

PHARYNX-II

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14-5-2020

Lesson Plan

❖ Oropharynx:

- Introduction
- Oropharyngeal Isthmus
- Features

❖ Laryngopharynx:

- Introduction
- Features

❖ Pharyngeal Wall

Oropharynx

Introduction

Extent-

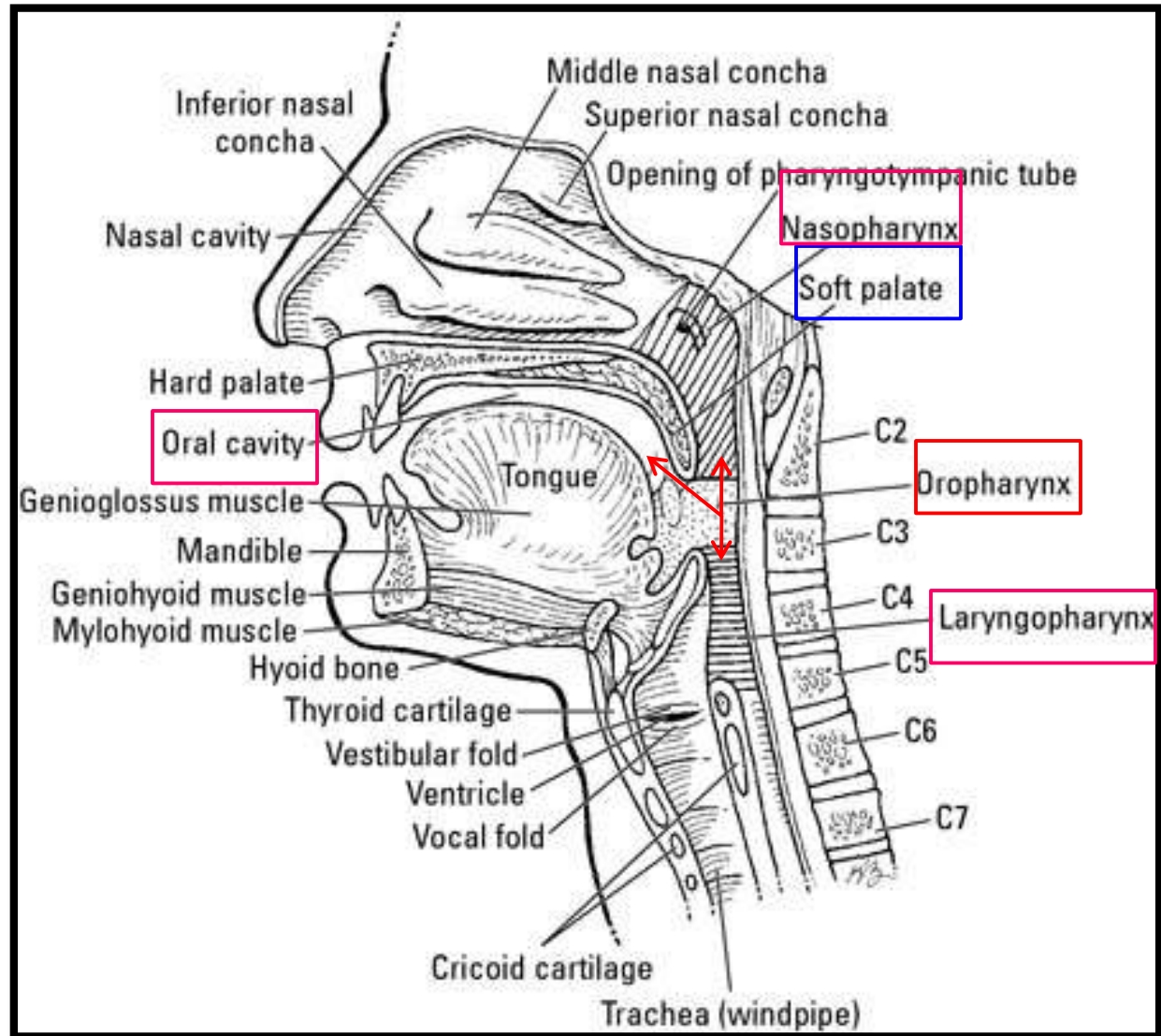
- From lower surface of soft palate to upper border of epiglottis.

Communications-

Anteriorly- with Oral cavity.

Above- with Nasopharynx.

Inferiorly- with Laryngopharynx.



Oropharyngeal Isthmus

- It is a communicating channel between oropharynx and oral cavity.

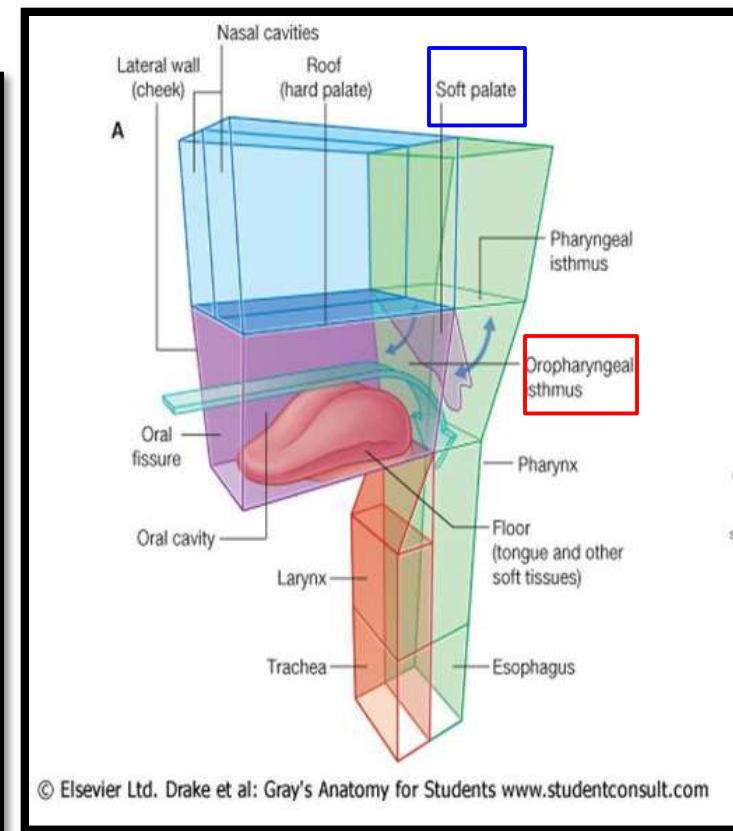
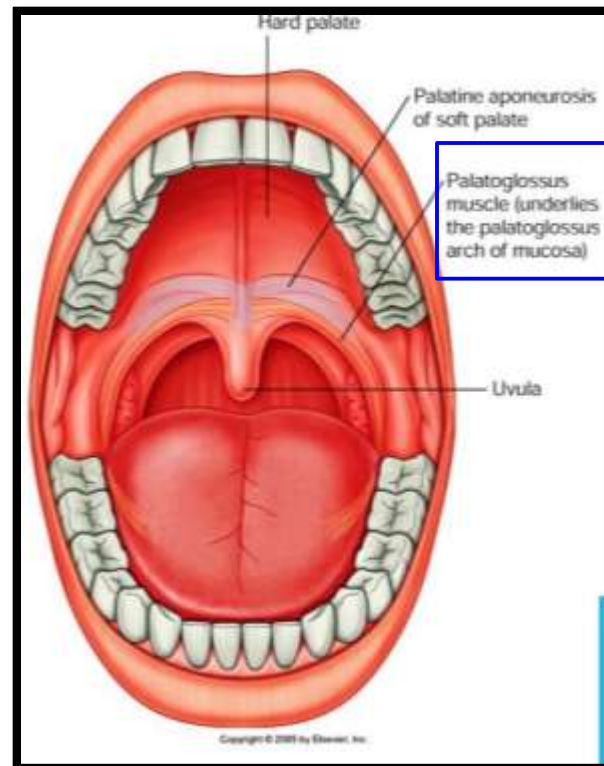
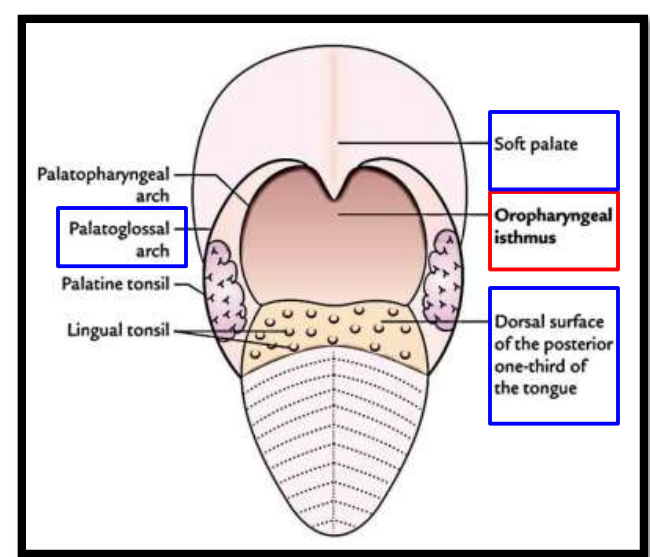
Boundaries-

Above- Soft Palate

Below- Dorsal surface of posterior 1/3rd of tongue.

Laterally- Palatoglossal arch.

- Oropharyngeal Isthmus is closed during deglutition.



Features

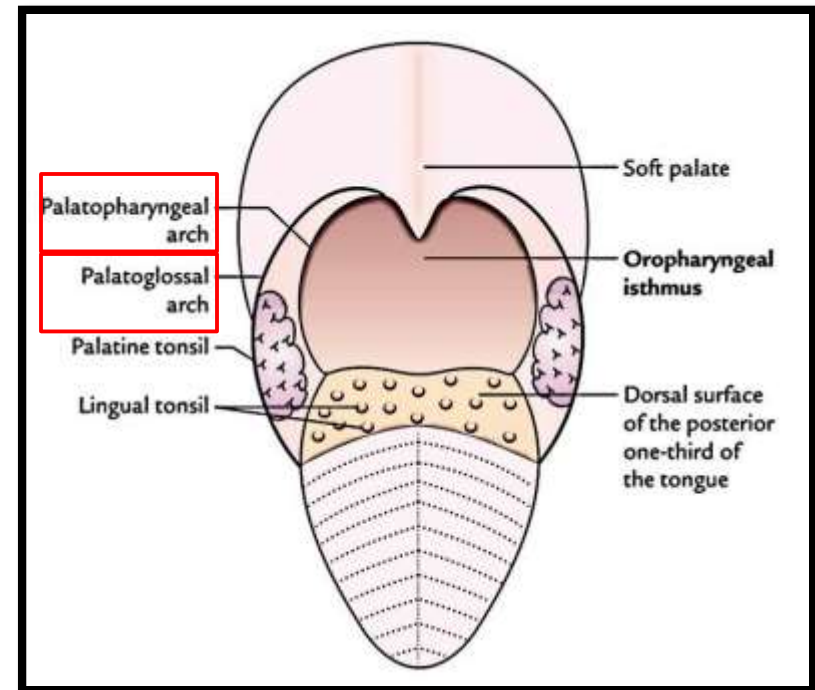
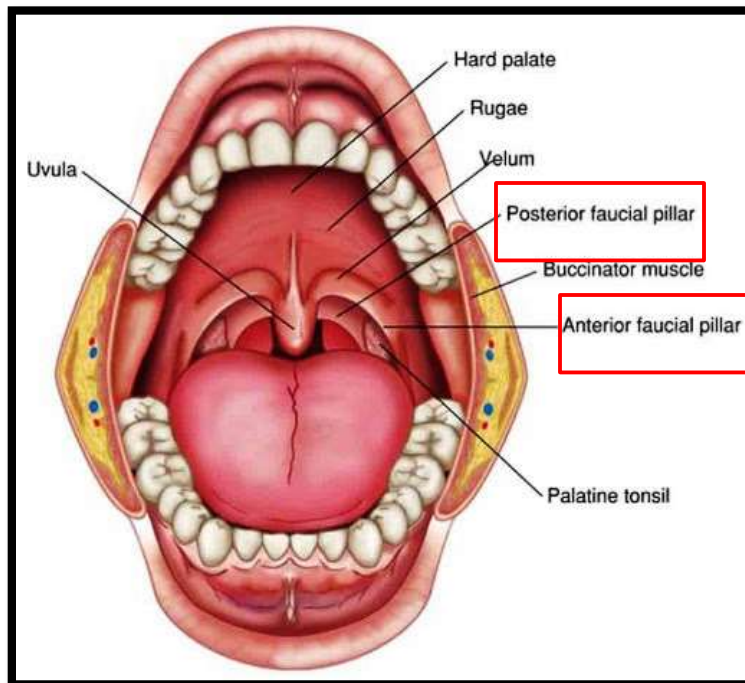
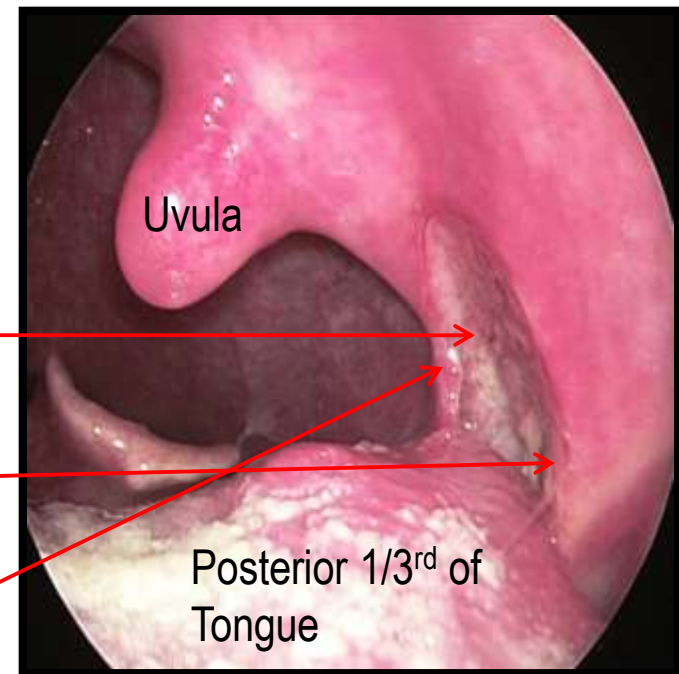
- Palatine tonsils.
- Anterior faucial pillar (Palatoglossal arch).
- Posterior faucial pillar (Palatopharyngeal arch).
- Lingual tonsils.
- Upper free end of Epiglottis.
- Median and lateral glossoepiglottic folds.
- Epiglottic valleculae.

Features in Lateral Wall

Palatine Tonsil-

Location:

- In the tonsillar fossa.
- Tonsillar fossa is located in the lateral wall of oropharynx.
- Tonsillar fossa is bounded anteriorly by the anterior faucial pillar (palatoglossal arch).
- Tonsillar fossa is bounded posteriorly by the posterior faucial pillar (palatopharyngeal arch).



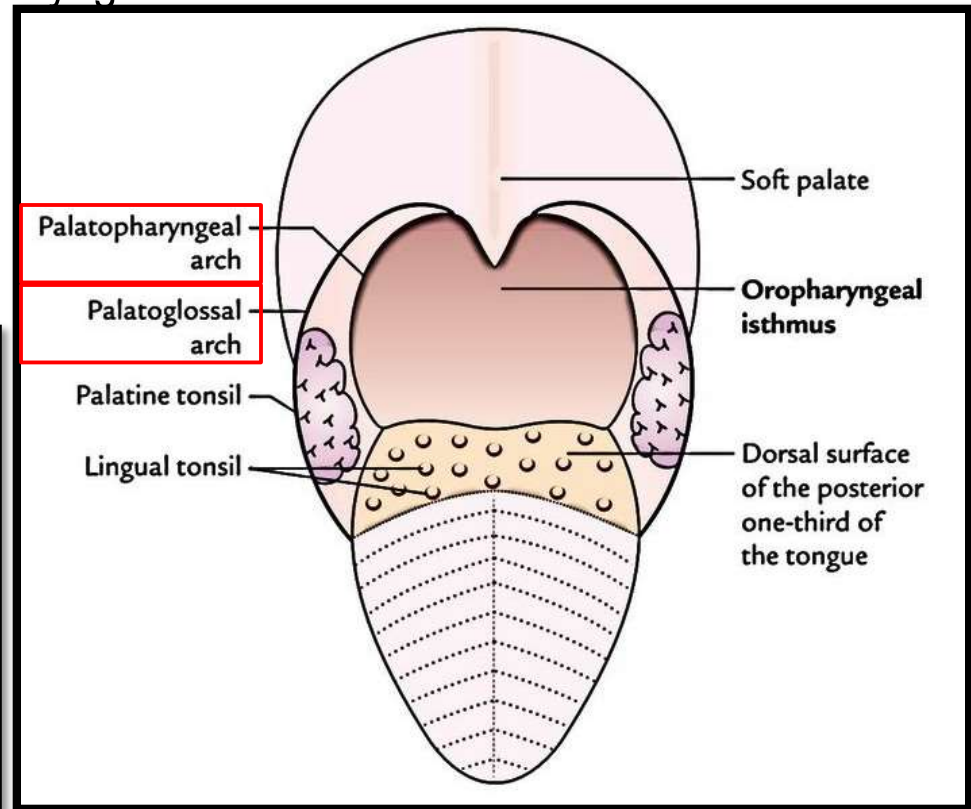
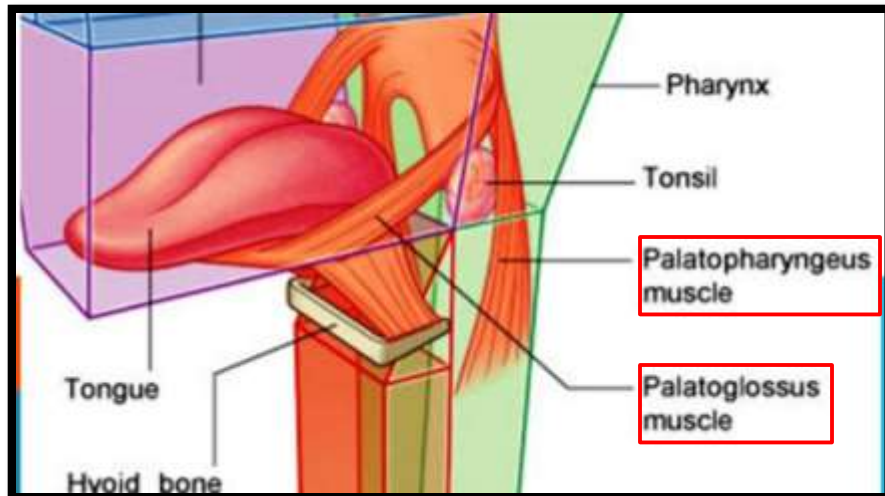
Features in Lateral Wall contd...

Anterior faucial pillar (Palatoglossal arch)-

- Runs downwards and forwards from soft palate to lateral margin of tongue (at the junction of anterior 2/3rd and posterior 1/3rd).
- It contains **Palatoglossus muscle**.

Posterior faucial pillar (Palatopharyngeal arch)-

- Runs downwards and backwards to the pharyngeal wall.
- It contains **Palatopharyngeus muscle**.



Features in Anterior Wall

❖ Lingual tonsils-

- These are the collections of lymphoid tissue underneath the mucosa of pharyngeal part of tongue.

❖ Upper free end of Epiglottis.

❖ Median glossoepiglottic fold-

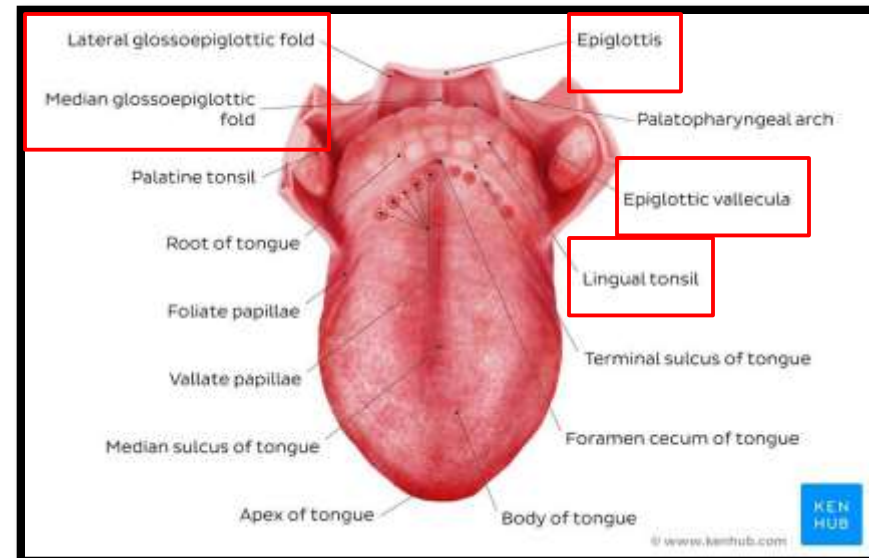
- A mucosal fold connecting anterior surface of epiglottis to the dorsal surface of posterior 1/3rd of tongue.

❖ Lateral glossoepiglottic folds-

- Mucosal folds connecting edges of epiglottis to the dorsal surface of posterior 1/3rd of tongue.

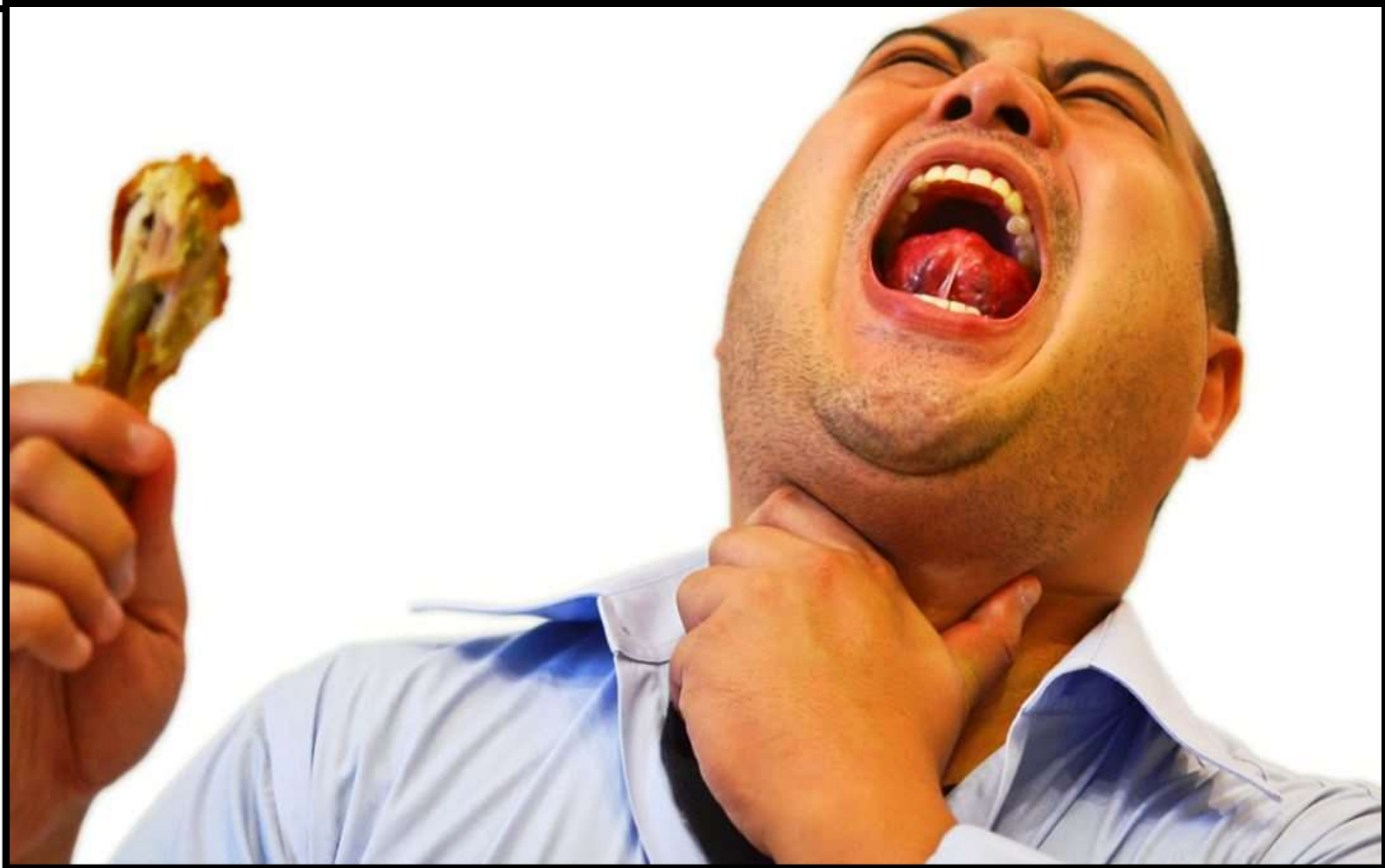
❖ Epiglottic valleculae-

- Shallow fossae between median and lateral glossoepiglottic folds.



Applied Aspects

- As oropharynx is a common channel for both food and air, sometimes food may enter into respiratory tract and cause choking



Laryngopharynx
[Hypopharynx]

Introduction

Vertical Extent-

Anteriorly-

- From upper border of epiglottis to lower border of lamina of cricoid cartilage.

Posteriorly-

- From C3 vertebra to the lower border of C6 vertebra.

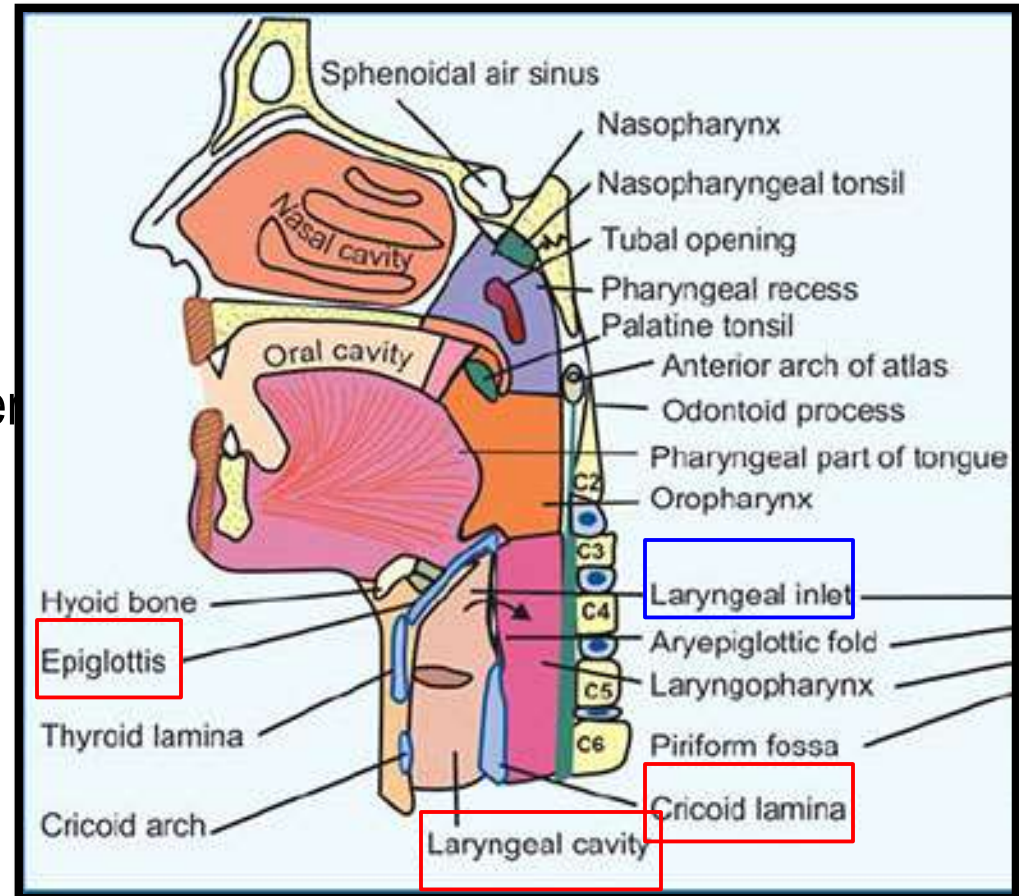
Communications-

Anteriorly- with Laryngeal cavity.

Superiorly- with Oropharynx.

Inferiorly- with Esophagus.

- ❖ Laryngopharynx communicates with laryngeal inlet through **Laryngeal Inlet**.



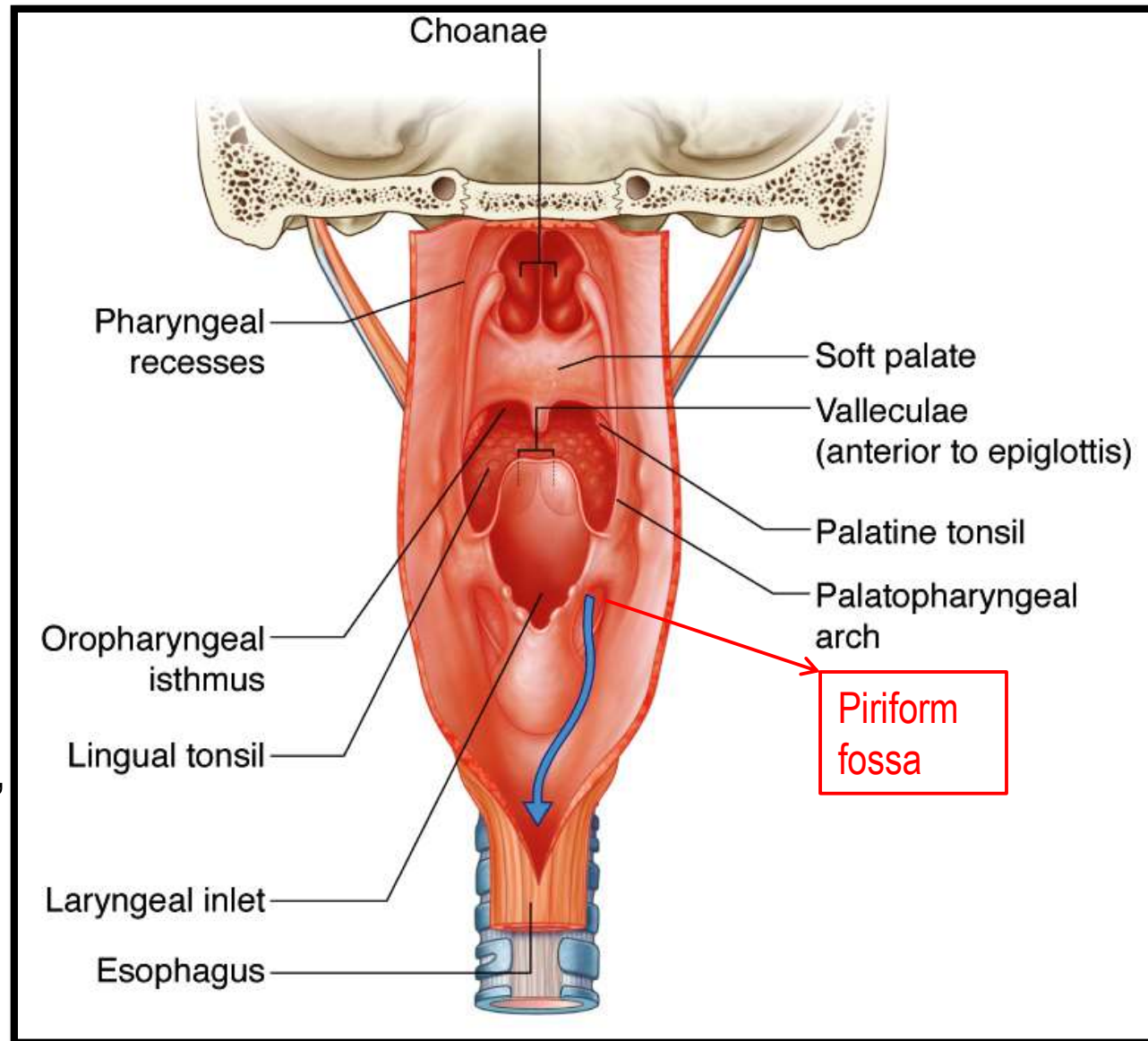
Features

- Laryngeal Inlet.
- Piriform fossa/recess.
- ❖ Laryngeal Inlet closes during deglutition.

Piriform fossa [Smuggler's Fossa]-

Location-

- Anterior part of lateral wall, on each side of laryngeal inlet.



Pharyngeal Wall

❖ Consists of 4 layers (from within outwards)-

- Mucous membrane.
- Pharyngobasilar fascia (Pharyngeal aponeurosis).
- Muscle layer.
- Buccopharyngeal fascia.

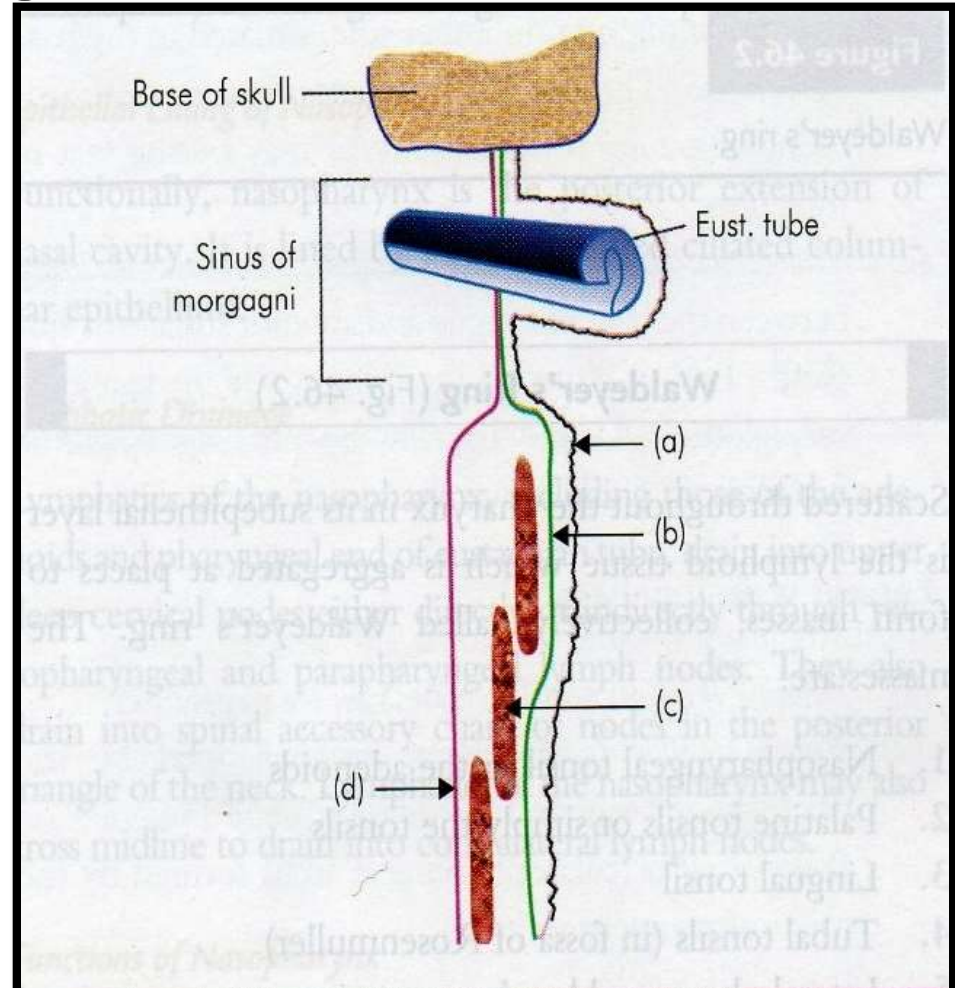


Figure 46.1

Structure of pharyngeal wall. From within outwards it consists of (a) Mucous membrane, (b) Pharyngobasilar fascia, (c) Muscular coat, and (d) Buccopharyngeal fascia.

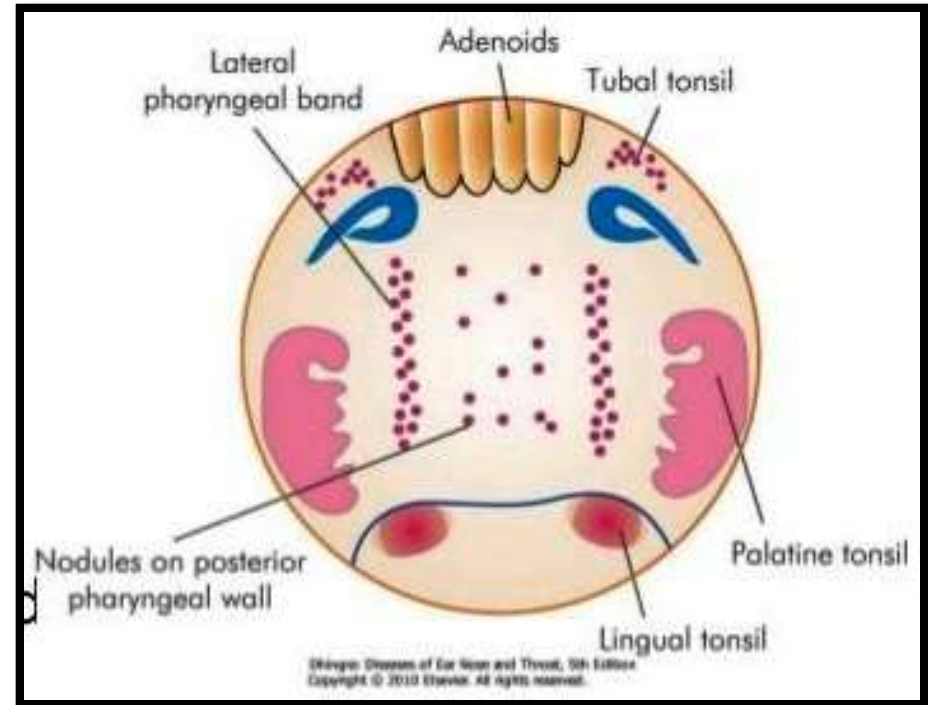
Mucous Membrane

Epithelium- Stratified squamous except nasopharynx.

- Nasopharynx is lined by ciliated columnar epithelium.
- Epithelium tends to invaginate in sub epithelial collections of lymphoid tissue in the form of clefts (crypts).

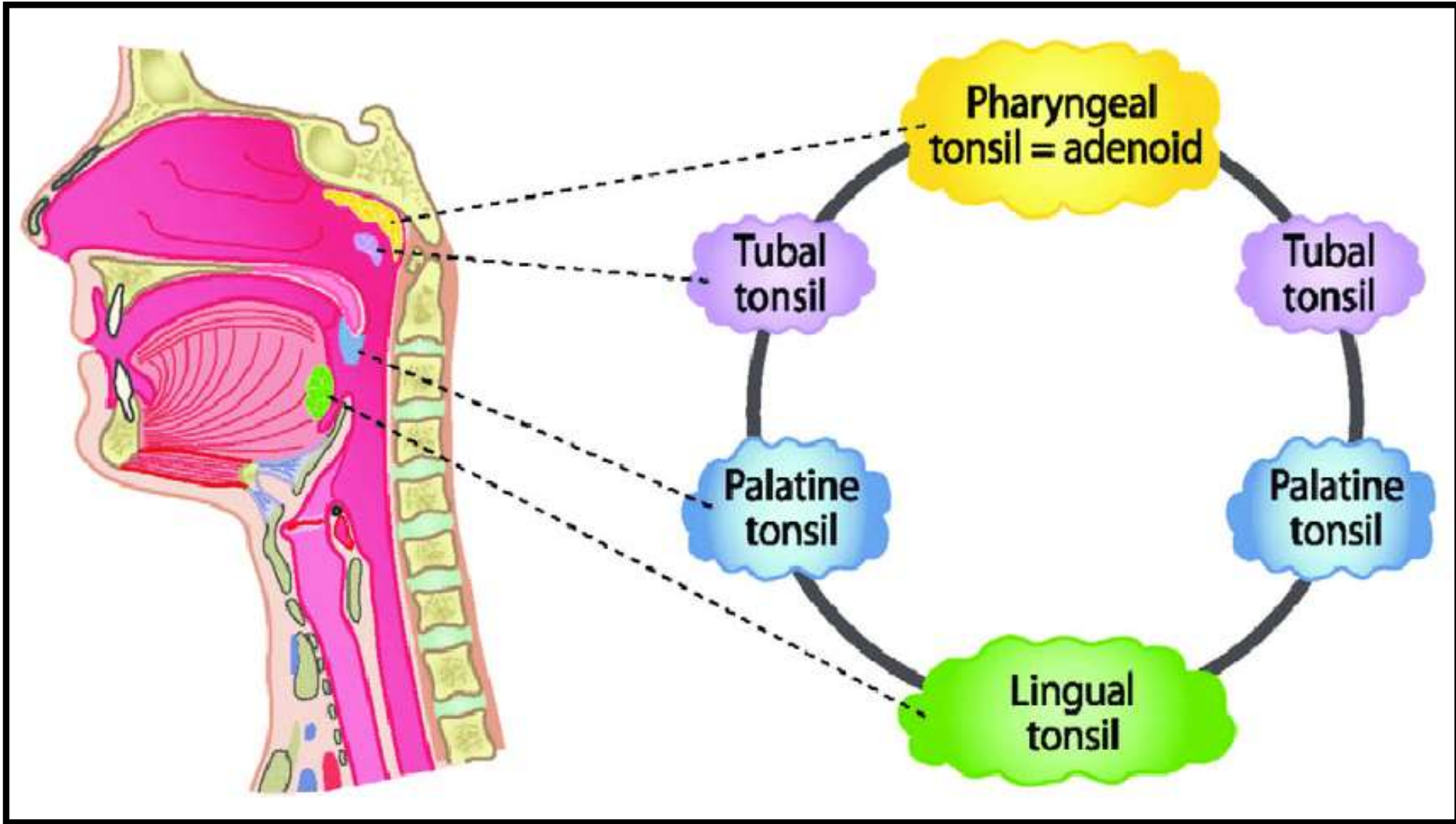
Waldeyer's Ring-

- Aggregations of lymphoid tissue underneath the epithelium of pharyngeal wall in the form of an interrupted ring.
- Surround the commencement of air and food passages.
- Lymphoid collections in the Waldeyer's ring are:
 - Nasopharyngeal (Pharyngeal) Tonsil [Adenoids]- Posteriorly
 - Tubal Tonsils- Postero-laterally
 - Palatine Tonsils- Antero-laterally
 - Lingual Tonsils- Anteriorly.



These lymphoid collections prevent the invasion of microorganisms in the air and food passages.

Waldeyer's Ring



Pharyngobasilar Fascia

- ❖ Fibrous thickening of submucosa.
- ❖ It is thick near the base of skull but thin and indistinct inferiorly.
- ❖ It is **thickest**:
 - where it fills the gap between upper border of superior constrictor and base of skull.
 - where it forms the **pharyngeal raphe** (posteriorly).

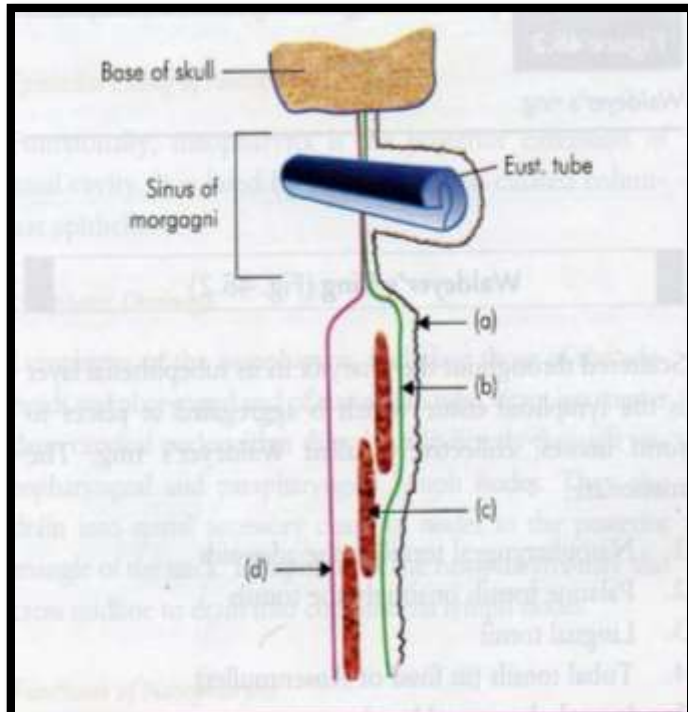
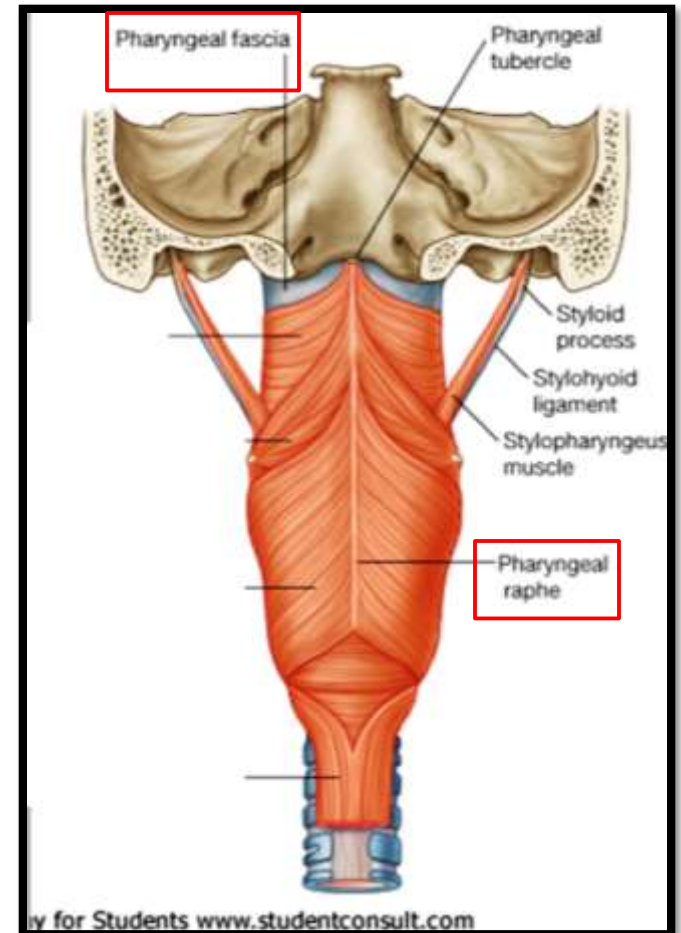


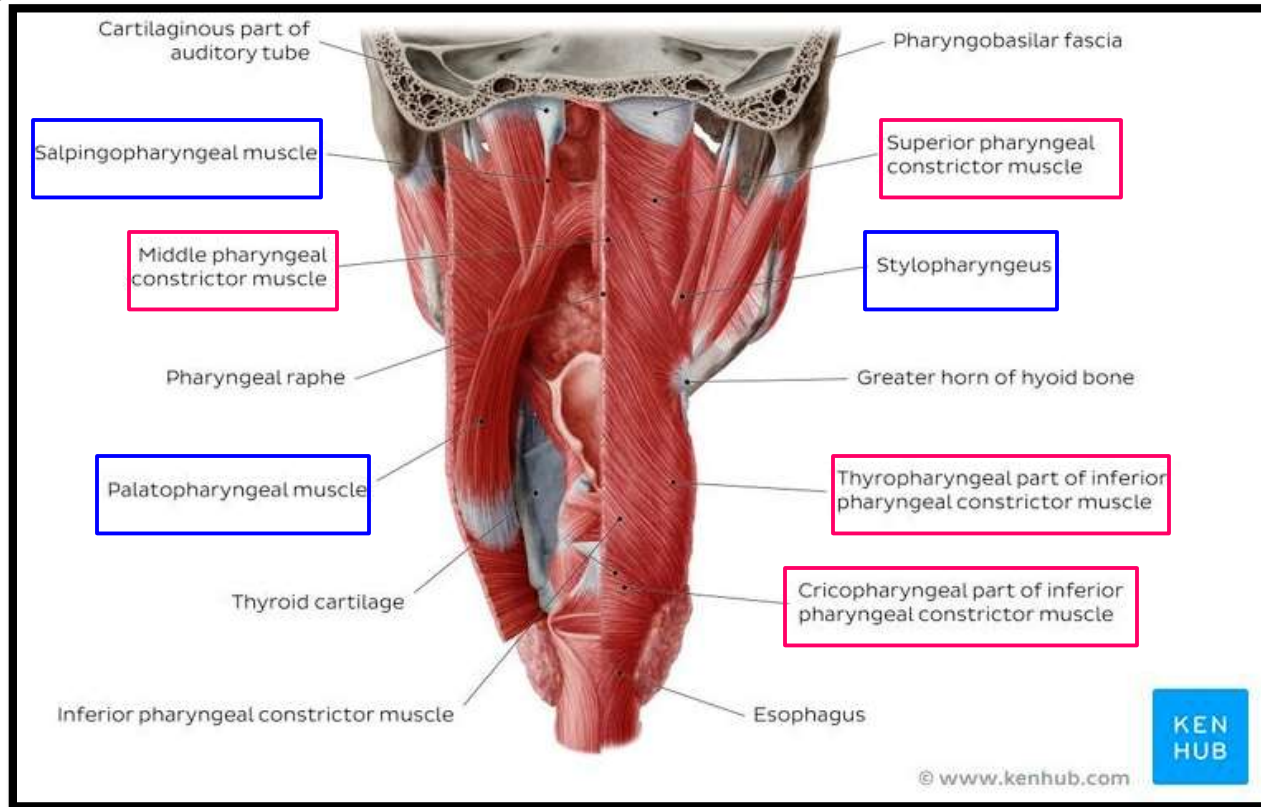
Figure 46.1

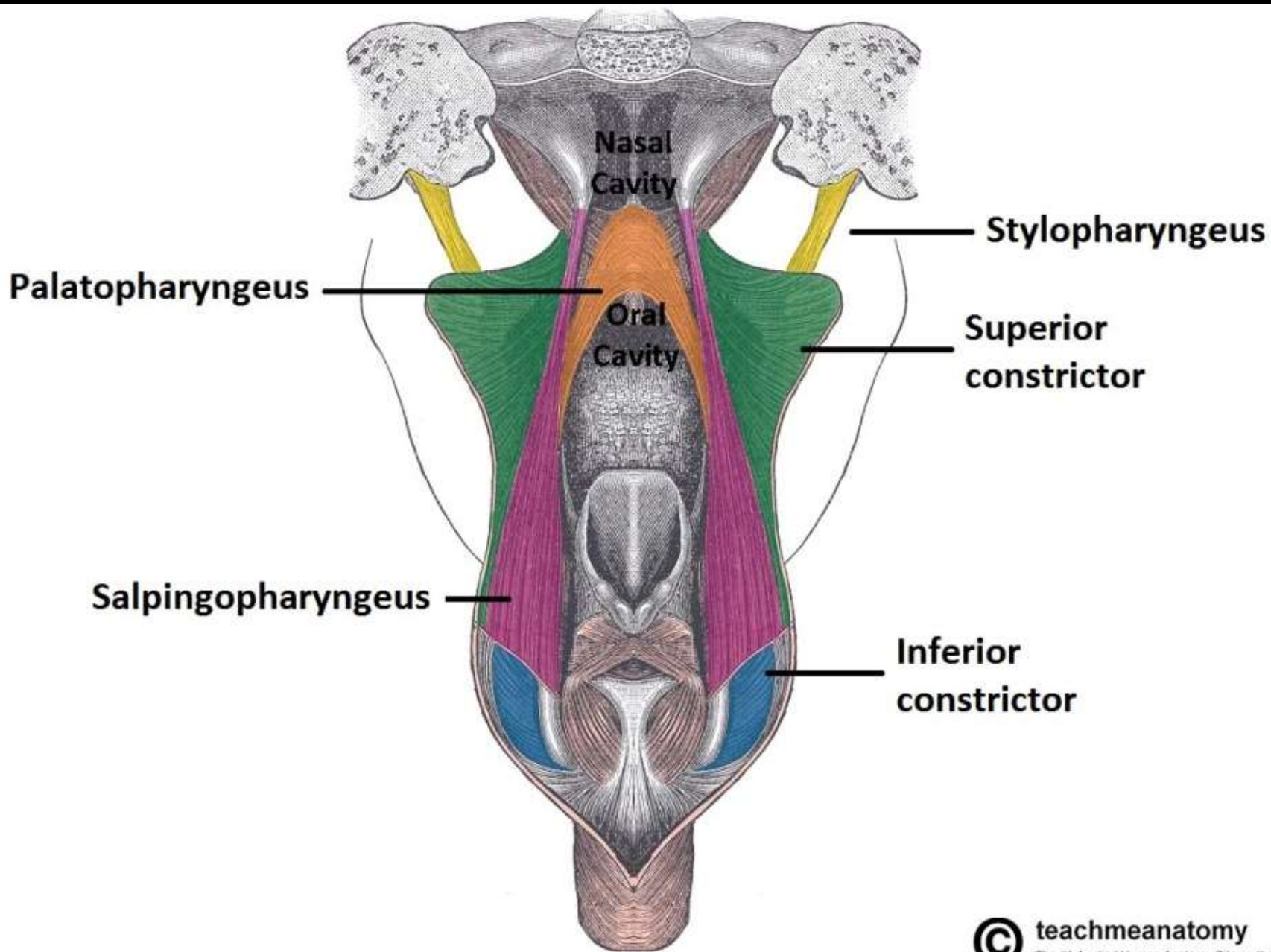
Structure of pharyngeal wall. From within outwards it consists of (a) Mucous membrane, (b) Pharyngobasilar fascia, (c) Muscular coat, and (d) Buccopharyngeal fascia.



Muscle Layer

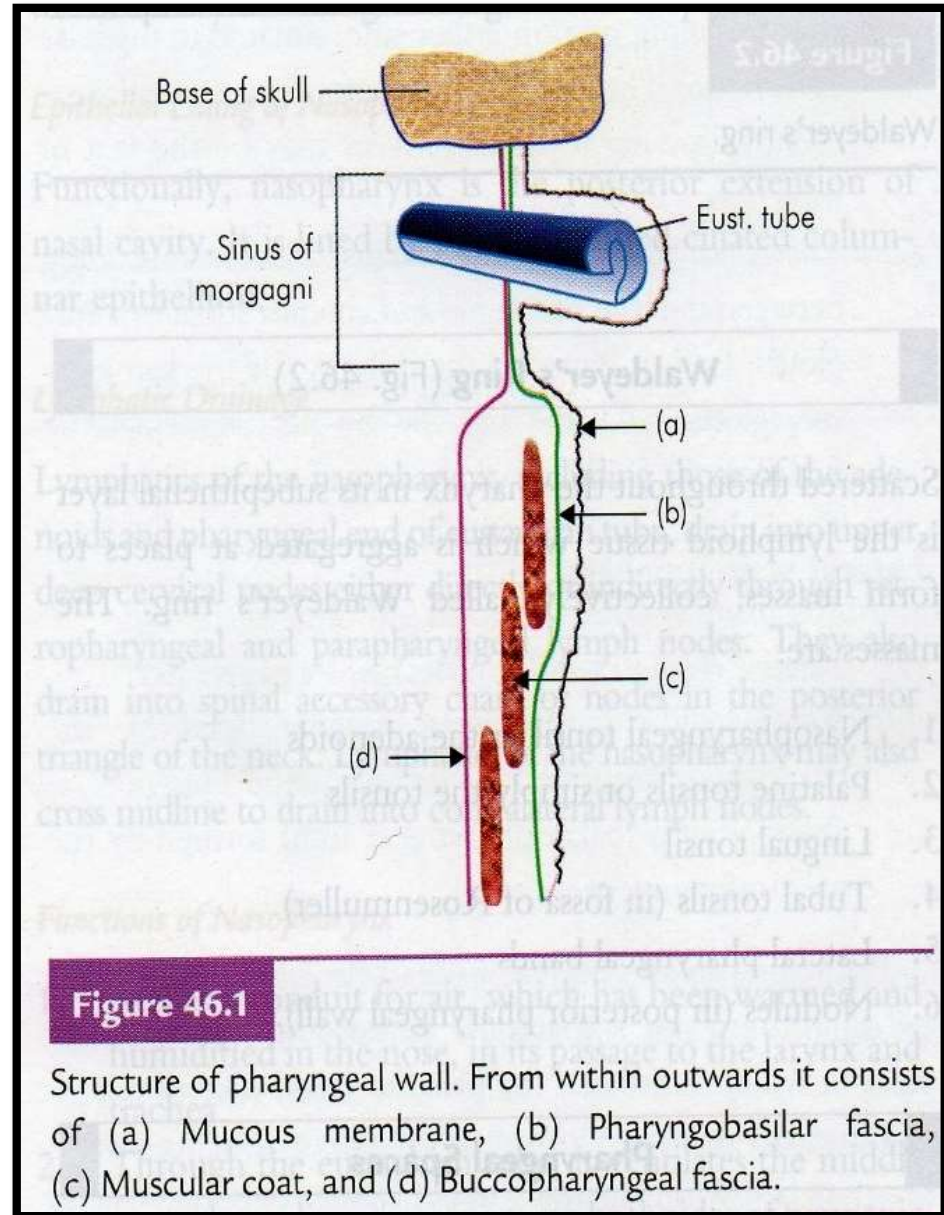
- ❖ 2 layers of striated muscles.
- ❖ Outer layer of 3 pairs of circular muscles (constrictor muscles):
 - Superior constrictor.
 - Middle constrictor.
 - Inferior constrictor.
- ❖ Inner layer of 3 pairs of longitudinal muscles.
 - Stylopharyngeus.
 - Salpingopharyngeus.
 - Palatopharyngeus.





Buccopharyngeal Fascia

- It is a layer of loose areolar tissue.
- It covers the outer surface of constrictor muscles.
- In the upper part, it is prolonged forwards to cover the **Buccinator muscles**.
- It blends with the pharyngobasilar fascia, above the upper border of superior constrictor muscles.





THANK
YOU!