How COPD Can Lead to Barrel Chest

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Barrel Chest COPD and Late Stage COPD

COPD is a leading cause of death in the U.S., as it affects upwards of 16 million Americans and millions more do not even know that they have the condition. The American Lung Association estimates that this number is probably closer to 24 million Americans. Worldwide, the prevalence of COPD continues to rise; in 2015, about 3.2 million people died from COPD. This is an 11.6% increase from 1990. As COPD worsens, so do the symptoms, and barrel chest COPD may occur.

What Is COPD?

Chronic obstructive pulmonary disease, more commonly referred to as COPD, is a chronic, progressive condition of the lungs. Most people with COPD have two lung conditions:

- **Emphysema.** This is when there are many air sacs in the lungs that help to exchange oxygen and carbon dioxide; with emphysema, these air sacs are destroyed. This interferes with oxygen exchange.
- **Chronic bronchitis.** This causes inflammation, narrowing and mucus buildup in the bronchial tubes.

The combination of these two conditions causes COPD and the characteristic symptoms that occur. Unfortunately, it is irreversible and progressive.

COPD Stages

We often hear COPD discussed by our healthcare providers as “early COPD”, “late COPD” and “end stage COPD”. Healthcare providers use a grading system called the GOLD classification to determine COPD severity.

There are four GOLD categories and they are determined based on spirometry testing:

- Grade 1: mild
- Grade 2: moderate
- Grade 3: severe
- Grade 4: very severe

Healthcare providers can also take into consideration various factors, such as symptoms and history of acute exacerbations.

Symptoms of Late Stage COPD

When COPD initially develops, symptoms are typically mild. In fact, it can initially be mistaken for a cold. Early symptoms include:

- Occasional shortness of breath, especially after exercise
- Mild but reoccurring cough
- The need to clear the cough often

As COPD worsens, common symptoms include:

- Shortness of breath that is more pronounced
- Wheezing that occurs during exhalations
- Chest tightness
- Lack of energy
- Frequent upper respiratory infections
- Chronic cough
- A need to clear mucus from the lungs daily

When COPD enters the late stages, symptoms include:

- Fatigue
- Swelling of the extremities
- Weight loss

Symptoms may be exacerbated by smoking.

What Is Barrel Chest COPD?

“Barrel chest” is not a technical medical term. However, it aptly describes the anatomy of someone with late stage COPD quite well.

Barrel chest is exactly what it sounds like, it is used to describe the chest area. When someone has had COPD for an extended period of time, the chest eventually changes shape. The diaphragm, which is responsible for assisting with moving air in and out of the lungs, begins to lose some if its length and strength. The muscles of the chest must begin to take on some of the work, causing them to remodel.

According to Medical News Today, “If the lungs do not have full function, it can be difficult for someone to inhale or exhale completely. The lungs remain partially inflated most of the time and the rib cage stays expanded. This state of hyperinflated lungs can result in a barrel chest, normally during the later stages of COPD. Individuals with a barrel chest from COPD may appear as if they are about to take a very deep breath, even though that this is often a difficult action to complete for people with the condition.”

Though later stages of COPD are the most common causes of barrel chest, there are other causes like:

- Cystic fibrosis, which typically occurs in children
- Osteoarthritis; barrel chest develops with osteoarthritis if the arthritis occurs where the ribs meet the spine
- Emphysema, which typically occurs with COPD, but may occur on its own

Management of Barrel Chest

Unfortunately, once damage has already occurred to the anatomy of the body (the lungs, ribs and sternum) it cannot be reversed. This is because COPD is an irreversible lung condition.

At this point, COPD should be managed to prevent further damage. Treatment of late stage COPD includes:

- **Smoking cessation.** Quitting smoking can improve symptoms. This also goes for avoiding cigarette smoke and other triggers.
- **Medications.** A variety of medications (mostly inhalers) are prescribed to improve and control symptoms, as well as prevent progression of the disease.

- **Pulmonary rehabilitation.** Pulmonary rehabilitation can assist with energy conservation techniques, breathing techniques, and advice on food and exercise.
- **Avoiding illness.** Illness can worsen breathing; preventing infections is of the utmost importance. Getting recommended vaccines and frequent handwashing is important.
- **Supplemental oxygen.** Often, oxygen from a portable tank is needed to maintain oxygen saturation levels.

When to See a Doctor

If you believe you have the symptoms of COPD, make sure to talk to your doctor about it. When doing so, they can form a proper diagnosis and start you on a targeted treatment plan.