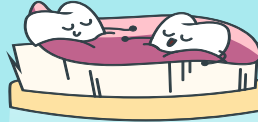


THE ORAL REGION 1



Objectives:

1. Identify the parts & contents of the oral region & its relation to other regions.
2. Study the entrance & exits of the oral cavity
3. Recognize the features of the lateral walls, roof & floor of the cavity and the neurovascular supply of each

Parts of the oral region

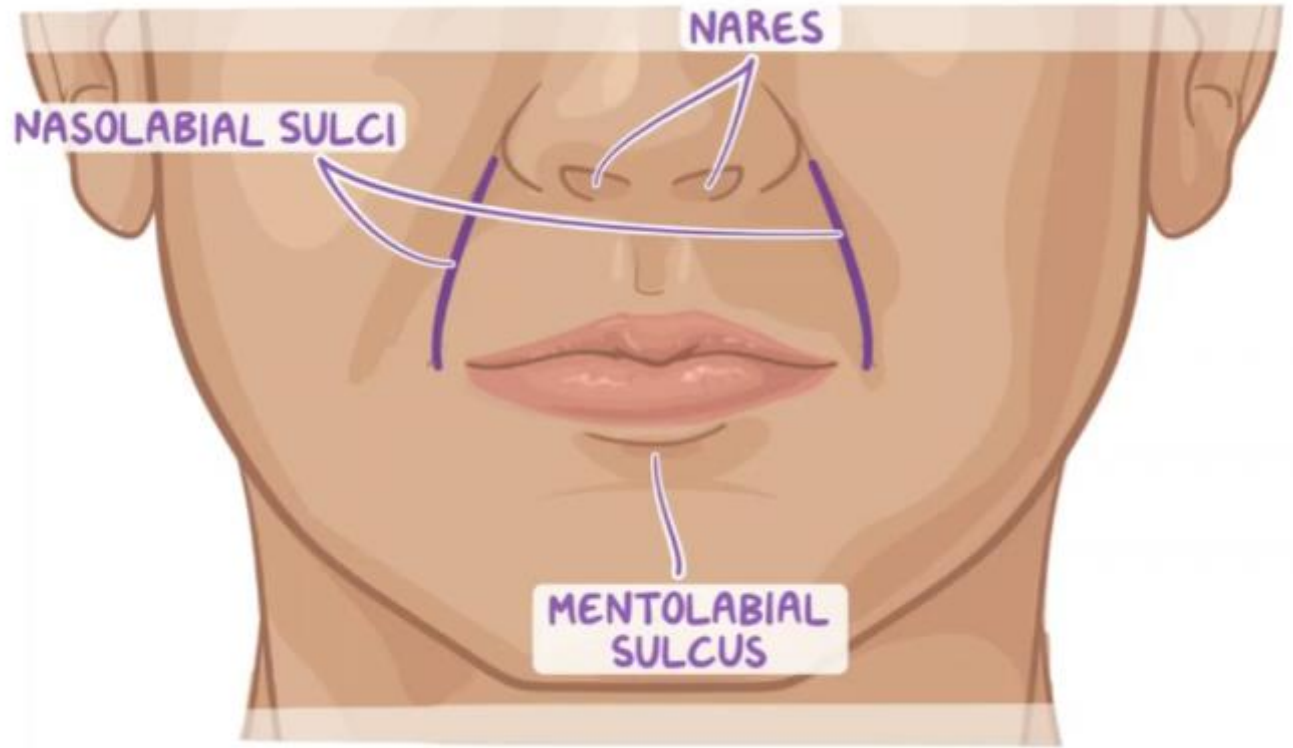
Part	Formation
Entrance	Oral fissure & lips
Exit	Isthmus of the fauces
Lateral walls	Cheeks
Roof	Hard & Soft Palate
Floor	Muscles & tongue

Contents of the oral region

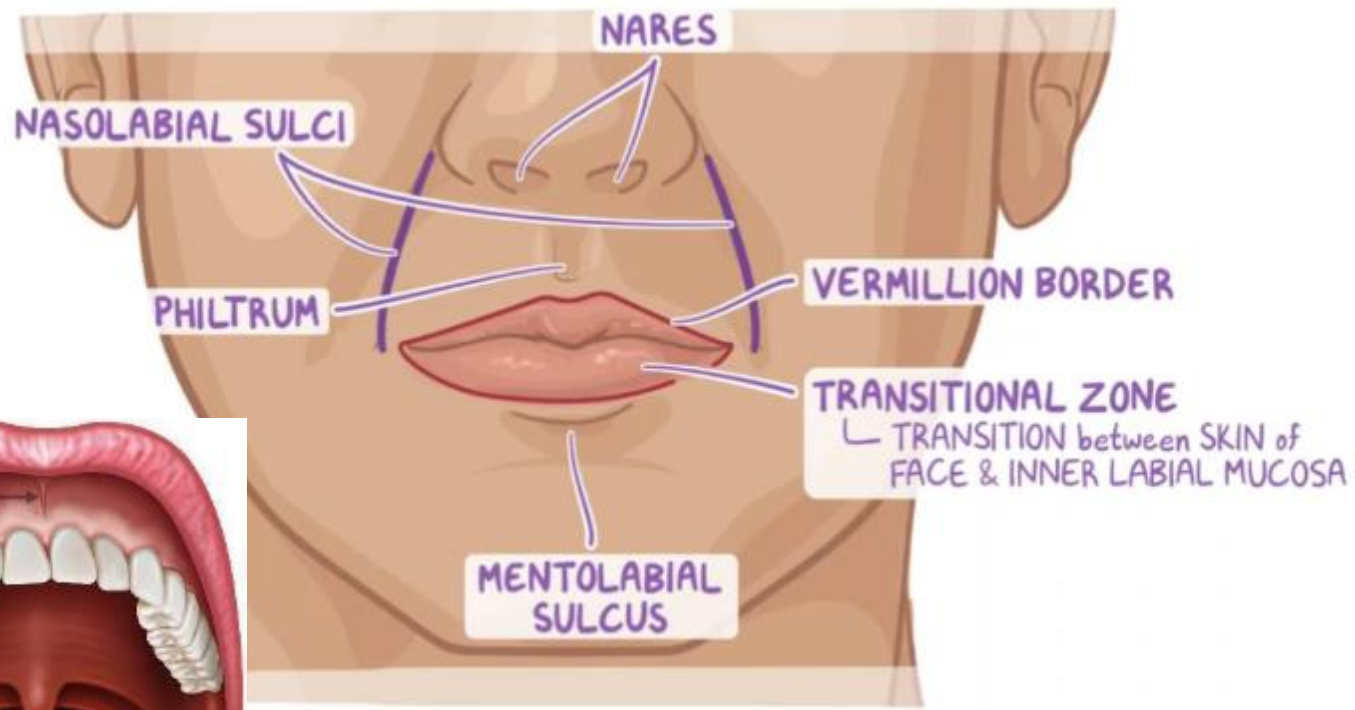
Part	Formation
Oral cavity	Vestibule, cavity proper
Dental arches	Upper & lower teeth
Tongue	-
Salivary glands	Submandibular & Sublingual glands

The oral fissure & lips

Extend from the
nasolabial sulci &
nares superiorly to the
mentolabial sulcus
inferiorly

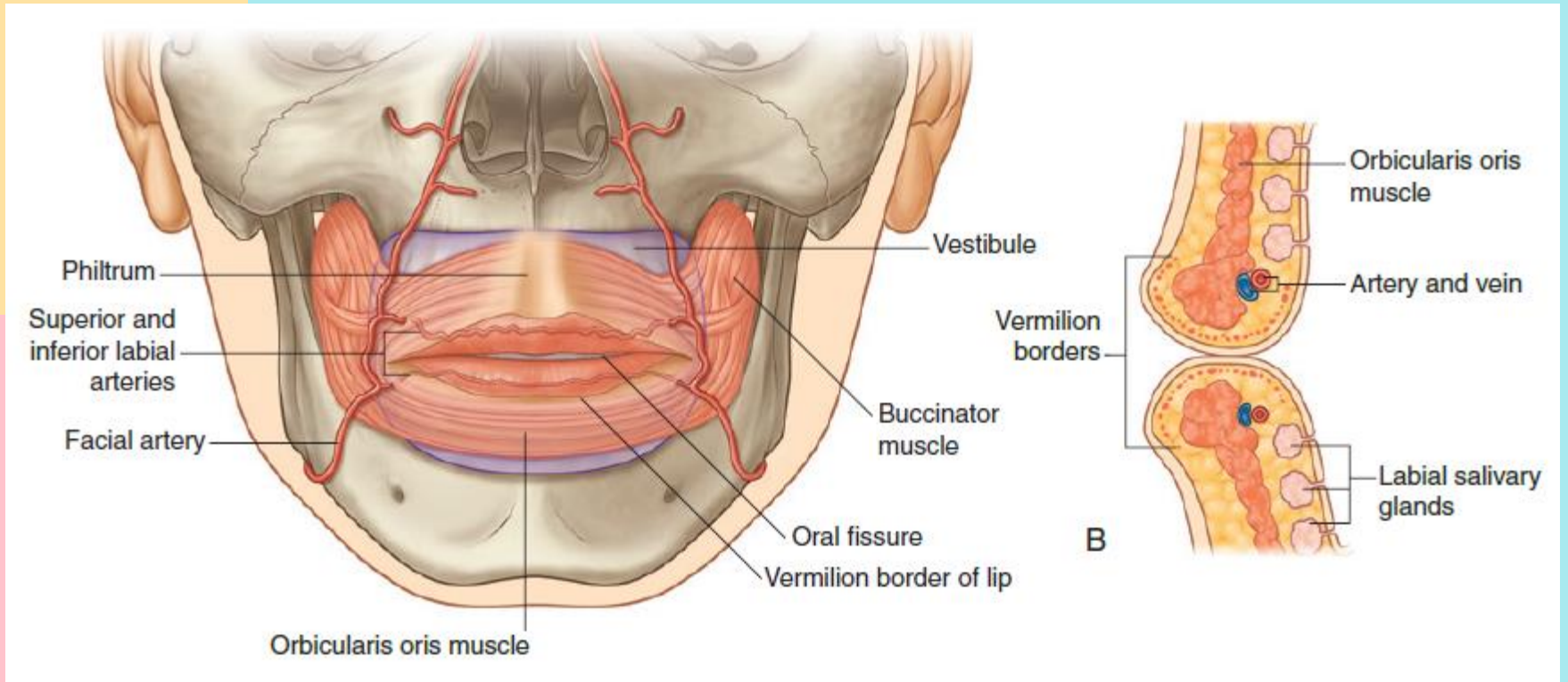


The oral fissure (LIPS)



- Philtrum**: upper midline groove
- Vermilion border**: change from thick to thin skin
- Transitional zone**
- Median labial frenulum**: mucosal fold towards incisor teeth

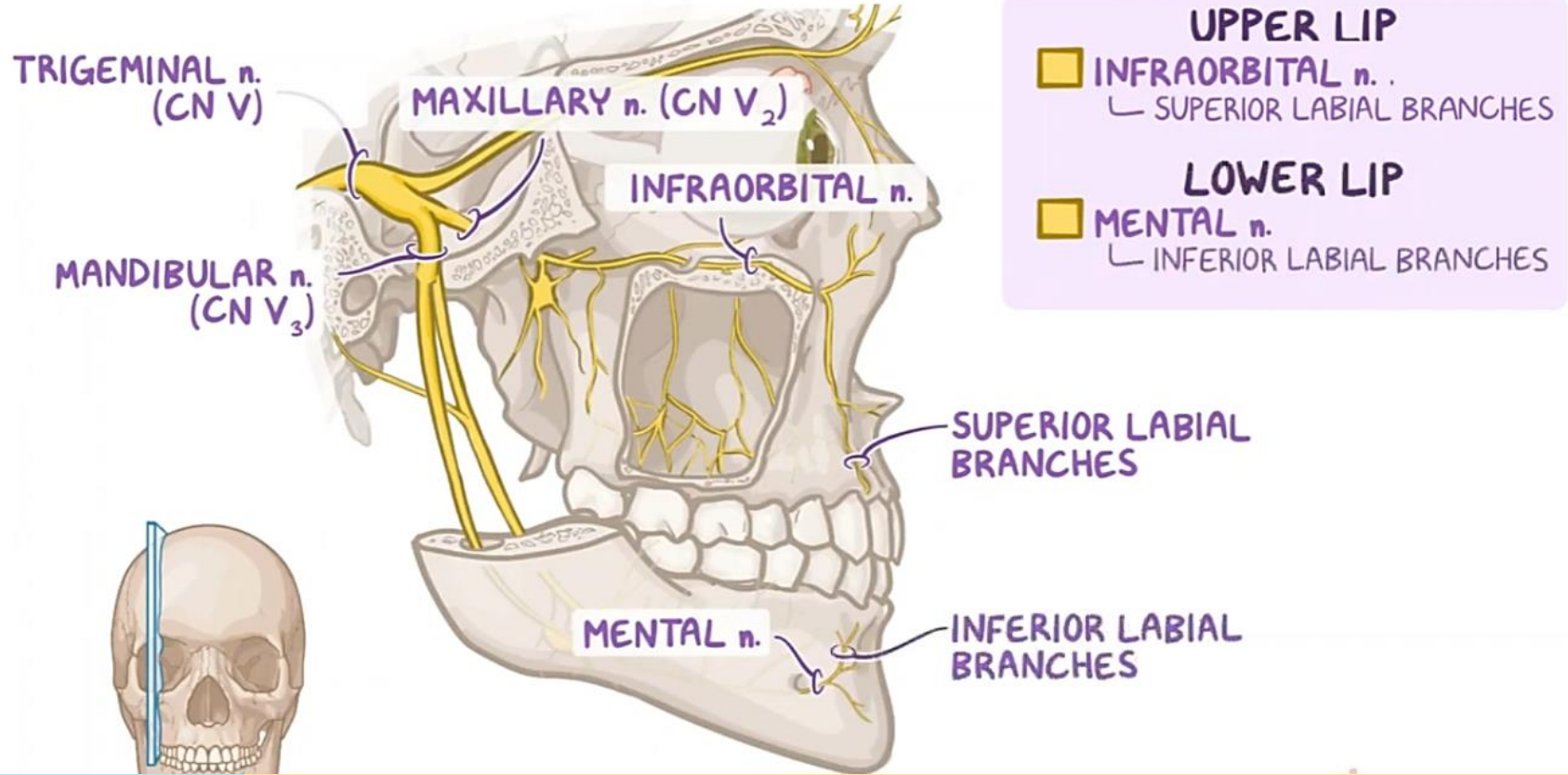
Structure & blood supply



- **Soft tissue:** mainly orbicularis oris+outer skin+ Inner mucosa

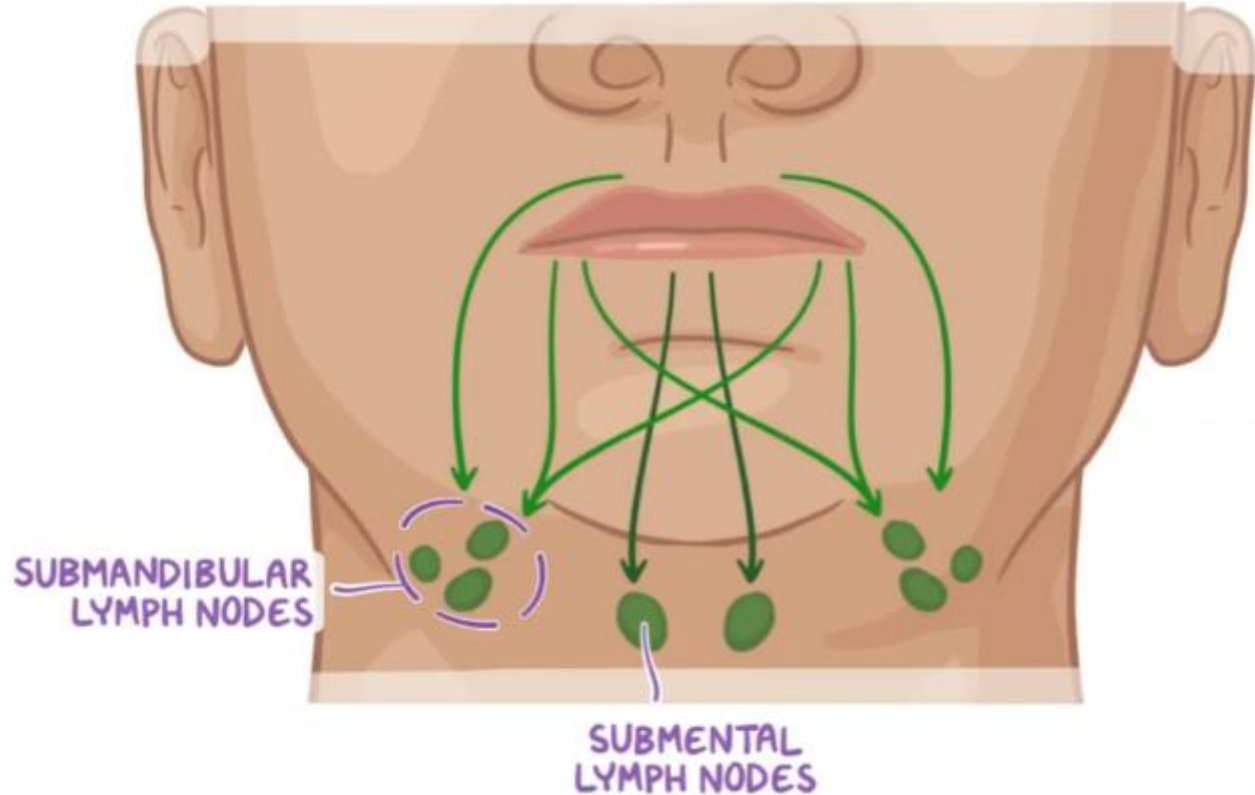
- **Blood supply:** sup. & inf. Labial branches of facial artery with rich midline anastomosis.

Innervation

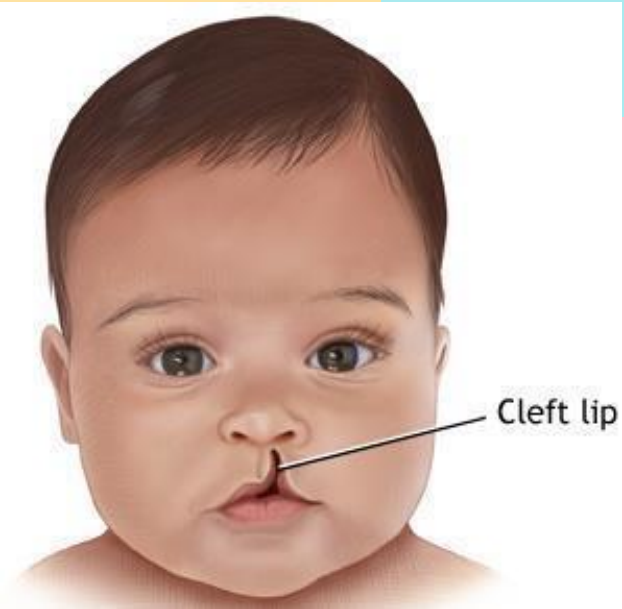


Lymphatic drainage

- Upper lip:** ipsilateral submandibular nodes.
- Central lower lip:** ipsilateral submental nodes
- Peripheral lower lip** ipsilateral & contralateral submandibular nodes



Common conditions

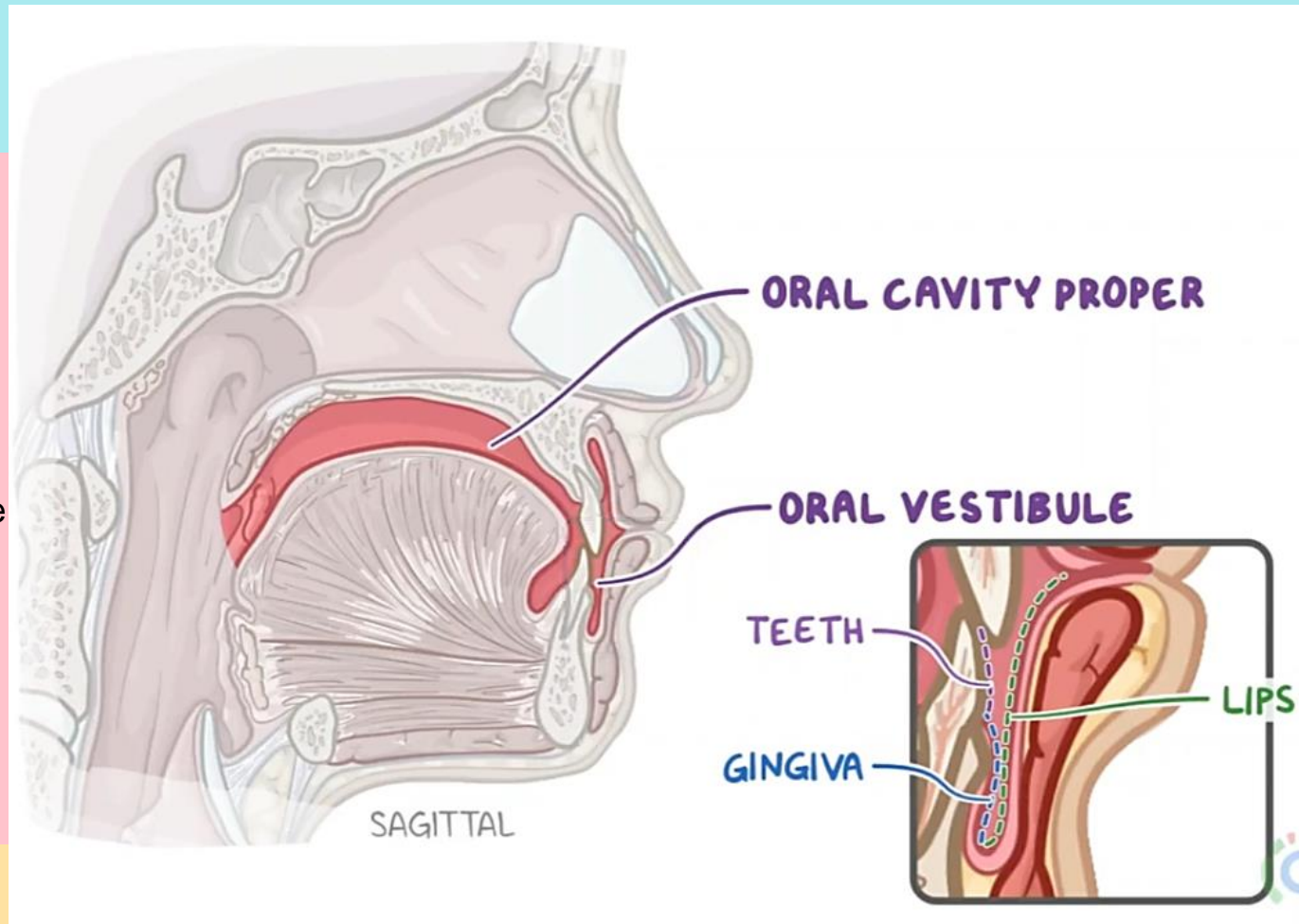


Cold sores (HSV infection)



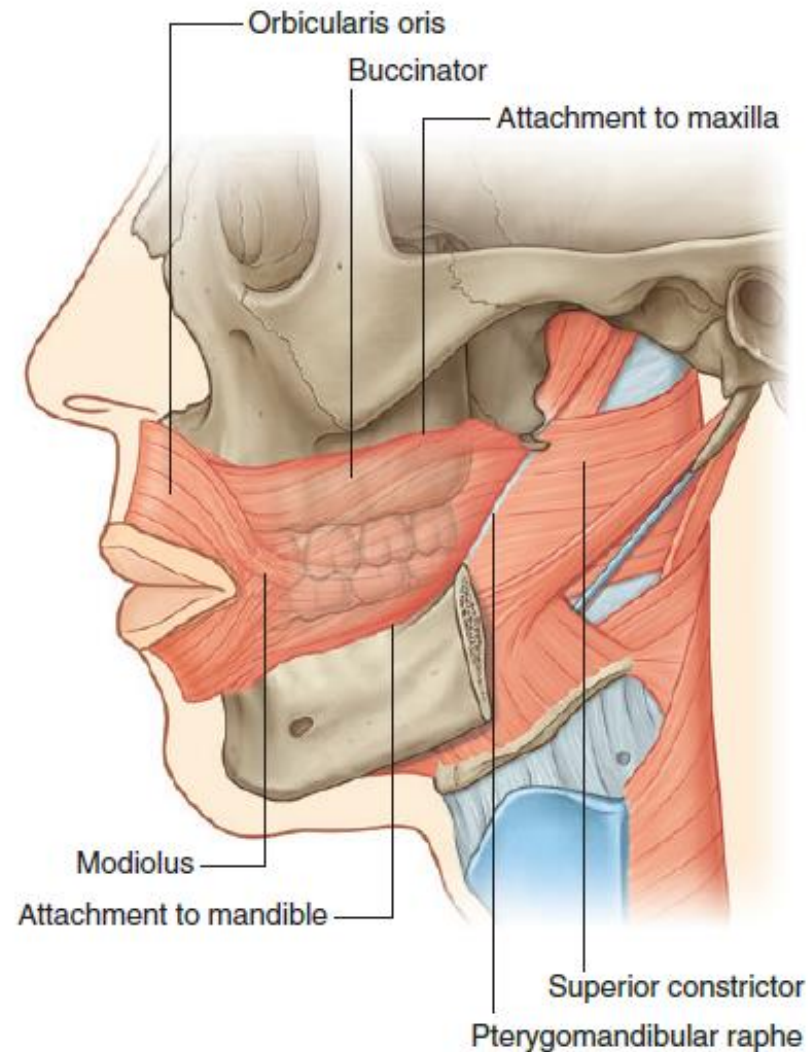
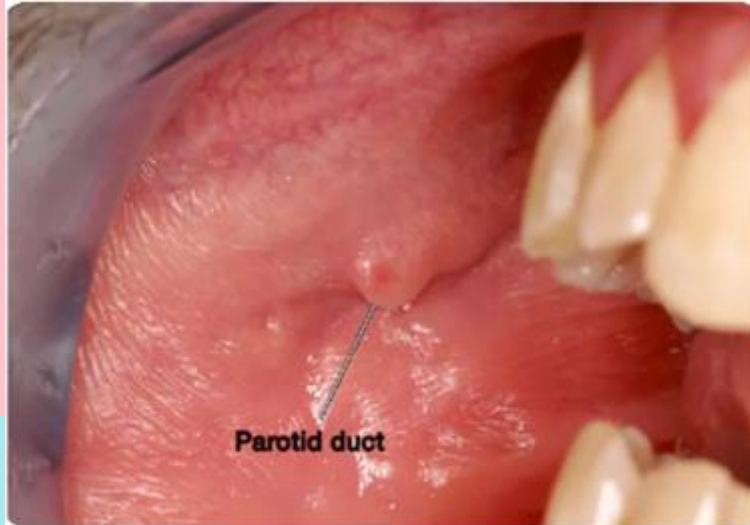
The oral cavity: Parts

- Vestibule**: between the dental arches and the lips or cheeks
- Oral cavity proper**: deep to the dental arches



Lateral walls = cheeks

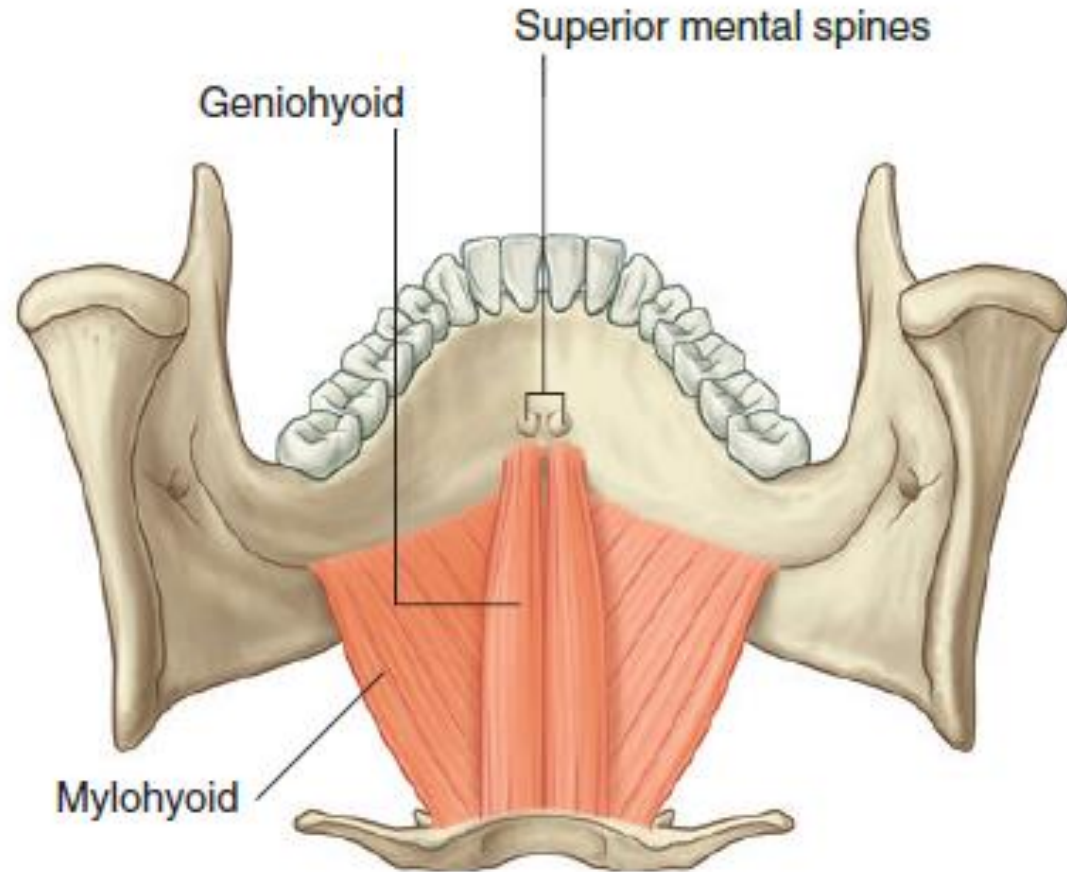
- **Buccinator muscle:** covered with facial skin & lined with oral mucosa
- **Motor innervation:** buccal br. of CN VII
- **Sensory nerves:** from buccal br. of V3.
- Mucosa has opening of parotid duct **opposite the upper 2nd molar tooth.**



Floor= Geniohyoid+Mylohyoid+Tongue

Geniohyoid

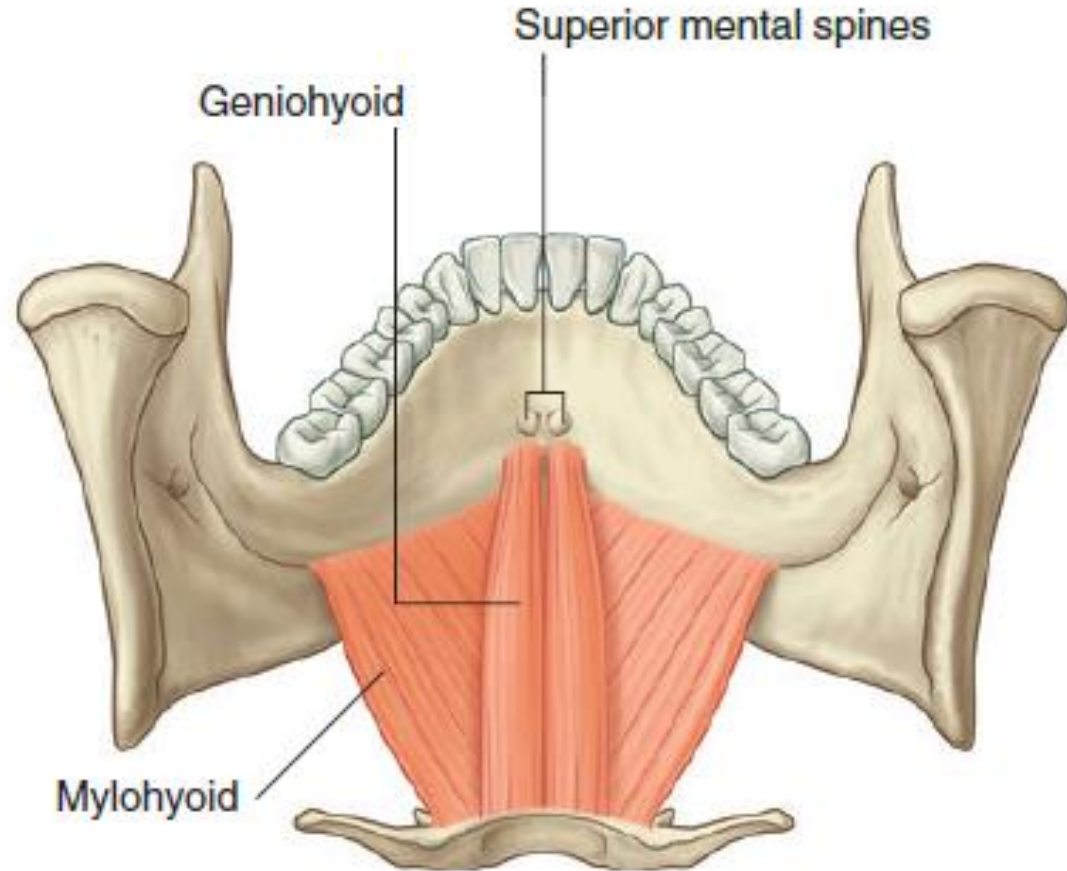
- Cord –like
- From inferior mental spines of mandible
- To body of hyoid bone
- Supplied by **C1**
- Elevates hyoid or Depresses mandible



Floor= Geniohyoid+Mylohyoid+Tongue

Mylohyoid

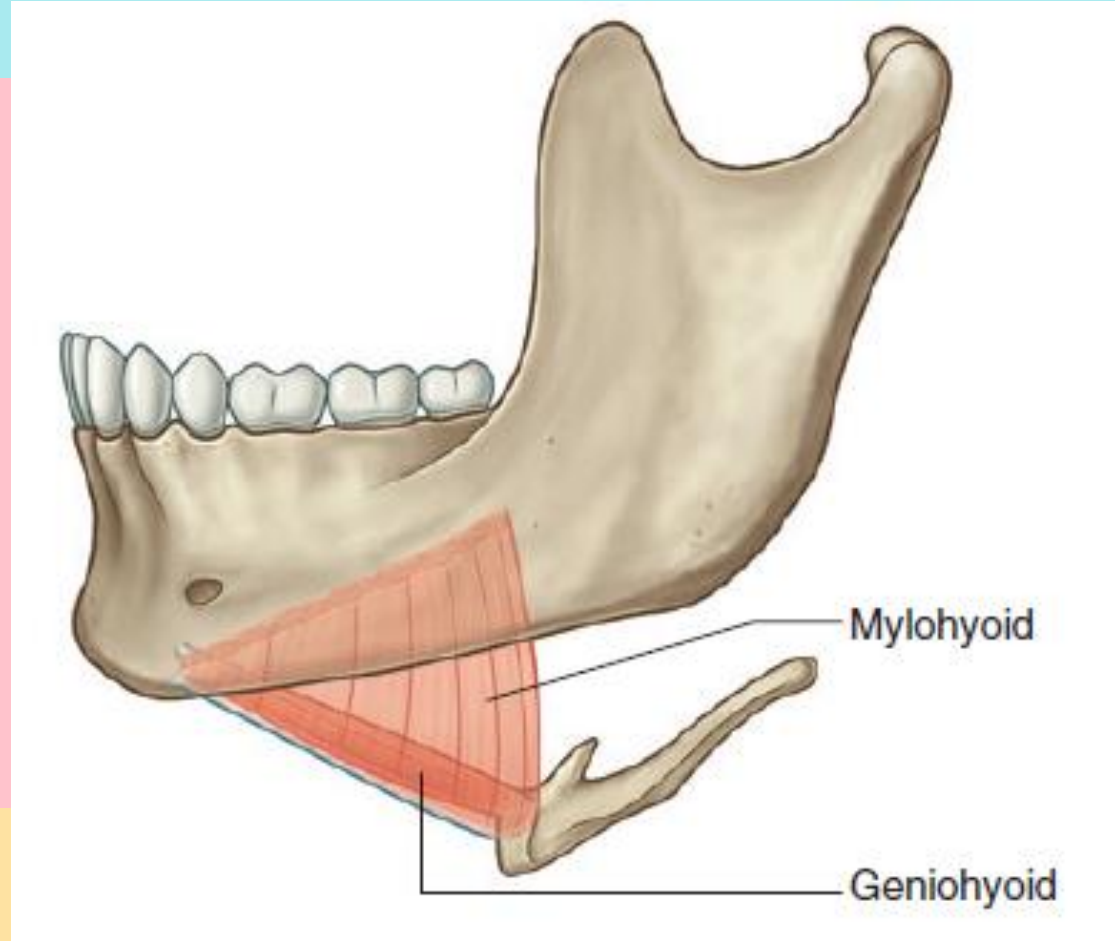
- Muscular diaphragm (flat)
- From mylohyoid line of mandible
- To median raphe & hyoid body
- Supplied by **Nerve to mylohyoid from inferior alveolar branch of V3**
- Elevates hyoid or **Depresses** mandible & **Supports** the weight of the tongue
- Has **FREE POSTERIOR BORDER**



Floor= Geniohyoid+Mylohyoid+Tongue

Mylohyoid

- Muscular diaphragm (flat)
- From mylohyoid line of mandible
- To median raphe & hyoid body
- Supplied by **Nerve to mylohyoid from inferior alveolar branch of V3**
- Elevates hyoid or **Depresses** mandible & **Supports** the weight of the tongue
- **Has FREE POSTERIOR BORDER**



Oropharyngeal triangle

Triangular aperture

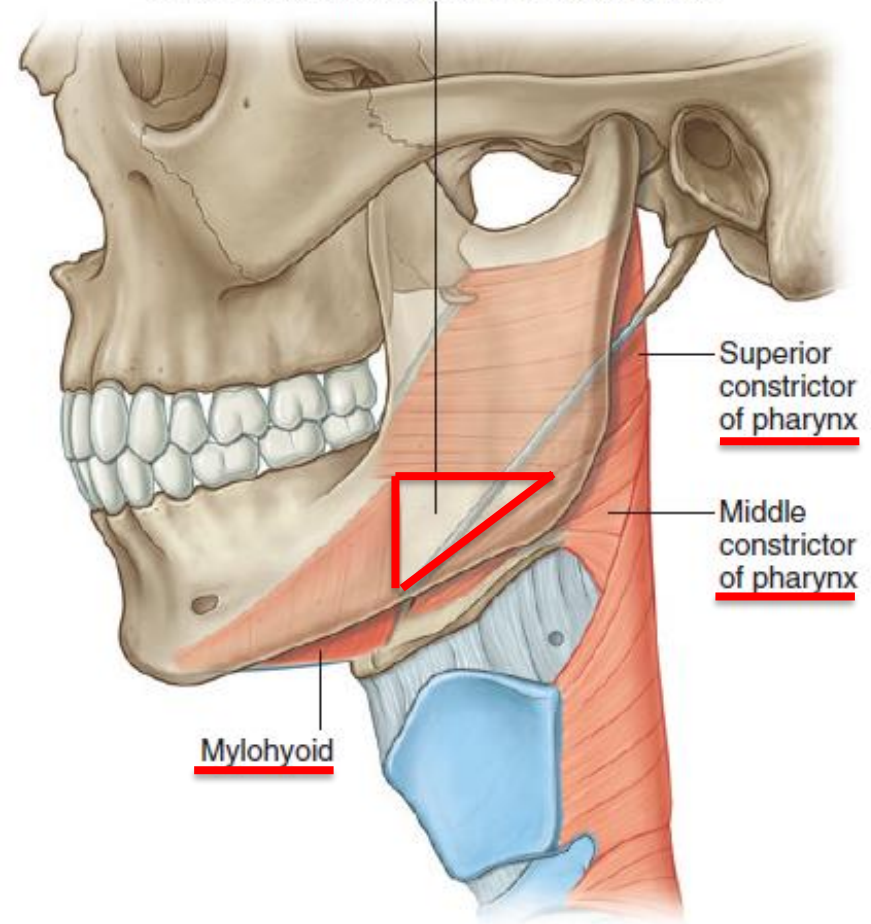
Gateway between oral cavity & infratemporal fossa

- **Anteriorly:** mylohyoid
- **Posteriorly:** middle constrictor
- **Superiorly:** superior constrictor

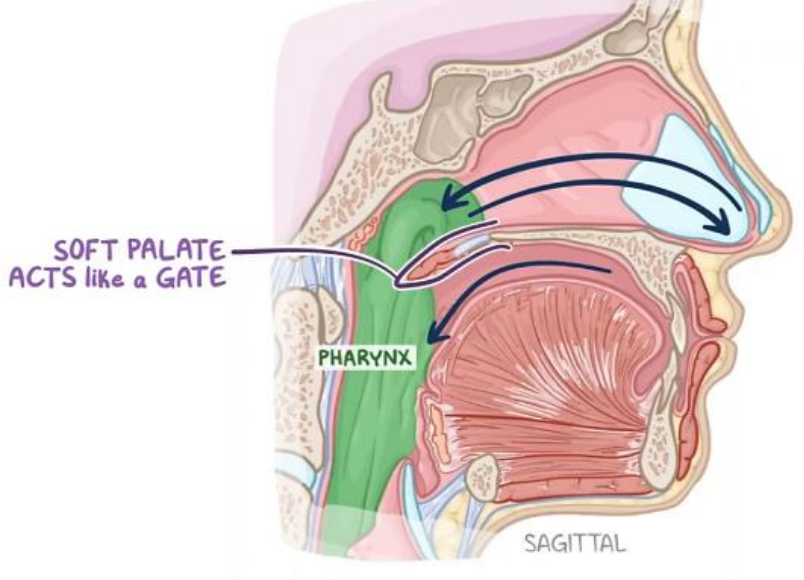
Allows passage of:

- **Muscles:** Hyoglossus + Styloglossus
- **Vessels:** Lingual a. & v.
- **Nerves:** Lingual + CN IX+CN XII
- **Lymphatics.**

Triangular aperture (oropharyngeal triangle) between mylohyoid, superior constrictor, and middle constrictor

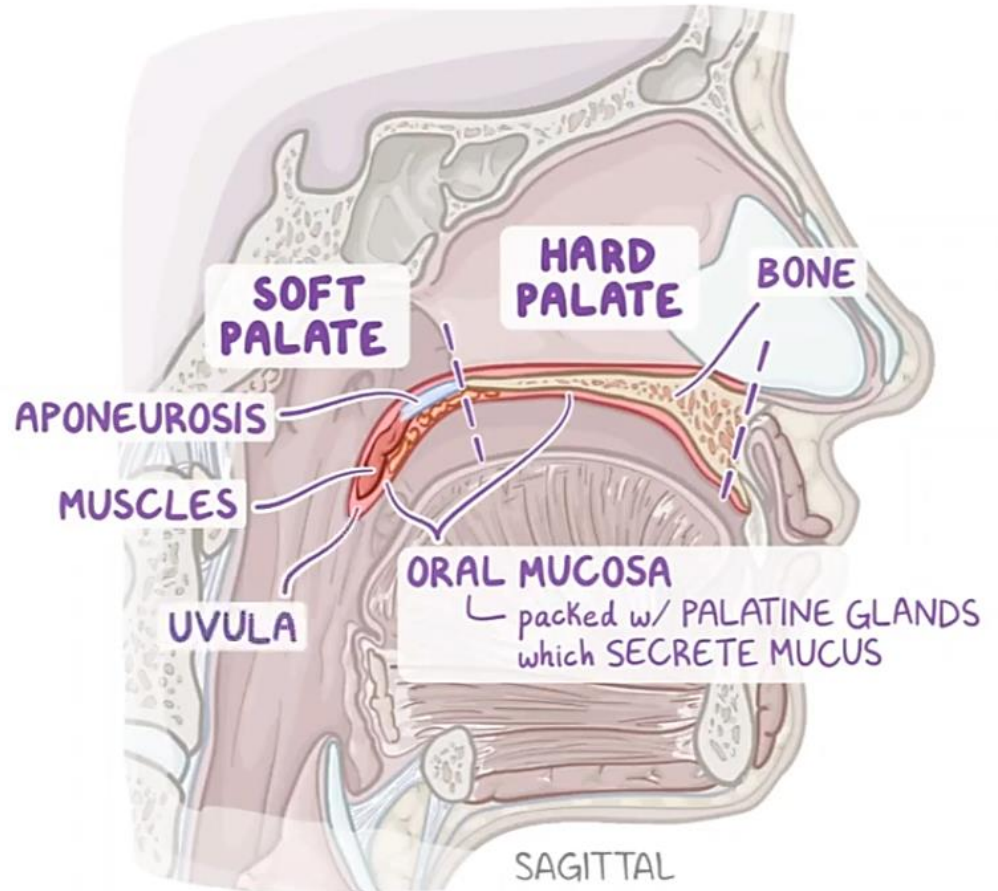


Roof= Palate



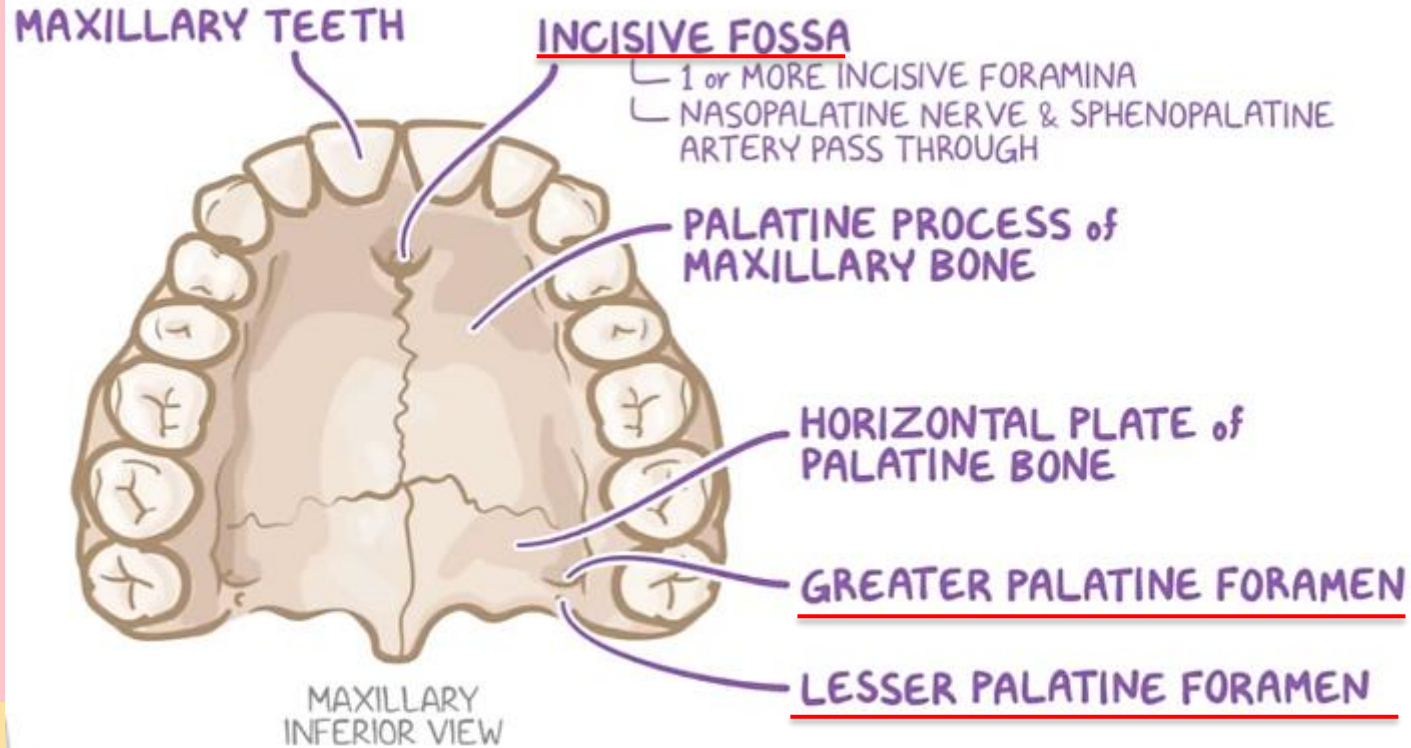
Palate

- Anteriorly **Hard palate**: separates oral from nasal cavity. Covered above by respiratory epith. & below by oral mucosa with palatine glands.
- Posteriorly **Soft palate**: skeletal muscles covered by oral mucosa. **Depresses** to close the exit of the oral cavity (nasal breathing). **Elevates** to separate the oropharynx from the nasopharynx (swallowing).



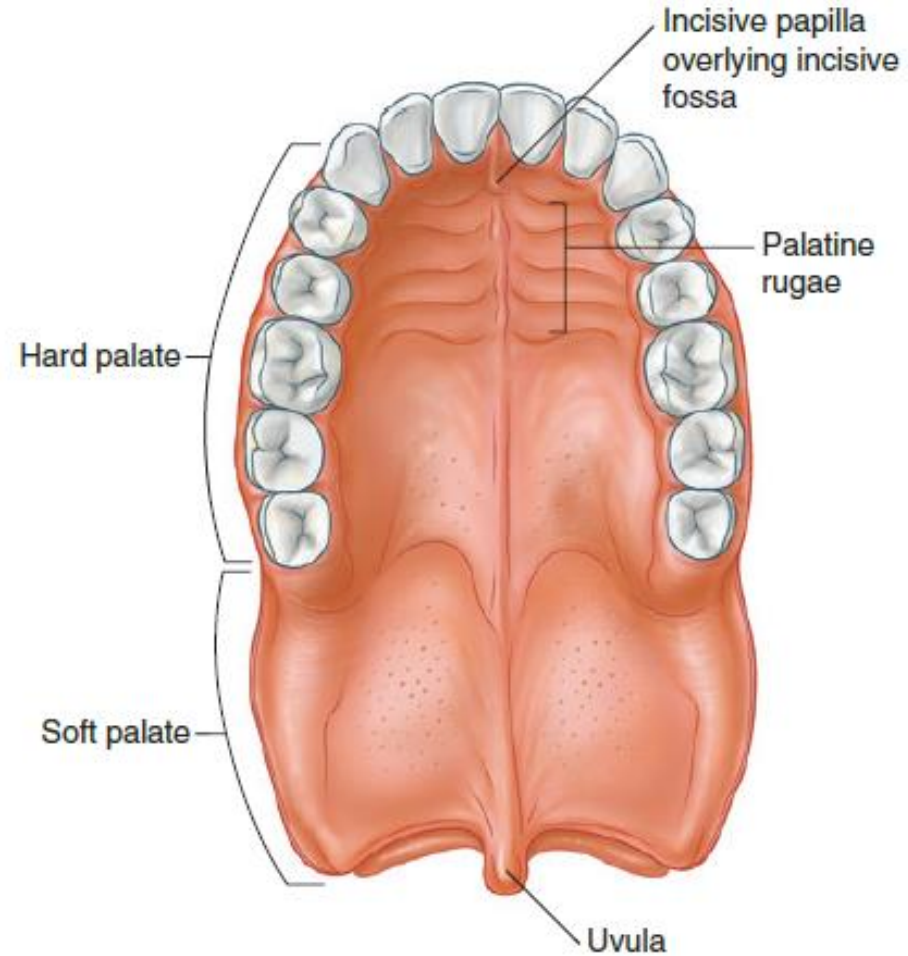
Hard palate: Skeletal framework

Anterior 2/3 = Maxilla
Posterior 1/3 = Palatine

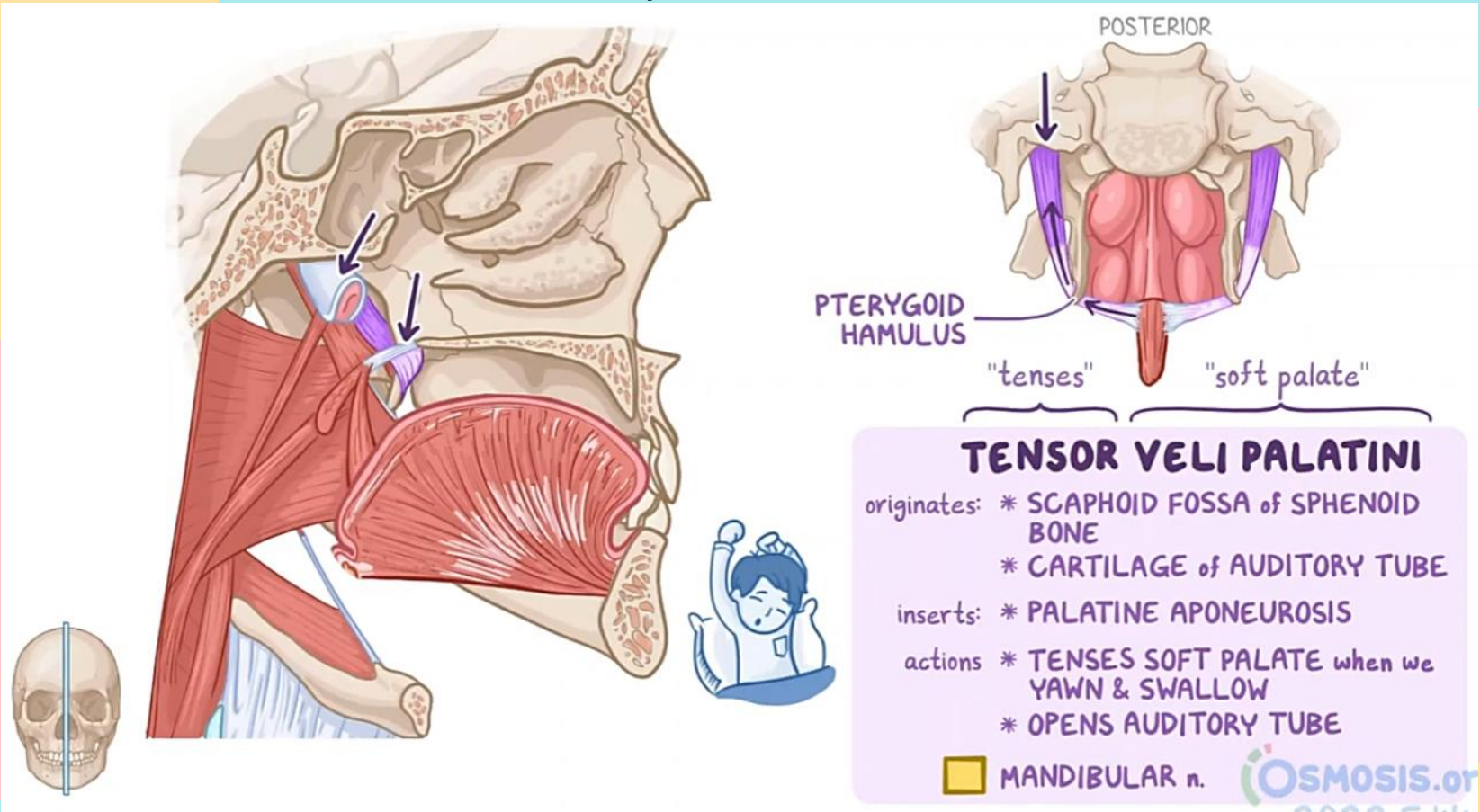


Hard palate : Mucosa

- Palatine rugae:** transverse folds in the anterior part
- Palatine raphe:** median longitudinal ridge leading anteriorly to:
 - **Incisive papilla:** small oval elevation over the incisive fossa
- **Uvula:** drop like projection from soft palate

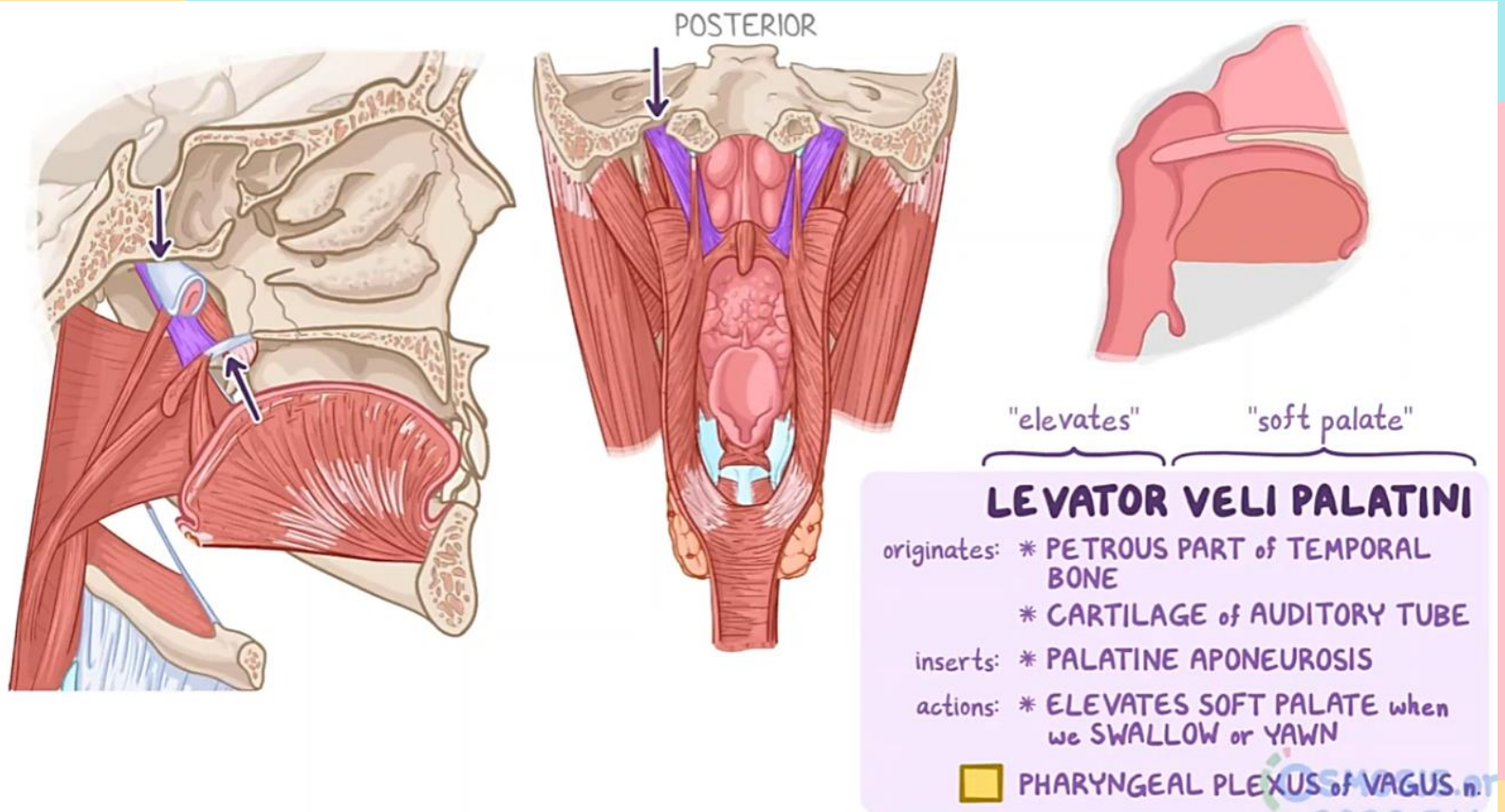


Soft palate: Muscles



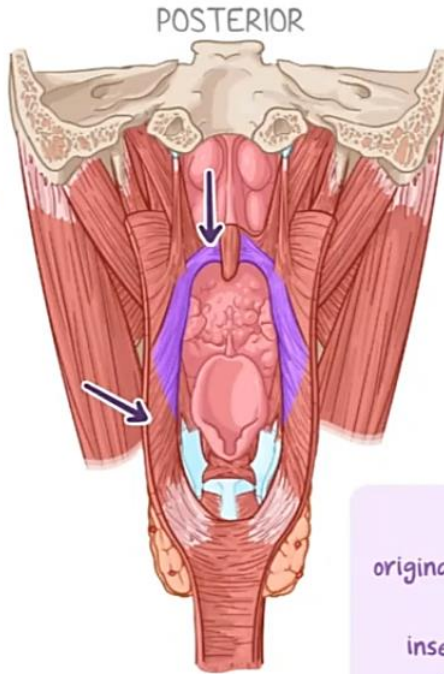
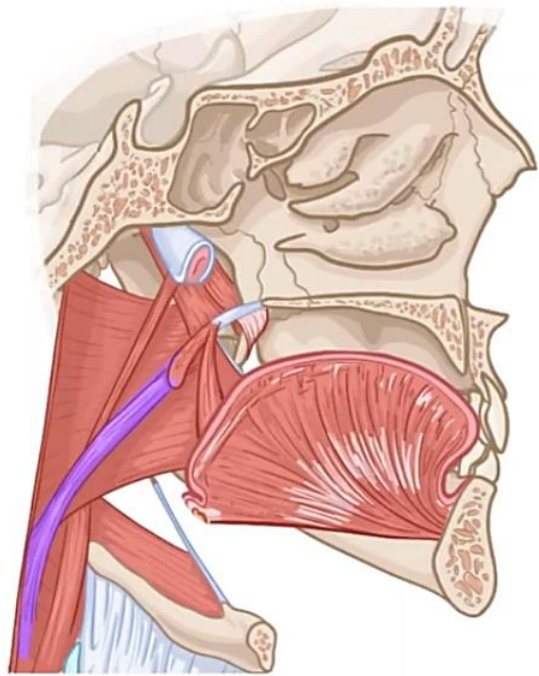
Only muscle supplied by the mandibular nerve (via br. to medial pterygoid). All Other muscles supplied by CN X (by br. to Pharyngeal plexus).

Soft palate: Muscles



Only muscle to elevate the palate above the neutral position

Soft palate: Muscles



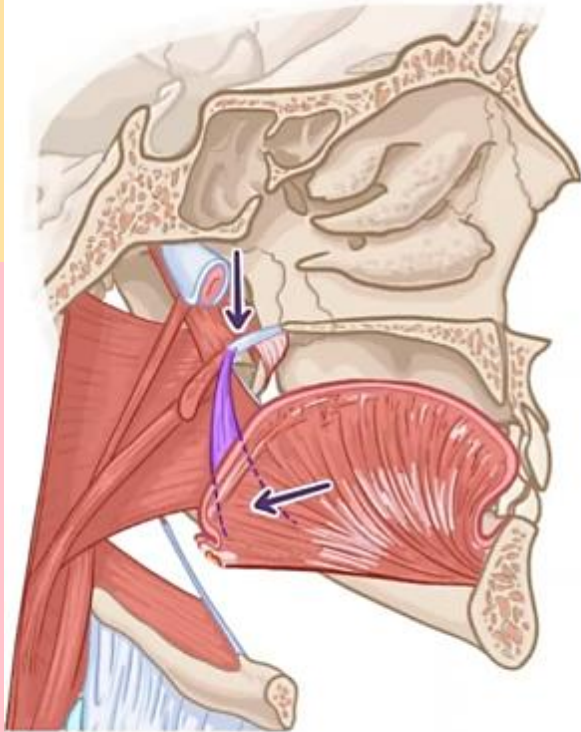
PALATOPHARYNGEUS

- originates: * HARD PALATE
* PALATINE APONEUROSIS
- inserts: * WALL of PHARYNX
- actions: * TENSES SOFT PALATE
* ELEVATES PHARYNX
-  PHARYNGEAL PLEXUS

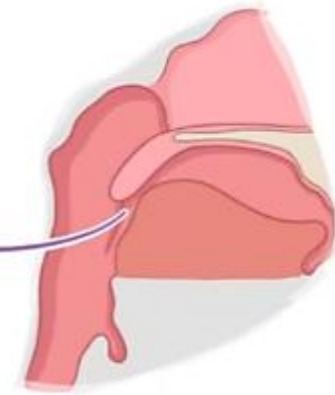
OSMOSIS

Also depresses soft palate

Soft palate: Muscles



ISTHMUS of the FAUCES



"palate"

"tongue"

PALATOGLOSSUS

originates: * PALATINE APONEUROSIS

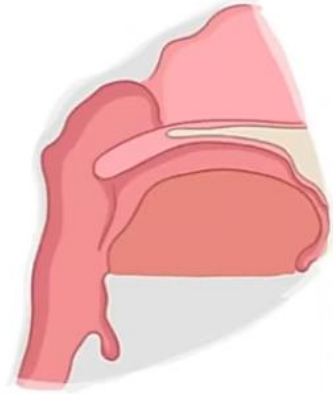
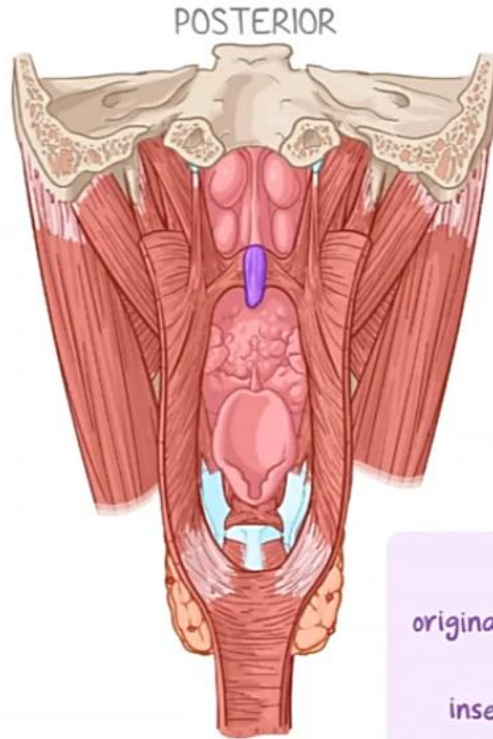
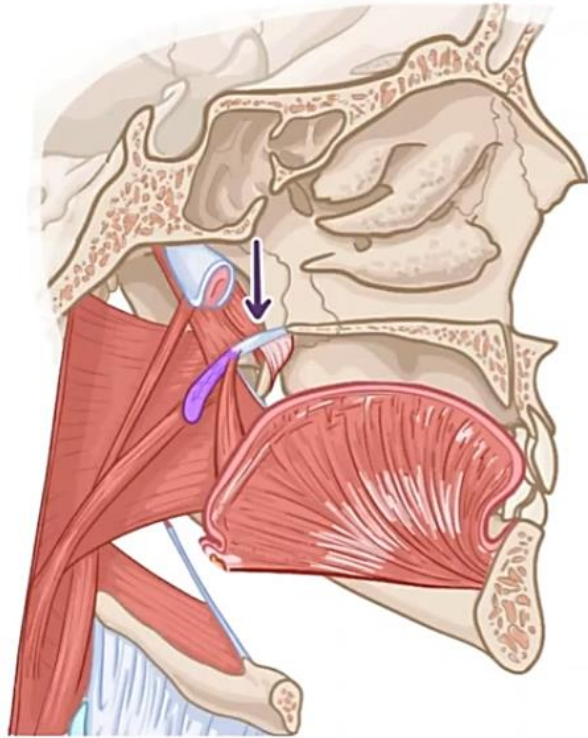
inserts: * SIDE of the TONGUE

actions: * DEPRESSES PALATE

* ELEVATES TONGUE

■ PHARYNGEAL PLEXUS of VAGUS n.

Soft palate: Muscles



MUSCULUS UVULAE

originates: * POSTERIOR NASAL SPINE
* PALATINE APONEUROSIS

inserts: * MUCOSA of UVULA

actions: * SHORTENS UVULA

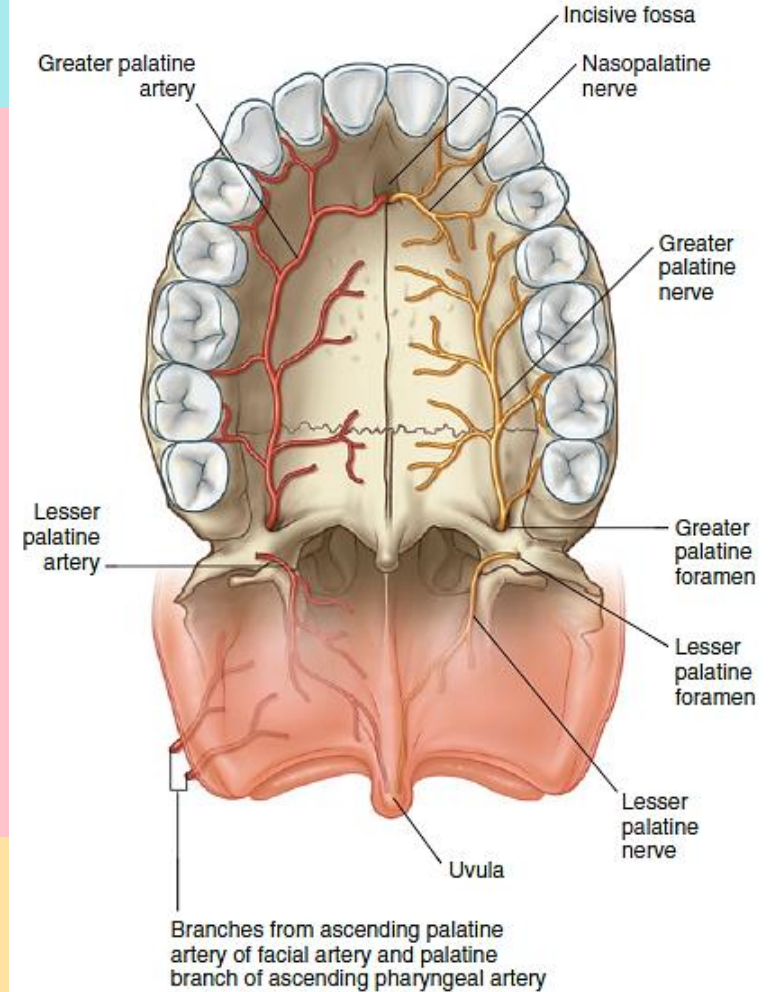
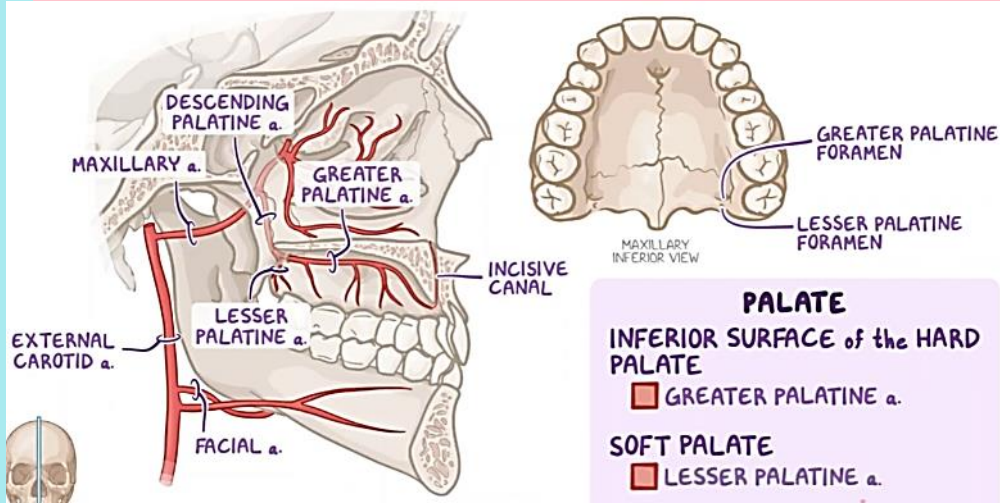
 PHARYNGEAL PLEXUS

Can elevate & retract the depressed uvula (but not above the neutral position)

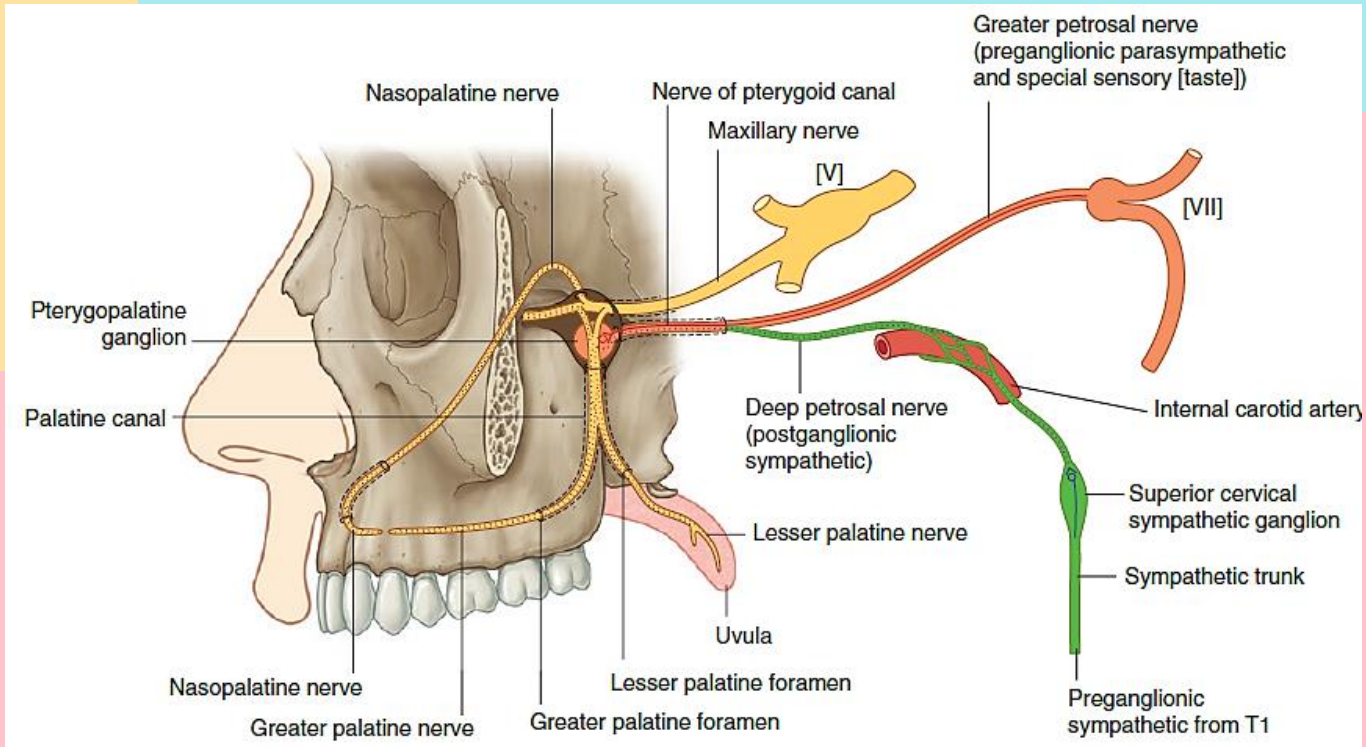
Palate : arterial supply

- Maxillary a. → Descending palatine a.:
- 1. lesser palatine + 2. Greater palatine
- Facial a. → Ascending palatine a.
- Ascending pharyngeal a. → palatine br.

Greater palatine a. to hard palate.
All other aa. To soft palate



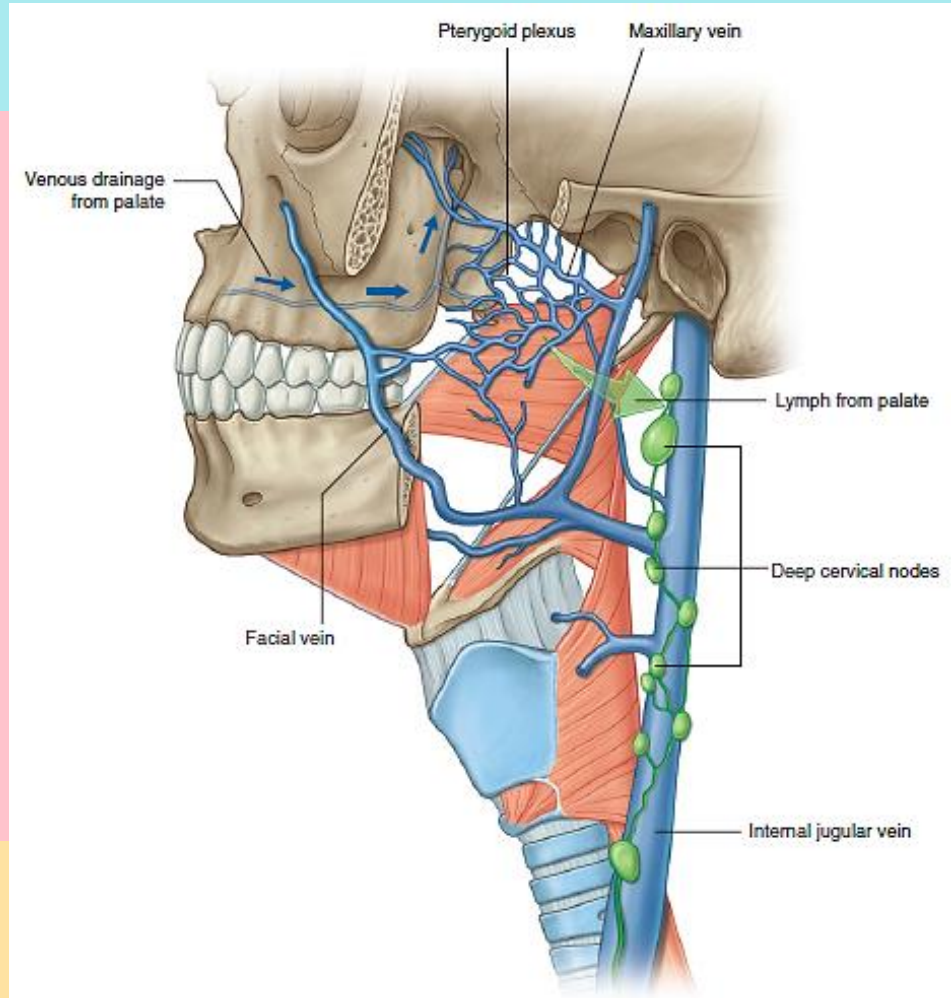
Palate : Nerve supply



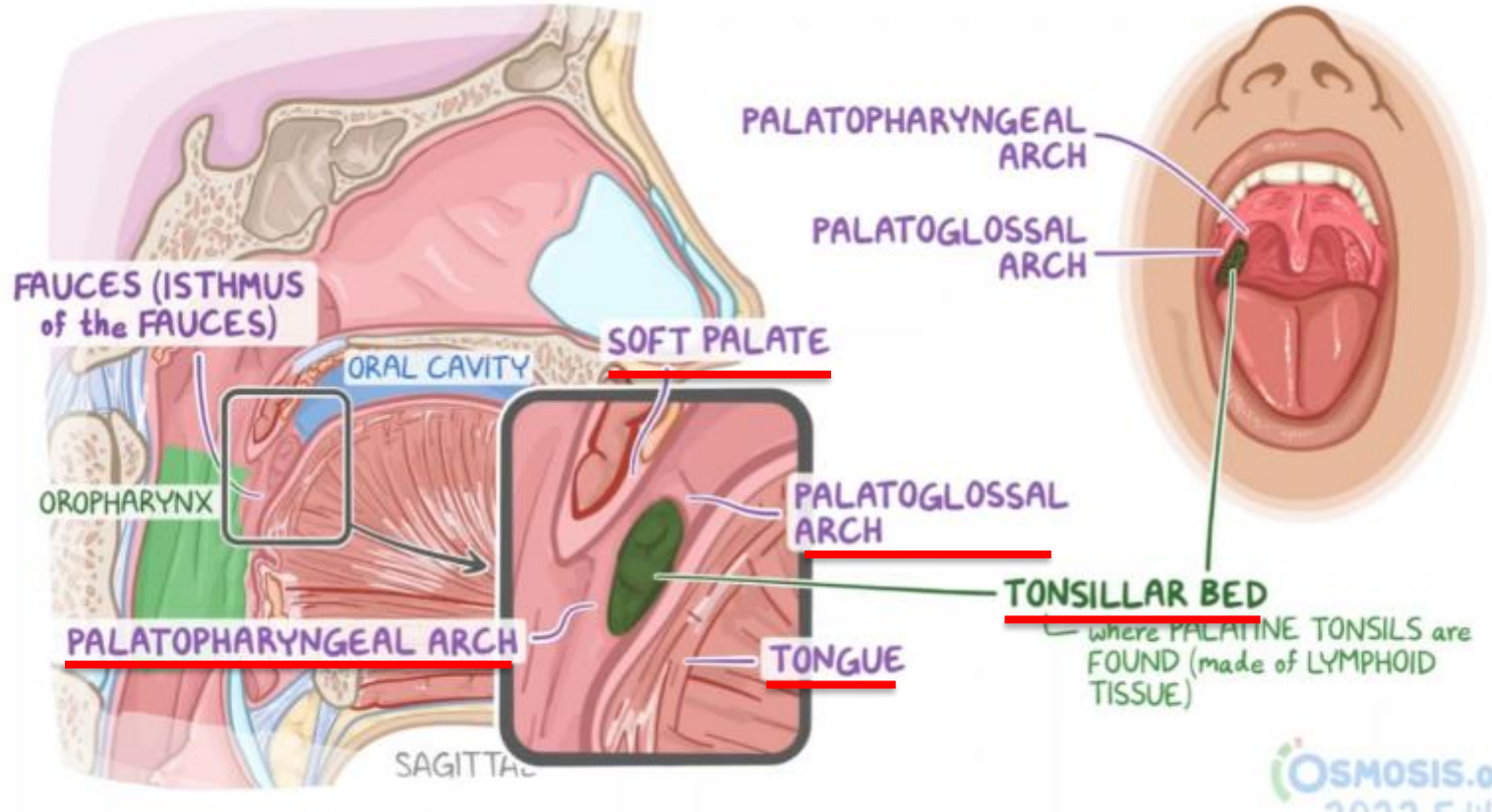
- **Sensory:** from V2 via greater & lesser palatine nn. & nasopalatine n.
- **Sympathetic:** from internal carotid plexus via deep petrosal n. to pterygopalatine ganglion
- **Parasympathetic:** from CN VII via greater petrosal n. to pterygopalatine ganglion.
- **Motor:** all palatal mm. are supplied by CN X (ph. plexus) **EXCEPT** tensor veli palatini (by V3 by n. to medial pterygoid)

Palate : venous & lymphatic drainage

- **Venous drainage:** follows the arteries to the pterygoid venous plexus, pharyngeal venous plexus or facial vein.
- **Lymph** passes to the deep cervical lymph nodes along the internal jugular vein



Exit of the oral cavity : Oropharyngeal isthmus (of the fauces)



- **Superiorly:** soft palate & uvula
- **Inferiorly:** tongue
- **Laterally:** palatoglossal arch (ant.), palatopharyngeal arch (post.) & tonsillar bed with palatine tonsils

Exit of the oral cavity : Oropharyngeal isthmus (of the fauces)

Posterior wall of oropharynx

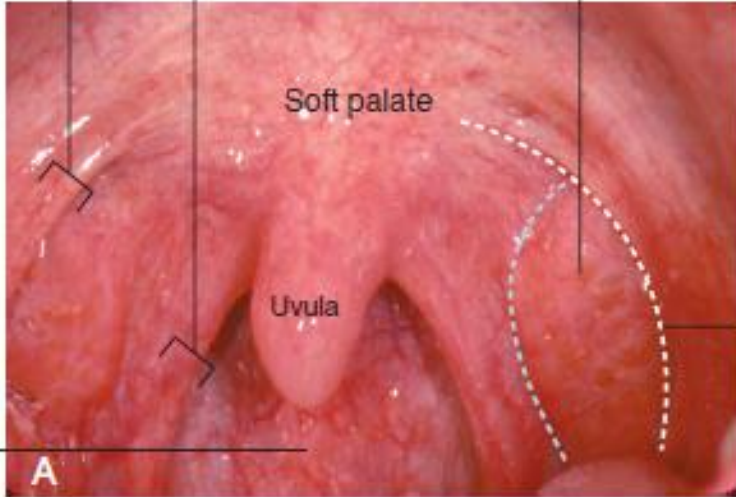
Palatine tonsil

Palatoglossal arch

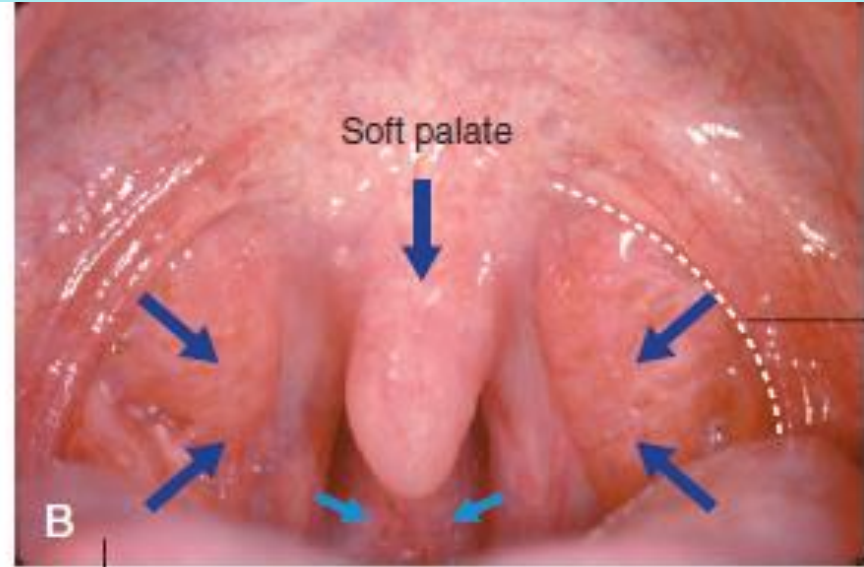
Palatopharyngeal arch

Soft palate

Uvula



OPEN



Tongue

Anterior margin of oropharyngeal isthmus (palatoglossal arch)

CLOSED

Medial and downward movement of palatoglossal & palatopharyngeal arches + Upward movement of tongue + Downward and forward movement of soft palate