LEARNING OBJECTIVES

On completion of the chapter, the reader will be able to:

1. Understand how the body maintains the arterial partial pressure of oxygen (Pao₂) and arterial partial pressure of carbon dioxide (Pco₂).
2. List the potential uses of pulmonary function tests.
3. Know the definition of an abnormal pulmonary function test.
4. Learn the four compartments that comprise the lung volumes.
5. Appreciate the difference between standard spirometry and the flow–volume loop.
6. List the common conditions that reduce the diffusion capacity of carbon monoxide.
7. Understand how spirometry defines obstructive lung disease.
8. Differentiate asthma from chronic obstructive pulmonary disease (COPD) by pulmonary function testing.
10. Appreciate how pulmonary function tests can distinguish upper airway obstruction from COPD or asthma.
11. Define restrictive lung disease.
12. Be familiar with the common causes of restrictive lung disease.
13. Understand the uses and limitations of pulse oximetry.
14. List the major indications for pulmonary exercise testing.
15. Be familiar with the 6-minute walk and the Harvard step test.
16. Be familiar with the concept of oxygen consumption (VO₂) and minute ventilation (Ve).
17. Appreciate the concept of the anaerobic threshold.