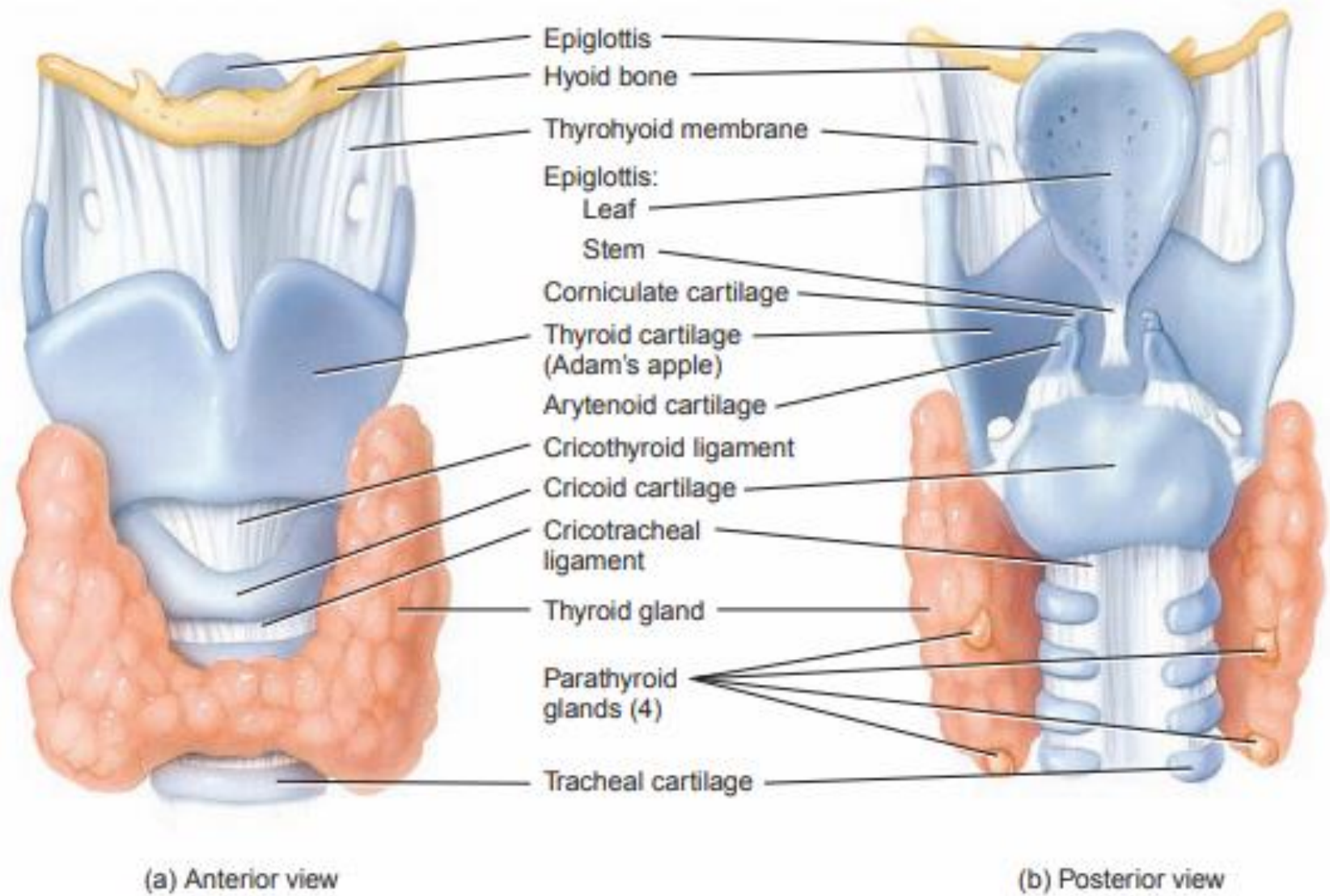
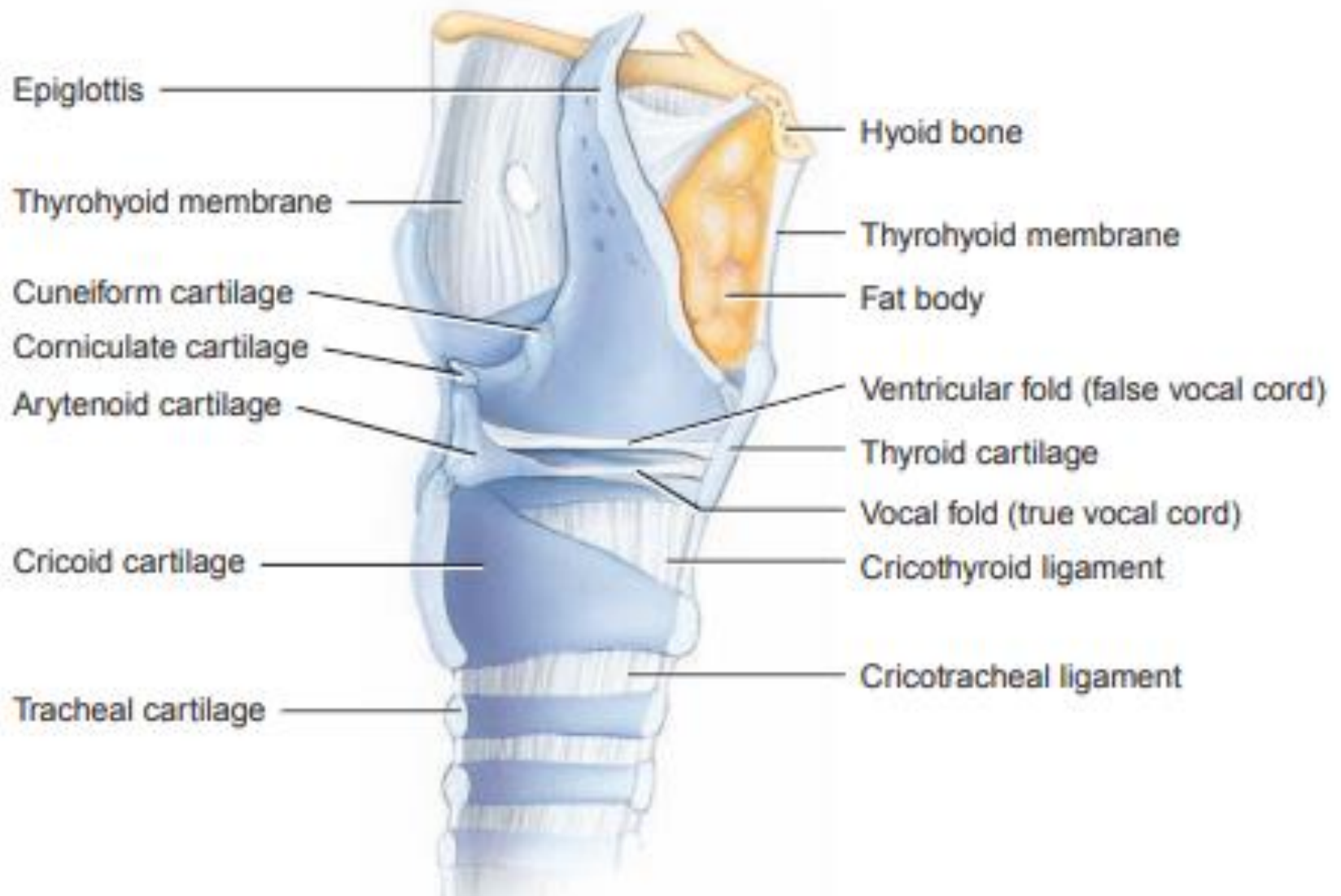





# LARYNX



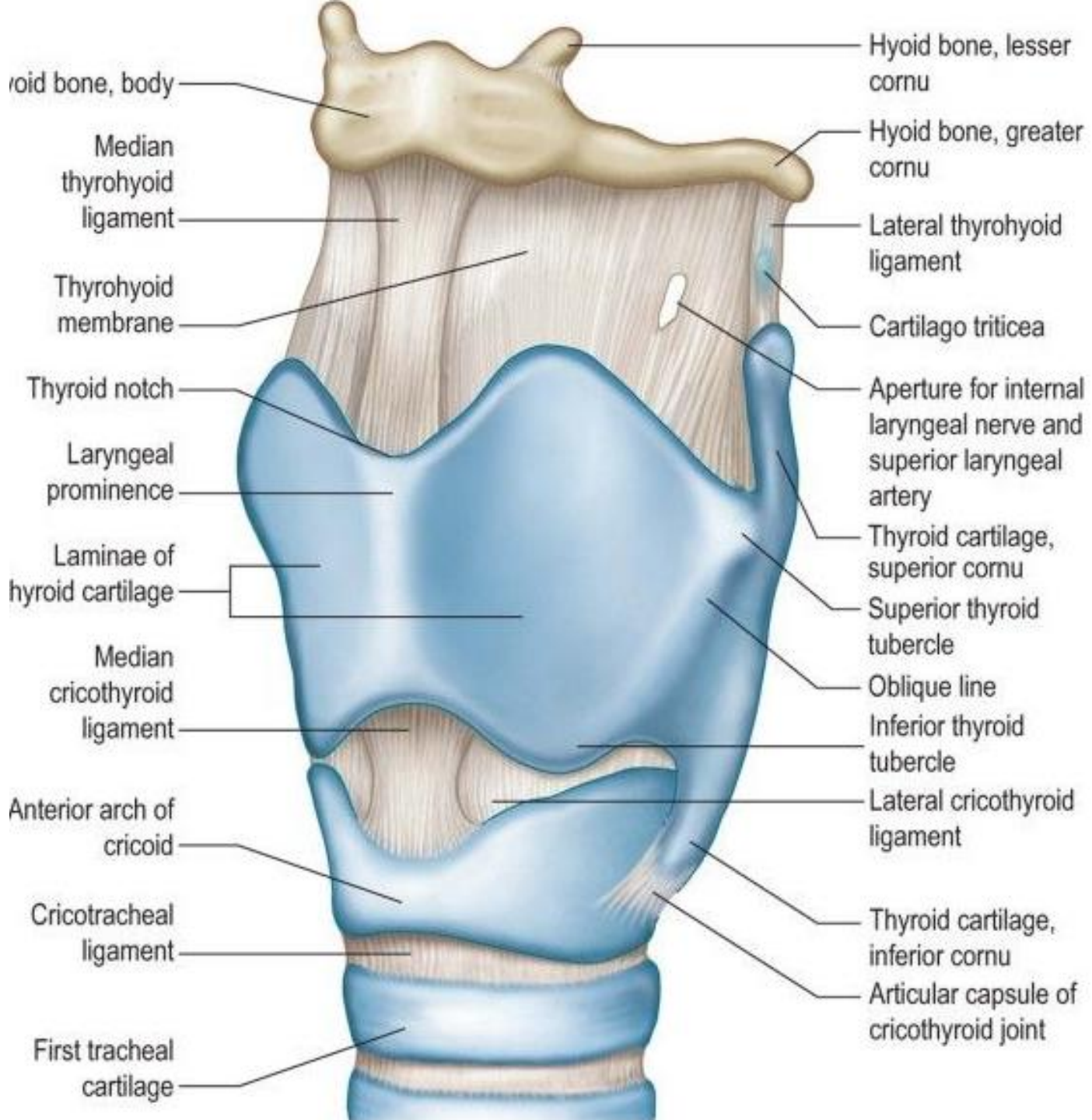


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- The larynx, or voice box, is a short passageway that connects the laryngopharynx with the trachea.
  - lies in the midline of the neck anterior to the esophagus
  - Vertebral level- C4–C6



The wall of the larynx is composed of nine pieces of cartilage.


- Unpaired cartilage- thyroid cartilage, epiglottis, and cricoid cartilage
- Paired cartilage- arytenoid, cuneiform, and corniculate cartilages.






# Thyroid cartilage

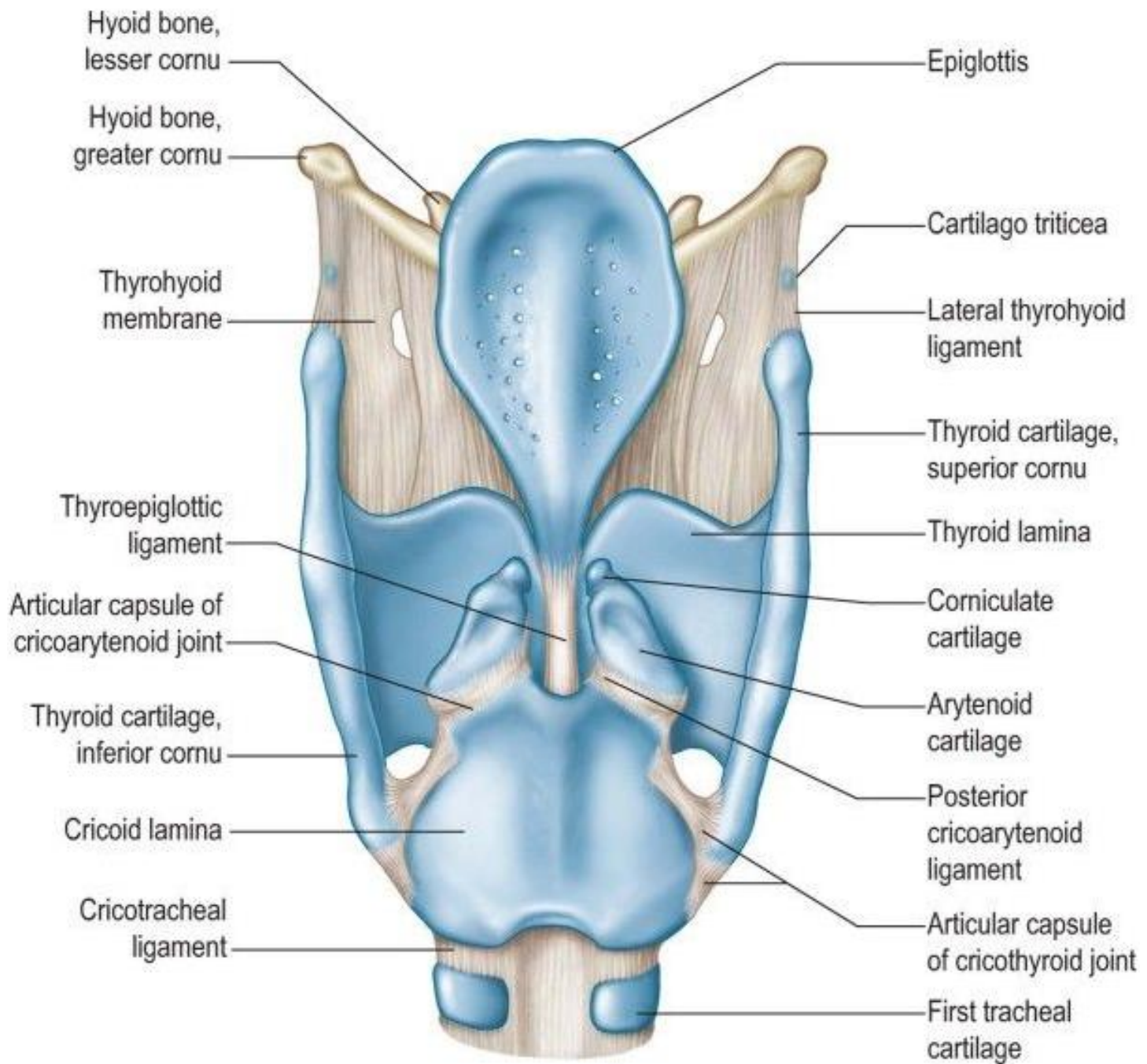
- The thyroid (shield like) cartilage consists of two laminae.
- Each lamina roughly quadrilateral. The laminae are placed obliquely relative to the midline.
- Their posterior borders are far apart but the anterior borders approach each other at an angle of about 90 degree in male and about 120 degree in female.

- 
- Laryngeal prominence or Adam's apple- the lower part of anterior border of Rt and Lt laminae fuse and form a median projection.
  - Posterior margin of each lamina is prolonged upwards to form a projection c/d superior cornu and downwards to form a smaller projection c/d inferior cornu.





The ligament that connects the thyroid cartilage to the hyoid bone is called the thyrohyoid membrane.




# Epiglottis

- large, leafshaped piece of elastic cartilage.
- The “stem” of the epiglottis is attached to the anterior margins of the laminae of the thyroid cartilage.
- The broad superior “leaf” portion is unattached and is free to move up and down like a trap door.

# Cricoid cartilage

- The cricoid cartilage is a ring of hyaline cartilage that forms the inferior wall of the larynx.
- The posterior part of the ring is enlarged to form a roughly quadrilateral lamina. The rest of the cartilage is c/d the arch.
- The inferior cornua of the thyroid cartilage articulates with the lateral sides of the arch of cricoid cartilage.
- On each side, the superolateral aspect of lamina of the cricoid cartilage bears a facet for articulation with the arytenoid cartilage.

- 
- It is attached to the first ring of cartilage of the trachea by the cricotracheal ligament. The thyroid cartilage is connected to the cricoid cartilage by the cricothyroid ligament. The cricoid cartilage is the landmark for making an emergency airway called a tracheotomy

# Arytenoid cartilage

- The paired arytenoid cartilages are triangular pieces of mostly hyaline cartilage located at the posterior, superior border of the cricoid cartilage.

# Corniculate cartilage

- The paired corniculate cartilages, horn-shaped pieces of elastic cartilage, are located at the apex of each arytenoid cartilage.



# Cuneiform cartilage

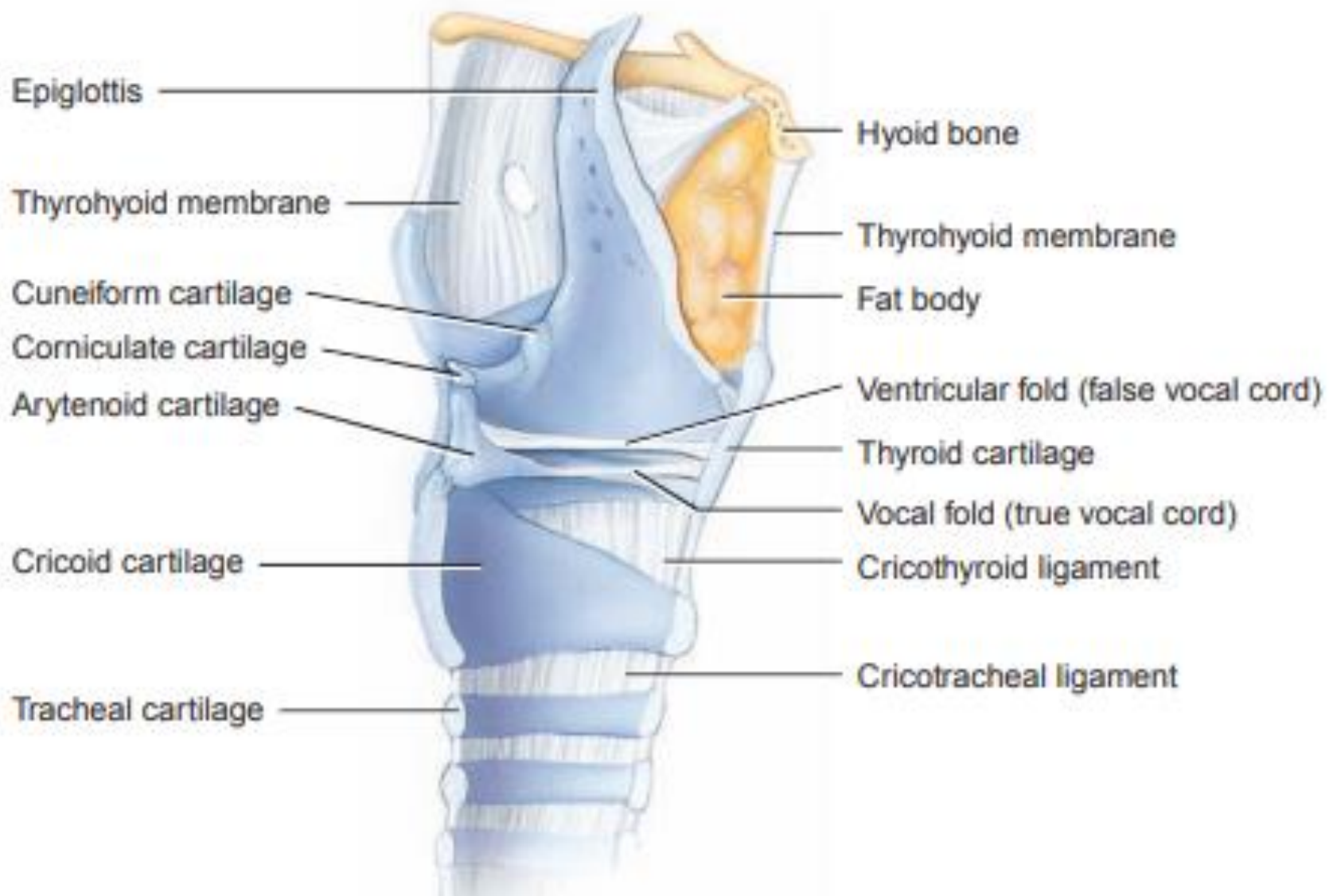
- The paired cuneiform cartilages, clubshaped elastic cartilages anterior to the corniculate cartilages, support the vocal folds and lateral aspects of the epiglottis.

# Tritiate cartilage

The tritiate cartilages are two small nodules of elastic cartilage, situated one on either side above the larynx within the posterior free edge of the thyrohyoid membrane, about halfway between the superior cornu of the thyroid cartilage and the tip of the greater cornu of the hyoid bone.

# Internal structure

The mucous membrane of the larynx forms two pairs of folds: a superior pair called the ventricular folds (false vocal cords) and an inferior pair called the vocal folds (true vocal cords). The space between the ventricular folds is known as the rima vestibuli and the fissure between true vocal cords is the rima glottidis or glottis. The true vocal folds are the primary source of phonation, whereas the vestibular folds normally do not contribute directly to sound production.



# Muscles of larynx

The muscles of the larynx may be divided into extrinsic and intrinsic groups.

The extrinsic muscles-

- thyrohyoid,
- sternothyroid
- sternohyoid
- inferior constrictor muscle of the pharynx.



□ The intrinsic muscles are-

- cricothyroid
- posterior and lateral cricoarytenoid
- transverse and oblique arytenoid
- aryepiglotticus
- thyroarytenoid
- vocalis
- thyroepiglotticus.



# Blood supply of larynx

Superior and inferior laryngeal arteries and veins



# Lymphatic drainage

- Deep cervical lymph node
- Pretracheal and paratracheal lymph node

# Nerve supply

- Internal and external branches of the superior laryngeal nerve
- Recurrent laryngeal nerve
- Sympathetic nerves