

Anterior view of the larynx

Posterior view of the larynx

* Respiratory System

- 1) Upper Respiratory tract :- Nose , Pharynx
- 2) Lower Respiratory tract :- Larynx , trachea , lung along with Bronchial tree.

1. Larynx (कंठिका) (Voice Box)

- It is a Musculo - cartilaginous structure, lined with Mucous membrane.
- It extends b/w the Root of tongue and Hyoid Bone to trachea.
- It is formed by 9 cartilage connected by ligaments, fibrous membrane and 8 muscles.
- Location :- Anterior part of the Neck.
- Significance of Larynx -

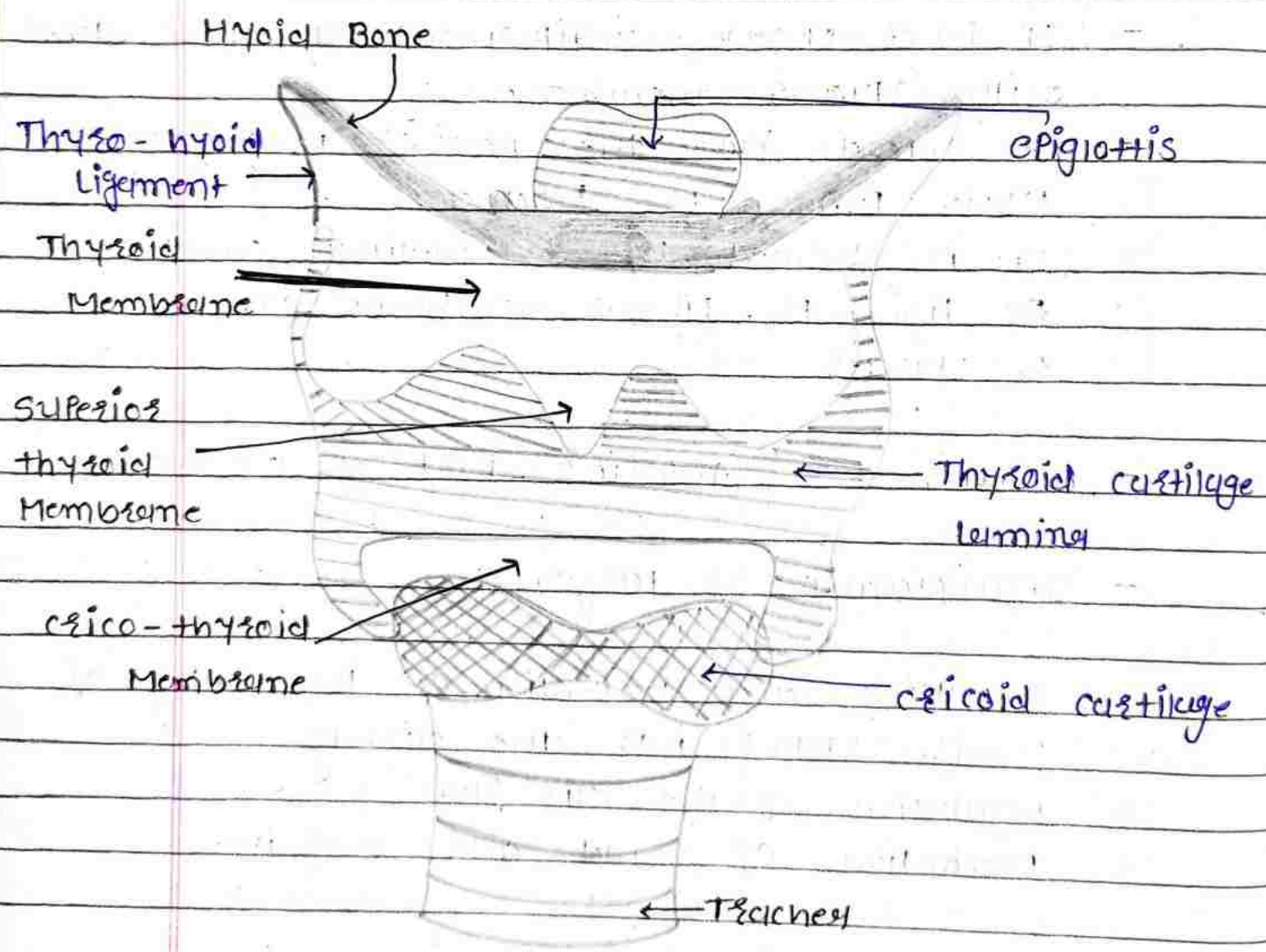
1. Expulsion and prevention of the entry of foreign matter into the airway.
2. Regulation of the air flow.
3. Production of sound and coughing.

- Extent :- C3 to C6

* Female air larynx is (गुरु शिरो) bc2 Male air (मन Neck) is (शिरु) शिरु।

- Relations :-

- 1) Posteriorly :- Pharynx
- 2) Laterally :- Thyroid gland and Infrahyoid muscle.
- 3) Postero-laterally :- carotid sheath and their contents.



Ant. view of the larynx

* cartilages of the larynx

- total 9 cartilage 3 Paired and 3 unpaired

- 1. Thyroid
 - 2. cricoid
 - 3. epiglottis
- } un paired cartilage

- 1. arytenoid
 - 2. corniculate
 - 3. cuneiform
- } Paired cartilage

* → 3 unpaired cartilage -

cartilage	shape & Type	level	parts	Attachment	Function
1. Thyroid cartilage	largest (laryngeal cartilage)	C4 - C5 - 2: vertebral level	Quadrilateral laminae meet in front forming laryngeal prominence	- Superior border - Inferior border	- Protects vocal cords - Provides Membrane attachment for laryngeal muscles & ligaments
		Men: 90° Female: 120°	(Adam's apple)	- cricothyroid Membrane - Oblique line on lateral	- Vocal fold tension.

2. Ring opposite - Anterior - Upper - Provides
 Cricoid Shaped C6 arch is Bores base of
 cartilage. Vertebral Narrow :- Laryngeal
 and cricoid - Framework
 posterior noid &
 arch is cricothy - Maintains
 Broad.oid airway
 - Joint on Muscle. Patency
 lamina
 cricoid - Lower
 with Bores
 arytenoid :- First
 cartilage tracheal
 Ring by
 cricotracheal
 ligament.

3. Leaf Behind - Upper - Attached - covers
 Epiglottic Shaped Root Broad to Laryngeal
 cartilage Elastic of Part is Hyoid & inlet
 cartilage tongue Free tongue during
 (flexible) in By swallowing
 Front - Lower fold
 of Stalk via
 lary- attached thro &
 geal to Hyoid
 inlet thyroid epiglottic
 cartilage. ligament

* → 3 Paired cartilages

1) Arteroid cartilages.

- Location :- Superior to the cricoid cartilage
- Shape :- Pyramidal
- Process :- 2 Process, extend.

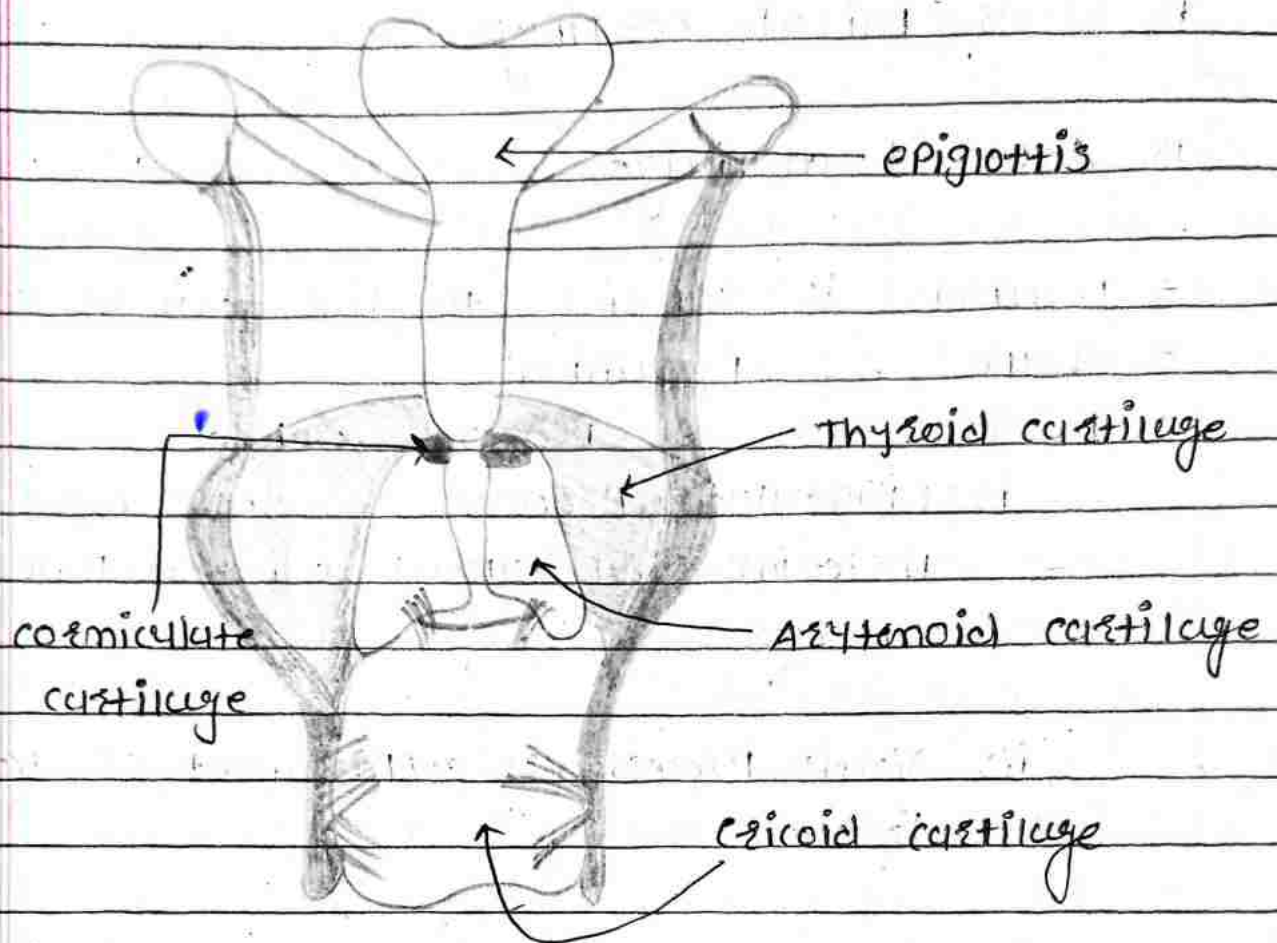
i) Muscular Process :- attachment of posterior and lateral crico-arteroid muscles.

ii) Vocal Process :- attachment of vocal ligament.

- Apex :- The apex points upward and gives attachment to the aryepiglottic fold.

2) corniculate and cuneiform

These are small pairs of nodules present in the aryepiglottic fold of mucous membrane.



Post. view of the
Larynx

* Ligaments :-

i) extrinsic ligament :-

1) Thyro-hyoid Membrane :-

- Fibro-elastic Membrane

- extending from. SUP. Border of Thyroid cartilage to Hyoid Bone.

- Mid line called :- Median thyrohyoid ligament

- Posterior line called :- lateral thyrohyoid ligament.

2) Hyo-epiglottic Ligament

- extends from the Midline of the superior surface of the epiglottis to the Hyoid bone.

ii) Intrinsic ligaments-

- extends from Arytenoid cartilage and the side of the epiglottis.
- vestibular ligaments
- crico-thyroid ligament
- Vocal ligament

* Interior of the larynx -

i) Upper compartment -

- Vestibular fold - (False vocal cords)
These are thick fold
also called Rima vestibularis

ii) Middle Compartment.

- Vocal fold (True vocal cords)
these are Mucous membrane
2 vocal fold is called Rima glottidis.

iii) Inferior compartment.

- also called Inferior glottic cavity
- Provide sensory Innervation to the Vocal folds.

* Laryngeal Muscles.

- | | |
|--------------------------------------|-------------------------------------|
| 1) Posterior crico-arytenoid Muscles | } Intrinsic
Laryngeal
Muscles |
| 2) Lateral crico-arytenoid Muscles | |
| 3) Transverse arytenoid Muscles. | |
| 4) Crico-thyroid M. Muscles | |
| 5) Superior Hyoid Muscles | } Extrinsic
Laryngeal Muscles |
| 6) Inferior Hyoid Muscles | |

* Arteries :- Branches of Superior and Inferior thyroid Arteries.

* Veins :- Superior and Inferior thyroid vein.

* Lymphatics :- Drain into upper and lower deep cervical Nodes.

* Nerves :- Internal and external branch of Superior laryngeal Nerves.
:- Recurrent laryngeal Nerves
:- Sympathetic Nerves.

* Clinical Anatomy

1) Laryngitis :- an inflammation of larynx causing hoarse voice.

2) Laryngeal oedema :- cause airway obstruction.

3) Recurrent laryngeal Nerve Paralysis :-