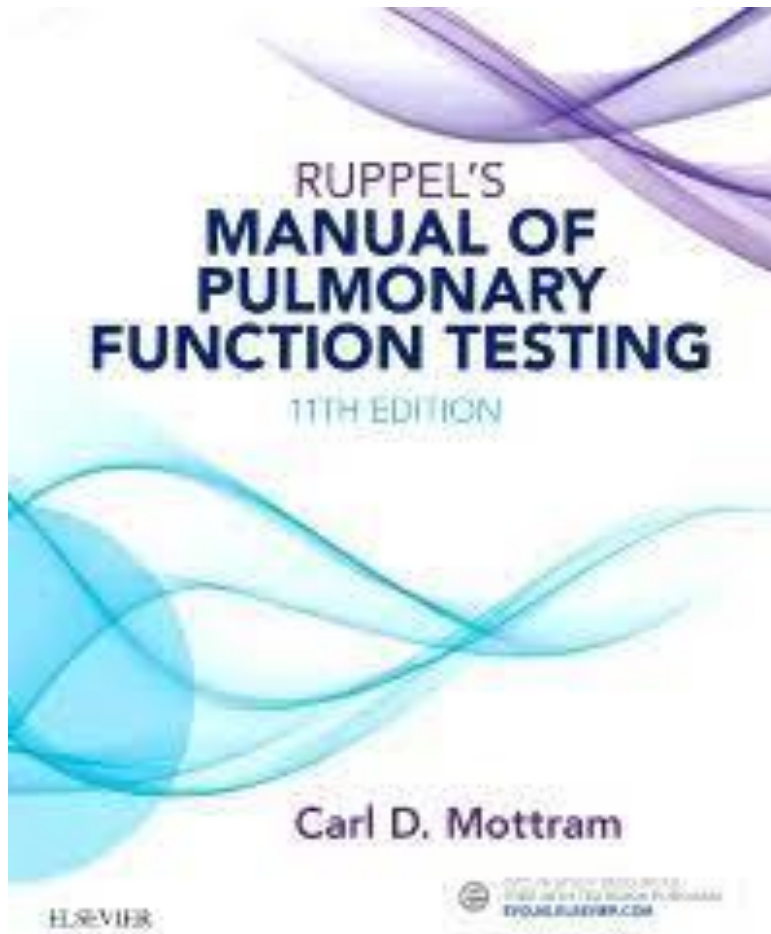


TEST BANK



**Test Bank Ruppel's Manual of
Pulmonary Function Testing,
11th Edition by Carl Mottram**

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Chapter 1: Indications for Pulmonary Function Testing Test Bank

MULTIPLE CHOICE

1. Who first popularized spirometry for the evaluation of pulmonary function?
 - a. August and Marie Krogh
 - b. Alvan Barach
 - c. John Severinghaus
 - d. John Hutchinson

ANS: D

Hutchinson popularized the concept of using VC to assess lung function, and the names he gave to several other lung compartments are still used today.

DIF: 1 REF: p. 2 OBJ: None MSC: NBRC: None

2. Which of the following are indications for performing spirometry?
 1. Assess the risk of lung resection.
 2. Determine the response to bronchodilator therapy.
 3. Assess the severity of restrictive lung disease.
 4. Quantify the extent of COPD.
 - a. 1 and 4
 - b. 2 and 3
 - c. 1, 2, and 4
 - d. 2, 3, and 4

ANS: C

Spirometry cannot assess severity of restriction; for that you need to measure lung volumes (see Box 1-2, Chapter 1).

DIF: 1 REF: p. 7 OBJ: EL-2 MSC: NBRC: None

3. The main indication for the measurement of lung volumes is to do which of the following?

- a. Diagnose or assess the severity of restriction.
- b. Evaluate the severity of pulmonary hypertension.
- c. Determine the level of cardiopulmonary fitness.
- d. Assess the risk of abdominal surgical procedures.

ANS: A

The most common reason for measuring lung volumes is to identify restrictive lung disease.

DIF: 1 REF: p. 35 OBJ: EL-2 MSC: NBRC: None

4. DLCO measurements may be indicated to evaluate pulmonary involvement in which of the following systemic diseases?
 - a. Asthma
 - b. Sarcoidosis
 - c. Exertional hypoxemia

d. Guillain-Barré syndrome

ANS: B

Sarcoidosis is the only systemic disease listed that affects gas exchange.

DIF: 1 REF: p. 9 | p. 19 | p. 21 | p. 35 OBJ: EL-2 MSC: NBRC: None

5. Blood gas analysis is used with patients with COPD to do which of the following?

- a. Monitor airway responsiveness.
- b. Determine level of cardiopulmonary fitness.
- c. Detect pulmonary hypertension.
- d. Assess need for supplementary O₂.

ANS: D

Blood gas analysis is most commonly used to determine the need for supplemental oxygen and to manage patients who require ventilatory support.

DIF: 2 REF: p. 15 OBJ: EL-1
MSC: NBRC: CPFT 2A-2

6. Which of the following cause emphysema?

1. α₁- Antitrypsin deficiency
 2. Exposure to environmental pollutants
 3. Radiation therapy
 4. Cigarette smoking
- a. 1 and 2
 - b. 3 and 4
 - c. 1, 2, and 4
 - d. 2, 3, and 4

ANS: C

Emphysema is caused primarily by cigarette smoking. Some emphysema is caused by the absence of a protective enzyme. Chronic exposure to environmental pollutants can also contribute to the development of emphysema.

DIF: 1 REF: p. 11 OBJ: EL-3 | AL-2 MSC: NBRC: None

7. An adult patient complains of chest tightness and cough whenever he jogs in cold weather. These symptoms are consistent with which of the following?

- a. Cystic fibrosis
- b. Asthma
- c. Pulmonary hypertension
- d. Idiopathic pulmonary fibrosis

ANS: B

Agents or events that cause an asthmatic episode are called triggers (see Box 1-7, Chapter 1). Antigens such as animal dander, pollens, and dusts are the most common triggers. Other common triggers include exposure to air pollutants and exercise in cold or dry air.

DIF: 2 REF: p. 16 OBJ: EL-3 MSC: NBRC: None

8. Which of the following statements concerning tumors in the upper airway is true?
- There may be variable or fixed obstruction.
 - Fixed obstruction will be present.
 - Variable obstruction will be present.
 - Small airway obstruction will result.

ANS: A

Tumors involving the upper airway may cause variable or fixed obstruction.

DIF: 2 REF: p. 19 OBJ: EL-2

MSC: NBRC: CPFT 3C-3

9. Sarcoidosis is a systemic disorder that usually causes which of the following?
- A restrictive ventilatory defect
 - An obstructive ventilatory defect
 - Hyperreactive airways
 - Primary pulmonary hypertension

ANS: A

Restriction is often associated with the following: interstitial lung diseases, including idiopathic fibrosis, pneumoconioses, and sarcoidosis.

DIF: 1 REF: p. 19 | p. 21 OBJ: EL-3 MSC: NBRC: None

10. For which of the following conditions might pulmonary function testing be contraindicated?
- Vocal cord dysfunction
 - Untreated pneumothorax
 - Congestive heart failure (CHF)
 - Bronchiolitis obliterans

ANS: B

Pulmonary function tests are usually contraindicated in the presence of pneumothorax. However, undiagnosed pneumothorax may present a risk if pulmonary function studies are performed.

DIF: 1 REF: p. 23 OBJ: EL-4

MSC: NBRC: CPFT 2B-6

11. Which of the following correctly describe(s) appropriate physical measurements before pulmonary function testing?
1. Actual body weight should be used to calculate predicted values.
 2. Standing height should be measured when the patient is barefoot.
 3. Arm span should be used instead of height for a patient with kyphosis.
 4. Age should be recorded to the nearest decade (10 years).
- a. 1 only
 - b. 2 and 3
 - c. 1 , 2, and 4
 - d. 1 , 2, 3, and 4

ANS: B

Various physical measurements are required for estimating each patient's expected level of pulmonary function. Age to the nearest month, height to the nearest 0.1 cm, and weight are usually recorded in addition to the patient's gender. Race or ethnic origin should also be recorded. (Although body weight is recorded, it is not used to calculate predicted values.)

DIF: 1 REF: p. 29 OBJ: None
MSC: NBRC: CPFT 3A-20

12. In addition to explaining the procedure for each pulmonary function test to the patient, the pulmonary function technologist should do which of the following?
- a. Briefly explain the physiologic basis of the test.
 - b. Demonstrate the correct performance of the test maneuver.
 - c. Limit feedback to the patient to reduce the placebo effect.
 - d. Explain the exact number of efforts that will be required for each test.

ANS: B

In addition to a description of the test, the maneuver should always be demonstrated.

DIF: 1 REF: p. 32 OBJ: None
MSC: NBRC: CPFT 2B-6

13. The single-breath diffusing capacity test was first described by:
- a. John Severinghaus
 - b. August and Marie Krogh
 - c. Robert Hyatt
 - d. Leland Clark

ANS: B

The basis for the modern single-breath diffusing capacity (DLCO) test was described by August and Marie Krogh in 1911.

DIF: 1 REF: p. 5 OBJ: None MSC: NBRC: None