

What is the Larynx?

Worksheet

The larynx is a cartilage-and-muscle 'voice box' in the neck that houses the vocal folds, controls airflow to the lungs, and seals the airway during swallowing.

Questions

1. Which cartilage forms the laryngeal prominence (Adam's apple)?
 - A) Cricoid
 - B) Thyroid
 - C) Epiglottis
 - D) Arytenoid
2. Which is the only muscle that abducts (opens) the vocal folds?
 - A) Lateral cricoarytenoid
 - B) Thyroarytenoid
 - C) Posterior cricoarytenoid
 - D) Transverse arytenoid
3. The cricothyroid membrane, used in emergency airway access, lies between which two cartilages?
 - A) Thyroid & epiglottis
 - B) Thyroid & cricoid
 - C) Cricoid & tracheal rings
 - D) Arytenoid & corniculate
4. Which nerve innervates most intrinsic laryngeal muscles except the cricothyroid?
 - A) Vagus nerve trunk
 - B) Hypoglossal nerve
 - C) Recurrent laryngeal nerve
 - D) Glossopharyngeal nerve
5. Where is an emergency cricothyrotomy performed and why?
6. A patient's vocal folds cannot abduct on one side, causing hoarseness and risk of airway compromise. Which muscle is paralyzed?
7. During swallowing, how does the larynx prevent aspiration?
8. Define: How many cartilages make up the larynx?
9. Define: Which cartilage is the only complete ring in the airway?
10. Define: What is the only vocal fold abductor muscle?

Answer Key

1. B) Thyroid - The thyroid cartilage's two laminae fuse anteriorly, forming the prominence.
2. C) Posterior cricoarytenoid - The posterior cricoarytenoid is the sole abductor of the vocal folds.
3. B) Thyroid & cricoid - The cricothyroid membrane connects the thyroid and cricoid cartilages.
4. C) Recurrent laryngeal nerve - The recurrent laryngeal nerve, a branch of the vagus, supplies them.
5. Identify the cricothyroid membrane between the thyroid and cricoid cartilage It's superficial, avascular, and below the vocal folds An incision here rapidly secures the airway when oral intubation fails.
6. Recall that the posterior cricoarytenoid is the sole abductor of the vocal folds It's innervated by the recurrent laryngeal nerve Damage during thyroid surgery can paralyze it The result is inability to open the airway on that side.
7. The larynx elevates via the suprahyoid muscles The epiglottis tips posteriorly to cover the laryngeal inlet Vocal and vestibular folds adduct to seal the airway Food is diverted into the piriform recesses toward the esophagus.
8. Nine - three unpaired (thyroid, cricoid, epiglottis) and three paired (arytenoid, corniculate, cuneiform).
9. The cricoid cartilage - signet-ring shaped, sits at C6.
10. Posterior cricoarytenoid.

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