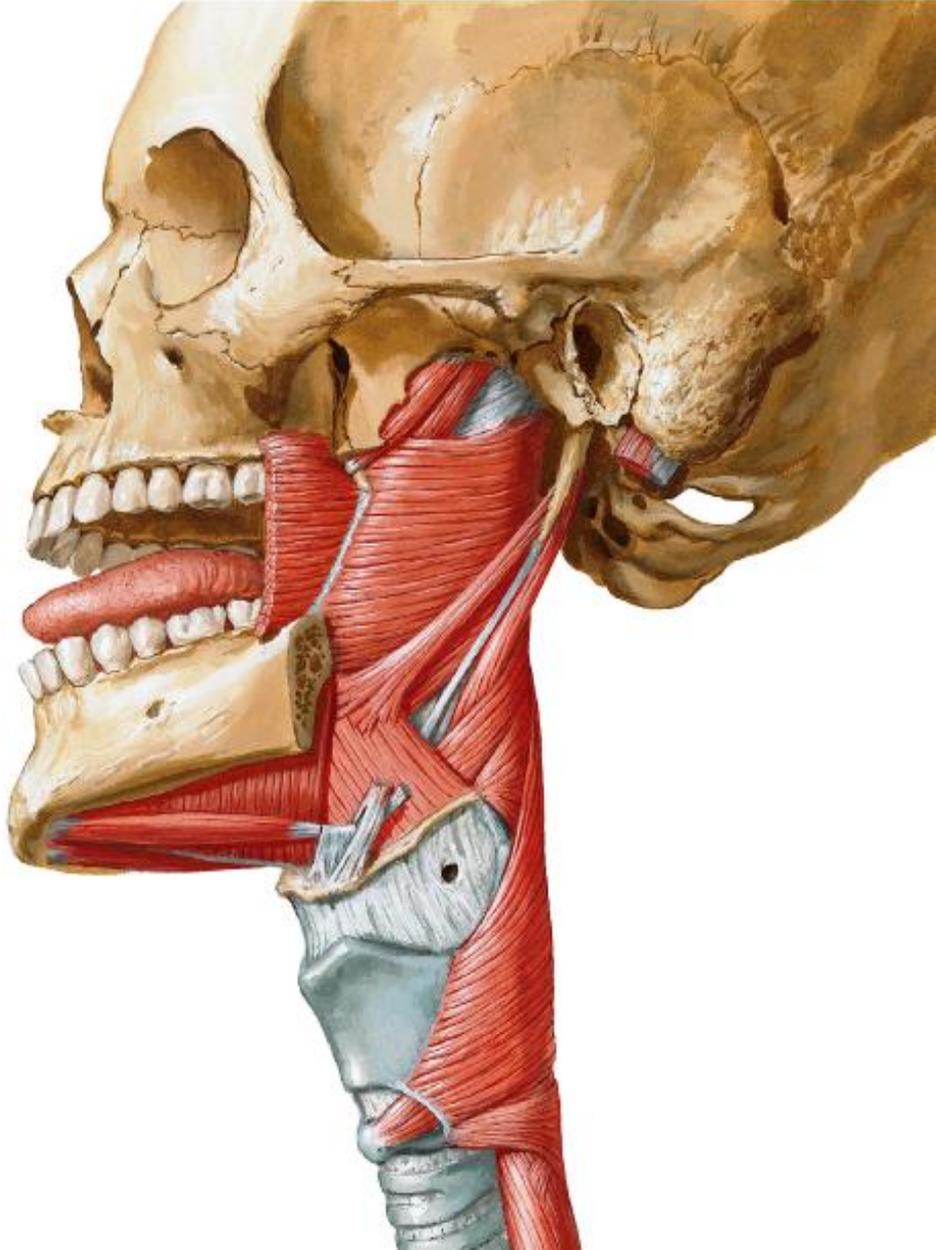


PHARYNX



BY
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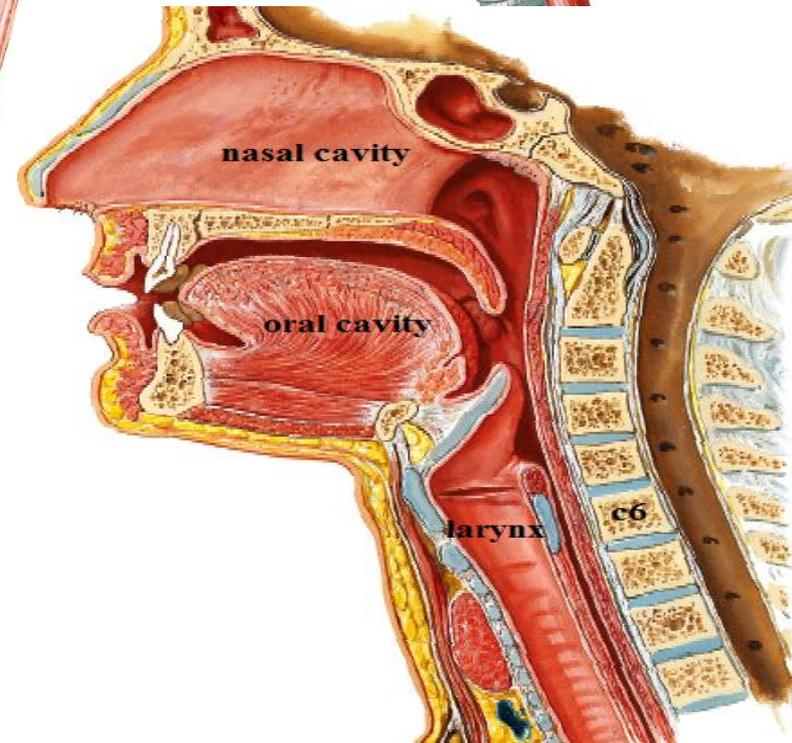
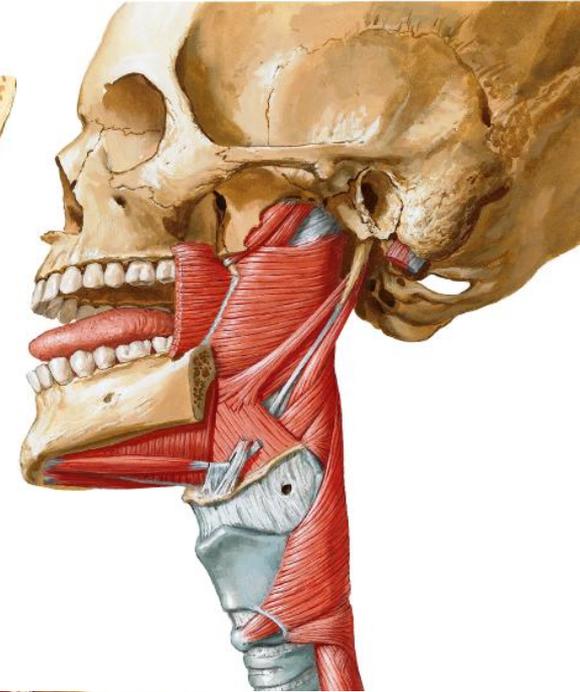
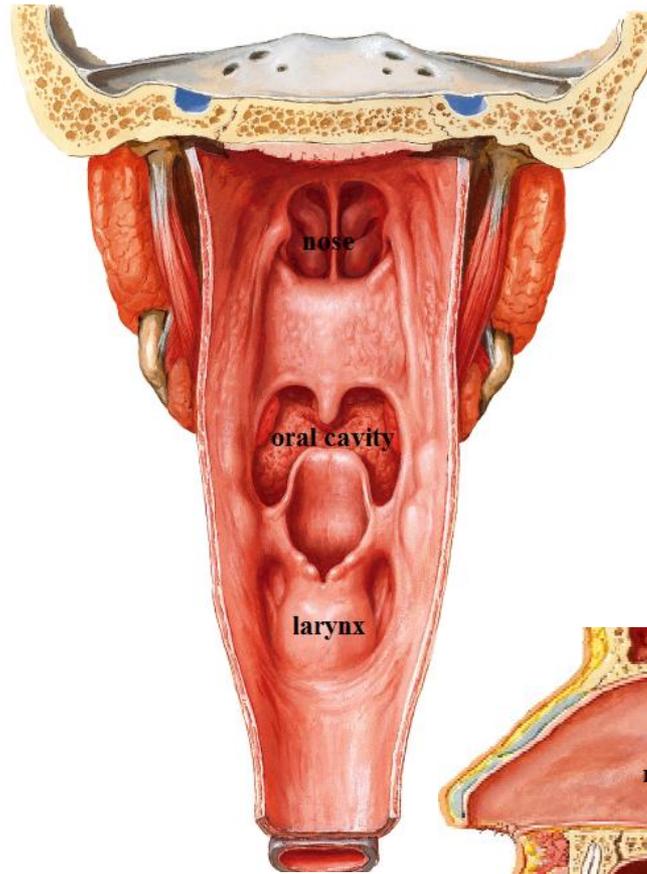
PHARYNX

Def.:

fibromuscular tube
defective anteriorly
lying behind nasal cavity,
oral cavity
and larynx.

Extent:

from base of skull
to 6th cervical vertebra,
where it continues with oesophagus.



PHARYNX

Structure: From inside outwards

- 1-mucous membrane
- 2-submucosa (connective tissue layer)
- 3-muscle layer.
- 4-buccopharyngeal fascia

Muscles:

3 constrictor muscles:

forming circular outer layer.

3 longitudinal muscles:

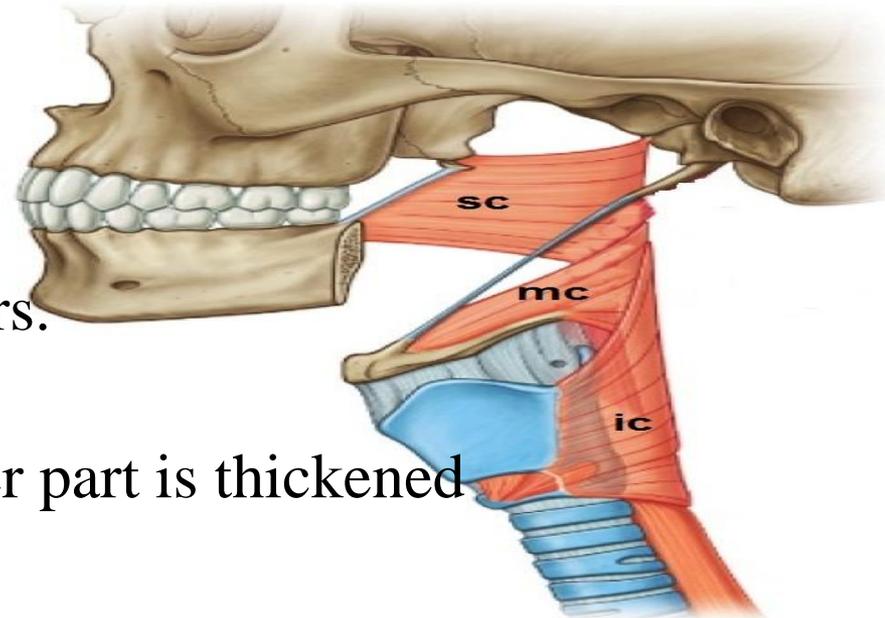
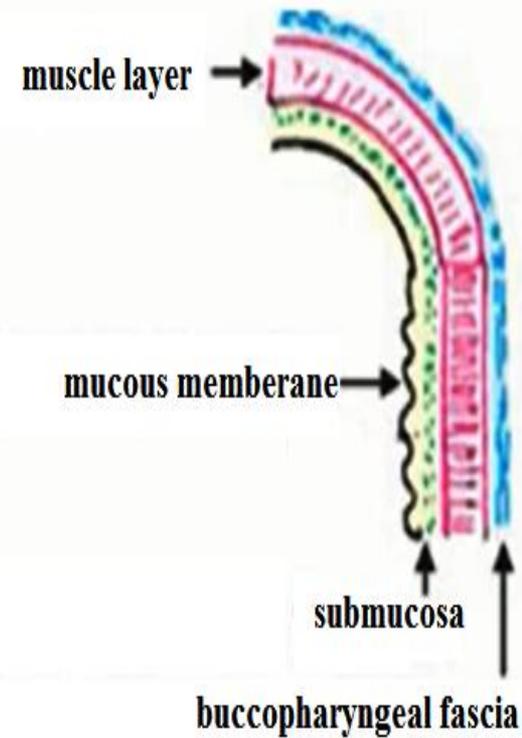
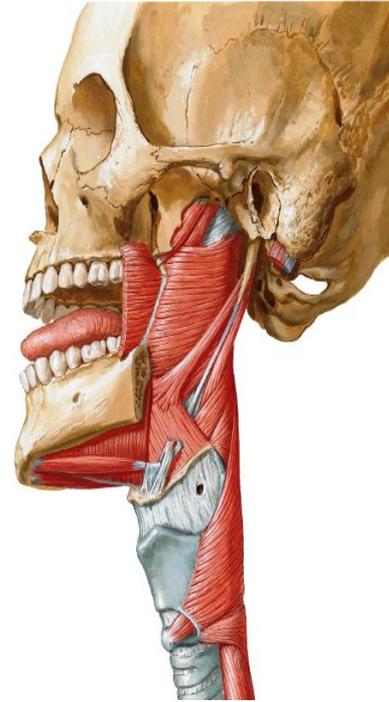
forming longitudinal inner layer

Buccopharyngeal fascia:

covering the outer surface of constrictors.

submucosa:

It is loose connective tissue but its upper part is thickened forming pharyngobasilar fascia.



PHARYNX

Muscles:

Superior constrictor:- arise from

- Pterygoid hamulus & Pterygomandibular raphe
- Post. end of mylohyoid line

Middle constrictor:- arise from

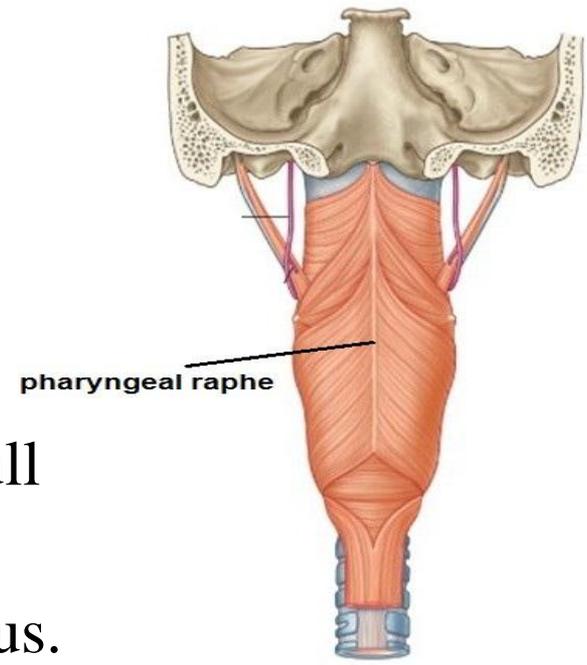
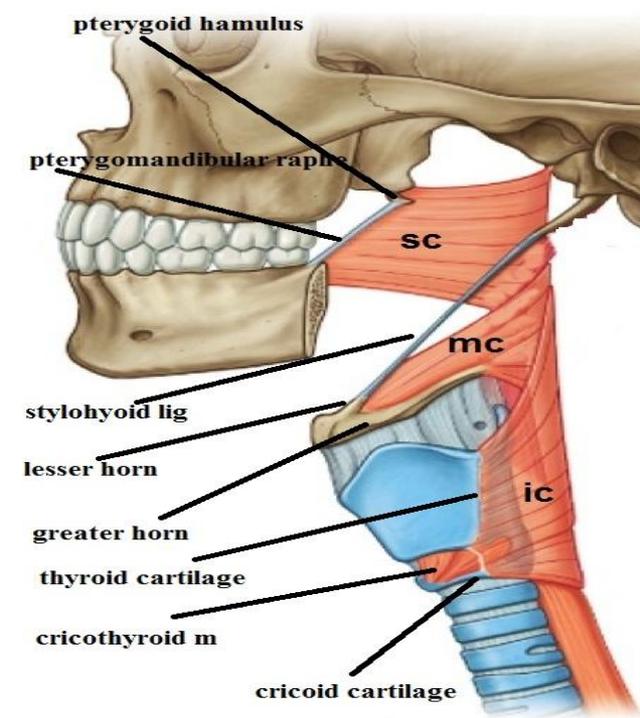
- lower part of stylohyoid ligament.
- Lesser & greater horns of hyoid bone.

Inferior constrictor:- arise from

- oblique line of thyroid cartilage
- Fibrous arch bridging cricothyroid muscle
- Side of cricoid cartilage

I.:- All form pharyngeal raphe that is fixed superiorly to pharyngeal tubercle in base of skull

Action:- Sequential contraction from above downwards moving the bolus towards esophagus.

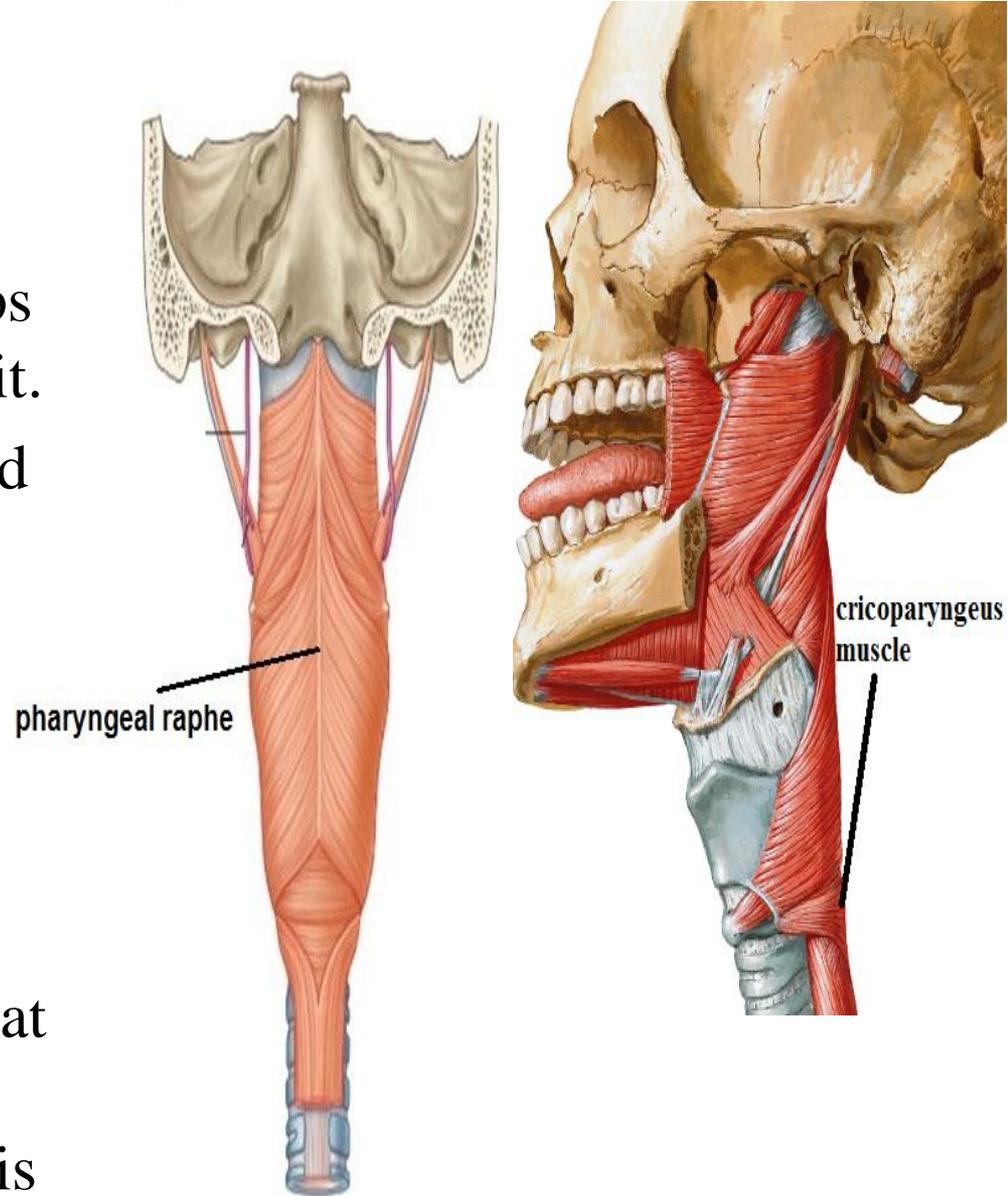


PHARYNX

Muscles:

N.B.1:- middle constrictor overlaps the superior constrictor enclosing it. & Inferior constrictor, overlaps and encloses the middle.

N.B.2:- lower fibres of inferior constrictor arise from one side of cricoid and pass uninterrupted to other side of cricoid cartilage, this part is called cricopharyngeus muscle which forms a sphincter that open only for passage of a bolus during swallowing. This part also is the narrowest part of GIT except appendix.



PHARYNX

Gaps in pharyngeal wall (parts defective in constrictors)

a-Between superior constrictor and base of skull:

For Auditory tube

Levator palati muscle.

Tensor palate muscle.

b-Between superior and middle constrictors :

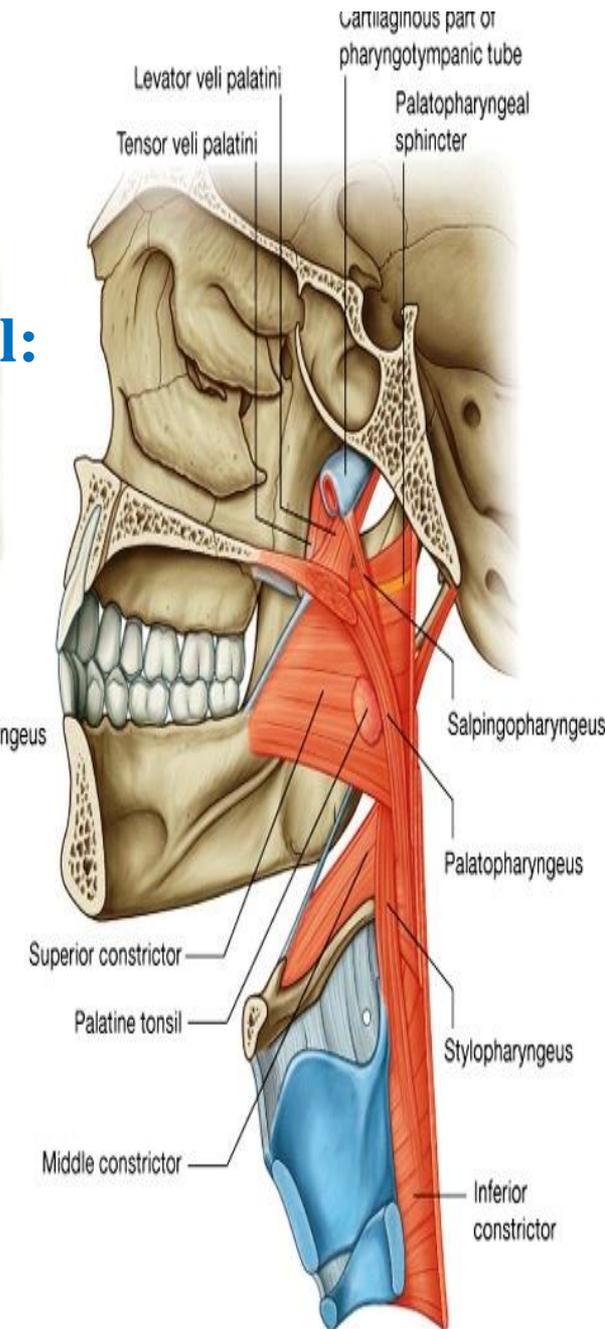
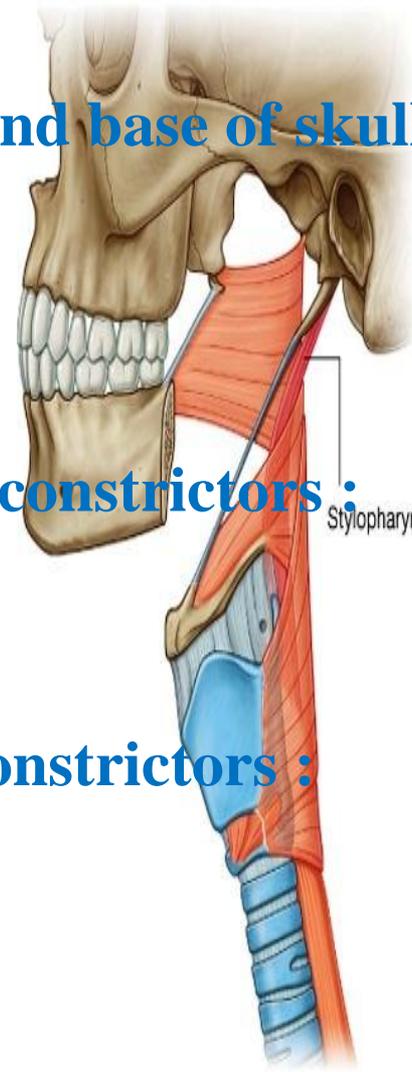
for Stylopharyngeus muscle.

Glossopharyngeal nerve

c-Between middle and inferior constrictors :

for Internal laryngeal n.

Superior laryngeal art.



PHARYNX

Muscles:

Palatopharyngeus

O.:- upper surface of palatine aponeurosis
post. border of thyroid lamina.

I.:- - Side wall of pharynx inner to constrictors

Salpingopharyngus

O.:- cartilaginous part of auditory tube

I.:- spread on inner aspect of constrictors.

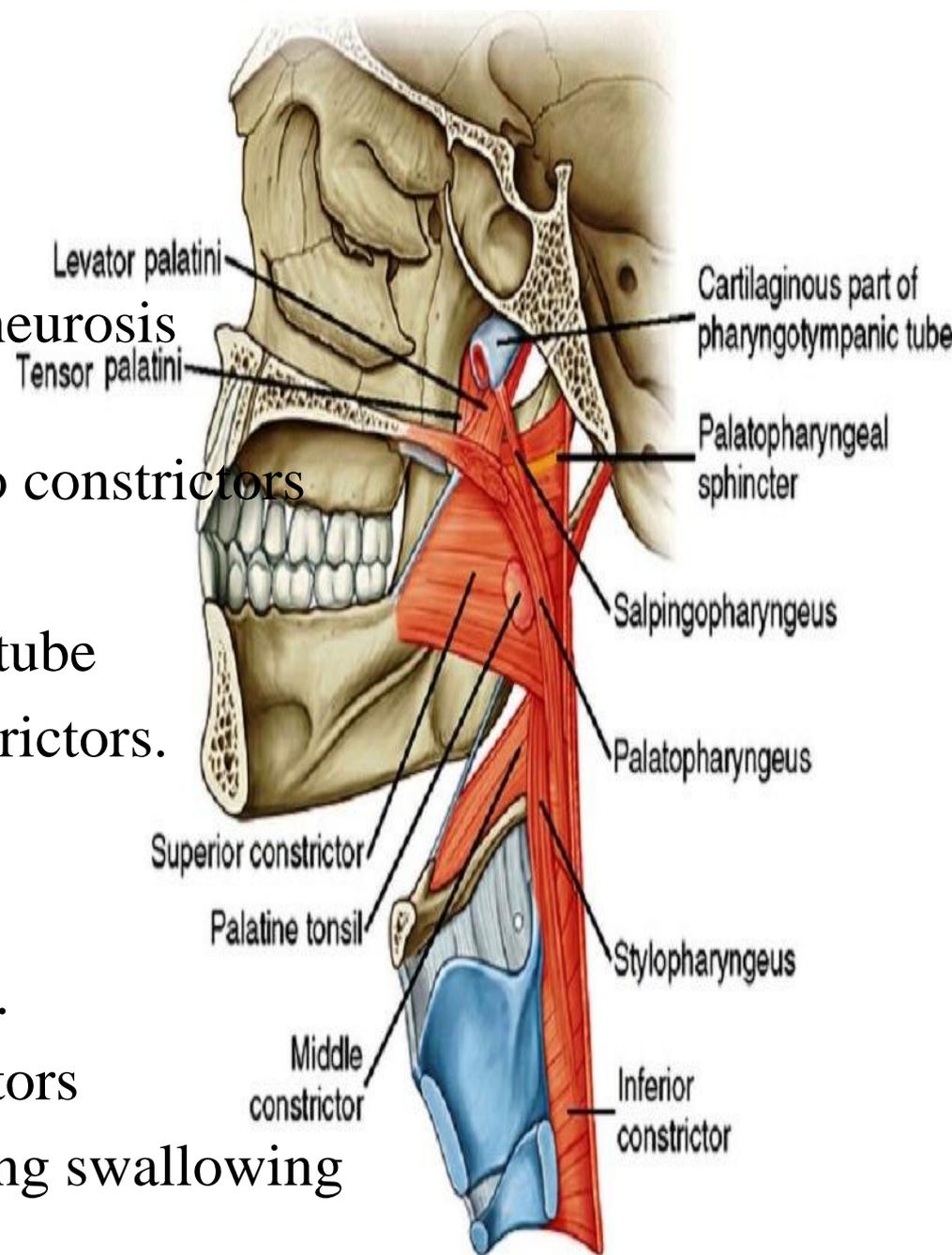
Stylopharyngus

O.:- styloid process

I.:- -post. border of thyroid lamina.

-spread on inner aspect of constrictors

A.:- ALL elevate the pharynx during swallowing so that the pharyngeal wall shorten



PHARYNX

Cavity of pharynx:

Internally pharyngeal cavity is divided into 3 parts:

I-Nasopharynx:

Lies behind nasal cavity

Extent: from base of skull to level of soft palate

Features:

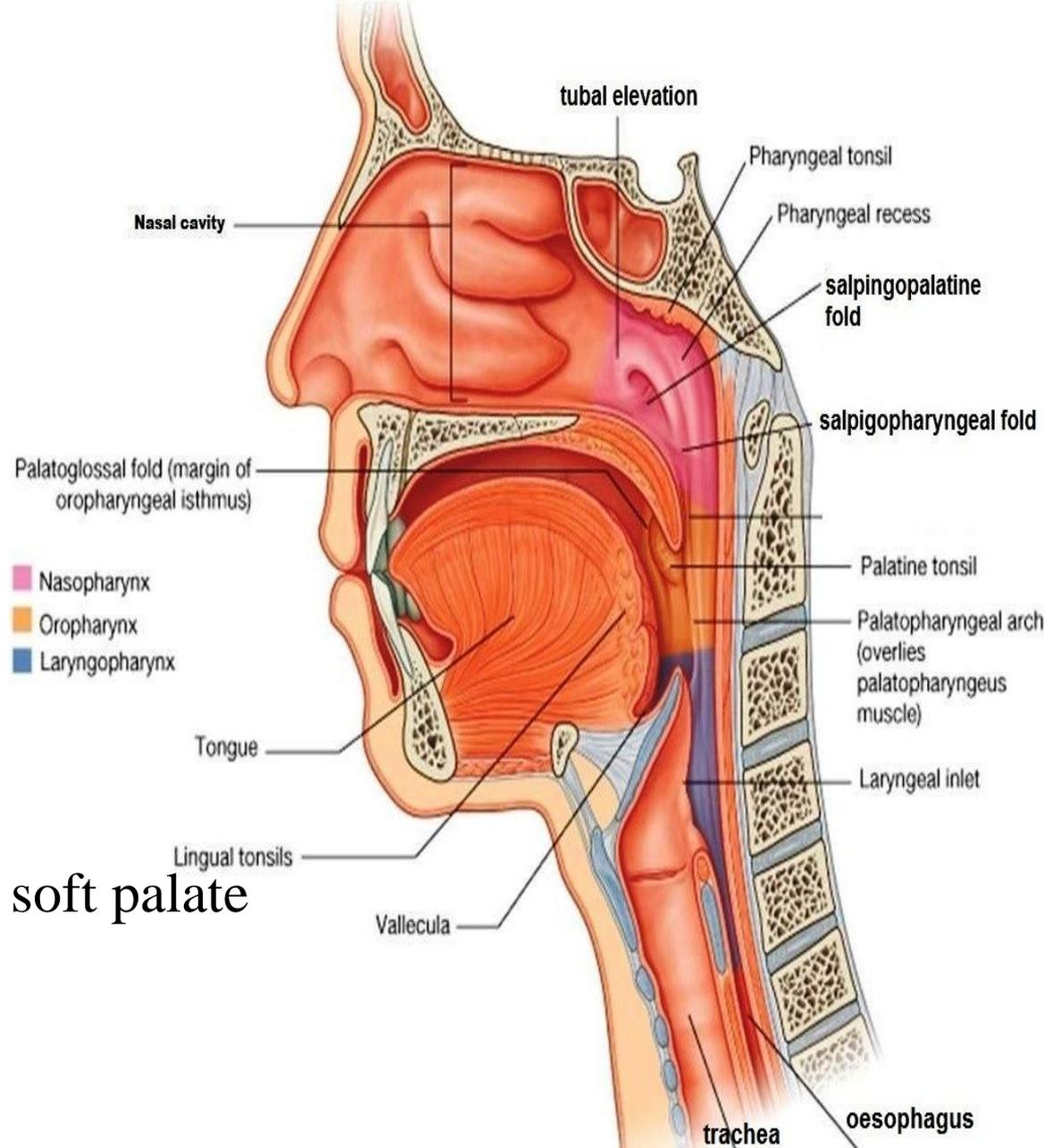
1-Opening of auditory tube in the side wall just above of soft palate

2-Tubal elevation

3-Salpingopalatine fold:

Produced by levator palati

extends from below the opening of auditory tube to soft palate.



PHARYNX

I-Nasopharynx:

Features:

4-Salpingopharyngeal fold

-Produced by salpingopharyngus muscle

-Extend from post. part of tubal elevation to fades away on the side wall of pharynx.

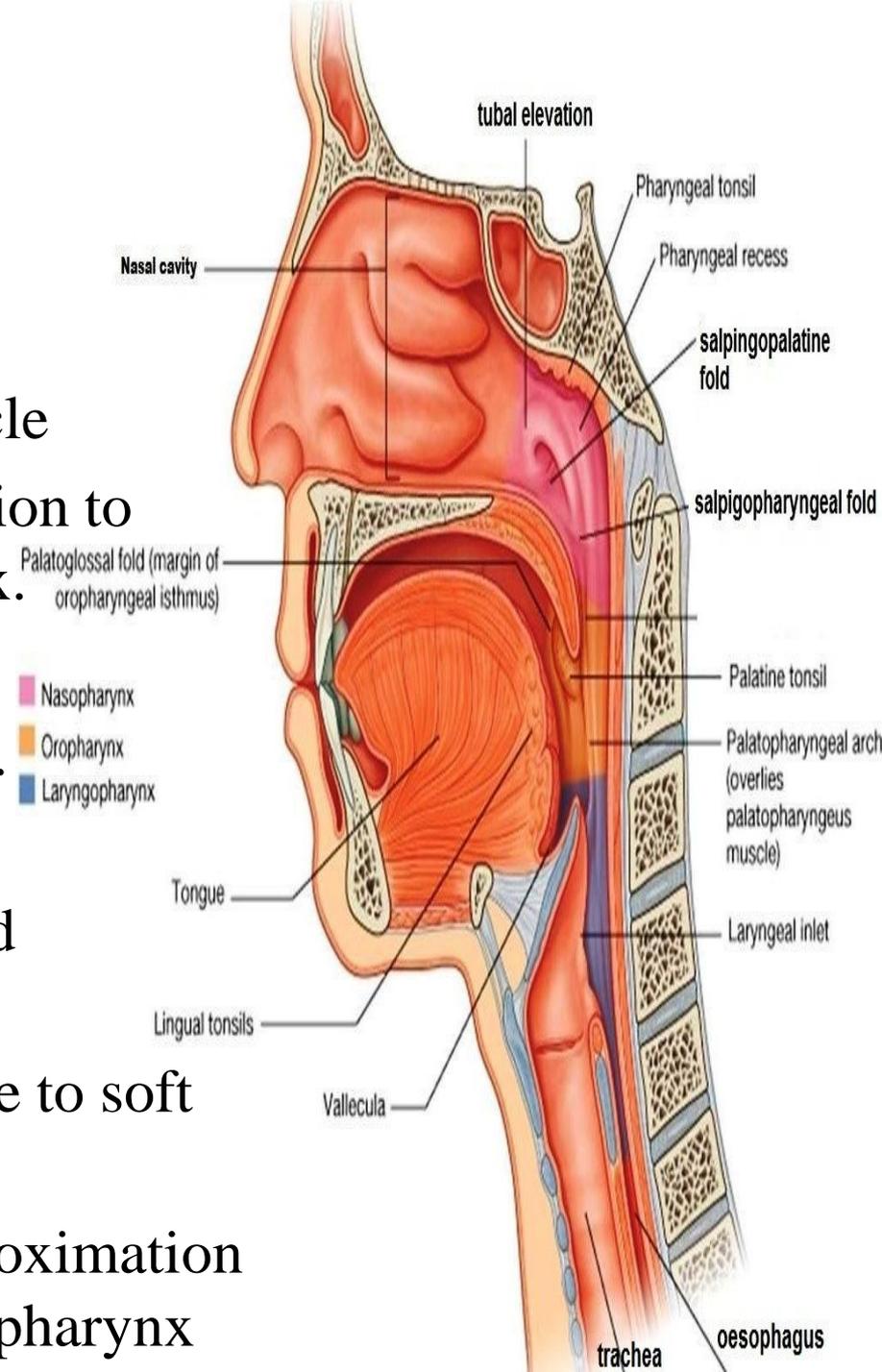
5-Pharyngeal recess

Depression just behind tubal elevation.

6-Pharyngeal isthmus

The junction between nasopharynx and oropharynx Bounded by soft palate anteriorly and wall of pharynx opposite to soft palate posteriorly.

It is closed during swallowing by approximation of soft palate and the opposite wall of pharynx



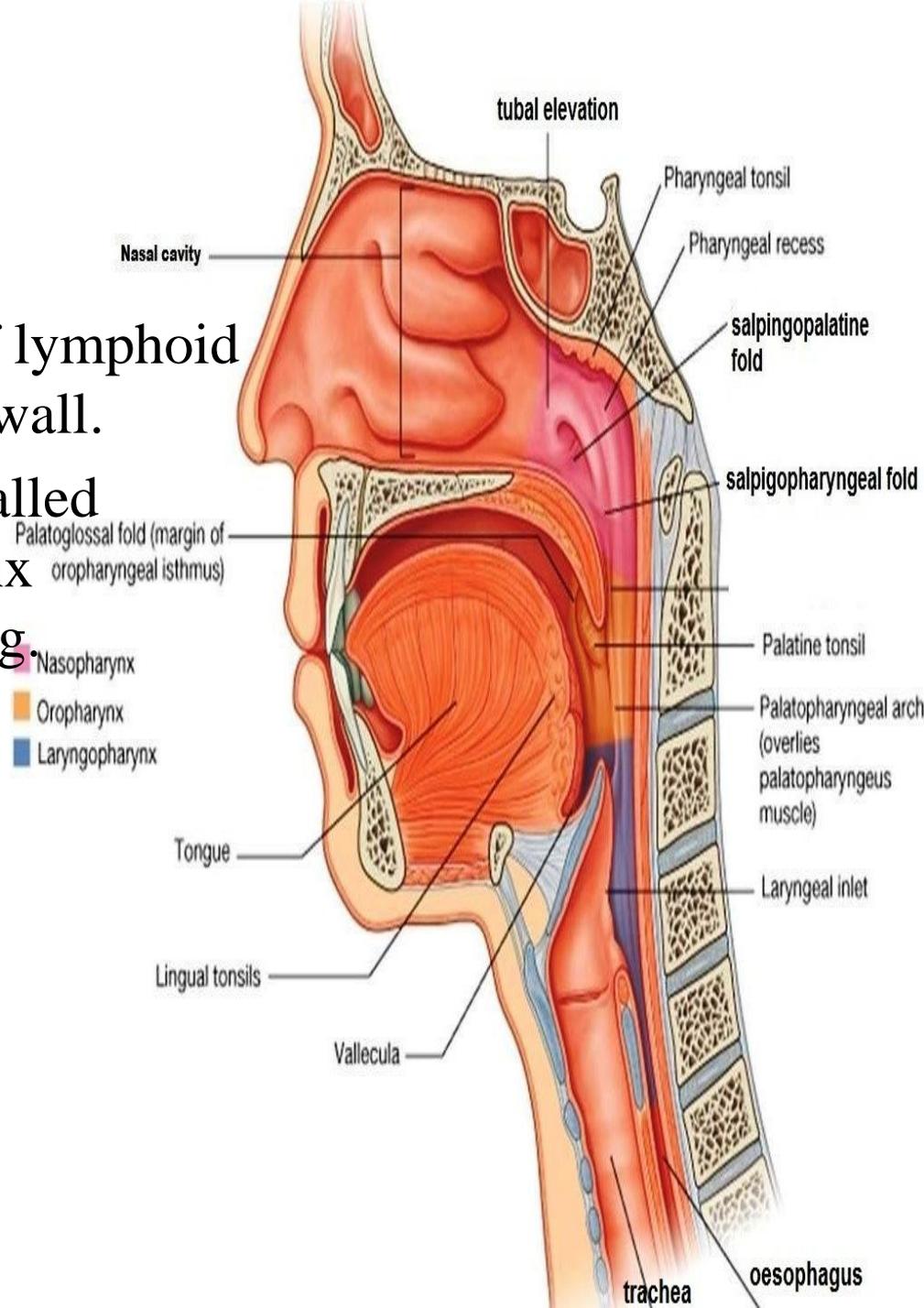
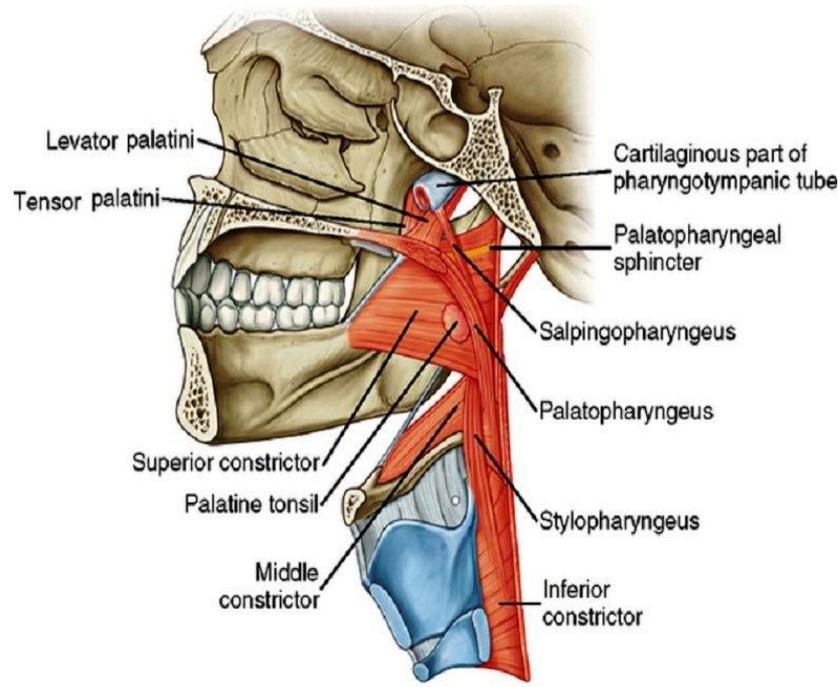
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I-Nasopharynx:

Features:

7-Pharyngeal tonsils collection of lymphoid tissue at meeting of roof and post. wall.

In children, if it is enlarged, it is called adenoids that can close nasopharynx completely leading to oral breathing.



PHARYNX

II-Oropharynx :

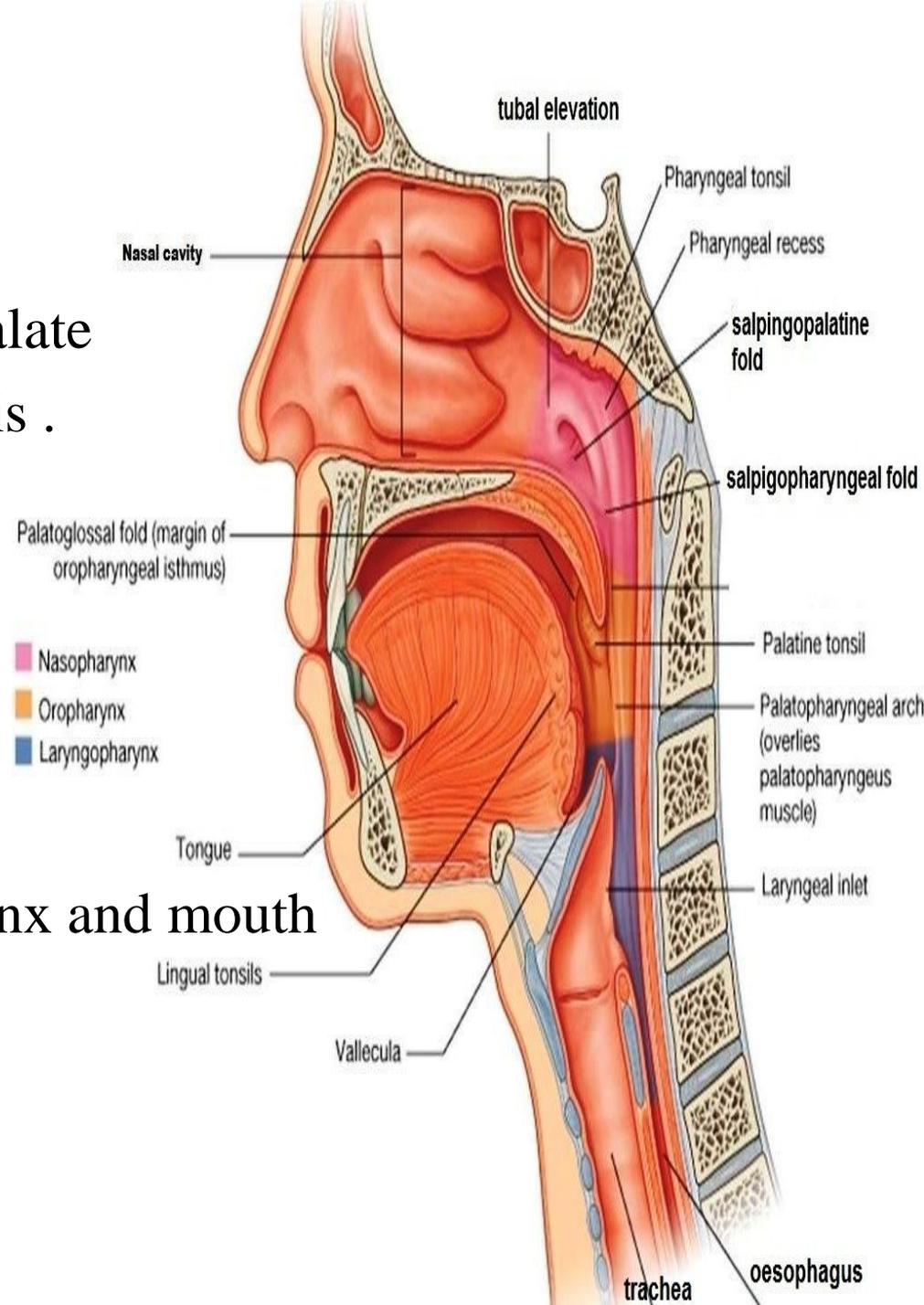
Lies behind oral cavity

Extent: from post. border of soft palate to upper border of epiglottis .

Features:

1-Its ant. wall is formed by back of tongue and oropharyngeal isthmus.

The latter is the opening communicating between oropharynx and mouth



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II-Oropharynx :

Features:

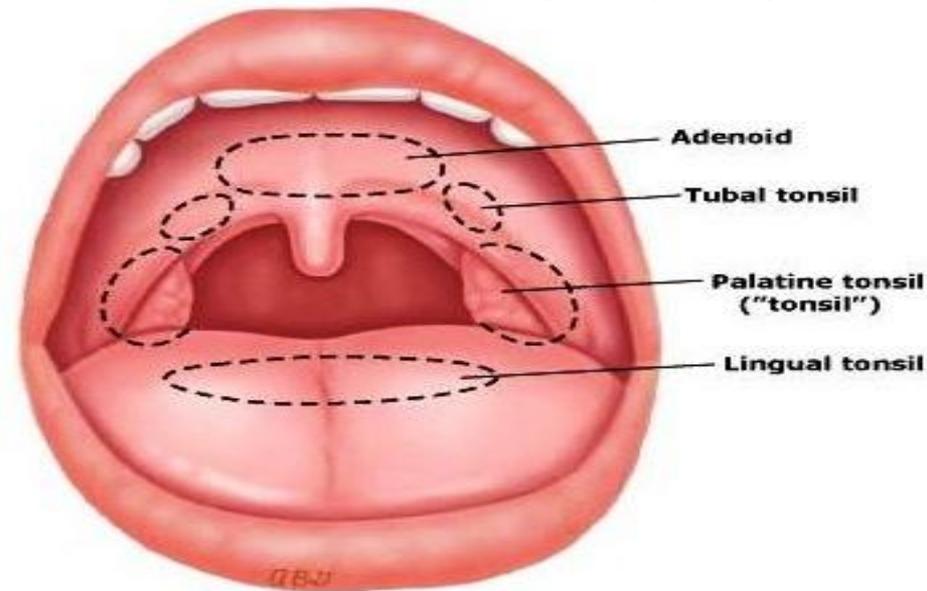
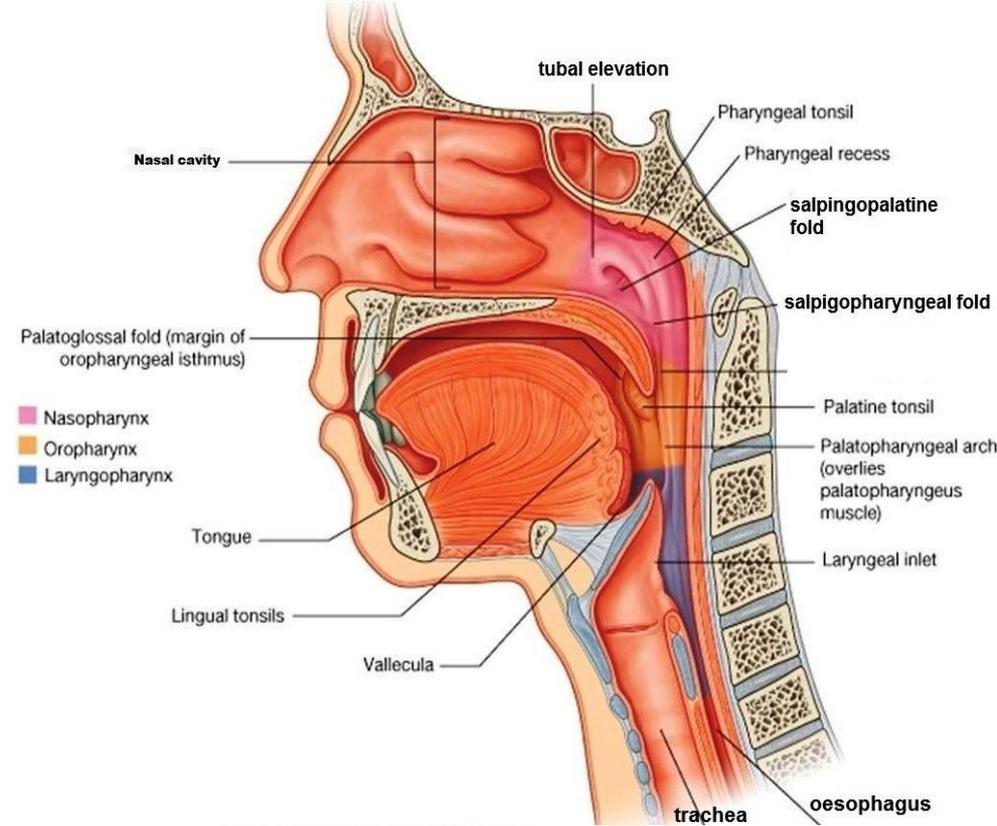
2- Palatine tonsil:

def.: collection of lymphatic tissue projecting into the oropharynx just behind Palatoglossal arch.

Site: Tonsillar fossa:

the part of side wall of oropharynx lodging the tonsil it is bounded by:

- Palatoglossal arches: anteriorly,
- Palatopharyngeal arches; posteriorly
- Soft palate: above.
- Tongue: below.
- floor: sup. constrictor



PHARYNX

II-Oropharynx :

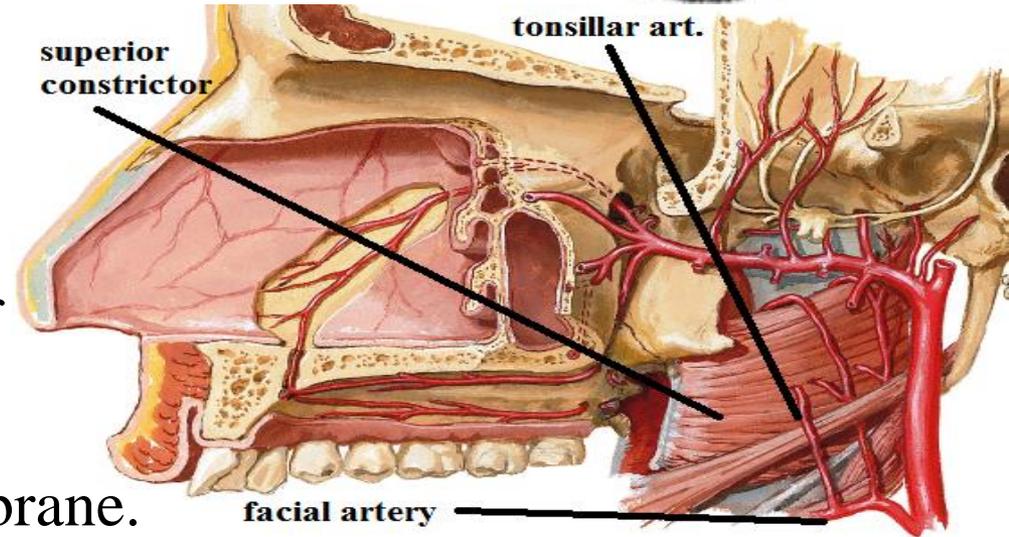
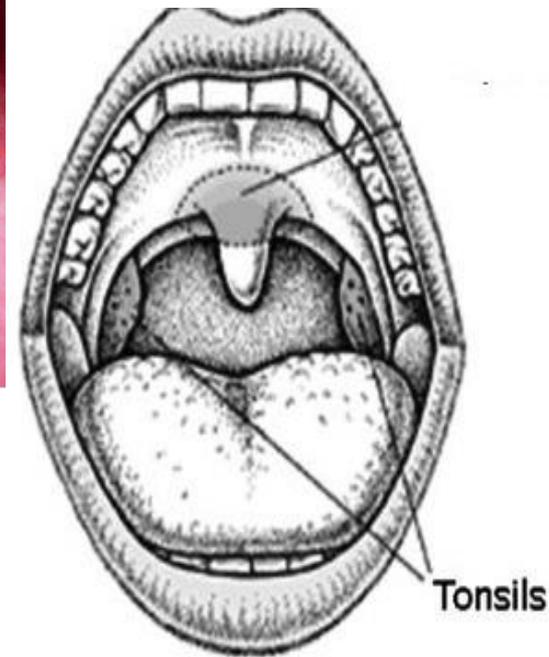
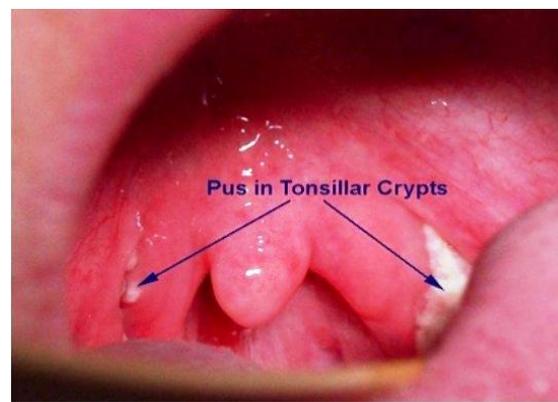
Features:

2- Palatine tonsil:

Tonsillar crypts: the medial surface of tonsil is covered by mucous membrane.

Minute tubular extensions from the mucous membrane invaginate the tonsil, end blindly within the collection of lymphoid tissue and open on the surface of the mucous membrane.

Blood supply : main blood supply is tonsillar artery, a branch of facial art.

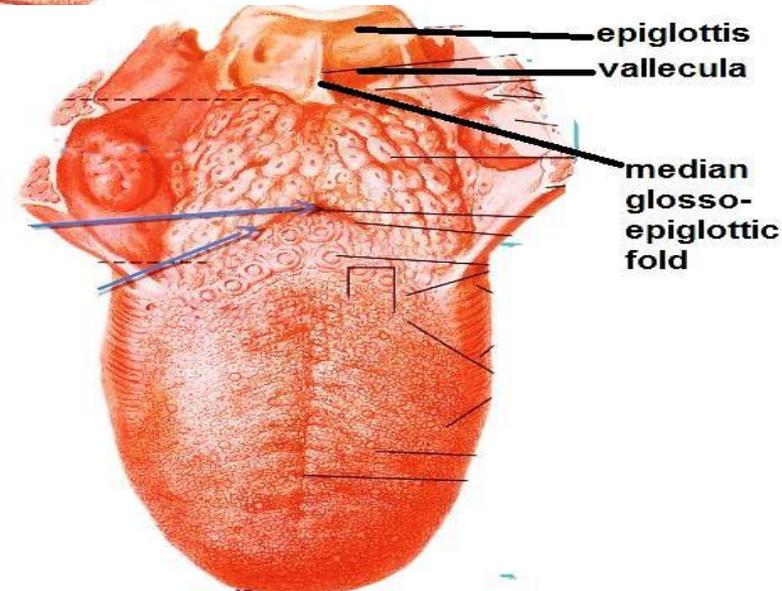
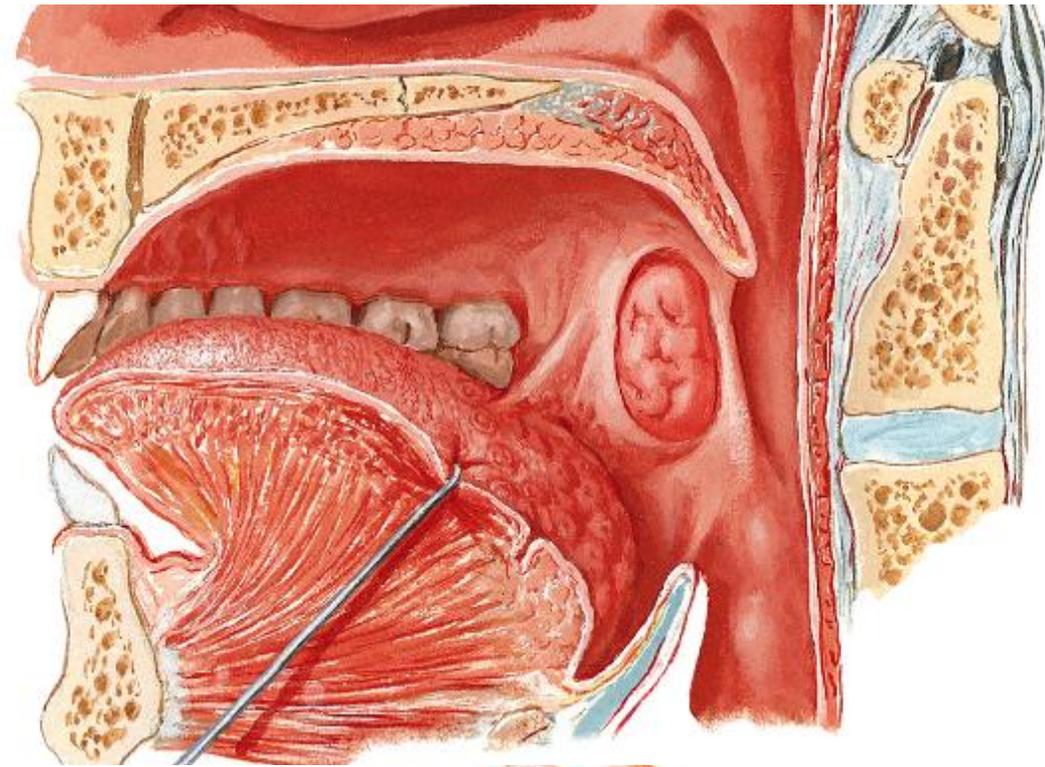


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II-Oropharynx :

Features:

- 3- Median glossoepiglottic fold:
fold of mucous membrane
connects back of tongue with
front of upper part of epiglottis,
- 4- Vallecula:
depression on each side
of median glossoepiglottic fold.



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III- Laryngopharynx:

Lies opposite to larynx

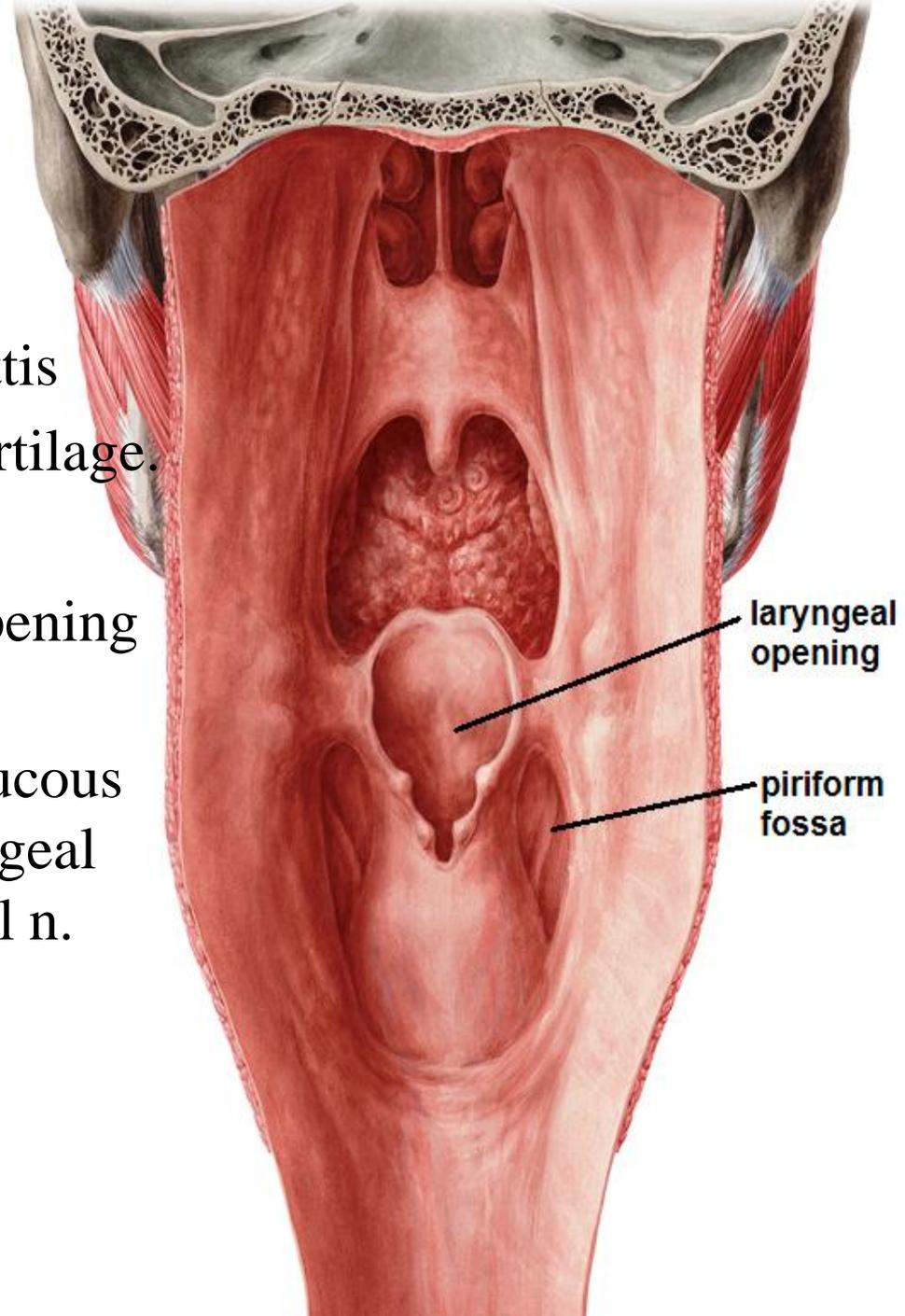
Extent: from upper border of epiglottis to lower border of cricoid cartilage.

Features:-

1-its **ant. Wall:** receives the upper opening of larynx (laryngeal inlet).

2- **Piriform fossa:** recess lined by mucous membrane lying on the side of laryngeal inlet and is supplied by int. laryngeal n.

It is tapering inferiorly.



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Arterial supply :

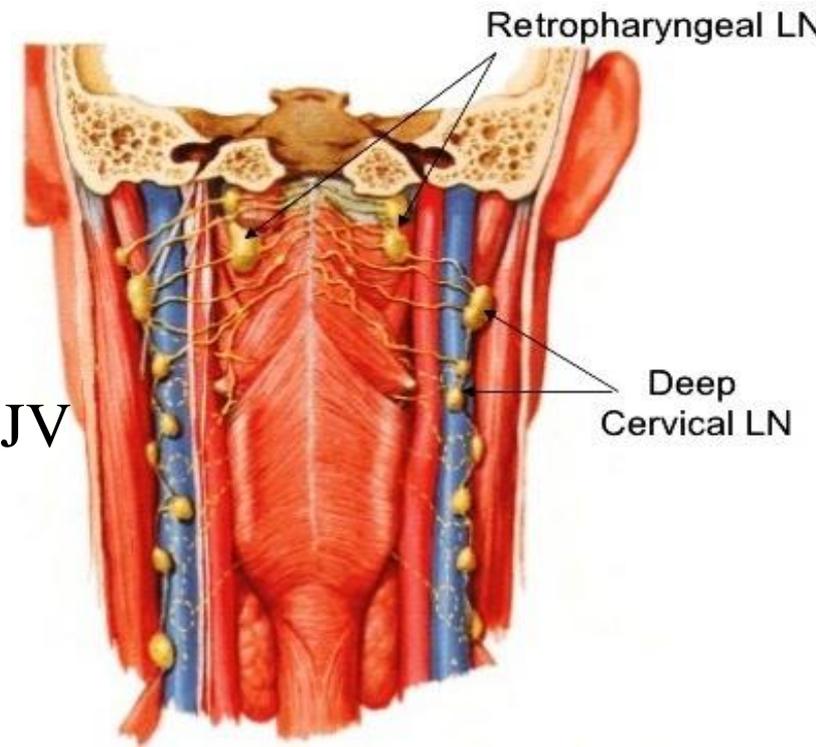
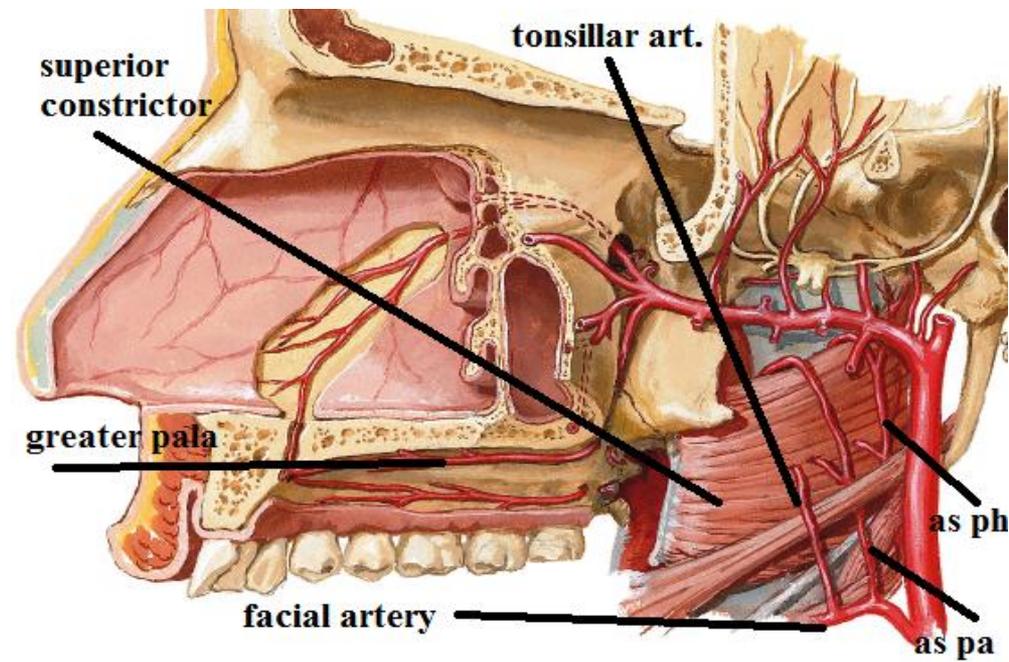
- Pharyngeal br of maxillary art.
- Greater palatine art
- Ascending pharyngeal art.
- Ascending palatine art.
- Tonsillar art
- Sup. Laryngeal art.
- Inf. laryngeal art.

Venous drainage:

- Veins from pharynx end in the pharyngeal plexus, which drains into IJV

Lymphatic drainage:

- Retropharyngeal LNs
- Deep cervical LNs



PHARYNX

Nerve supply:

Motor:

all muscles of pharynx are supplied by pharyngeal br. of vagus. through pharyngeal plexus except stylopharyngeus which is supplied by glossopharyngeal n.

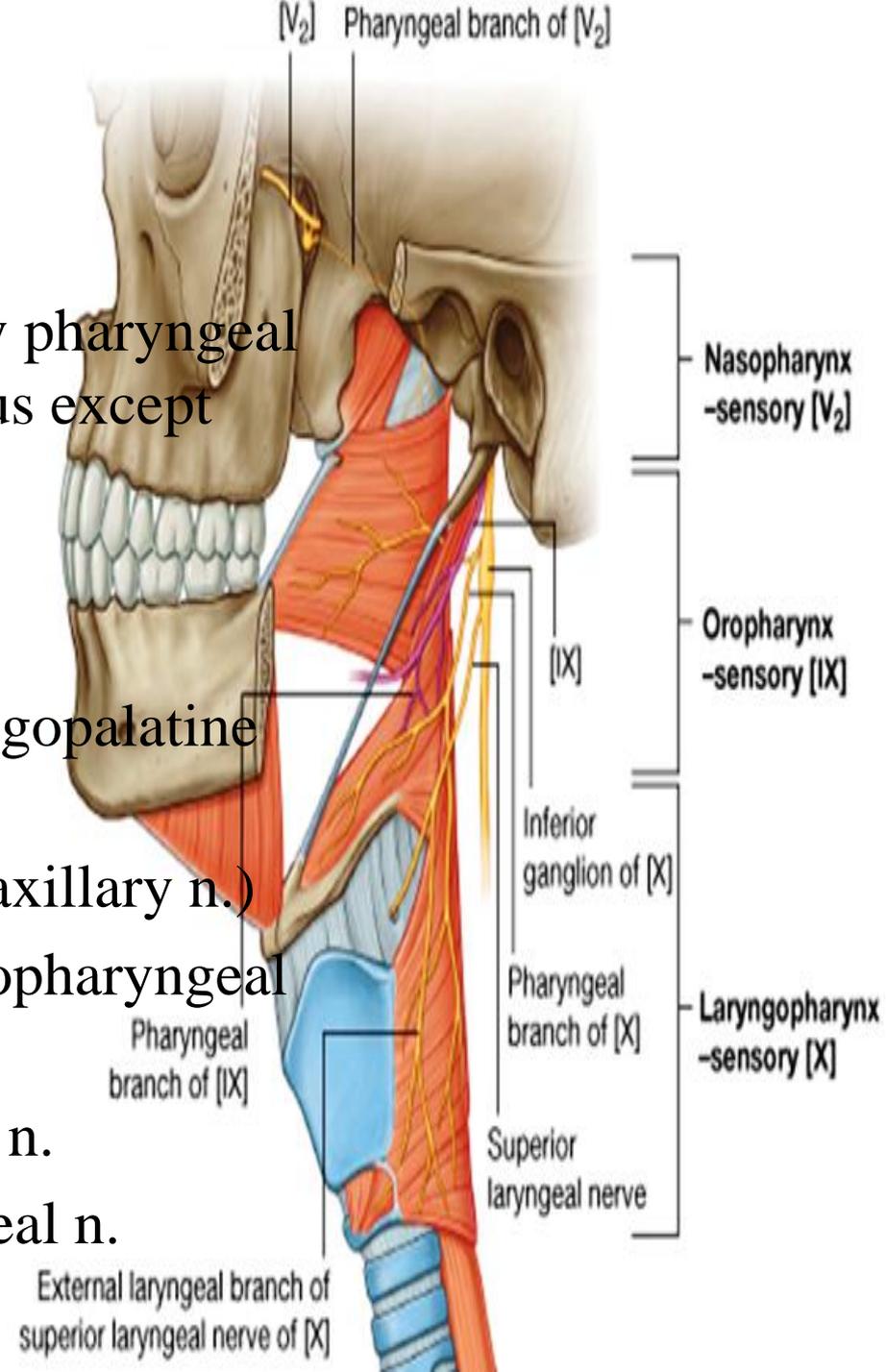
Sensory:

-**Nasopharynx:** pharyngeal br. of pterygopalatine ganglion

(its sensory fibres are derived from maxillary n.)

-**Oropharynx:** pharyngeal brs of glossopharyngeal n. through pharyngeal plexus.

-**Laryngopharynx:** - Internal laryngeal n.
- Recurrent laryngeal n.



THANQ