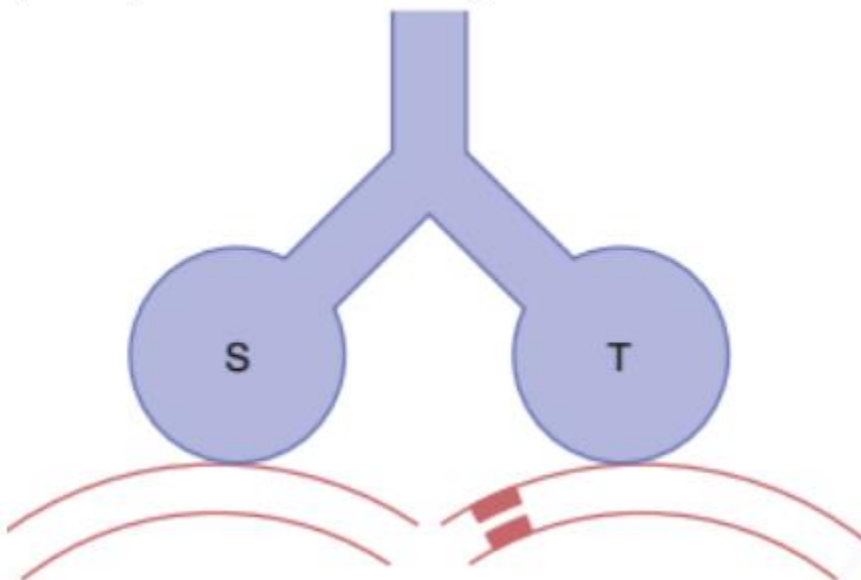


1. The maximum amount of gas that can be exhaled after a full inspiration is called:
- A. Expiratory reserve volume
 - B. Vital capacity
 - C. Total lung capacity
 - D. Functional residual capacity**

2. The figure below shows two lung units (S and T) with their blood supplies. Lung unit S has an ideal relationship between blood flow and ventilation. Lung unit T has a compromised blood flow. What is the relationship between total dead space (TDS), physiologic dead space (PDS) and anatomic dead space (ADS) for these lung units? Lung unit S Lung unit T

	Lung unit S	Lung unit T
A	$TDS < ADS$	$TDS = ADS$
B	$TDS = PDS$	$TDS > PDS$
C	$TDS = ADS$	$TDS < ADS$
D	$TDS = ADS$	$TDS > ADS$
E	$TDS > ADS$	$TDS < ADS$

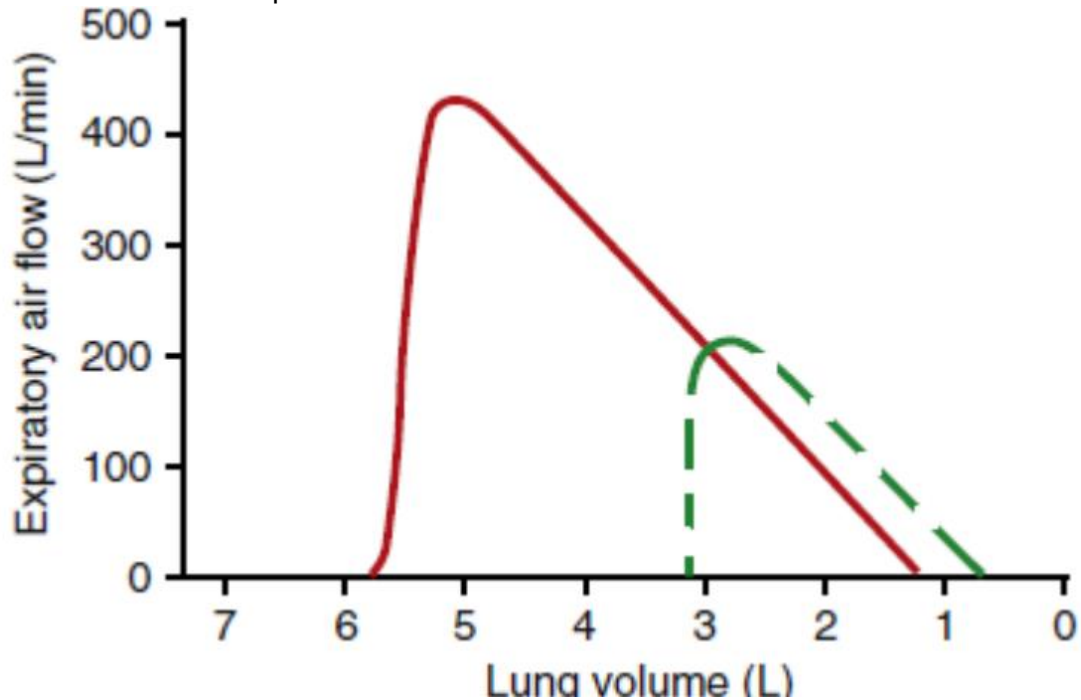


Answer D

3. The residual volume is

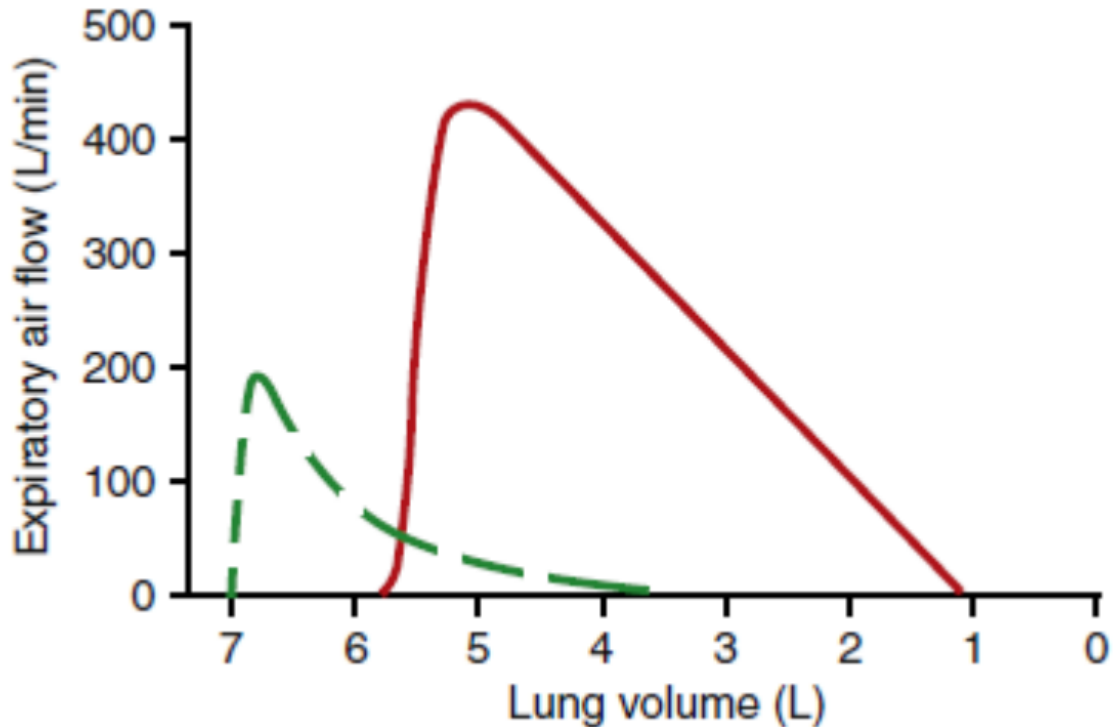
- A. The gas remaining in the lungs at the end of a full expiration
- B. Greater on average in men than in women
- C. 3–4 liters on average in young adults
- D. Measured directly using a spirometer
- E. Smaller in old than in young people

4. A 62-year-old man reports difficulty breathing. The figure below shows an MEFV (maximum expiratory flow–volume curve from the patient (green solid line) and from a typical healthy individual (red dotted curve). Which of the following best explains the MEFV curve of the patient?



- A. Fibrosis
- B. Asthma
- C. Bronchospasm
- D. Emphysema
- E. Old age

5. The maximum expiratory flow–volume (MEF–V) curves shown in the figure below were obtained from a healthy person (red solid curve) and a 57-year-old man with shortness of breath (green dotted curve). The man with shortness of breath likely has which disorder?



- A. Asbestosis
- B. Emphysema**
- C. Kyphosis
- D. Scoliosis

6. By conventional spirometry, one can be determined:

- A. Vital capacity**
- B. Functional residual capacity
- C. Residual volume
- D. Total lung capacity

7. The FEV1/FVC ratio is normally greater than:

- A. 0.8**
- B. 0.7
- C. 0.9
- D. 0.5

8. The most sensitive index of small airways resistance in a patient with bronchial asthma is:

A. vital capacity

B. FEV₁

C. FEV₁/FVC

D. PEF

E. Maximal Mid-Expiratory Flow Rate (Forced Expiratory Flow 25%–75%)

9. In chronic obstructive lung disease:

A. FRC decreases

B. TLC decreases

C. VC decreases

D. RV decreases