

OTORHINOLARYNGOLOGY

LARYNGOLOGY

SURGICAL ANATOMY OF THE THROAT

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The pharynx is a common aerodigestive tract, which is subdivided anatomically into the nasopharynx, oropharynx, and laryngopharynx (hypopharynx). At approximately the level of the sixth cervical vertebra the pharynx becomes the esophagus, and anterior to the pharynx the larynx becomes the trachea.

Nasopharynx : from base of the skull to the level of the hard palate

Oropharynx : from the level of the hard palate to the level of hyoid bone

Hypopharynx : from the level of the hyoid bone to the level of the cricoid cartilage .

NASOPHARYNX

Dimensions

4 cm height , 4cm width , 3 cm anteroposterior length

RELATIONS

Anterior wall: choana & posterior margins of the septum

Flore : soft palate

Roof and posterior wall: form a continuation of bones

Body of the sphenoids

Basiocciput

First 2 cervical vertebrae

In the upper portion of the posterior wall there is a lymphoid mass embedded in the mucosa which is the ADENOID

THE LATERAL WALL:

There is opening of the Eustachian Tube, and the fossa of Rosenmuller

OROPHARYNX

Subdivided to:

ANTERIOR WALL: base of the tongue and the vallecula

LATERAL WALL: palatine tonsils and the facial pillars

SUPERIOR WALL: the soft palate and the Uvula

POSTERIOR WALL: which is the posterior pharyngeal wall

PALATINE TONSILS

Oval masses of specialized subepithelial lymphoid tissue lining between the anterior and the posterior pillars on each side of the oropharynx, the free surface is covered by stratified squamous epithelium , the deep surface is separated from the superior constrictor muscle by connective tissue capsule.

HYPOPHARYNX

Is divided in to:

PYRIFORM FOSSA: extend from the pharyngoepiglottic fold to the upper end of the esophagus

POSTCRICOID AREA: which is the pharyngo-esophageal junction extend from the level of the arytenoids posteriorly to the beginning of the esophagus

POSTERIOR PHARYNGEA WALL : continuity from the nasopharynx and oropharynx

MUSCLES OF THE PHARYNX

1. Superior constrictor muscle
2. Middle constrictor muscle
3. Inferior constrictor muscle

Muscles of the soft palate

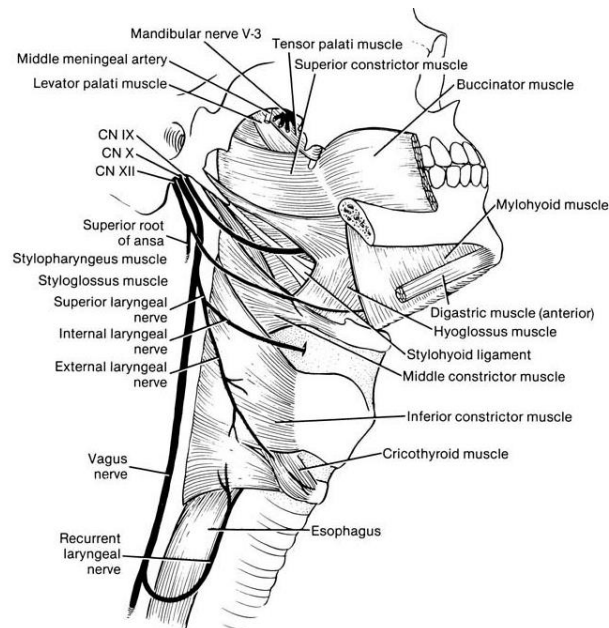
- 1.levator veli palatine
- 2.palatoglossus
- 3.palatopharyngeus
- 4.stylopharyngeus
- 5.salpingopharyngeus

ARTERIAL SUPPLY OF THE PHARYNX

1. Ascending pharyngeal artery branch of external carotid artery
2. Ascending Palatine artery branch of facial artery
3. Descending Palatine artery branch of maxillary artery
4. Dorsal linguae branch of lingual artery

NERVE SUPPLY OF THE PHARYNX

1. motor supply : by the pharyngeal plexus (X and XI cranial nerve) , only stylopharyngeus muscle is supplied by IX cranial nerve.
2. sensory supply: both taste and common sensations are carried through the glossopharyngeal IX nerve



THE LARYNX

THE CARTILAGINOUS FRAMEWORK

- A. Unpaired cartilages
 1. Epiglottis
 2. The cricoid cartilage
- B. Paired cartilages
 1. The arytenoids cartilages
 2. The thyroid cartilages

INTRINSIC MUSCLES OF THE LARYNX

- I – Muscle that open the vocal cords
 - Posterior cricoarytenoid muscle
- II- Muscles that close the vocal cords
 - Lateral cricoarytenoid muscle
 - Interarytenoid muscle
 - Cricothyroid muscle
- III- Muscles that increase the tension of the vocal cords
 - Thyroarytenoid(vocalis) muscle

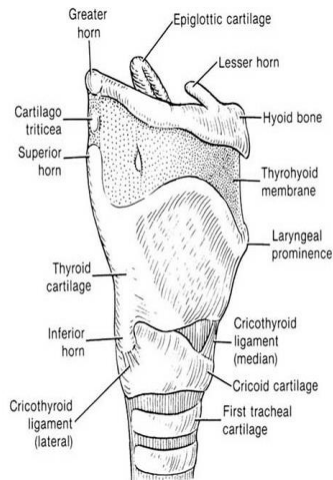
ARTERIAL SUPPLY OF THE LARYNX

- Superior Laryngeal artery: branch of superior thyroid artery
- Inferior Laryngeal artery: branch of inferior thyroid artery
- Cricothyroid artery: branch of superior thyroid artery

NERVE SUPPLY OF THE LARYNX

Motor innervations by the recurrent laryngeal nerve that supplies all the intrinsic muscles of the larynx except the cricothyroid muscle which is supplied by the external laryngeal nerve which is branch of superior laryngeal nerve

Sensory innervations of the larynx for the area above the vocal cords is supplied by the internal laryngeal branch of superior laryngeal nerve while the area below the vocal cords is supplied by the recurrent laryngeal nerve.



FUNCTIONS OF THE PALATE

1. Closure of the nose during swallowing
2. Phonation of nasal sounds
3. Prevention of passage of fluids to the nose

FUNCTIONS OF THE LARYNX

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3. Prevention of passage of fluids to the nose