



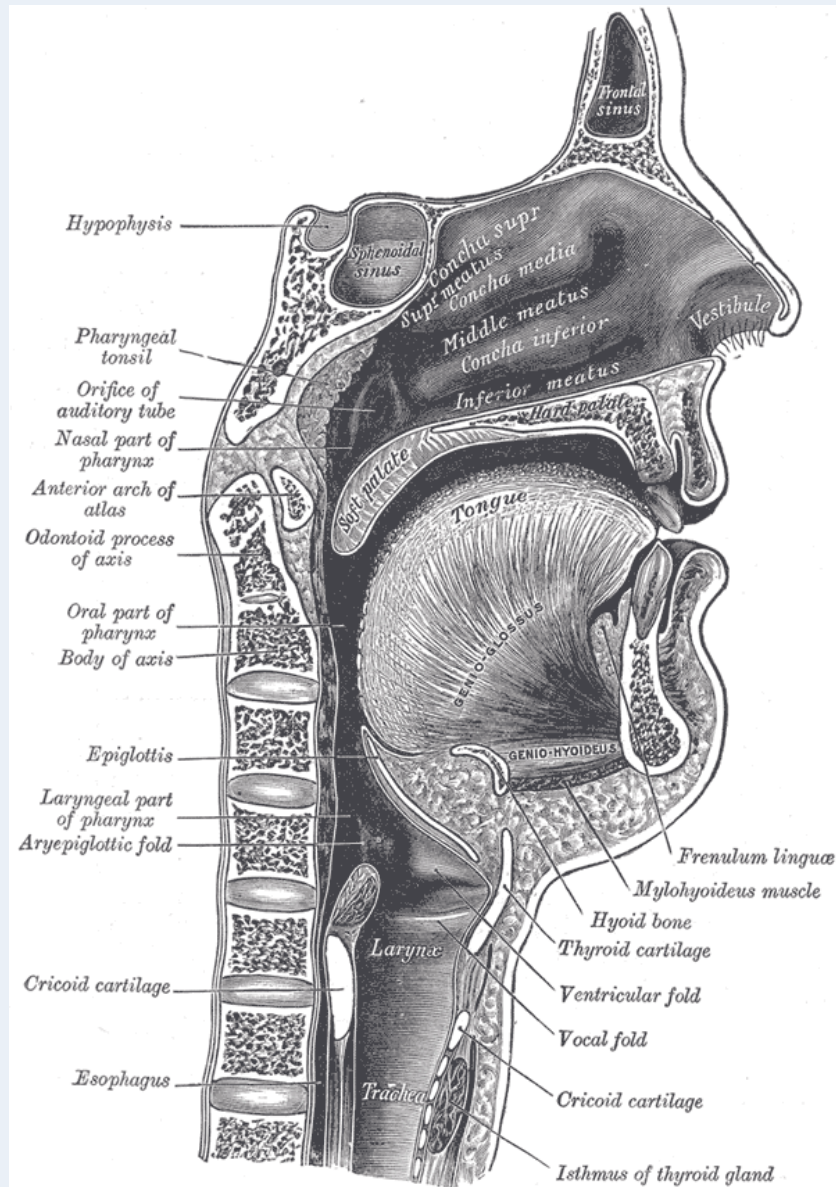
## The palate and the faucial isthmus

*He who guards his mouth and his tongue keeps himself from calamity.*

*Proverbs 21:23*

Ph.D., Dr. David Lendvai

# Parts of the oral cavity



# Parts of the oral cavity

## 1. Vestibule of the oral cavity

Borders:

- lips and cheek (bucca)
- dental arches

## 2. Oral cavity proper

Borders:

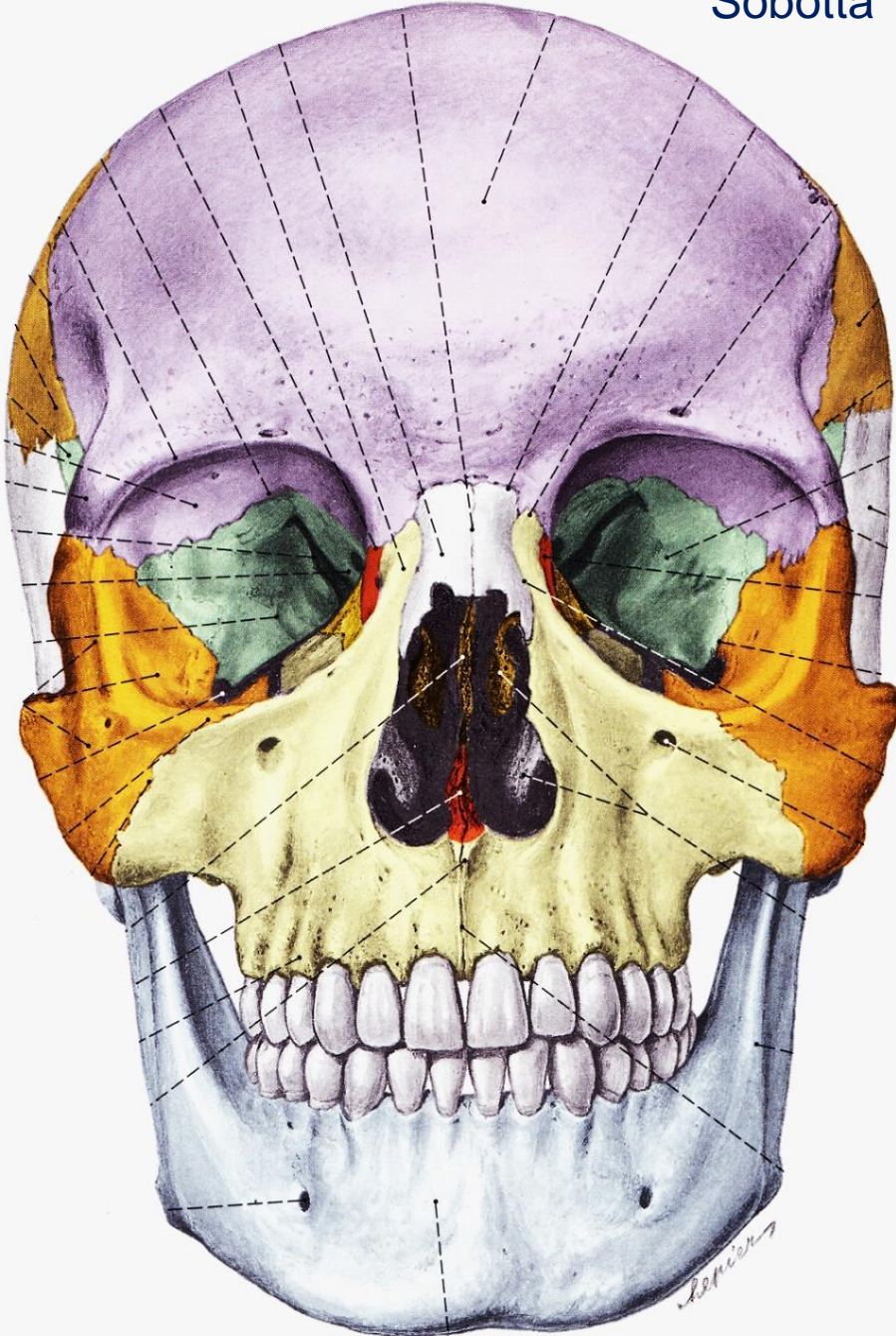
- roof: hard and soft palate
- floor: oral diaphragm (mylohyoid m.)
- antero-laterally: dental arches
- posteriorly: isthmus of the fauces



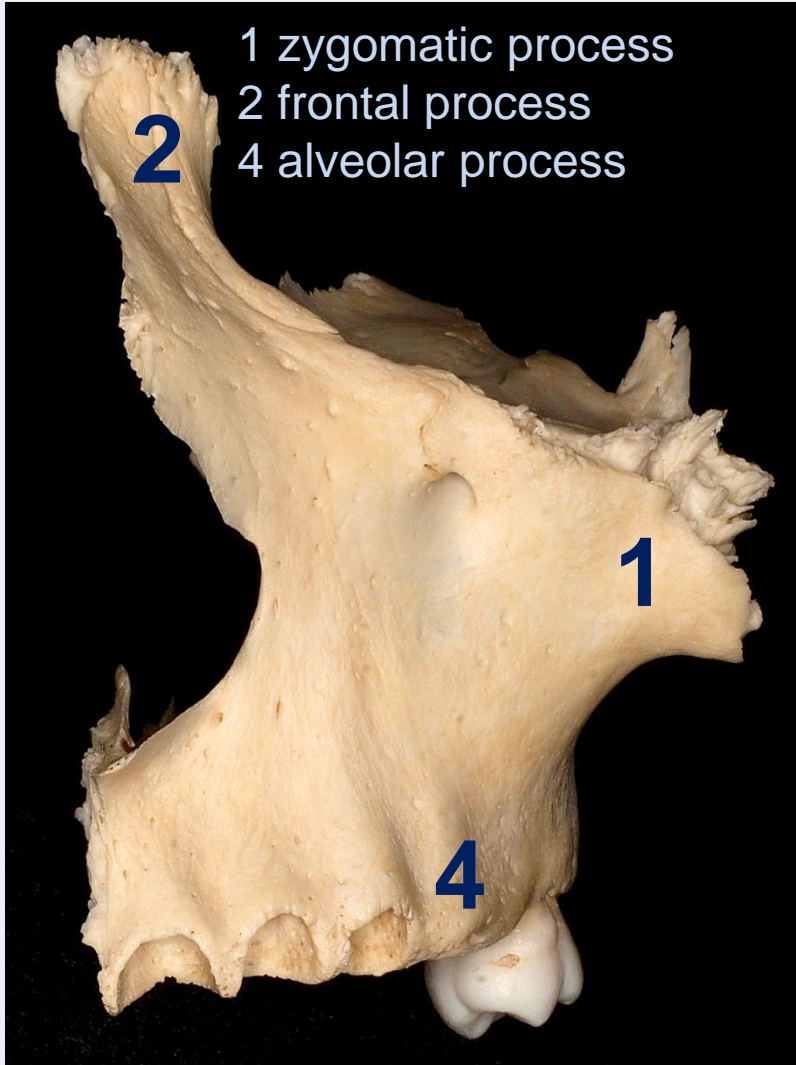
# Etrance of the oral cavity



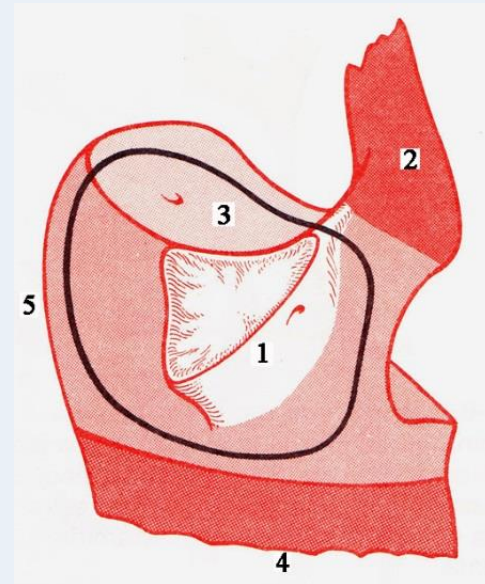
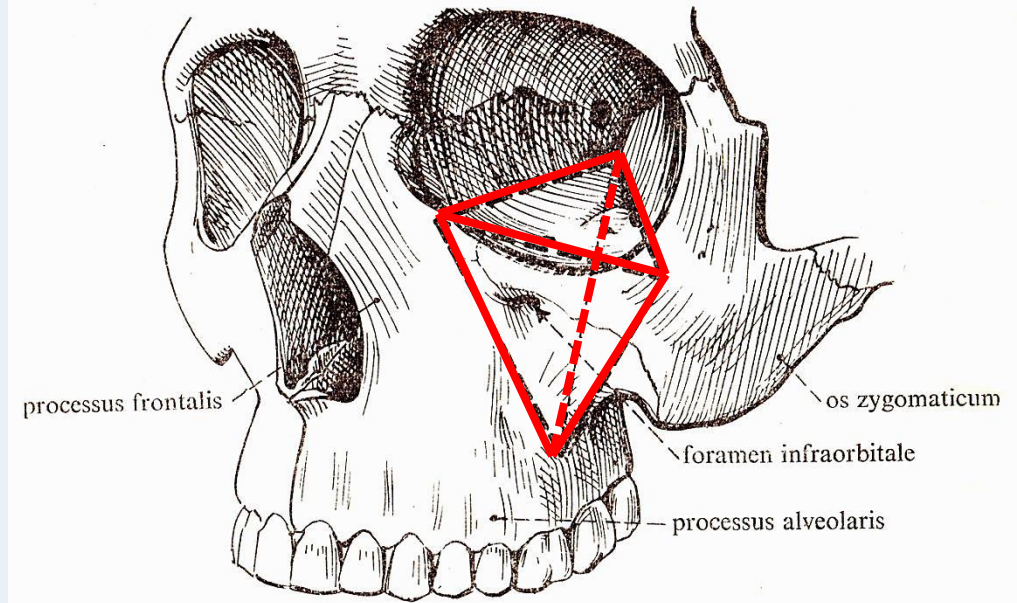
- Philtrum
  - Upper & lower lip
  - Angulus
  - Rubor labii
  - Nasolabial groove
- (Facial palsy)



# Aspectus anterior



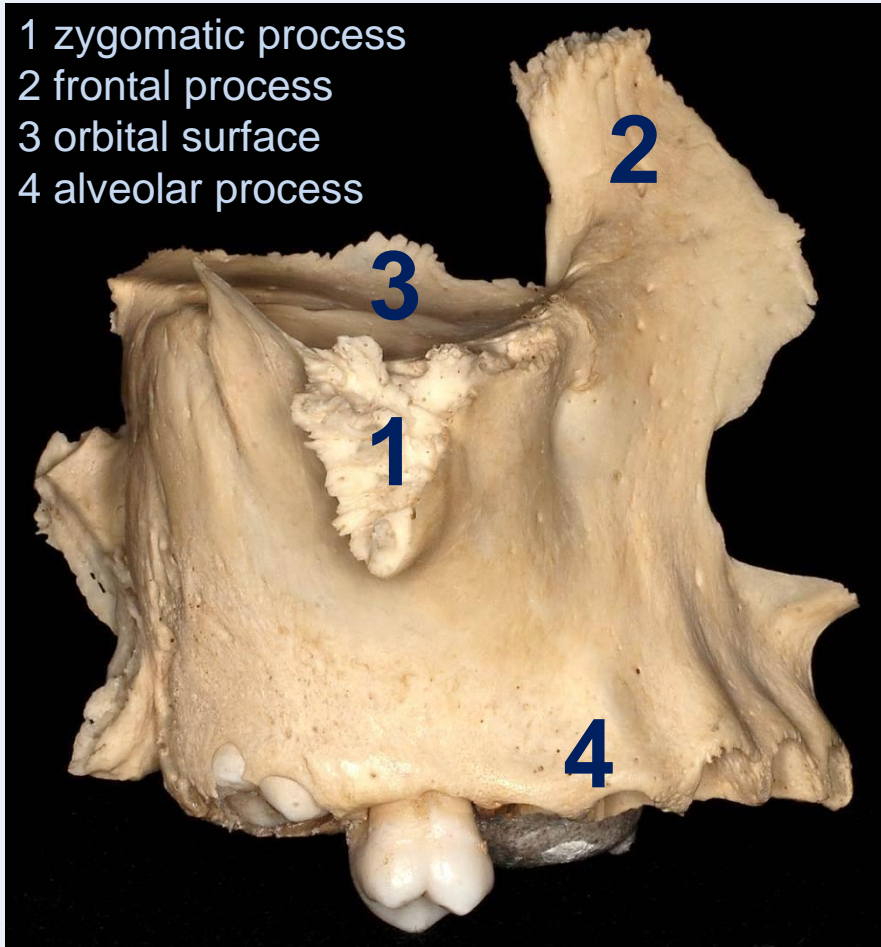
(left)



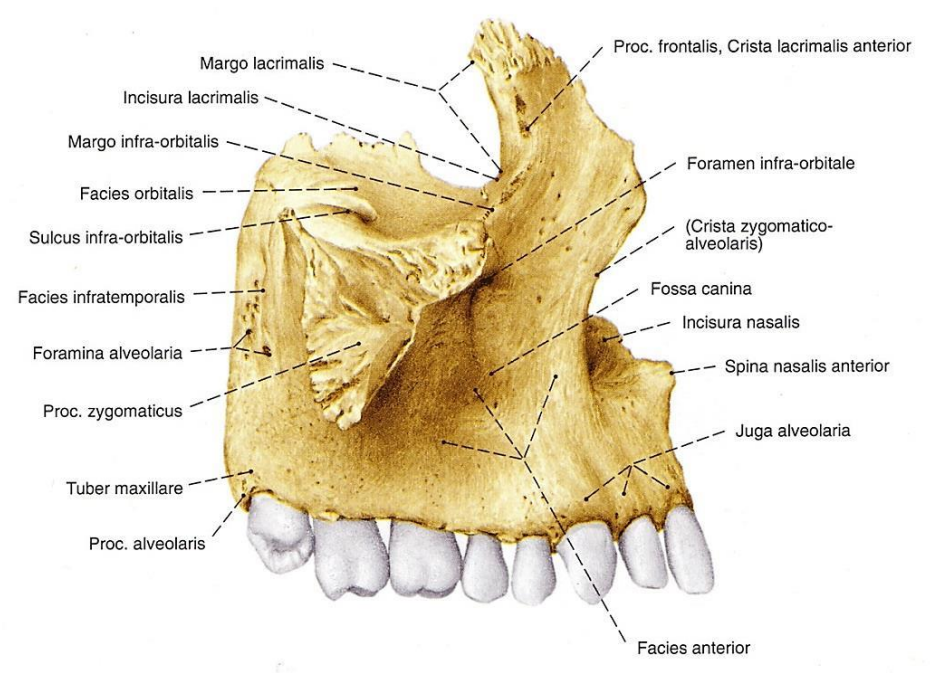
Faller

# lateral aspect

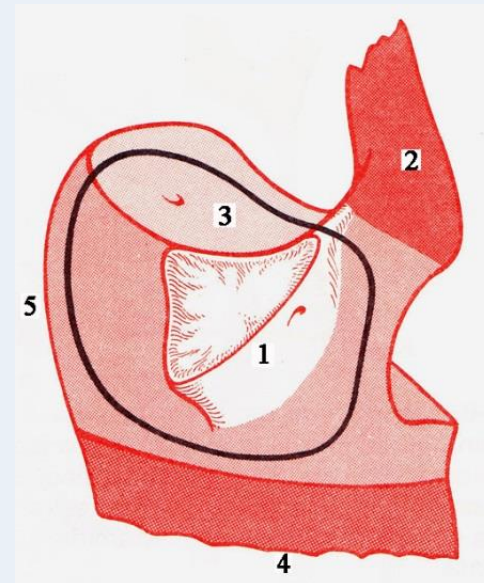
- 1 zygomatic process
- 2 frontal process
- 3 orbital surface
- 4 alveolar process



(right)

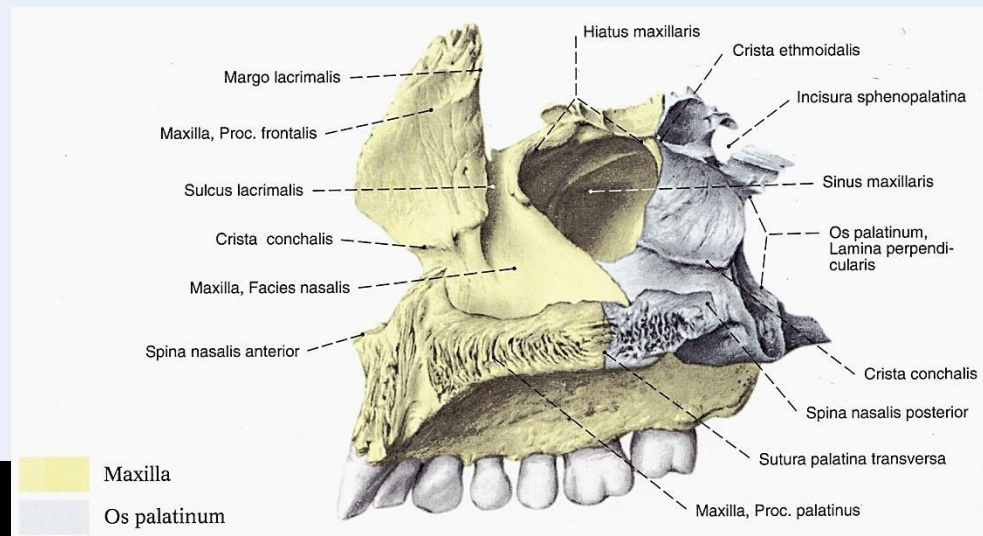


Sobotta

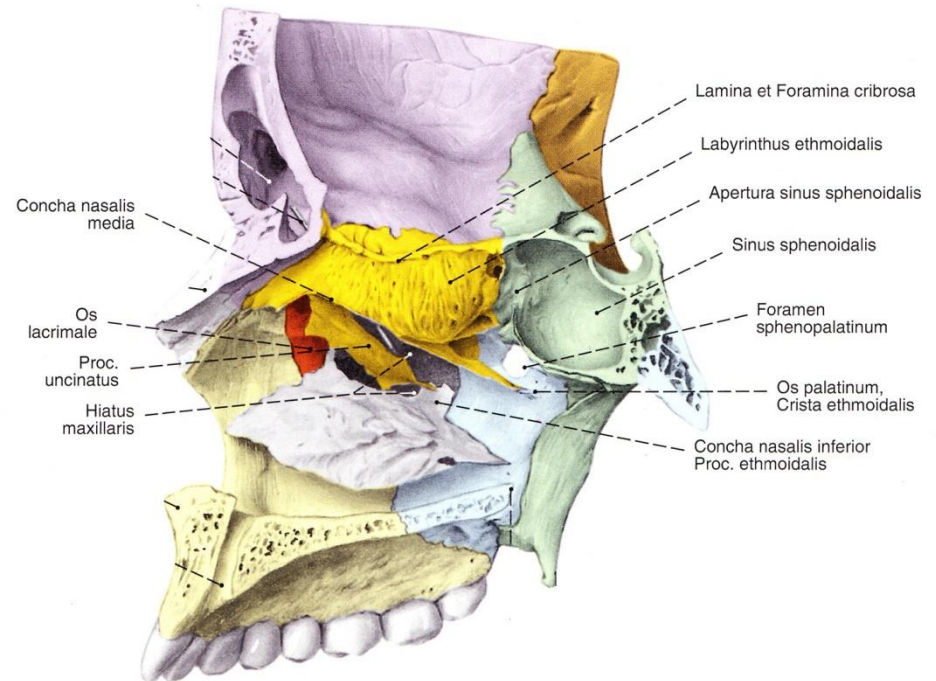


Faller

# Medial aspect

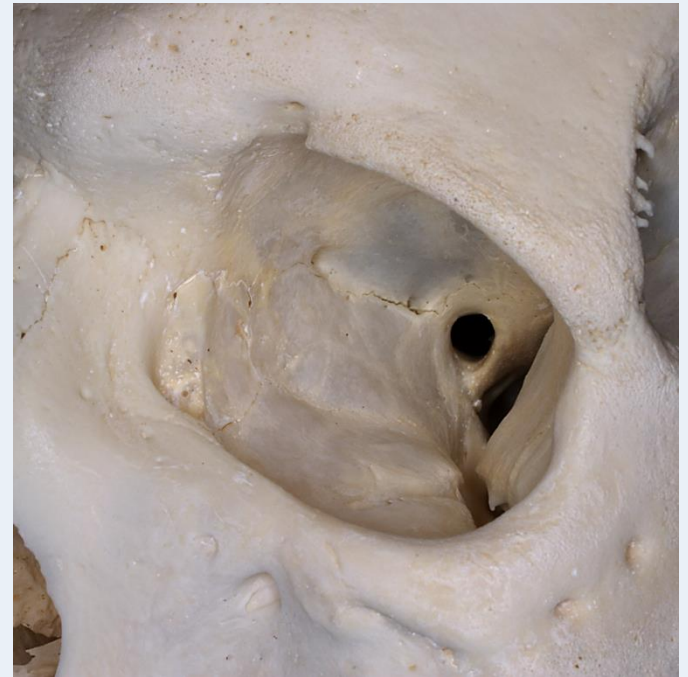
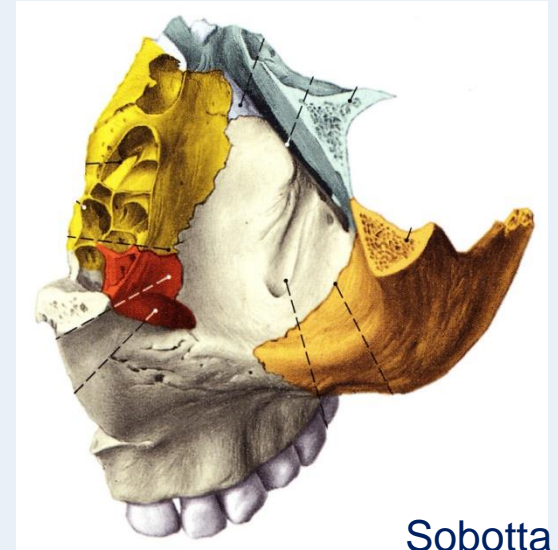


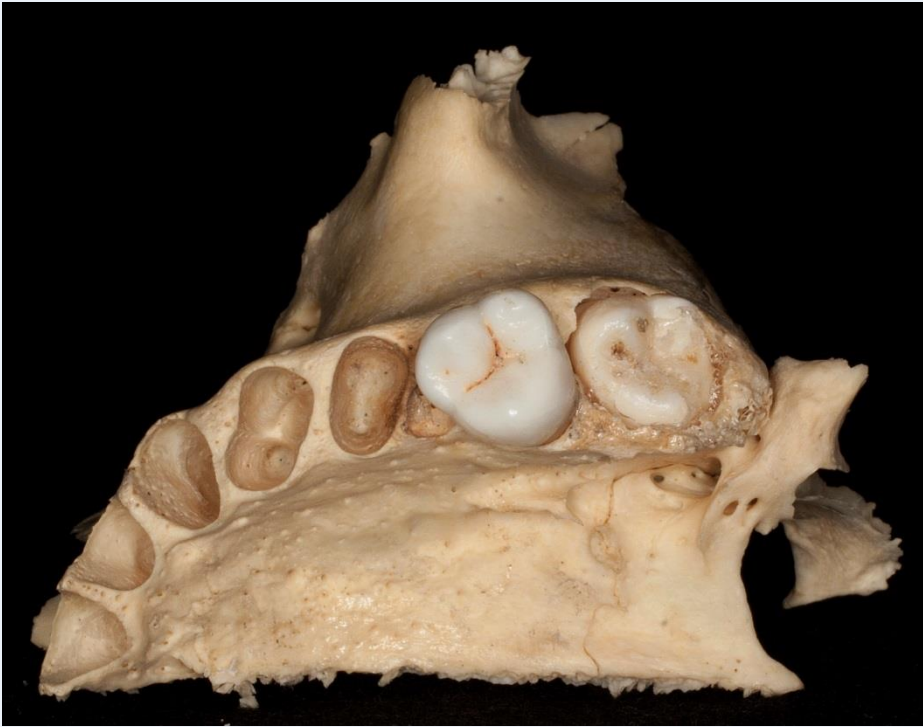
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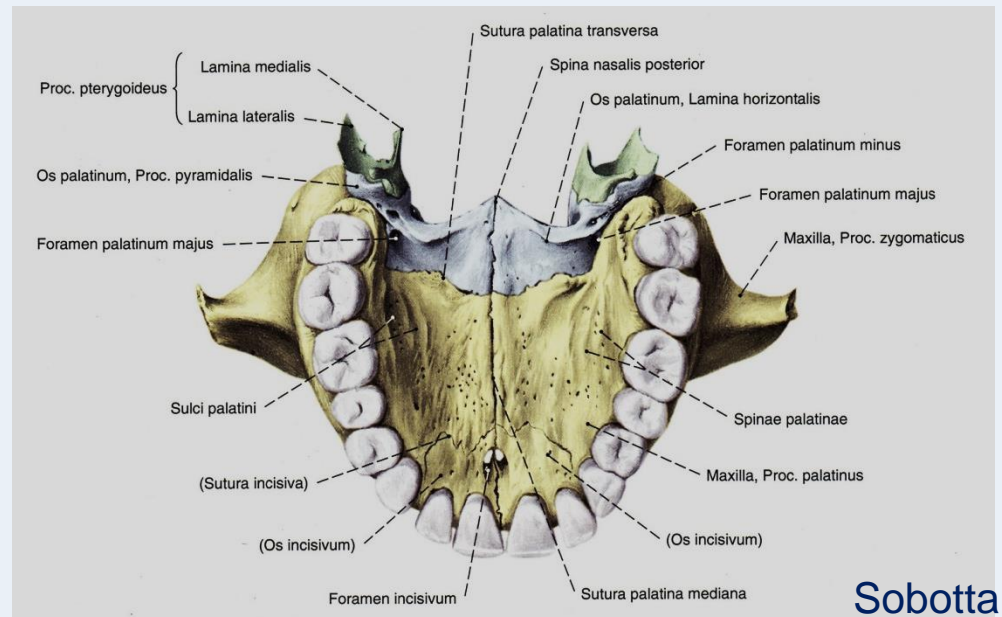


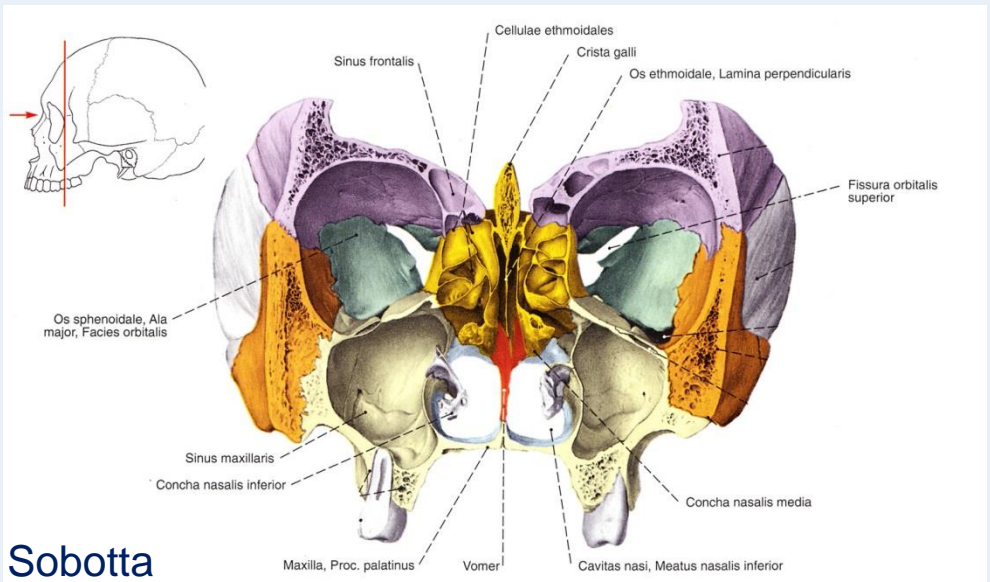
# Superior aspect



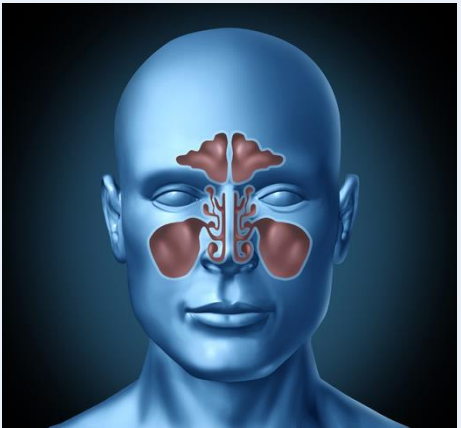


# Inferior aspect





Sobotta

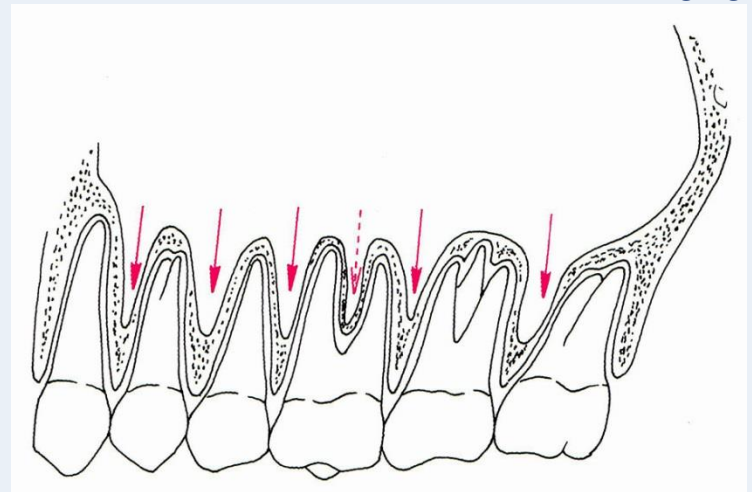


<http://www.almanahmedical.eu>



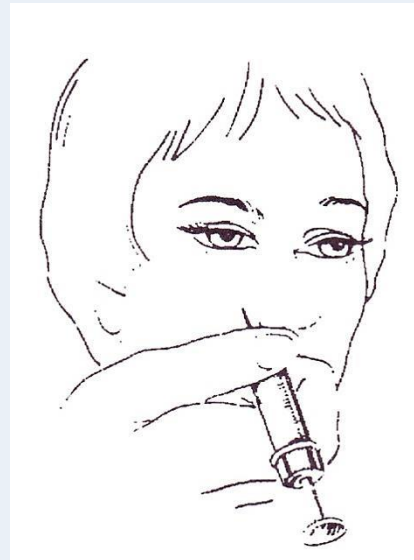
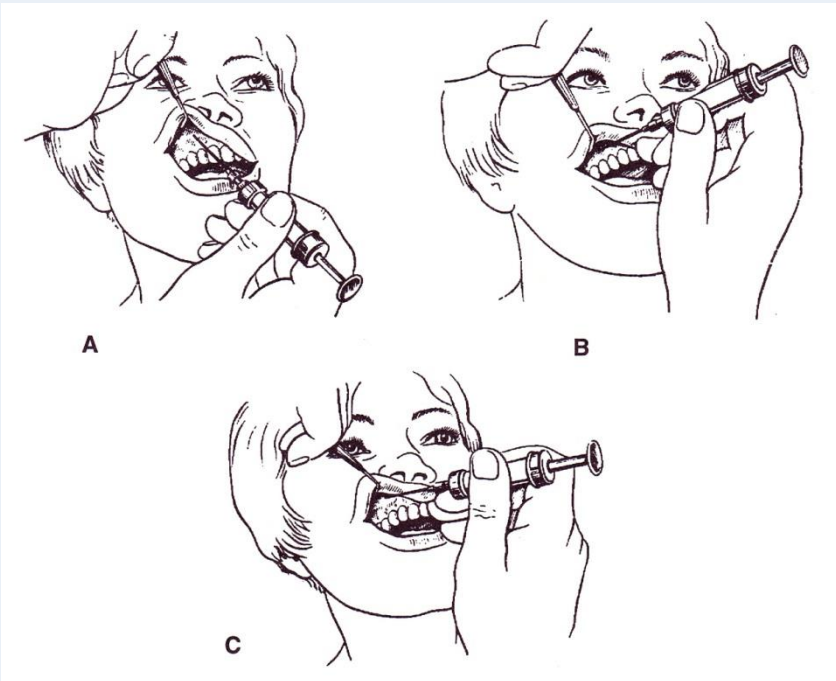
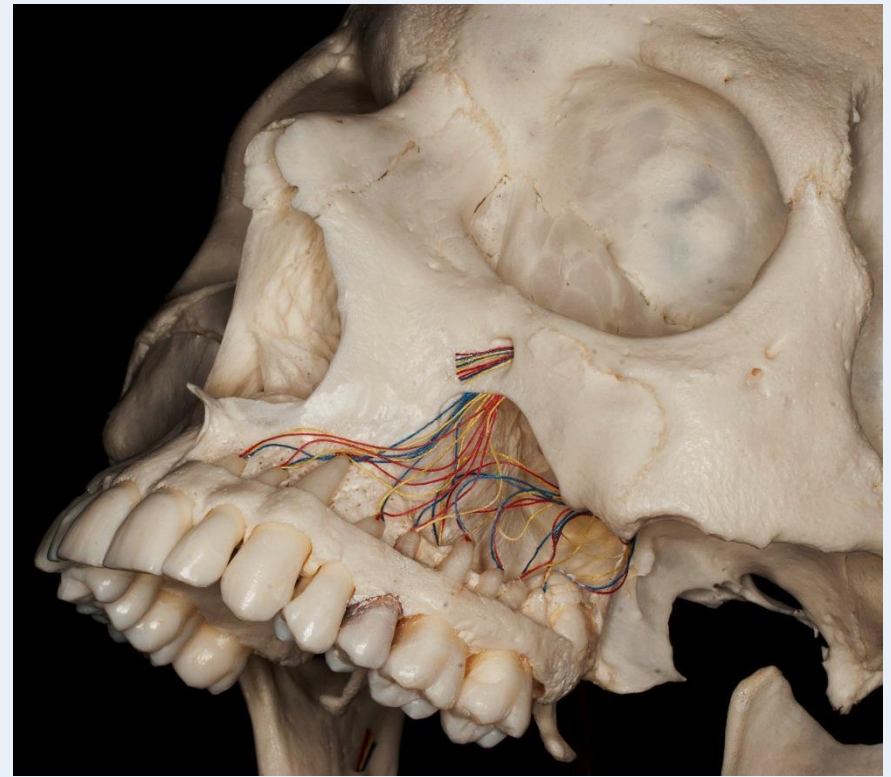
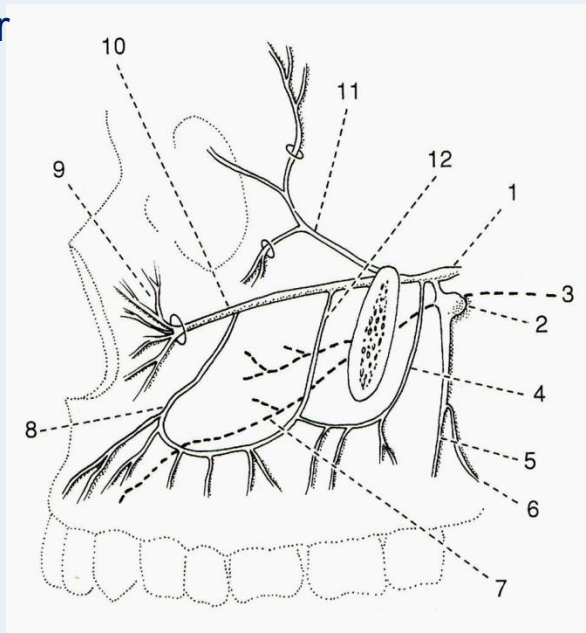
Florian Dental – Dr. S. Kovách





Fehér

Fehér

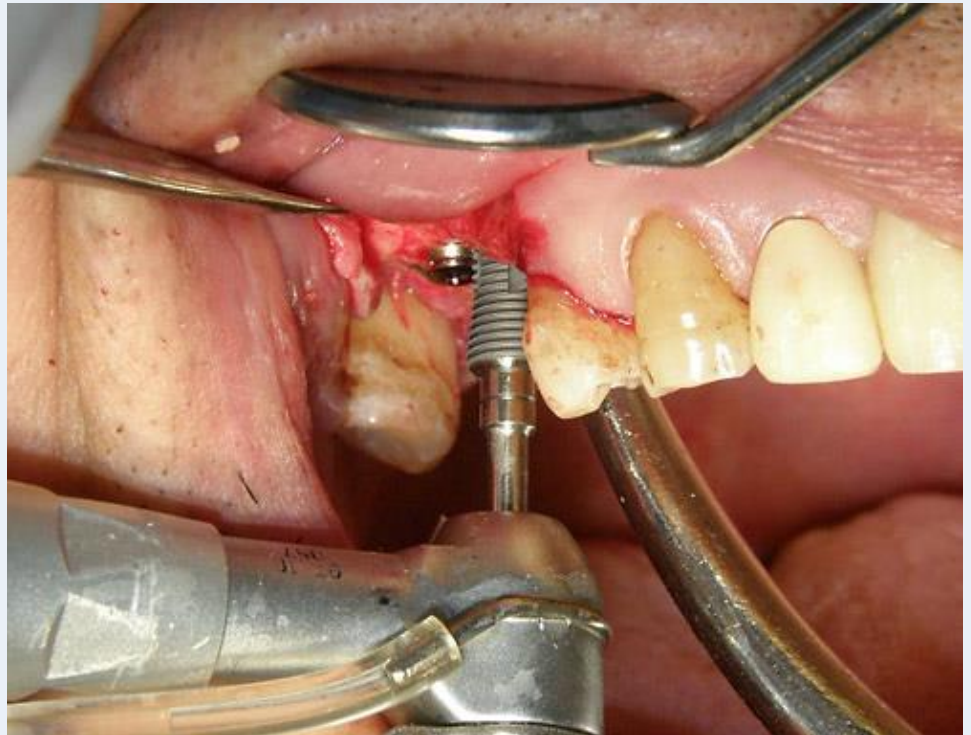


Szél

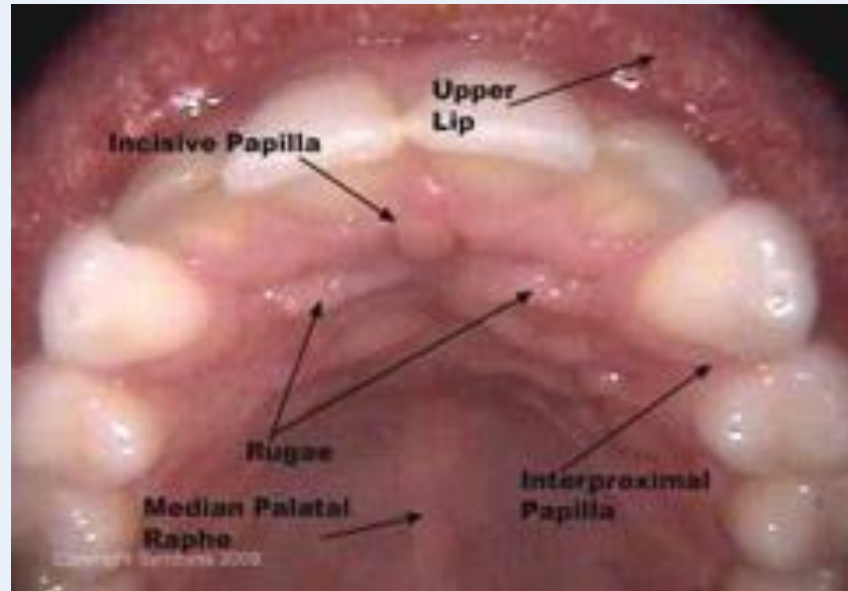
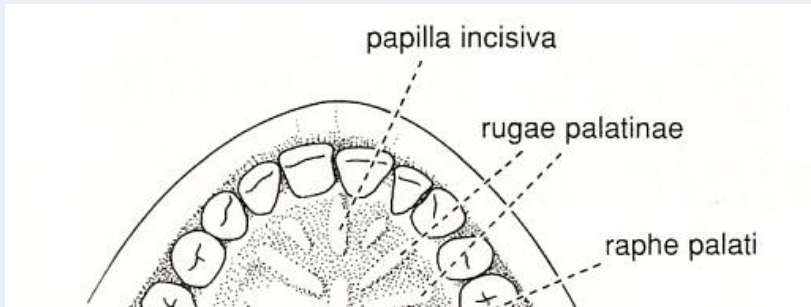
Szél



<http://www.hc-bios.com>



# Structures of the hard palate

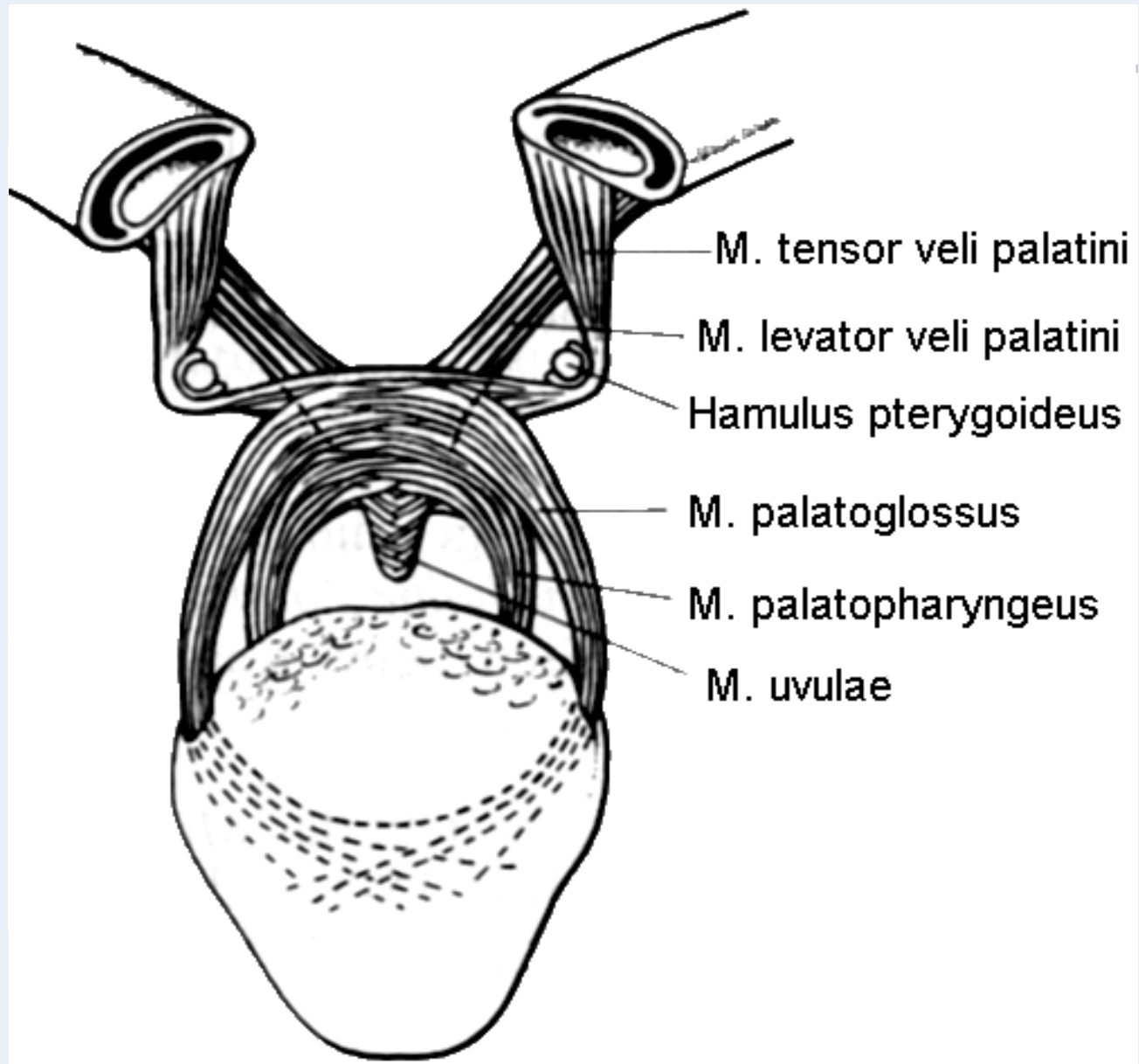


- incisive papilla
- palatine rugae
- palatine raphe
- torus

# Hard and soft palate

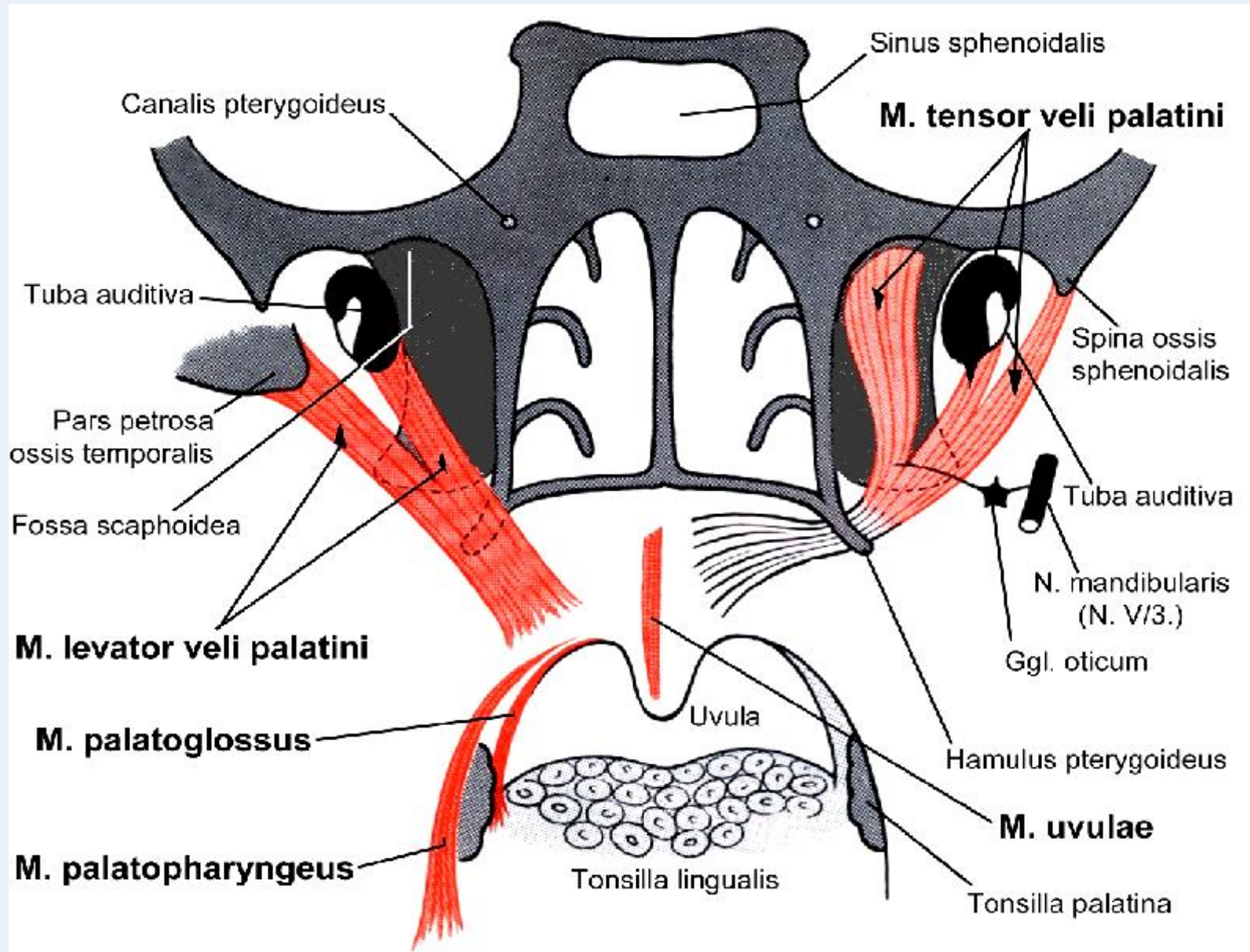
## Muscles of the soft palate

- Levator veli palatini m.
- Tensor veli palatini m.
- Palatoglossus m.
- Palatopharyngeus m.
- M. uvulae

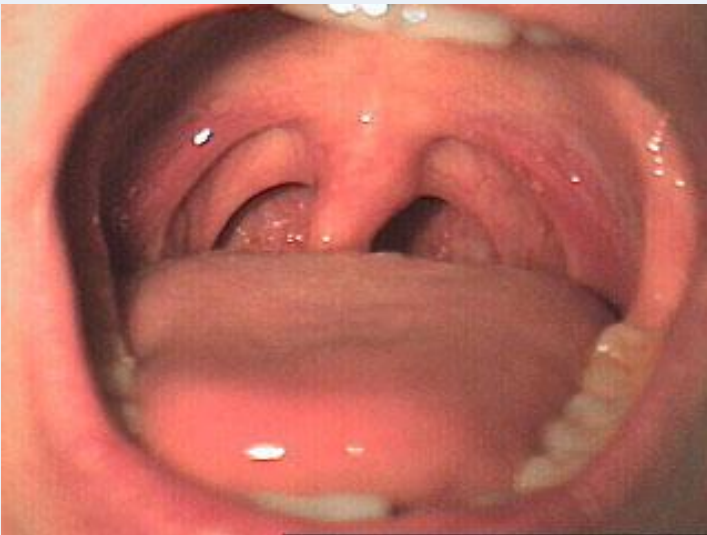
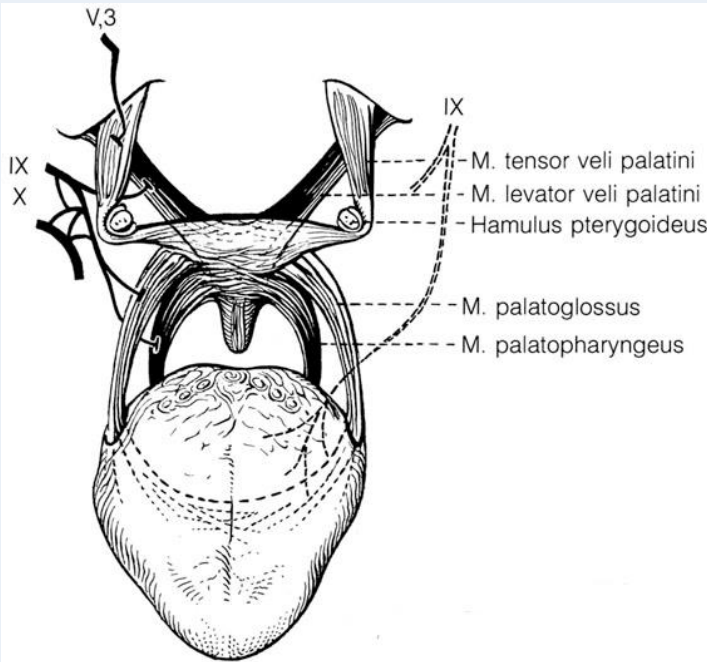




# Muscles of the soft palate



# Muscles of the soft palate

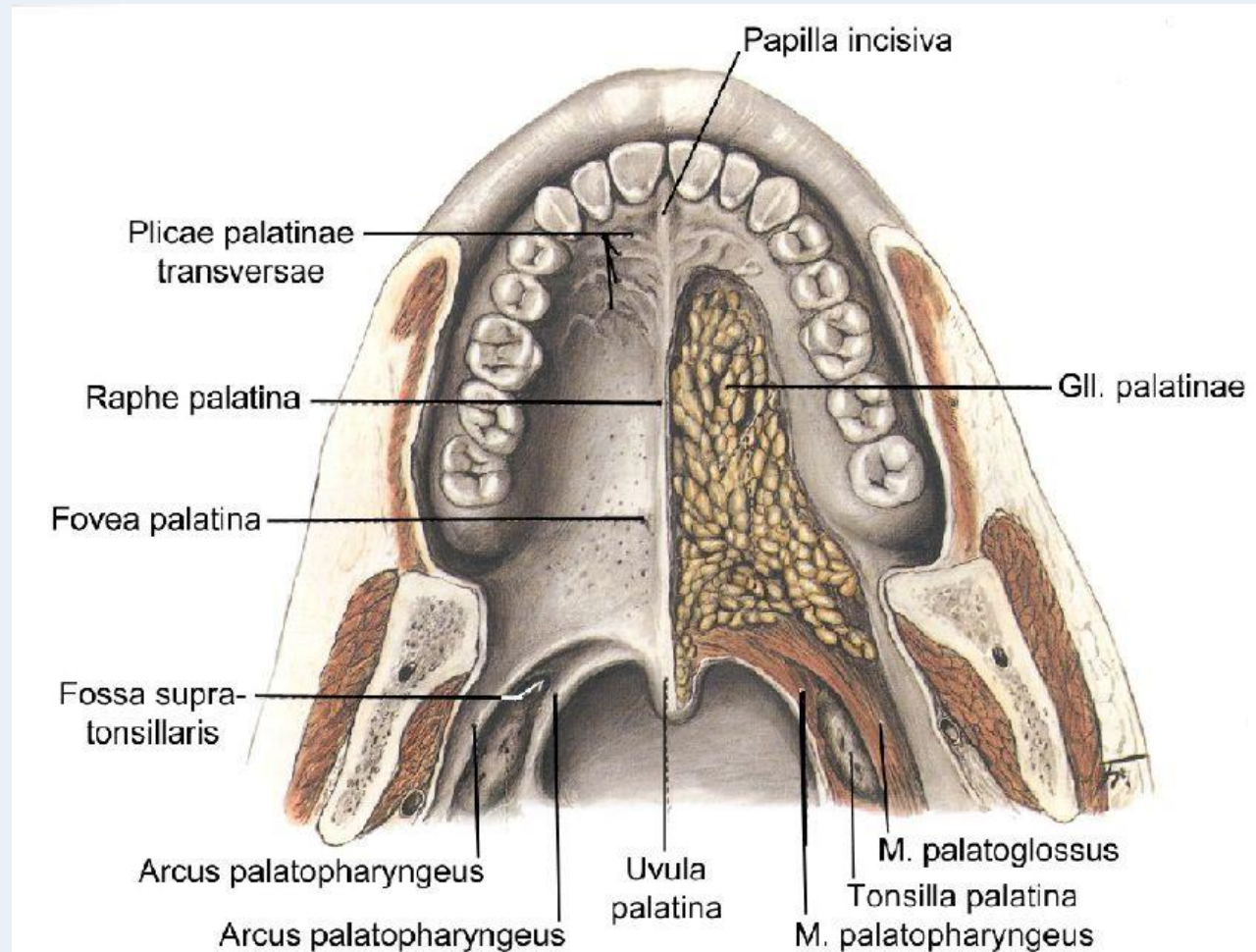


## Attachments and Actions of the Muscles of Soft Palate

Muscles	Origin	Insertion	Action
<b>Tensor veli palatini</b>	Lateral surface of auditory tube, spine of sphenoid, scaphoid fossa	Its tendon hooks around the pterygoid hamulus and forms aponeurosis which is attached to the inferior surface of hard palate (behind the palatine cres) and to the posterior border of hard palate	Tightens the soft palate and helps in opening the auditory tube
<b>Levator veli palatini</b>	Inferior surface of petrous part of temporal bone near its apex, medial surface of auditory tube	Upper surface of palatine aponeurosis	Elevation of soft palate and helps in opening the auditory tube
<b>Palatoglossus</b>	Inferior surface of palatine aponeurosis	Side of tongue at the junction of its oral and pharyngeal part	Elevation of tongue Approximation of the two palatoglossal arches to close the oropharyngeal isthmus
<b>Palatopharyngeus</b>	Superior surface of palatine aponeurosis and posterior border of hard palate. It arises by two fasciculi which are separated by levator veli palatini)	Posterior border of lamina of thyroid cartilage	Pulls the pharyngeal and laryngeal walls upwards during swallowing
<b>Musculus uvulae</b>	Posterior nasal spine and palatine aponeurosis	Mucosa of uvula	Shortens and raises the uvula

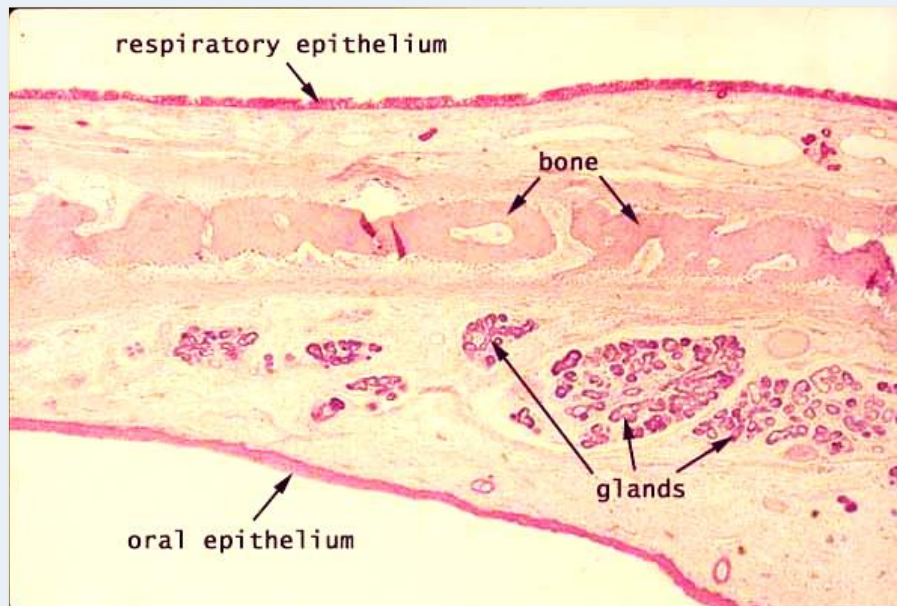
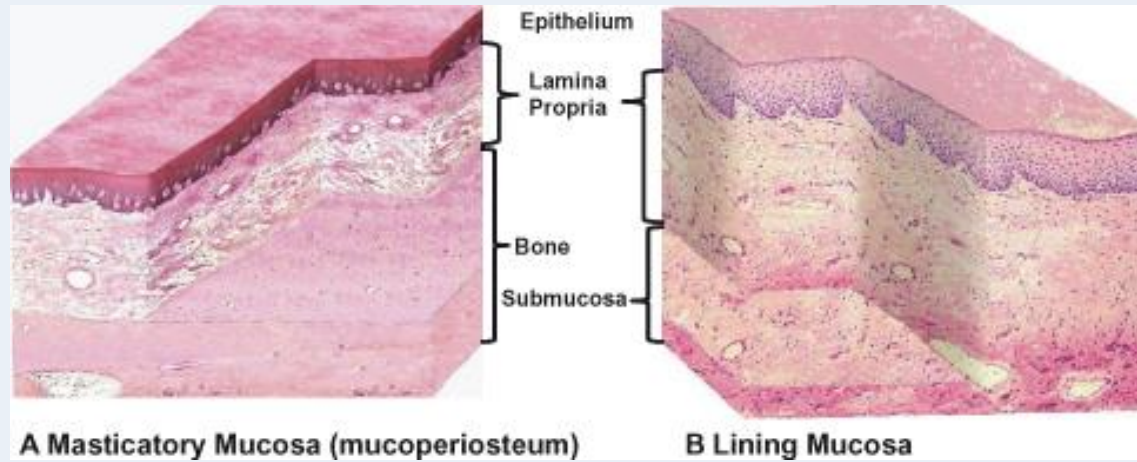
# Structures of the hard and soft palate

- mucous membrane
- palatine glands
- bone / muscles

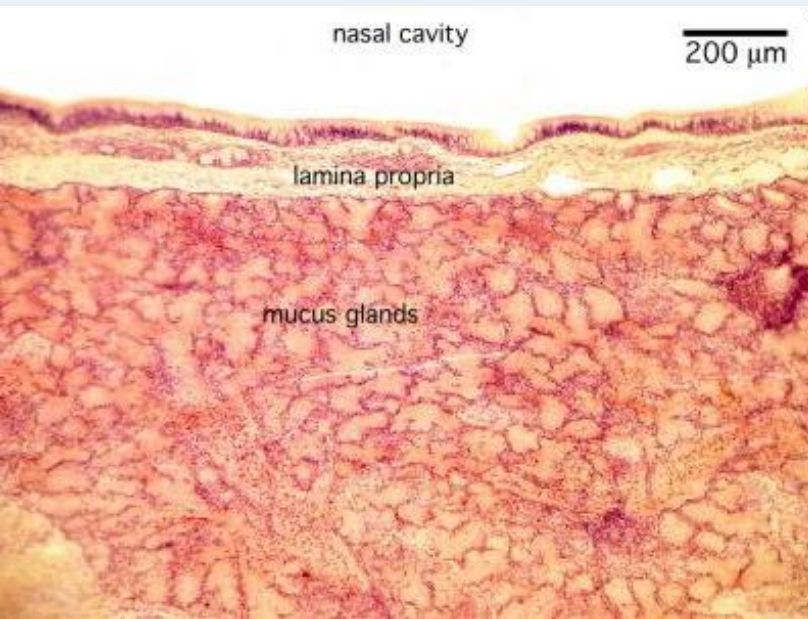


# Histology of the hard palate

## Mucoperiosteum



# Histology of the soft palate

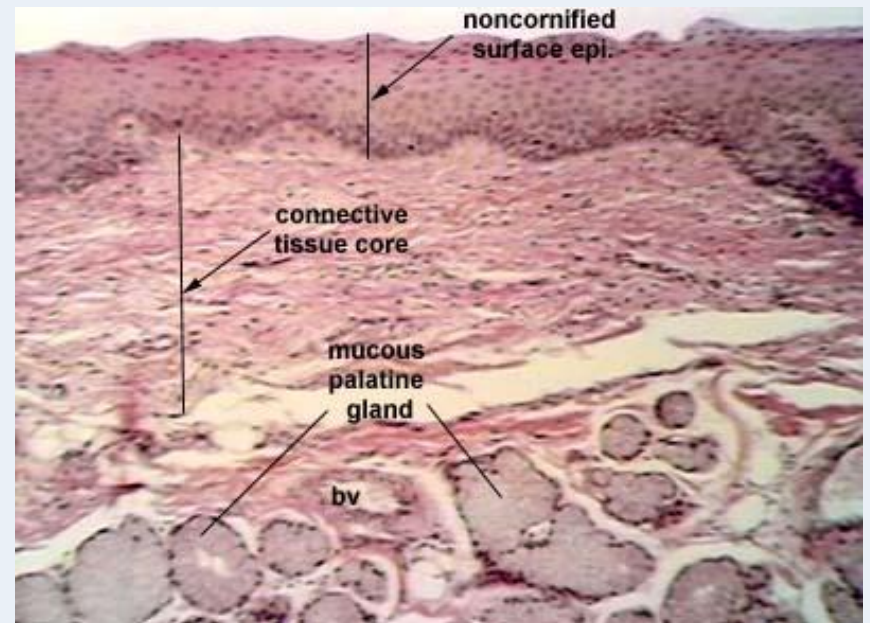


## NASAL SURFACE

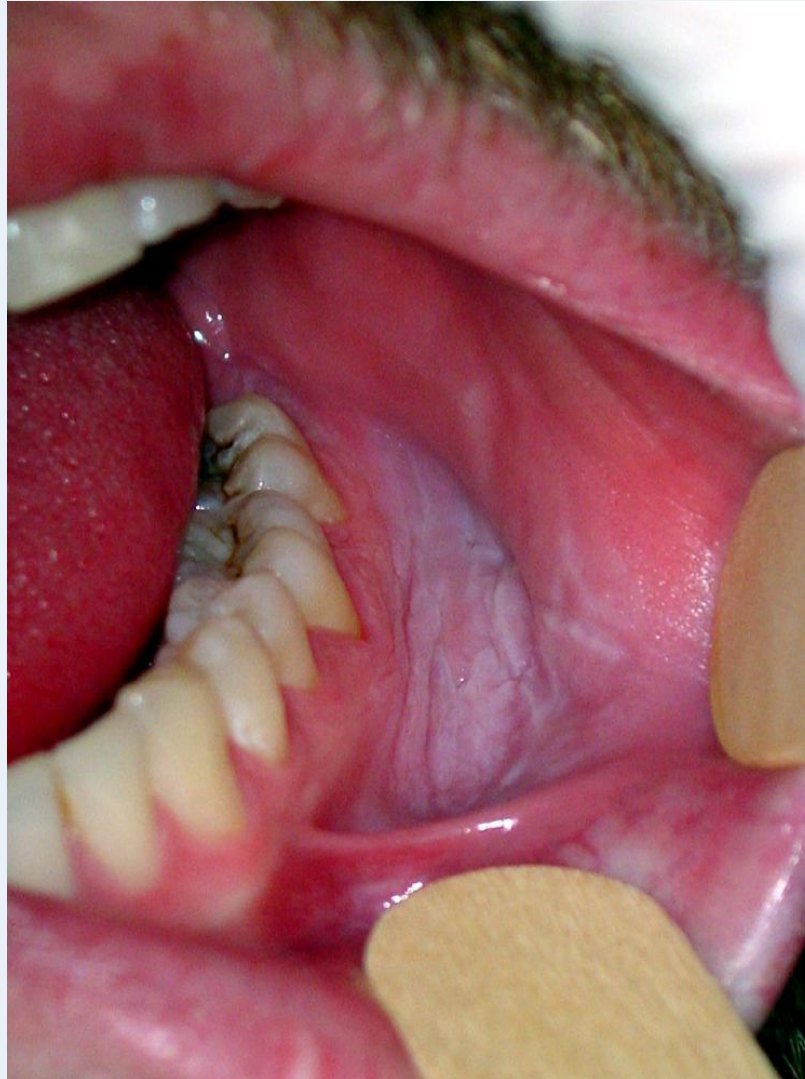
- pseudostratified ciliated columnar epithelium
- lamina propria
- mucous glands
- striated muscle

## ORAL SURFACE

- stratified squamous non keratinized epithelium



# Leukoplakia (precancerous stage!!!)



# Allergic reaction



# Torus palatinus

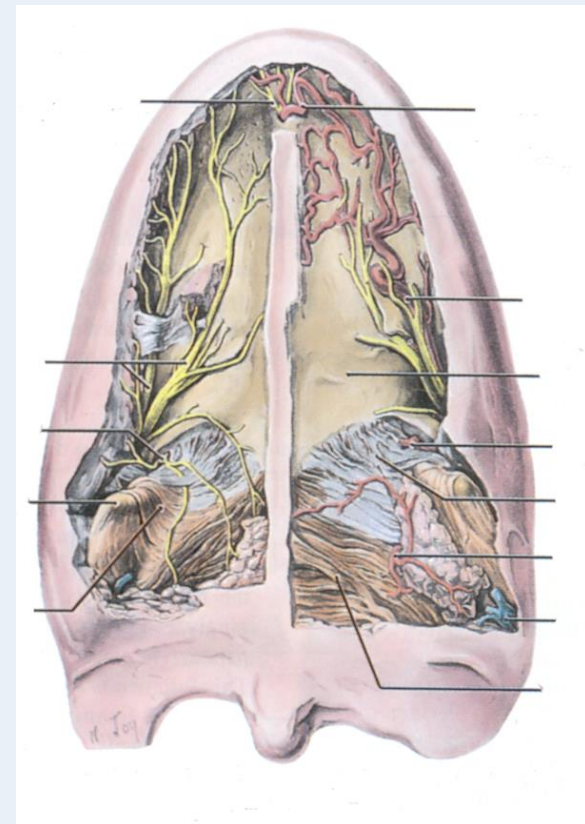
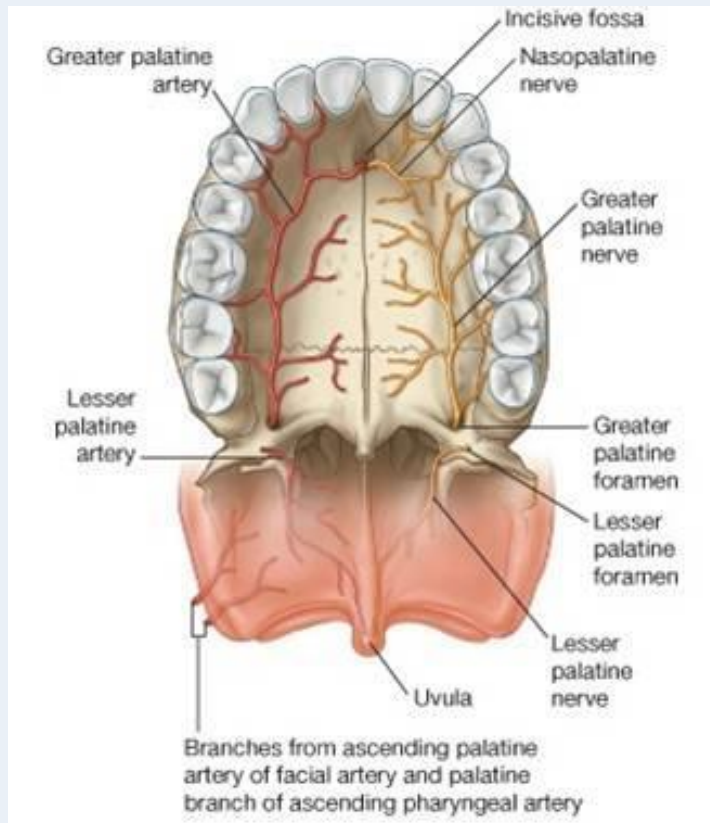




# Blood supply and innervation of the hard and soft palate

- greater and lesser palatine nerves (maxillary nerve)
- nasopalatine nerve

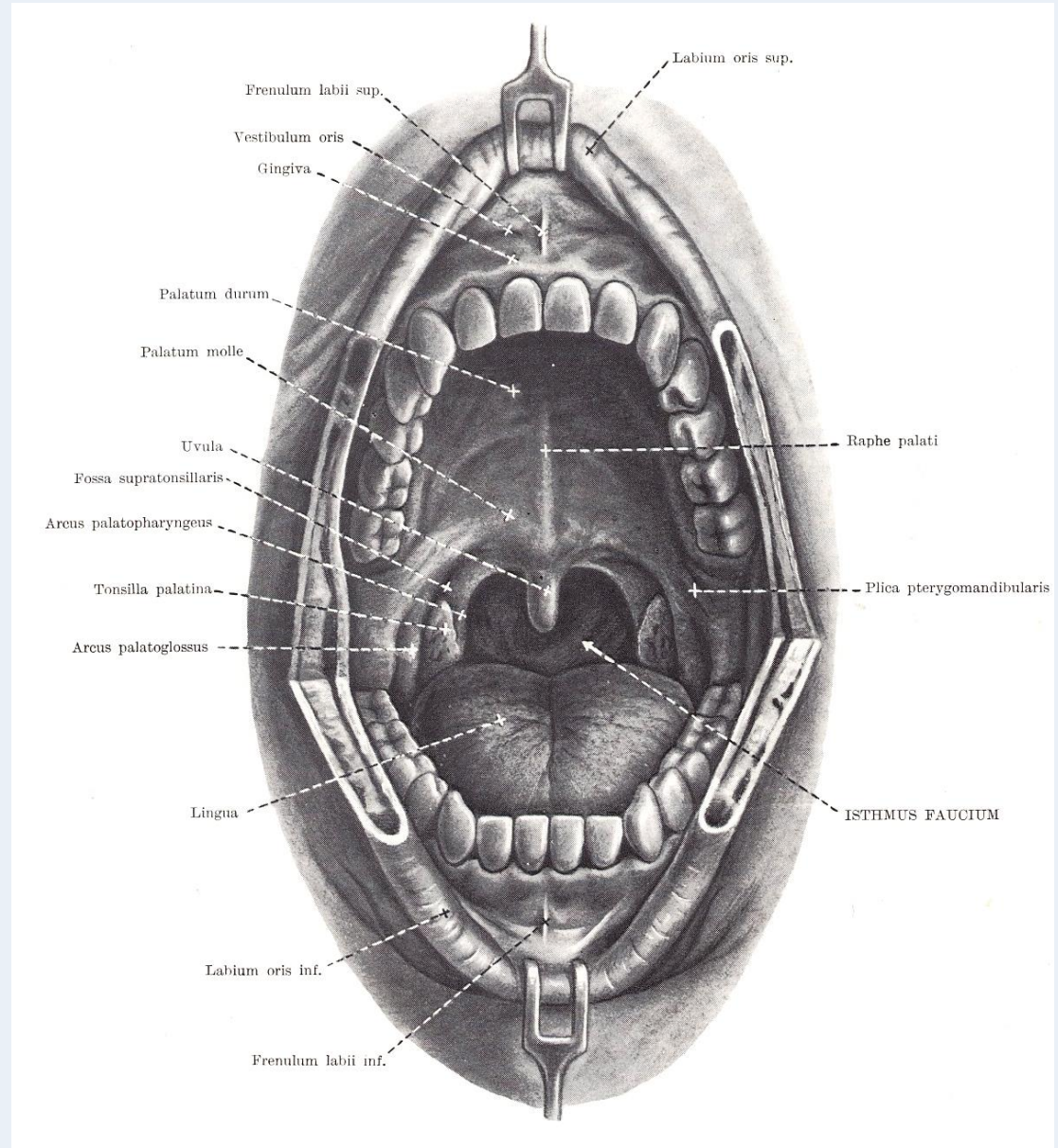
greater and lesser palatine arteries

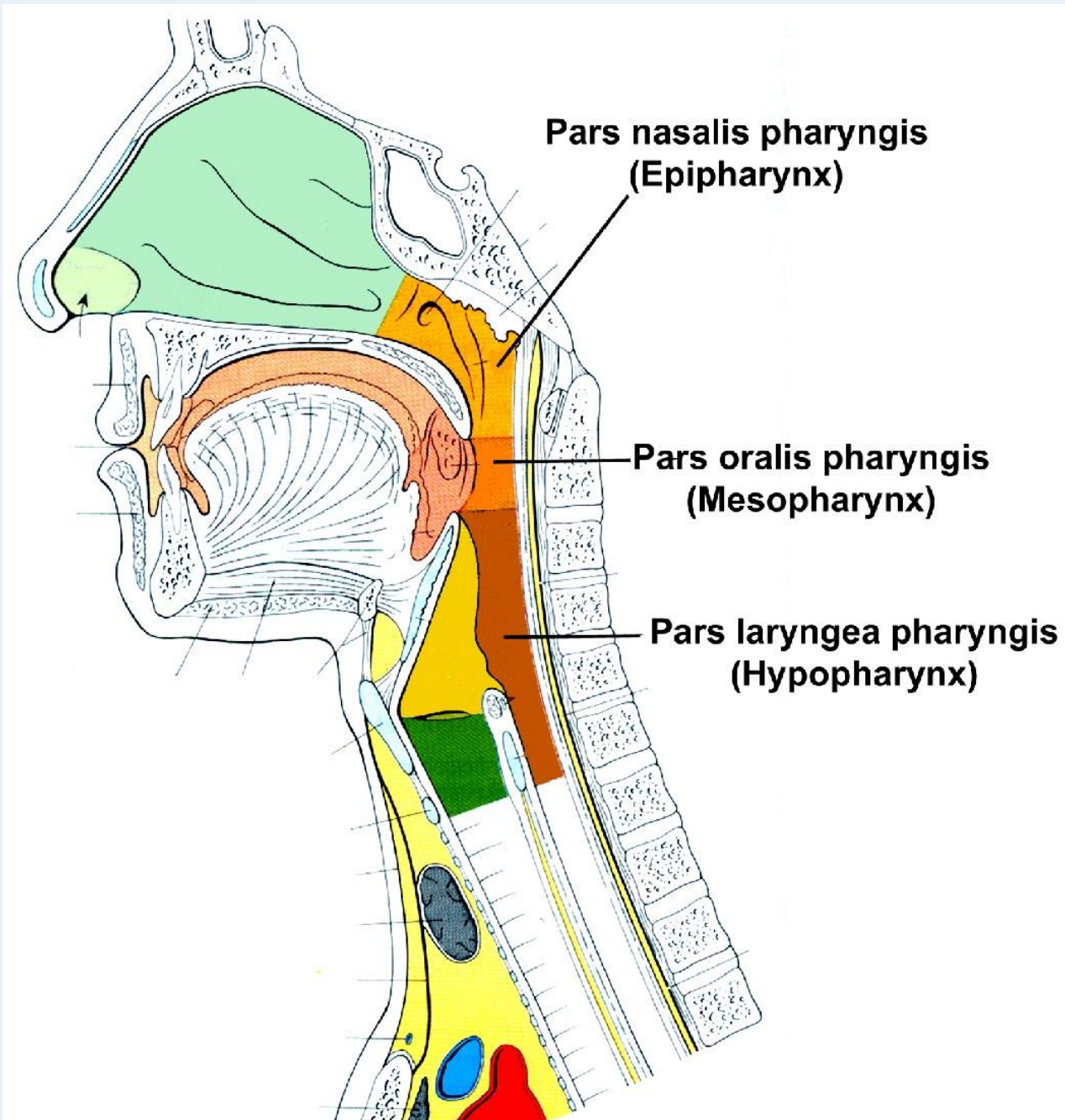


# ISTHMUS OF FAUCES

Borders:

- superior: soft palate
- inferior: root of the tongue
- lateral: palatoglossal and palatopharyngeal arches/folds





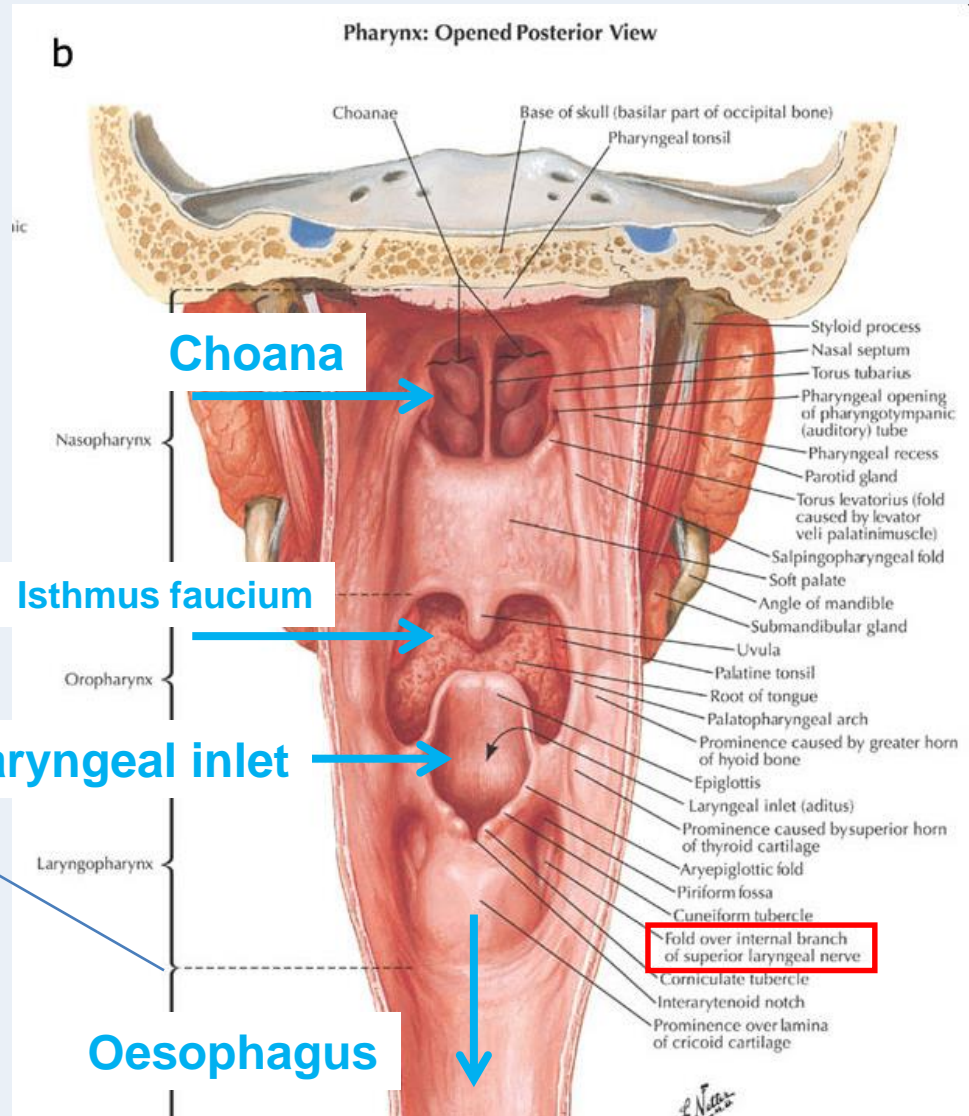
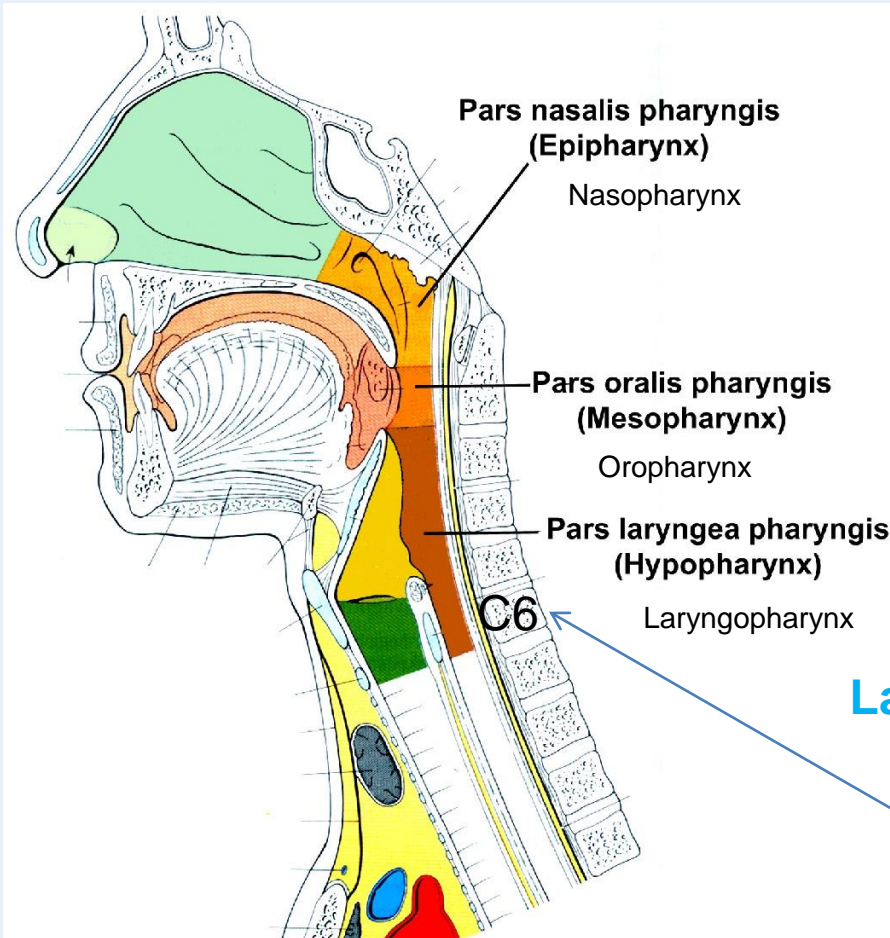
**Pars nasalis pharyngis  
(Epipharynx)**

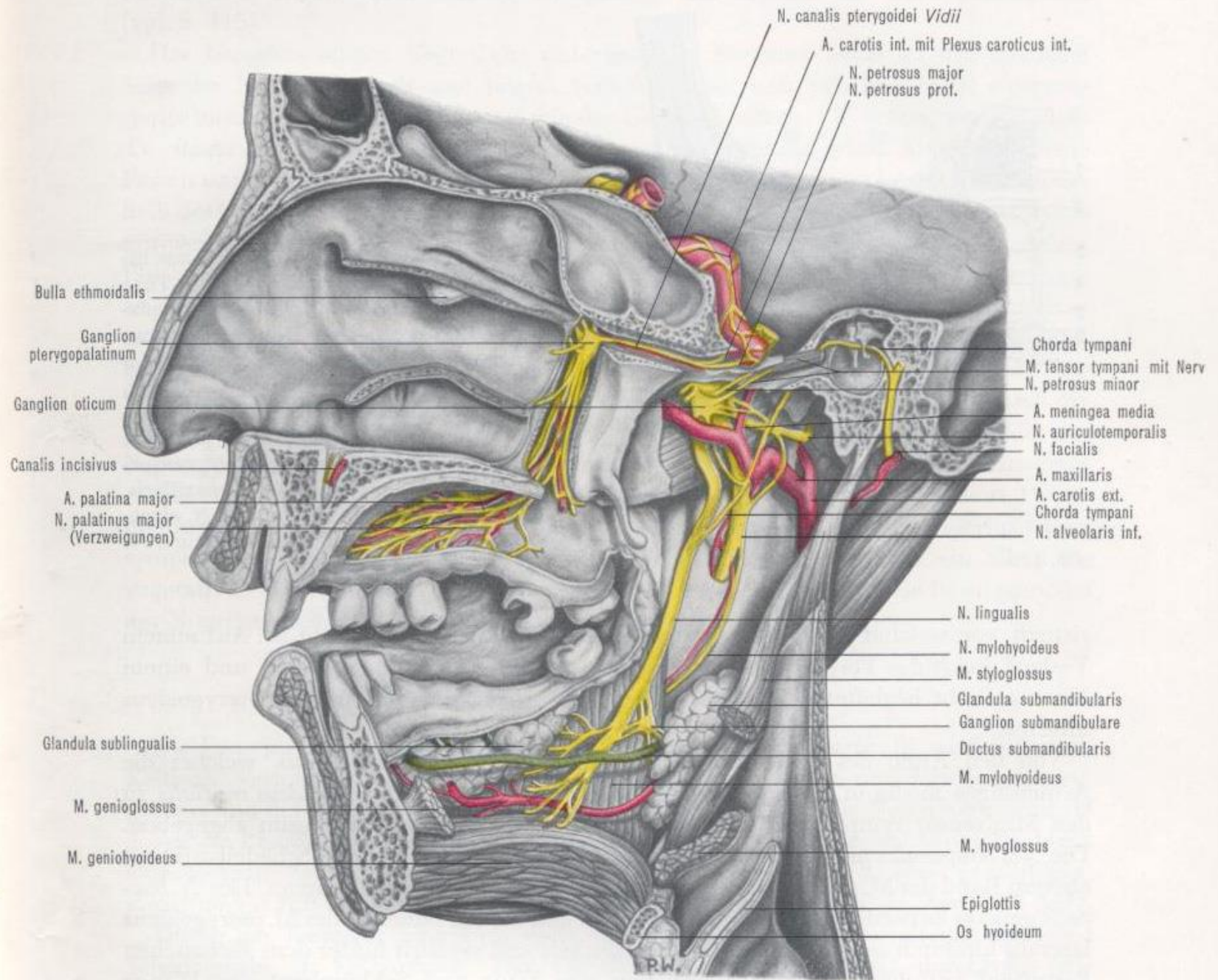
**Pars oralis pharyngis  
(Mesopharynx)**

**Pars laryngea pharyngis  
(Hypopharynx)**

# Pharynx

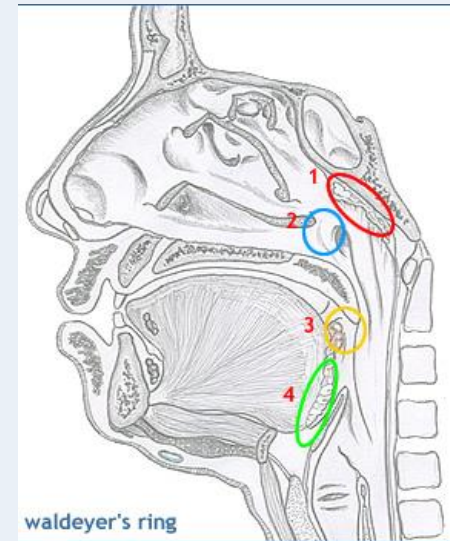
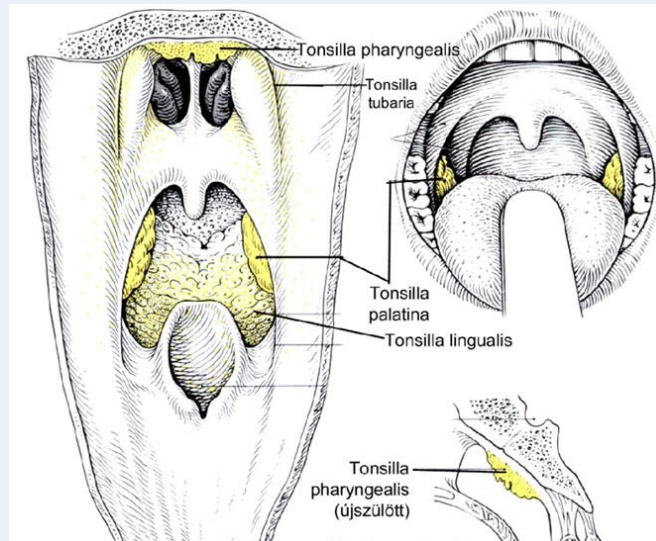
3 levels:



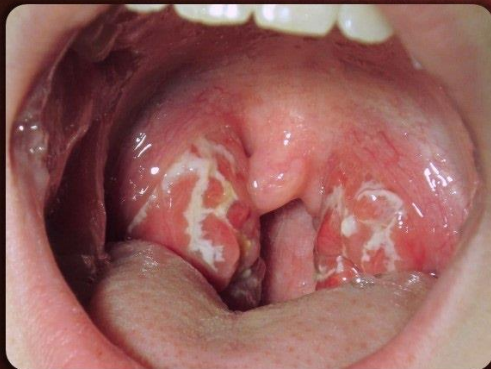


# Waldeyer's lymphatic ring

- pharyngeal tonsil
- tubarian tonsils
- palatine tonsils
- lingual tonsil



## Streptococcal Pharyngitis



Original image by [James Heilman, MD](#) / [CC-BY-SA 3.0](#)

## Viral Pharyngitis

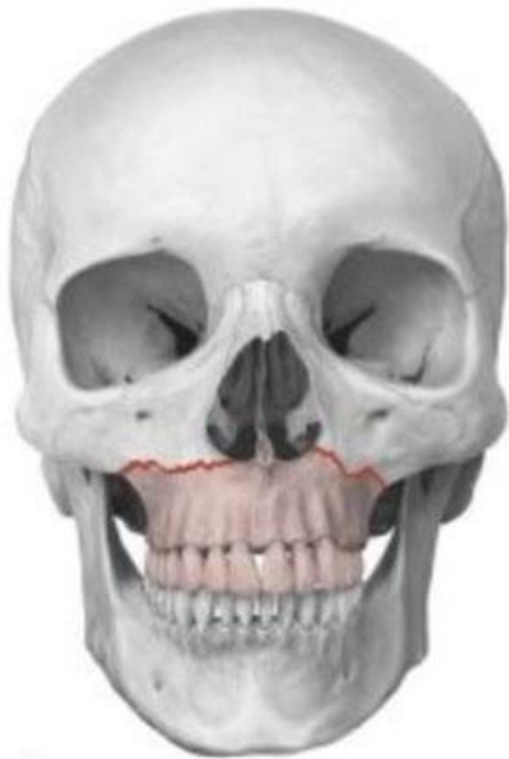


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## Blood supply of palatine tonsil:

- descending palatine artery (maxillary a.)
- ascending palatine a. (facial a.)
- ascending pharyngeal artery (external carotid)
- lingual artery (external carotid)

A **Le Fort fracture of the skull** is a classic transfacial fracture of the mid face, involving the maxillary bone and surrounding structures in either a horizontal, pyramidal or transverse direction.



Le Fort I



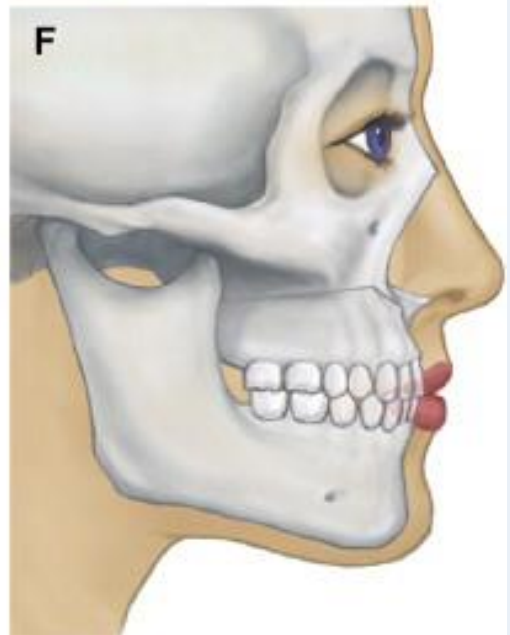
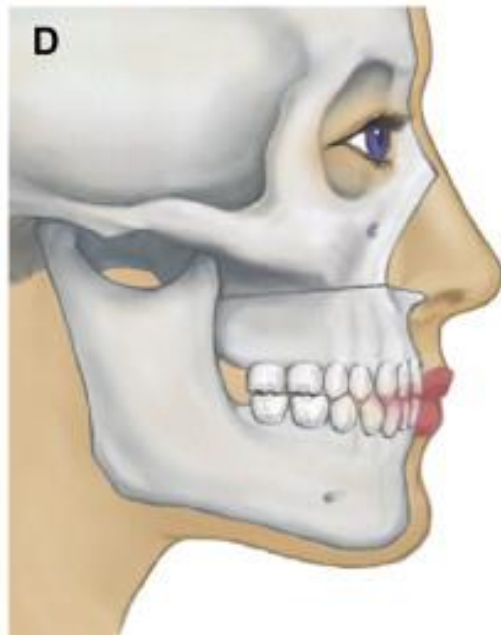
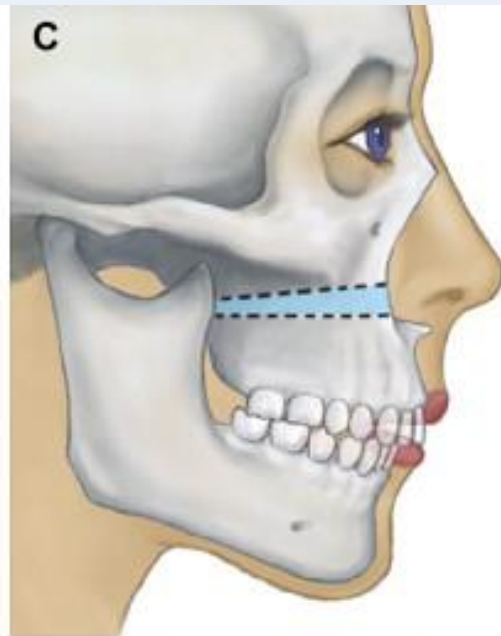
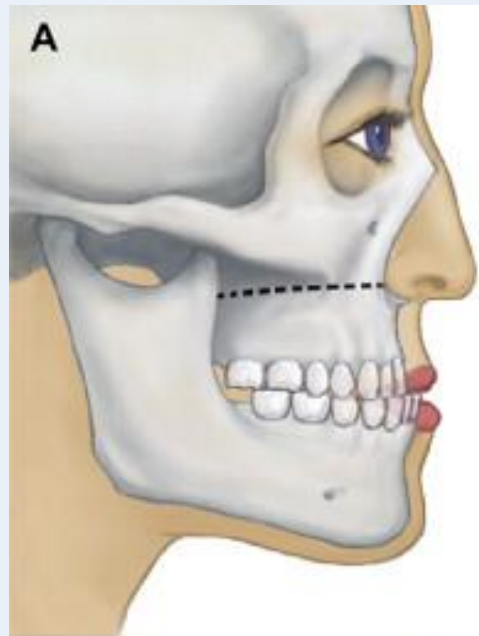
Le Fort II

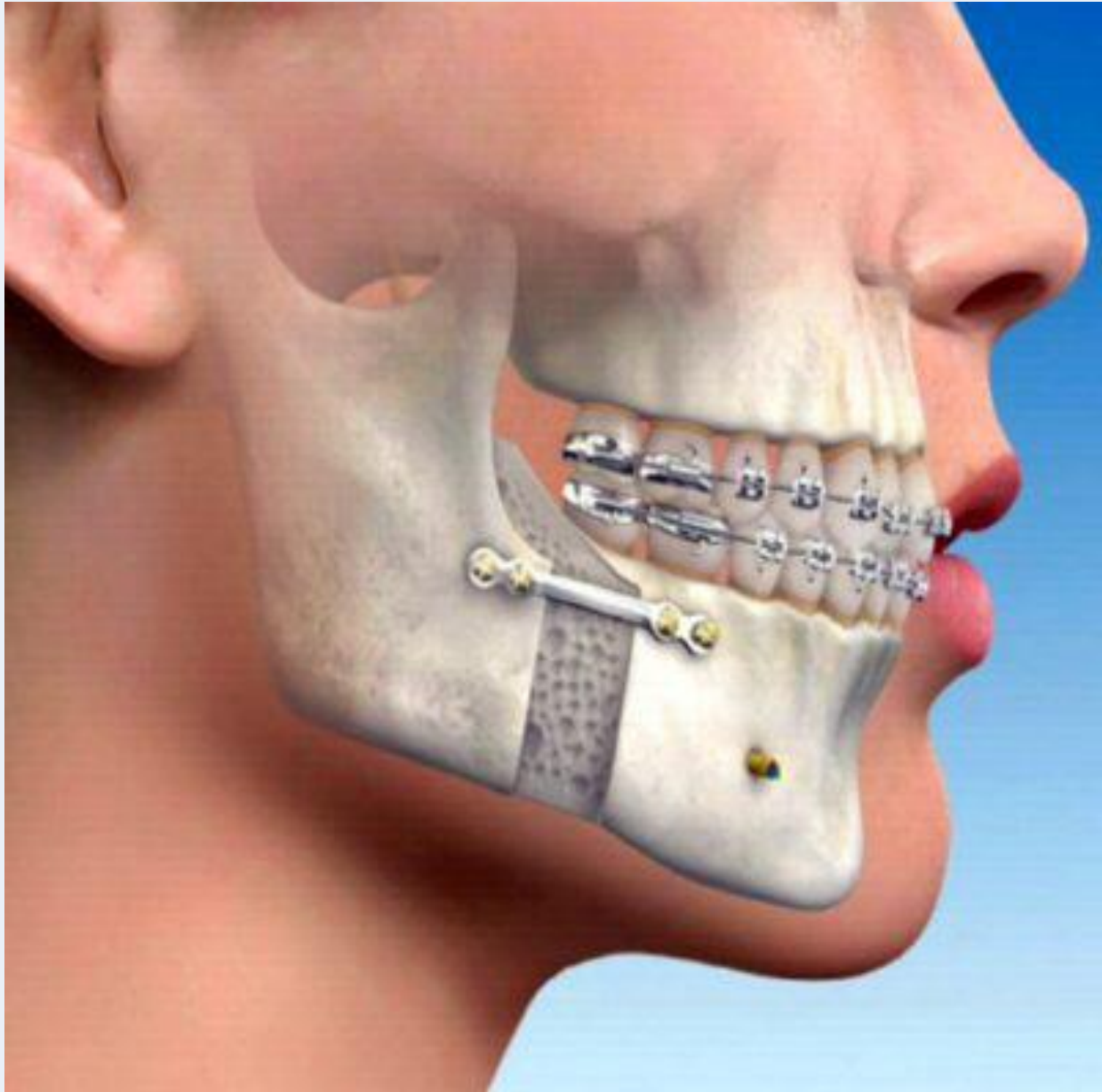


Le Fort III













[https://www.youtube.com/watch?v=Ewg0\\_Bct1Yk](https://www.youtube.com/watch?v=Ewg0_Bct1Yk)

<https://www.youtube.com/watch?v=Td9Hx6N1YiY>

Thank you for your attention!

