color or quality of your mucus production; for example, it may now be green, be thicker and stickier if you have an upper respiratory infection.
- Sharp chest pain.

Prevention of lung infections is key! One thing you can do is get a flu shot every year. Ask your physician if you are a candidate for the pneumococcal vaccine. In addition, frequent hand washing is extremely important.

Cyanosis

Cyanosis can occur to the lips and the fingernail beds. This is when the lips and fingernail beds turn a bluish color.

When this occurs, this typically means that COPD is in its advanced stages and there is not enough oxygen in the blood for the body to function well.

So, when we're healthy, our blood is oxygenated, and it is the deep red color that we're very familiar with; when you're in the advanced stages of COPD, the red blood cells are not well oxygenated, and the lips and fingernail beds can take on the bluish tint instead of the healthy color that we're familiar with.

- If cyanosis occurs suddenly, it can be an emergency situation.
- If cyanosis occurs gradually over time, it probably means the oxygen level of the blood has decreased at a gradual rate. It typically occurs when the oxygen saturation rate is less than 90 percent.
- Cyanosis is treated by correcting the underlying cause (if it is caused by something occurring suddenly), or by the use of oxygen therapy.

When to Seek Emergency Medical Attention for Cyanosis

When your symptoms worsen rapidly, you may have heard this called a COPD exacerbation or a flare-up. Symptoms of an exacerbation include:

- Changes in your breathing. You likely suffer from shortness of breath anyway – but if shortness of breath increases, this is a warning sign. In addition, breathing that becomes noisier can indicate an exacerbation. Wheezing indicates mucus in the lungs, while rattling indicates fluid in the lungs.
- If your breathing becomes more irregular, this can also be dangerous. This can indicate that you are using your accessory muscles – your chest muscles – to breathe.
- Your coughing worsens. As your coughing worsens, your sputum may change colors as well.
- Remember when we discussed cyanosis? This is when you may become cyanotic.
- Breathing becomes so labored that it becomes difficult to speak. This is a later stage in the exacerbation.
- Swelling in the extremities. If this occurs, it is a signal that there is a complication with the heart.

Fatigue

Fatigue is extremely common if you have COPD – and this is not the type of fatigue that you can correct with a few cups of coffee! The reasons for fatigue when you have COPD are multifaceted.

The biggest reason for fatigue has to do with the disease process itself, according to the *Lung Institute*, "COPD impairs airflow. Without the proper exchange of gases, the body can't get the amount of oxygen it desperately needs.

Eventually, the sufferer will develop low blood oxygen levels, or hypoxemia. When a body is low on oxygen, it will feel tired. This becomes cyclical in nature, as the fatigue disallows a person to properly inhale and exhale air, therefore causing further fatigue."

However, it also causes fatigue for the following reasons:

- Because of the lung damage, which makes it difficult to breathe, many people avoid activities that promote energy and muscle-building, which ultimately contributes to fatigue.
- The symptoms of COPD themselves can cause fatigue, such as the constant coughing.
- All of these contribute together, and the fatigue becomes cyclic, making it hard to break the cycle of fatigue.

Weight Loss

Unintended weight loss may seem like a good thing, but if you have COPD, you want to maintain your weight. Why? Well, you expend more energy when you have COPD – in fact, it is estimated that the increased work you're doing just to breath means that you're burning 10 times more calories *just to breathe* than people without a lung disease.

It is estimated that 40 to 70 percent of people with COPD will experience unintended weight loss. People with COPD needed to maintain their weight. People who lose weight unintentionally are more likely to:

- Suffer from infections.
- Have increased fatigue and weakness.
- Feel an increase in weakness of the muscles that control breathing, which causes increased shortness of breath.

So what exactly *happens* to your body when you lose weight as a result of expending all of those calories? Your body needs to burn the calories from somewhere – so it starts to break down fat and muscle tissue – which not only causes weight loss but also makes fatigue worse.

Other COPD symptoms may include:

- Wheezing.
- Having to clear your throat first thing in the morning.
- Swelling in the ankles.

How Is COPD Diagnosed?

There are a variety of tools and diagnostic tests that can be utilized to diagnose COPD. Initially, your physician will probably perform a physical exam with assessment and take a history.

However, to receive a "real" diagnosis, some type of diagnostic tool should be ordered as well.

Pulmonary function testing is a common way to measure the amount of air that is inhaled and exhaled. It can also tell how much air is being delivered to the blood. During this test, you'll blow into a machine called a spirometer, which measures the air your lungs holds and how fast you can blow the air out.

This test detects COPD before symptoms occur, as well as tracks progression of the disease. It can also let your physician know if your treatment is working.

Additional tests for diagnosing COPD may include:

- A **chest x-ray** can detect emphysema, as well as rule out other problems of the respiratory system and the heart.
- A **CT scan** can detect emphysema and can screen for lung cancer. It can also be a useful tool to see if you would benefit from surgery to treat your COPD.
- **Arterial blood gases** (ABGs) are a type of blood test that is drawn from your wrist. They are a measure of how well your blood is oxygenating.
- Other **laboratory tests** can help differentiate COPD from other causes of respiratory distress. For example, a blood test can be drawn to let your physician know if you have the alpha-1 antitrypsin deficiency.

The Bottom Line About COPD Symptoms

COPD is chronic, progressive, and can be debilitating.

It is ultimately your choice to receive COPD treatment, but I can promise you this – you will have a better quality

of life if you seek help to manage your disease and your symptoms. Available COPD management tools for symptoms begin with lifestyle changes (i.e., diet, practicing breathing exercises), reducing stress and anxiety, learning your COPD triggers, and taking medication (i.e., inhalers) properly.

Lastly, the best thing you can do for yourself before you develop COPD is to quit smoking. If you already have COPD, it isn't too late to stop smoking. Although you can't reverse the damage that has occurred to your lungs, research indicates that smoking cessation can slow the progression of the disease. In one research study, "smoking cessation significantly reduces disease progression in mild to moderate COPD and that even having multiple relapses is better than continued smoking in terms of disease progression."