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**Title:** What is the relationship between inspiratory capacity and different measures of exercise capacity in patients with COPD?

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**Body:** Background: Inspiratory capacity (IC) is an indirect measure of pulmonary hyperinflation in patients with chronic obstructive pulmonary disease (COPD), and may be a limiting factor to exercise capacity in this population. However, the relationship of IC with exercise capacity still needs to be better explored. Objective: To investigate the relationship between inspiratory capacity and different measures of exercise capacity in subjects with COPD. Methods: Thirty patients with COPD (16 men, 66±8 years, forced expiratory volume in the first second [FEV<sub>1</sub>] 40±14% pred) were studied. Inspiratory capacity was assessed by post-bronchodilator spirometry, whereas exercise capacity was assessed by the following three tests: six-minute walking test (6MWT), incremental symptom-limited cycle ergometry test (ISL) and constant work rate cycle ergometry test (CWR), all tests performed according to international guidelines. Results: In the 6MWT, IC (in liters) explained 18% (p=0.02) of the distance walked, whereas in the ISL it explained 23% (p=0.008) of maximum work load and 19% (p=0.02) of heart rate reached at the end of the test. In the CWR, IC showed only a simple negative correlation with oxygen saturation at the end of the test (r=-0.48). Conclusion: The inspiratory capacity significantly contributes, albeit modestly, to some key variables of exercise capacity tests. This indicates that a greater ventilatory reserve may be related to better physical fitness, and hence to a lower chance of hyperinflation.