

## Chapter 2: Normal Voice: Anatomy and Physiology Throughout the Lifespan

### Multiple Choice

1. The largest of the vertebrae are the
  - a. cervical
  - b. thoracic
  - c. lumbar
  - d. coccyx
2. The bifurcation of the trachea at the level of the fifth thoracic vertebra is known as the
  - a. pleural membrane
  - b. alveoli
  - c. carina
  - d. plural duct
3. When the thorax enlarges, the
  - a. lungs contract and exhalation begins
  - b. lungs enlarge and exhalation begins
  - c. lungs contract and inhalation begins
  - d. lungs enlarge and inhalation begins
4. Most voice disordered patients who report that they run out of air when speaking would benefit from
  - a. respiratory training exercises
  - b. speaking at high lung volumes
  - c. focusing on taking breaths at appropriate places in a phrase
  - d. speaking at low lung volumes
5. The reduced ability of the larynx to be palpated from side to side may be indicative of
  - a. degenerative changes
  - b. the presence of a mass
  - c. muscle tension dysphonia
  - d. all the above
6. Contraction of the interarytenoid muscles serve to
  - a. draw the arytenoids together
  - b. decrease the distance between the cricoid and thyroid cartilages
  - c. tilt the thyroid cartilage superiorly
  - d. pull the arytenoids apart
7. The true vocal folds are lubricated by
  - a. sacs found in the ventricles
  - b. glands found on the ventricular folds
  - c. the rima glottis
  - d. a and b
8. The mucosal wave
  - a. is comprised of the intermediate layer of the lamina propria
  - b. may be interrupted due to a space occupying lesion or edema
  - c. can be seen by the naked eye
  - d. is adhered tightly to the vocal ligament
9. When vocal folds lengthen, pitch normally
  - a. increases, due to contraction of the cricothyroid
  - b. decreases, due to contraction of the thyromuscularis
  - c. remains the same, due to contraction of the thyroarytenoid
  - d. increases, due to contraction of the interarytenoid

10. The movement and positioning of the velum changes the size and shape of
  - a. the pharynx
  - b. the oral cavity
  - c. the nasal cavity
  - d. all the above
  
11. The primary muscles of inspiration include the
  - a. external intercostals and diaphragm
  - b. external intercostals and internal intercostals
  - c. internal intercostals and abdominals
  - d. internal intercostals and diaphragm
  
12. The posterior cricoarytenoid muscles
  - a. adduct the vocal folds
  - b. are extrinsic laryngeal muscles
  - c. provide support to the lateral cricoarytenoid muscles
  - d. abduct the vocal folds
  
13. Structural changes across physiological systems that occur as a normal part of aging
  - a. result in a voice that sounds childlike
  - b. have no impact on voice
  - c. often result in psychogenic dysphonia
  - d. affect the accuracy, speed, and range of muscular movements
  
14. Vocal pitch
  - a. is a perceptual attribute correlated with loudness
  - b. is a perceptual attribute correlated with intensity
  - c. is a perceptual attribute correlated with frequency
  - d. is a perceptual attribute correlated with resonance
  
15. Breathy voice quality
  - a. is often associated with increased tension of the vocal folds
  - b. is often associated with incomplete glottal closure
  - c. is often associated with complete closure of the vocal folds
  - d. is often associated with high intensity
  
16. The “modal” register
  - a. is the register used for most of conversational speech
  - b. includes frequencies that span approximately 150 to 500 Hz for adult men
  - c. includes frequencies that span approximately 80 to 450 Hz for adult women
  - d. may also be referred to as falsetto voice
  
17. The vocal ligament
  - a. is attached posteriorly to the thyroid cartilage
  - b. is attached anteriorly to the thyroid cartilage
  - c. is attached posteriorly to the muscular process of the arytenoid cartilage
  - d. is attached anteriorly to the muscular process of the arytenoid cartilage
  
18. Breathing for life
  - a. has an inhalation to exhalation ratio of 2:1
  - b. is an active process
  - c. is the same as quiet breathing
  - d. involves a high volume of air at 25% of vital capacity
  
19. The intrinsic laryngeal muscles
  - a. connect the laryngeal cartilages to each other
  - b. connect the laryngeal cartilages to cartilages outside the larynx
  - c. connect the intrinsic laryngeal membranes to the intrinsic laryngeal ligaments
  - d. connect the laryngeal cartilages to intrinsic laryngeal ligaments

20. Total lung capacity
- is the volume of air remaining in the lungs and airways at the end of a resting tidal exhalation
  - is the amount of air inspired and expired during a single respiratory cycle
  - is the maximum volume of air that can be inspired
  - is the total volume of air contained in the lungs and airways after a maximum inspiration

## **Chapter 2: Normal Voice: Anatomy and Physiology Throughout the Lifespan**

- C
- C
- D
- C
- D
- A
- D
- B
- A
- D
- A
- D
- D
- C
- B
- A
- B
- C
- A
- D