

Pulmonary Ventilation

Read Chapter 19.3

Fill in the blanks

1. When we breathe in, the air moves into our lungs because the pressure inside the lungs (increases or decreases) _____
2. During relaxed inhalation the muscles contracting include the _____ and the _____
3. During forced exhalation, such as when coughing or laughing, the muscles contracting include the _____ and the _____
4. Boyle's law states that as the volume of a container decreases, the pressure (increases or decreases) _____
5. When you are not moving air in or out of the lungs, the small moment between breaths, the alveolar pressure is (the same as, higher than, lower than) _____ the atmospheric pressure.
6. Standard atmospheric pressure at sea level is most often approximately _____ mmHg
7. The intrapleural pressure is always a bit (higher or lower) _____ than the alveolar pressure. This is important for preventing the lungs from _____.
8. If the lungs are healthy, they can easily expand, this is (compliance or recoil) _____
9. If the lungs are unhealthy, such as in a person with emphysema, and they are unable to effectively push air out of the lungs, this is due to a decrease in (compliance or recoil) _____
10. Match the following description with the correct lung volume: Inspiratory reserve, inspiratory capacity, tidal volume, vital capacity.
 - a. The volume of air we normally inhale and then exhale at rest _____
 - b. The amount of air we can breathe in after already taking a normal breath in _____
 - c. The amount of total air we can breathe fully in and fully out _____
 - d. The amount of air we breathe in normally PLUS all the extra air we can breathe in _____

11. The volume of air we can never exhale is called the _____
12. The amount of air in the trachea that moves in and out but never reaches the respiratory structures is called _____
13. If Betty has a respiration rate of 14 breaths per minute and her tidal volume is 450 ml, and if she has a dead space of 120ml. What is her alveolar ventilation? _____ L/min