



# COPD, OBESITY & EXERCISE

## WHAT IS COPD?

- **Chronic obstructive pulmonary disease, or COPD, is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. COPD is typically caused by long-term exposure to irritating gases or particulate matter, most often cigarette smoke. Symptoms include breathing difficulty, cough, mucus production and wheezing. COPD symptoms often do not appear until significant lung damage has occurred, and they usually worsen over time, particularly if smoking exposure continues. While COPD and asthma are both obstructive lung diseases, asthma has reversible airway obstruction whereas COPD does not, and it is seen as a progressive disease. The goal of COPD treatments is to minimize symptoms and slow the progression of the disease. People with COPD are at increased risk of developing heart disease, lung cancer and a variety of other conditions.**

## How does obesity affect COPD?

- Obesity and COPD are linked with each other in several ways. The breathing difficulties characteristic of COPD can make it hard to maintain a healthy weight, and excess weight can exacerbate COPD symptoms. In turn, exercise intolerance from COPD can lead to a sedentary lifestyle which can lead to obesity.
- The risk of heart failure is also compounded for people with both COPD and obesity. To make things more challenging, being very underweight is associated with a higher risk of COPD-associated mortality, so weight also seems to be a protective effect in some cases.

## **Obesity increases symptoms of COPD**

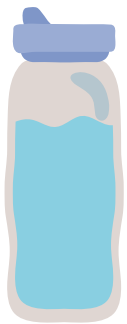
- Obesity affects lung function by restricting the free movement of air and compressing the lungs reducing total lung volume (how much air can be brought into the lungs). Excess weight increases the work of breathing which is already impaired in COPD. The additive effects can make it a struggle to breath and cause more shortness of breath. Fatigue that can occur from carrying excess weight only heightens the challenges of daily activities.
- The BODE Index, which is a tool which helps estimate the survival time of people living with COPD, uses body mass index along with spirometry values, dyspnea and exercise tolerance. The final value (0-10) provides a percentage of how likely a person is to survive for four years. Changes to lifestyle, including smoke cessation, engaging in exercise and maintaining an appropriate weight, along with improved treatment adherence can improve long-term outcomes.

## How can increasing exercise and weight loss help COPD?

Exercise is encouraged in COPD and even more for people who are overweight or obese. Incorporating pulmonary rehabilitation into the COPD treatment and weight loss plan can improve exercise tolerance and decrease risks for other complications. Exercise can not only help with weight management, but it can also possibly prevent a decline in condition and may lead to emotional and cognitive benefits which can improve quality of life.

- Moderate and consistent physical exertion can build muscle and increase oxygen utilization—increasing strength and energy levels as well as reducing fatigue.
- People with COPD who walk on a regular basis can increase walking distances and decrease symptoms of shortness of breath.
- Exercise and a healthy weight can decrease the risk of infection which can lead to COPD exacerbations, hospitalization and long-term worsening of quality of life.
- Exercise may also help in smoking cessation. Research shows that physical activity can reduce nicotine withdrawal symptoms, cigarette cravings, negative mood, and weight gain when cutting back or trying to quit.

### Exercising with COPD:



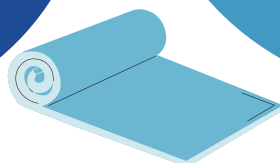
Pulmonary rehabilitation will help select exercises and monitor oxygenation to assure that the program is safe.



Breathing properly during exercise will help maintain adequate oxygen levels and reduce shortness of breath. Doing pursed-lip breathing and working exhaling during the most difficult part of the exercise and inhaling during the easiest part of exercise will help.

Using the dyspnea scale to measure shortness of breath can help pace exercise and exertion.

Walking is a great exercise because pace, distance, and time spent walking can be adjusted. Walking also improves blood pressure, weight, joint health, and mood.



### Contact Us

 [contact@inhalecqi.org](mailto:contact@inhalecqi.org)



**INHALE**  
Inspiring Health Advances in Lung Care

#### References:

Bottrell, J. (2019) Differences Between an Asthma and COPD Diagnosis. COPD.net: <https://copd.net/clinical/differences-asthma-copd-diagnosis>  
Leader, D. (2022) How Exercise Can Help COPD Patients. Verywellhealth: <https://www.verywellhealth.com/exercise-and-copd-914974>