

LARYNX

- * Upper expanded part of LRI
- * Voice box / organ of phonation
- * Functions;

1. Phonation
2. Respiration
3. Protection
4. Deglutition.

Location: Ant midline of upper part of neck.

Extend: From root of tongue

↓
trachea

C₃-C₆

Laryngeal Cartilages

Unpaired

- * Thyroid (CPL)
- * Cricoid (CPL)
- * Epiglottis. (PL)

Paired

- * Arytenoid (CPL)
- * Corniculate
- * Cuneiform

③ Thyroid cartilages

- consist of 2 quadrilateral laminae
- met in front at an angle → thyroid angle.
- thyroid angle acute in male
obtuse in female

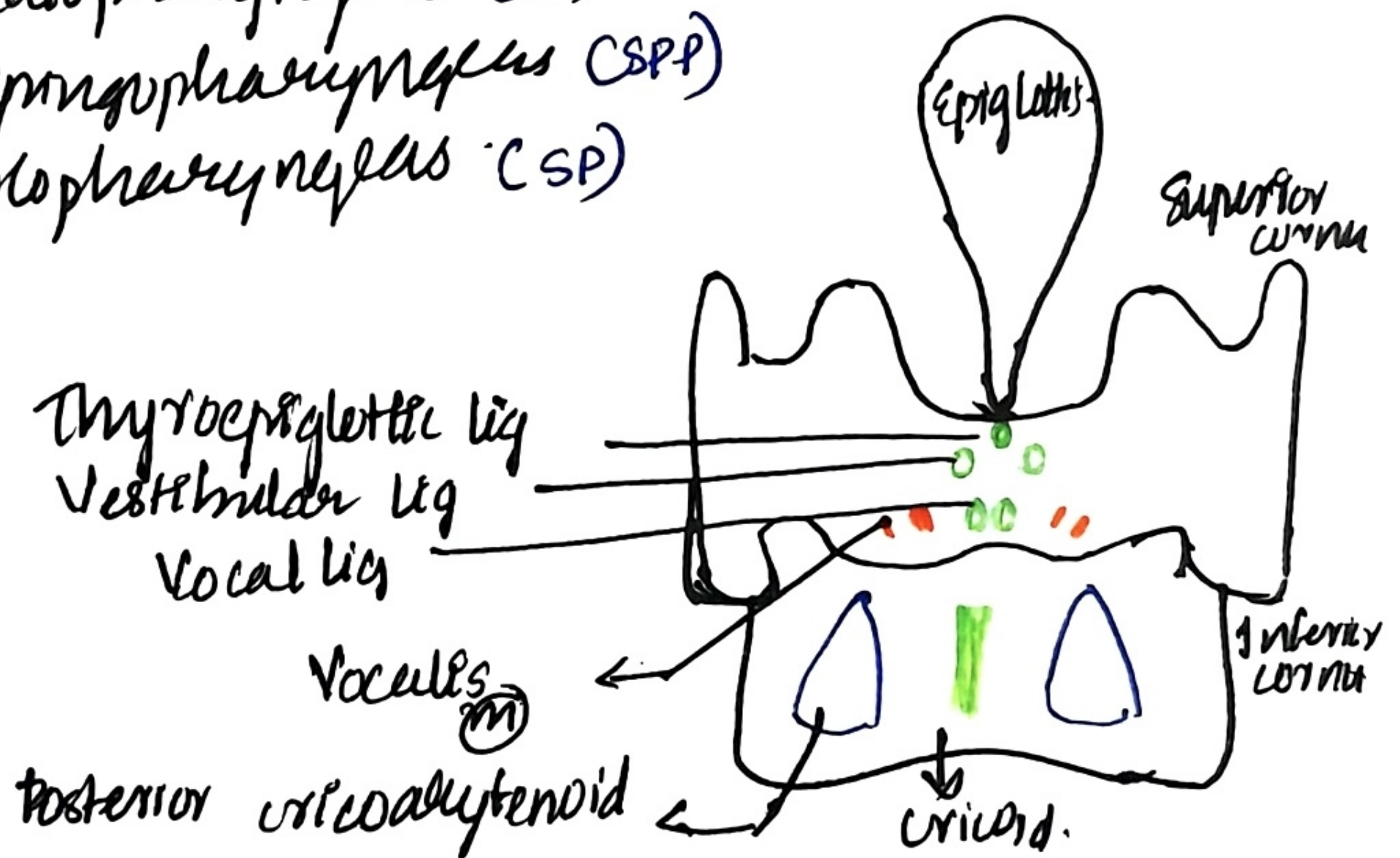
Adam's apple → Prominent thyroid angle in males.

Attachments to posterior surface

- * Thyroepiglottic lig
- * A pair of vestibular lig.
- * A pair of vocal lig.

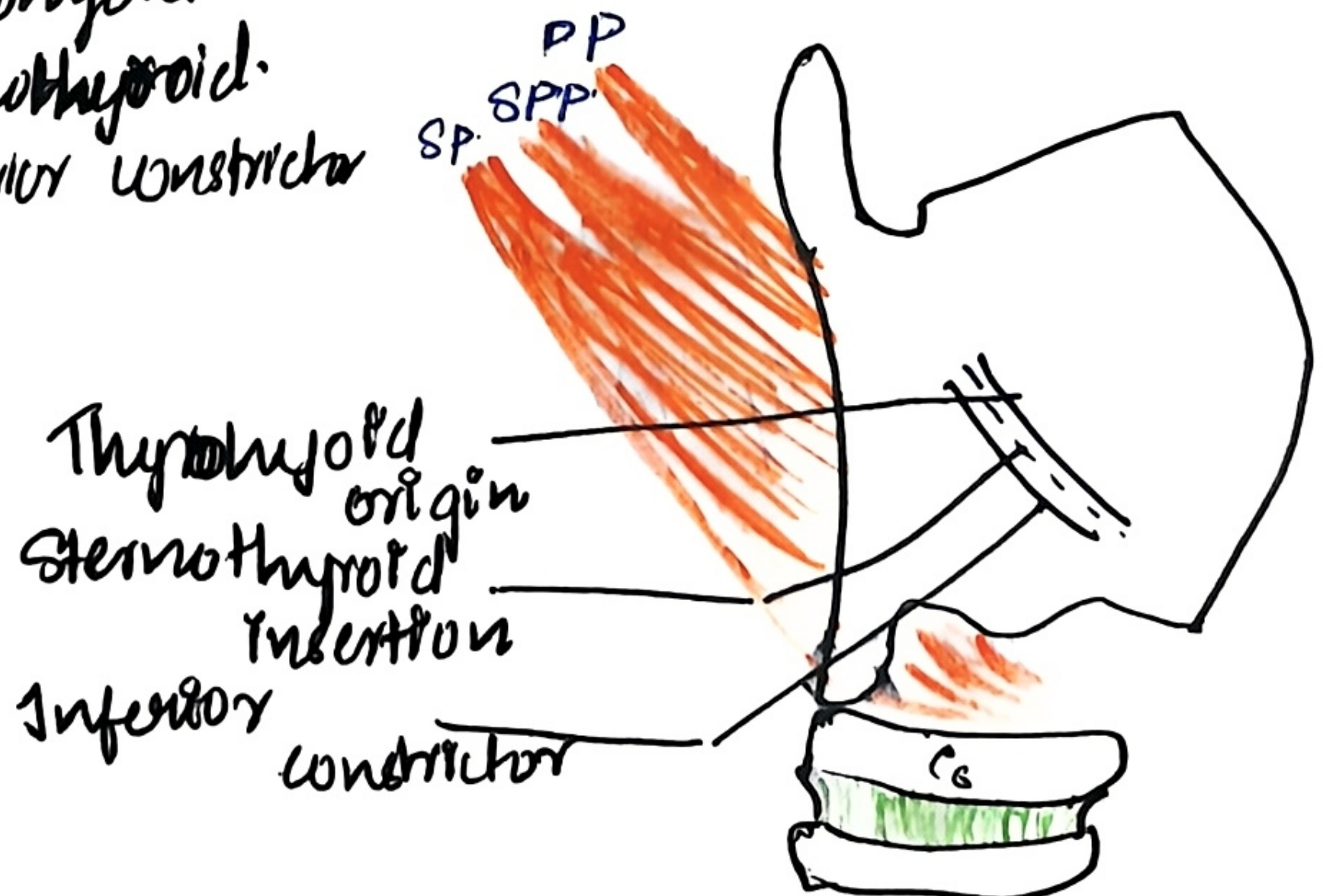
Post border of each lamina gives insertion to

- Palatopharyngeus (PP)
- Salpingopharyngeus (SPP)
- Stylopharyngeus (SP)



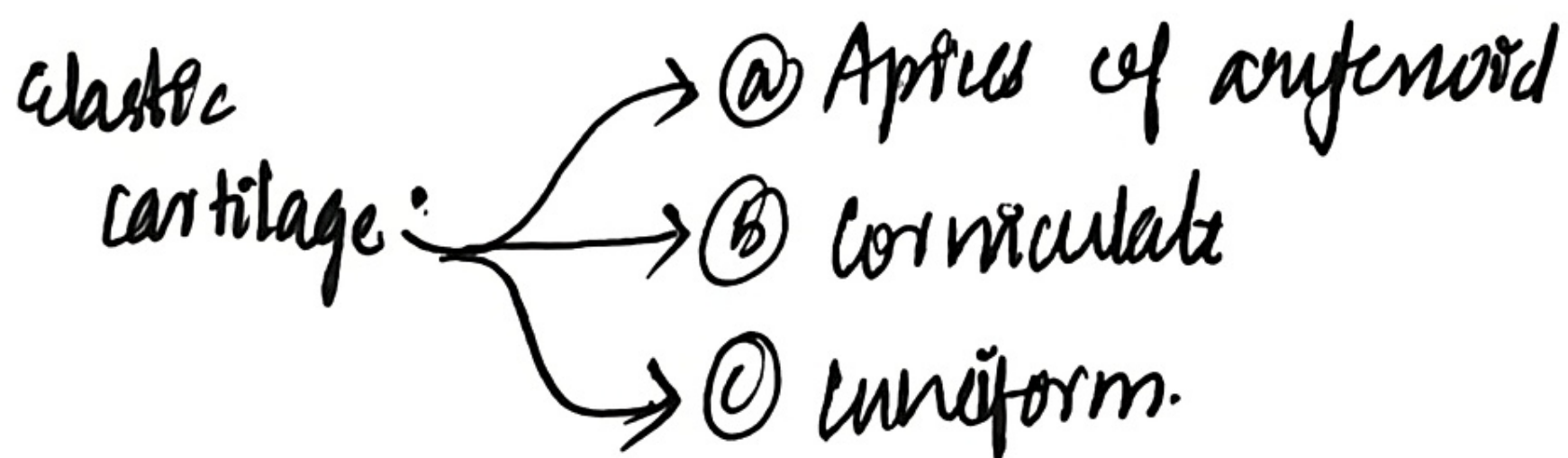
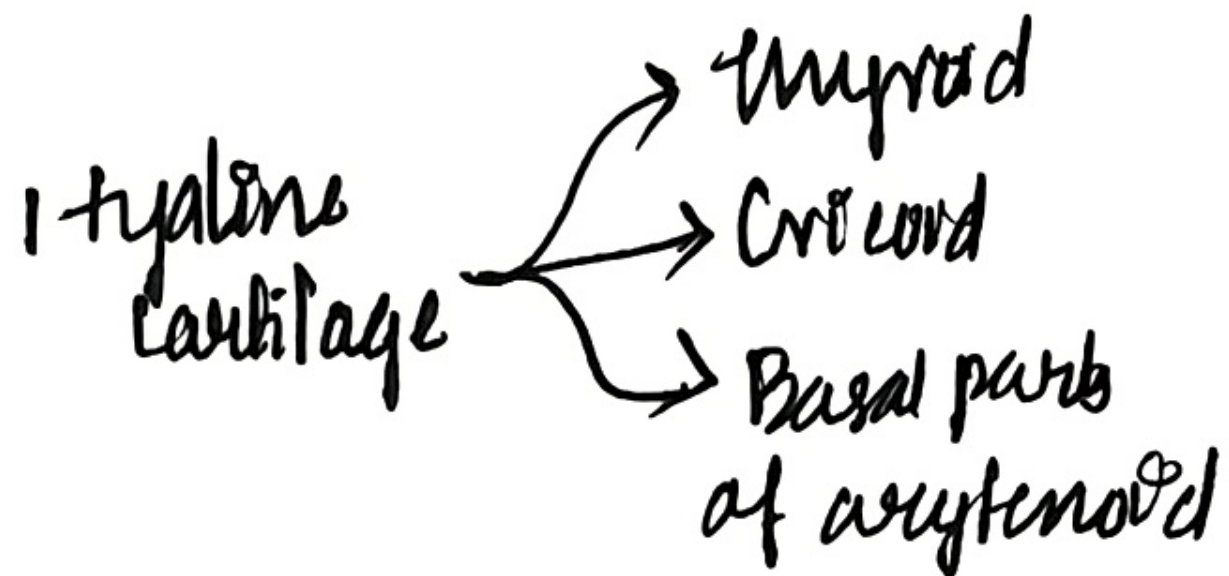
Oblique lamina provides insertion to

1. Thyrohyoid
2. Sternothyroid
3. Inferior constrictor



CRICOID CARTILAGE

- * Signet ring shaped cartilage
- * Narrow anterior arch & broad posterior lamina.
- * Foundatⁿ stone on larynx
- * completely encircles the lumen at larynx @ C₆ vertebral level



Joints

1. Cricothyroid joint
2. Cricoarytenoid joint.
3. Arytenocorniculate joint.

Ligaments & Membranes

	<u>Extrinsic</u>	<u>Intrinsic</u>
Membrane	Thyrohyoid Cricotracheal	Commissure elastic Quadrangular membrane

Ligaments -

- (a) median & lateral thyrohyoid
- (b) cricothyroid
- (c) cricotracheal

- (a) vocal
- (b) vestibular

Muscles

Extrinsic

Palatopharyngeus.
Salpingopharyngeus
Stylopharyngeus.
thyrohyoid
sternothyroid

Intrinsic

Open/close of lar inlet	Abduct/Adduct vocal cord	tenses/relaxes vocal cord
Open → Thyroepiglotticus close → Oblique arytenoid Aryepiglotticus	Adduct → Transverse cricoarytenoid lateral cricoarytenoid Abduct → Posterior cricoarytenoid	Tenses → cricothyroid Vocalis Relaxes → Thyro arytenoid

- * All intrinsic muscles of larynx are paired, except transverse cricothyroid.
- * TUNING FORK OF LARYNX - cricothyroid, controls tension of voice
- * SAFETY MUSCLE OF LARYNX - Posterior cricothyroid, only abductor.
- * Cricothyroid - only muscle lying on the outer aspect of larynx.

→ supplied @ ext laryngeal @
 All other intrinsic muscles are innervated by Recurrent lary. @

Laryngeal Cavity

Boundaries;

Ant: Epiglottis

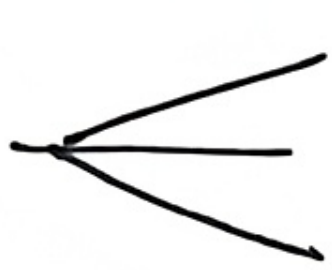
Post: Interarytenoid fold of mucous membrane

Lat: Aryepiglottic fold.

Within the laryngeal cavity 2 folds
 → vocal folds / true vocal cords.
 → vestibular folds / false vocal cords.

Rima vestibuli : space b/w 2 vestibular folds
Rima glottidis : b/w vocal folds

narrowest part of laryngeal cavity

3 compartments 

- vestibule
- ventricle
- infraglottis

Vestibule / Supraglottis.

Extent : laryngeal inlet $\rightarrow$ vesti. folds

Ant wall : post surf of epiglottis

Post wall : arytenoid + corniculate cartilage.

Lat wall : aryepiglottic fold

Ventricle / Sinus of Larynx.

Deep elliptical space b/w vesti. & vocal folds.

Salivary gland of larynx $\rightarrow$ oil can at larynx

$\rightarrow$ mucus secretⁿ lubricate vocal cords.

Infraglottis / Subglottis.

Extends : vocal cord $\rightarrow$ lower border of cricoid.

Nerve supply (sensory).

Above VC - Internal larynx.
Below Recurrent

Arterial supply / Venous

Above
below

Superior larynx @ 4 (V)
Inferior larynx @ 4 (V)

clinical

Heimlich manoeuvre → choking.