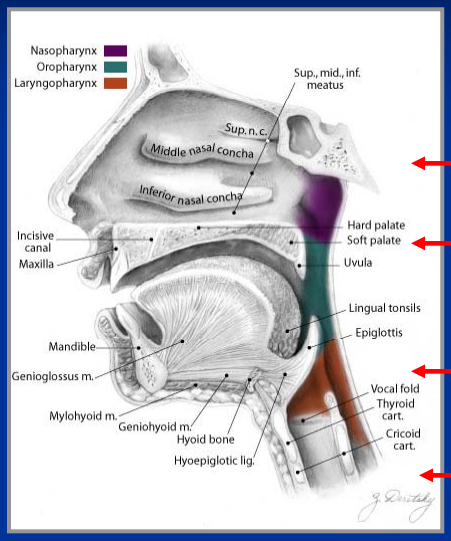
Anatomy & Physiology of the Pharynx

Emad A. Magdy, M.D.
Assistant Professor,
Department of Otorhinolaryngology,
Faculty of Medicine, Alexandria University.

Regions of the Pharynx



Posterior Choana

Hard Palate

Hyoid bone

Lower border of Cricoid cartilage

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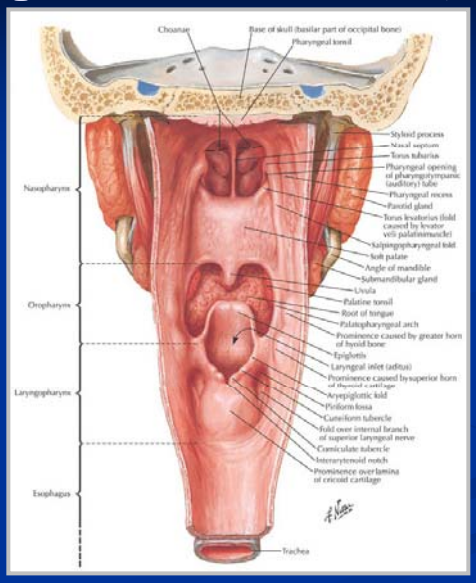

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NASOPHAYNX

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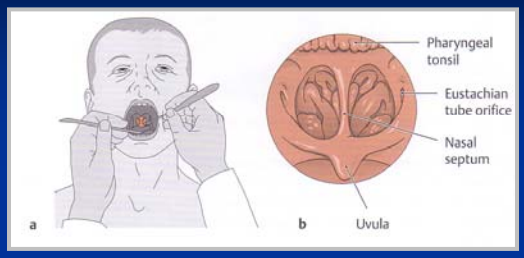
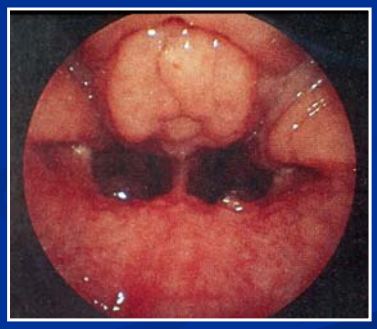
Relationships of Nasopharynx





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Lateral wall of Nasopharynx

Fossa of Rosenmuller

Tubal elevation (Torus tubarius)

Salpingopharyngeal fold

Salpingopalatine fold

ET orifice
(1.5 cm behind post. end of IT)

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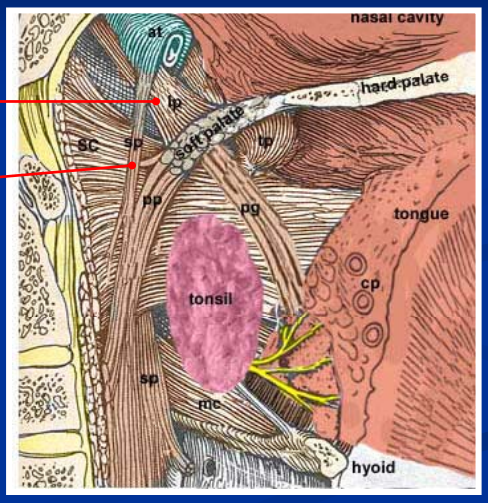
Lateral wall of Nasopharynx

Levator palati muscle

Salpingopharyngeus muscle



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OROPHAYNX

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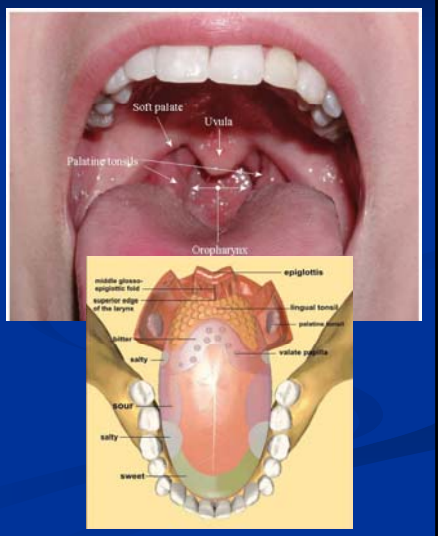
PARTS OF OROPHAYNX

- Sup. wall: Soft palate & Uvula.
- Lat. wall: Ant. & Post. pillars +Tonsillar fossae & Palatine Tonsils.
- Ant. wall: Tongue base (& lingual tonsils) + Valleculae.
- Post. wall: extends from soft palate to tip of epiglottis.



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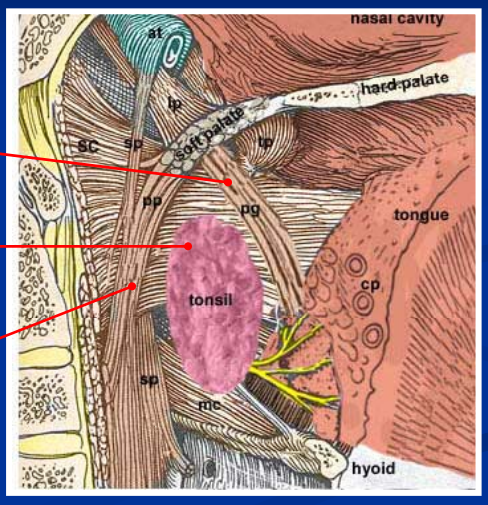
Lateral wall of Oropharynx



Palatoglossus muscle (Anterior pillar)

Palatine Tonsil

Palatopharyngeus muscle (Posterior pillar)

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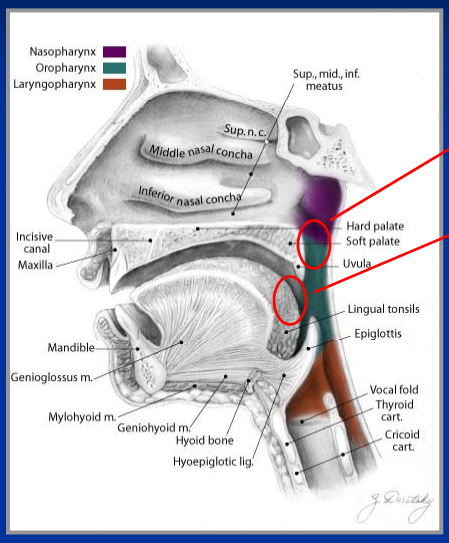
OROPHAYNX



Velopharyngeal isthmus

Oropharyngeal isthmus

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Physiological considerations

Velopharyngeal sphincter:

Closure of the sphincter-like mechanism between the oropharynx & nasopharynx is essential for normal ***deglutition*** **&** ***speech***.

<u>It is effected by combined:</u>

- Postero-superior movement of the soft palate.
- Medial movement of the lat. ph. walls.
- Slight anterior movement of post. ph. wall (*Passavant's ridge*)

The ***uvula*** plays an important role in the perfection of this closure.

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Physiological considerations

Functions of the Oropharynx:

1. Common pathway for food & air.
2. Respiratory function (Patent pathway between nose & larynx).
3. Reflex actions (sneezing, coughing & vomiting).
4. Speech resonance (articulation of vowels).
5. Deglutition (2nd "pharyngeal" phase of swallowing).
6. Drainage of mucus from nasopharynx.

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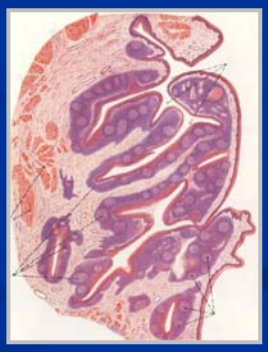
The Palatine tonsils

- A pair of lymphoid tissue masses lying on either side of the oropharynx.
- Normal tonsils are flush with the edges of the fauces.
- Medial surface is covered by mucous membrane showing 8-30 depressions (crypts).
- The largest crypt (*crypta magna*) separates the upper pole from the tonsillar body.



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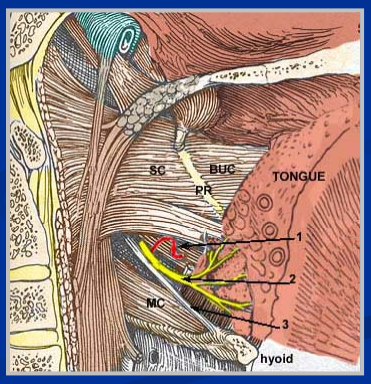
The Palatine tonsils

- Its lateral (deep) surface is bounded by a fibrous tissue **capsule,** which separates the tonsil from its bed that is made up of:
  - Superior constrictor muscle.
  - Glossopharyngeal nerve.
  - Facial artery.
  - Buccopharyngeal fascia.
- The lower pole may extend to the BOT & become continuous with the lingual tonsil.



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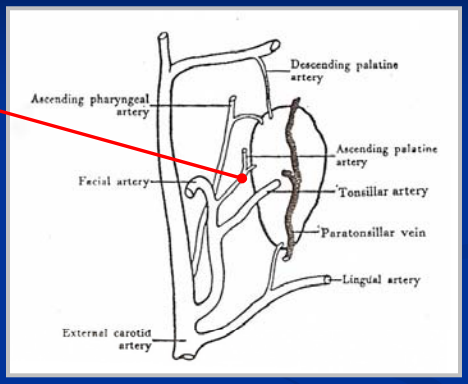
Blood supply of palatine tonsils

- **Tonsillar branch of Facial artery** (main).
- Ascending palatine a.
- Dorsalis linguae a.
- Descending palatine a.
- Ascending pharyngeal a.



Lymphatic drainage:

Upper deep cervical LNs (esp. the **Jugulo-diagastric LN**)

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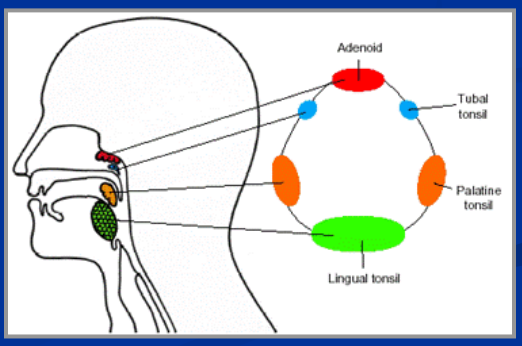
Waldeyer's Ring

Definition:

Ring of Lymphoid tissue guarding entrance to the digestive & respiratory tracts.

It plays an important role in *early recognition of pathogenic microorganisms* & *initiation of an immune response.*

1. **Nasopharyngeal Tonsil (Adenoid).**
2. **Tubal Tonsils.**
3. **Palatine Tonsils.**
4. **Lingual Tonsils.**
5. Lat. Pharyngeal bands.



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HYPOPHAYNX (LARYNGOPHARYNX)

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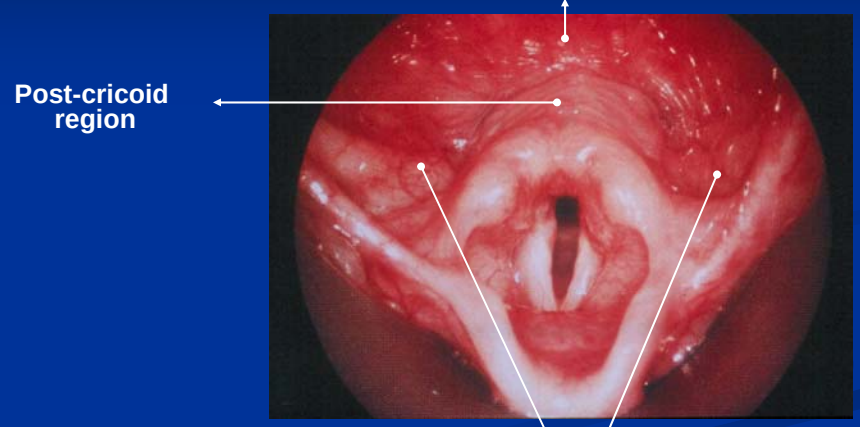
PARTS OF HYPOPHAYNX



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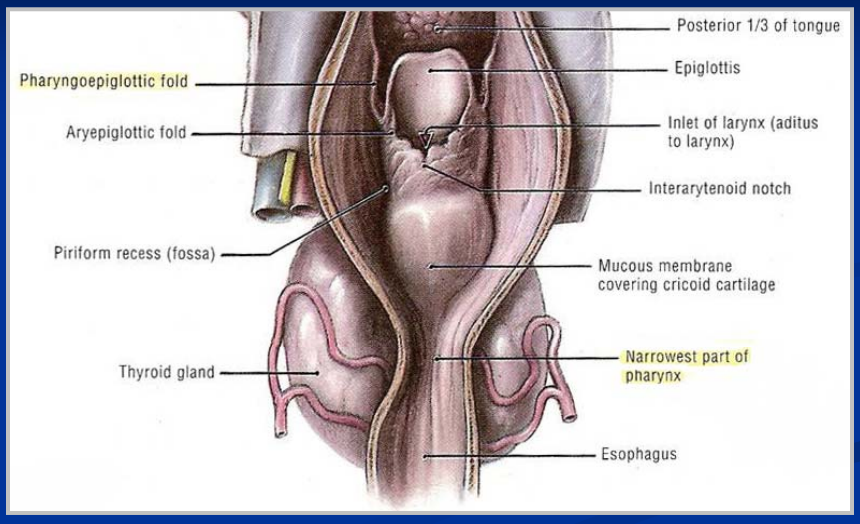

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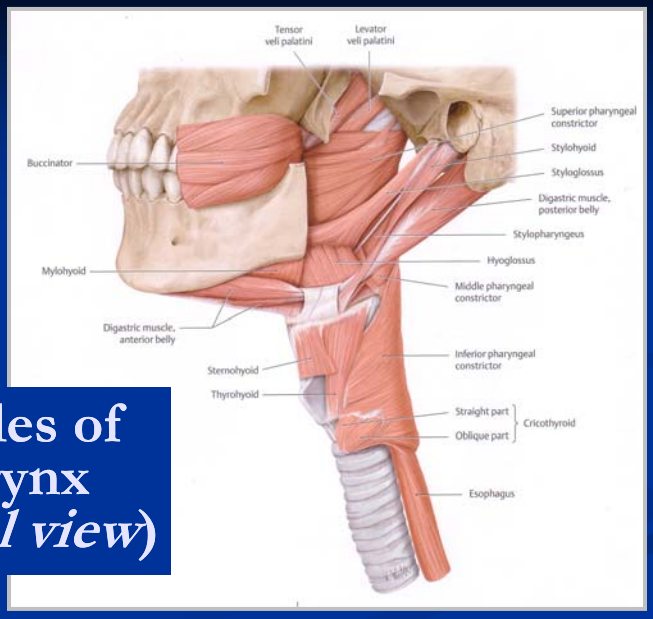
Muscles of Pharynx (*Lateral view*)



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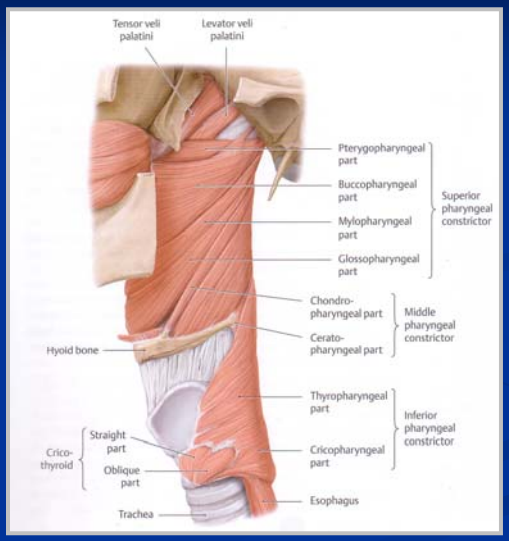
Constrictor muscles of Pharynx



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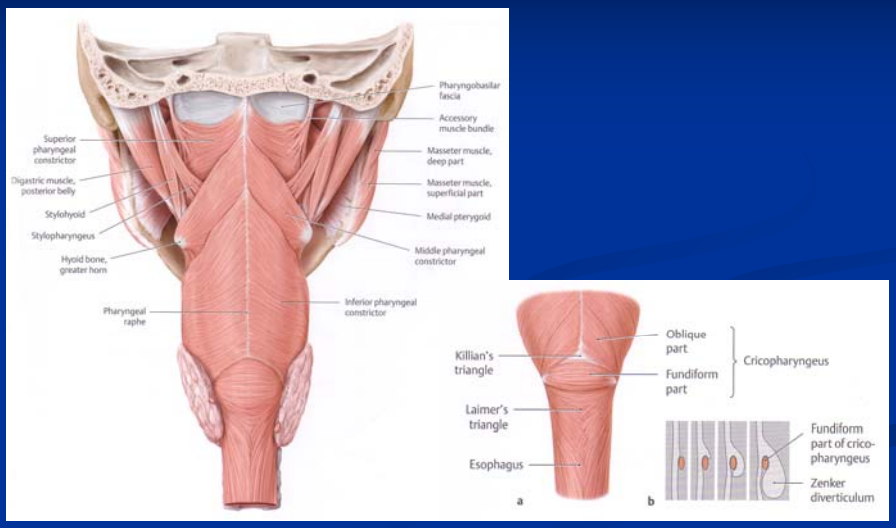
Constrictor muscles of Pharynx



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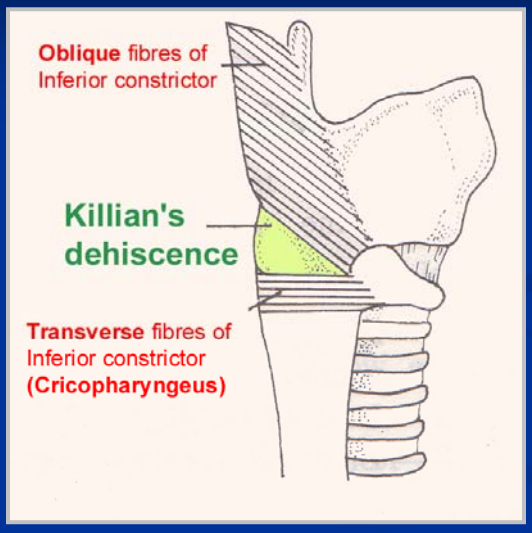
Inferior constrictor muscle of Pharynx



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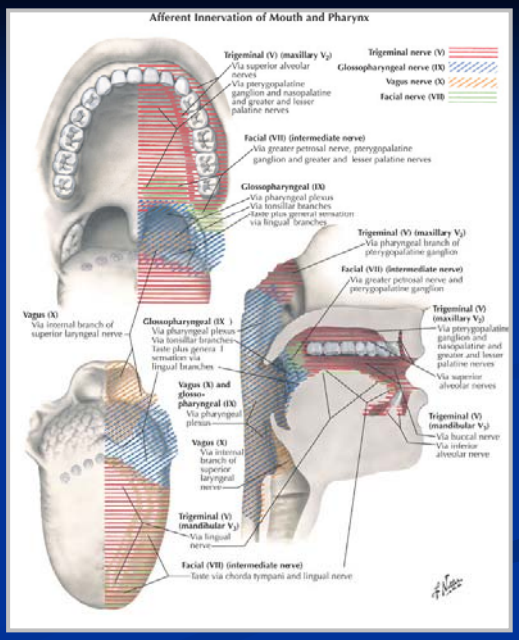
Nerve supply of the Pharynx



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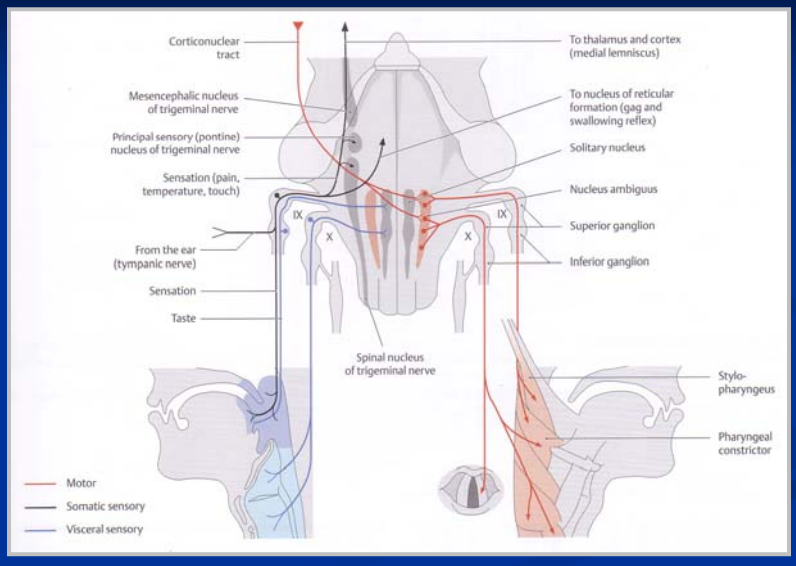

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THANK YOU!