



GSSE Anatomy *Head and Neck*

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General Outline

- Face
- Parotid Gland
- Infratemporal Fossa

Face

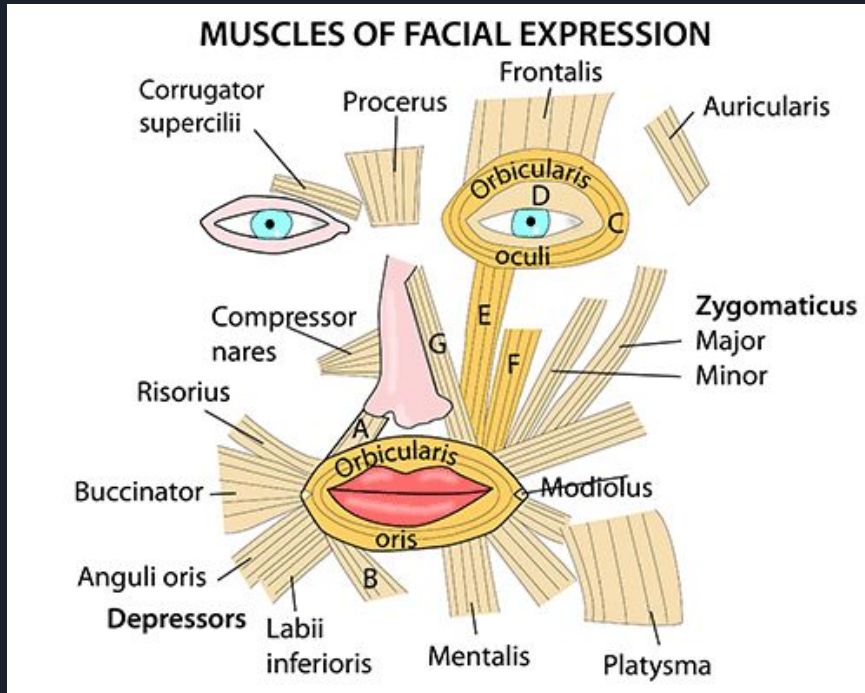




Face

- Muscles of facial expression
- Facial nerve
- Trigeminal nerve
- Arterial Supply
- Venous drainage

Muscles of Facial Expression

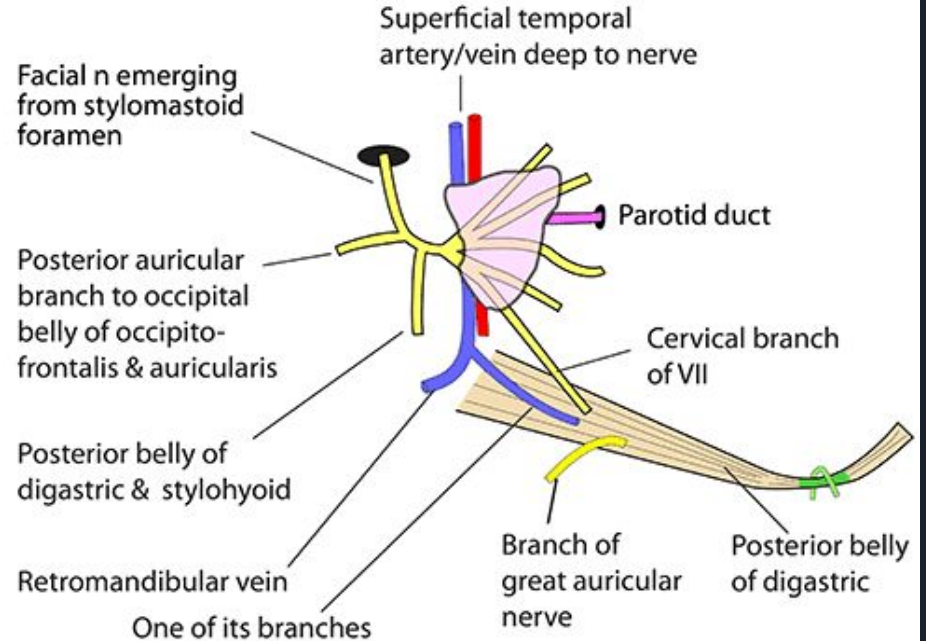


- A = Incisive slip of orbicularis oris
 - B = Mental slip of orbicularis oris
 - C = Orbital part of orbicularis oculi
(complete sphincter, screws up eye, decreases volume of conjunctival sac & tears spill over)
 - D = Palpebral part of orbicularis oculi
(Medial palpebral ligament to lateral palpebral raphe. Keeps volume of conjunctival sac constant, no tear spill, closes eye)
 - E = Levator labii superioris
 - F = Levator anguli oris
 - G = Levator labii superioris alaeque nasi
(Dilator nares & depressor septi are not shown)
- Note: The face has no deep fascia, variables amount of fat, good blood supply & drainage. Muscles are 2nd arch mesoderm, equivalent to the panniculus carnosus of animals, often attached to the dermis & are arranged into sphincters, dilators and expressors

Facial Nerve


- Pre-parotid
- Intra-parotid
- Post - parotid

RIGHT FACIAL NERVE IN & BEFORE THE PAROTID



Note: Only three structures lie anterior to the posterior belly of digastric:-

- Cervical branch of VII
- Branch of the retromandibular vein
- Branch of great auricular nerve (cervical plexus)



Facial Nerve Pre-parotid

*Through stylomastoid
foramen, near origin of
posterior belly digastric*

- Posterior auricular nerve
 - Occipital belly
occipitofrontalis
- Muscular supply to posterior
belly of digastric and stylohyoid
- Upper temporozygomatic
- Lower cervicofacial



Facial Nerve intra-parotid

Pes anserinus

- Plexiform arrangement
- Superficial to retromandibular vein and external carotid artery

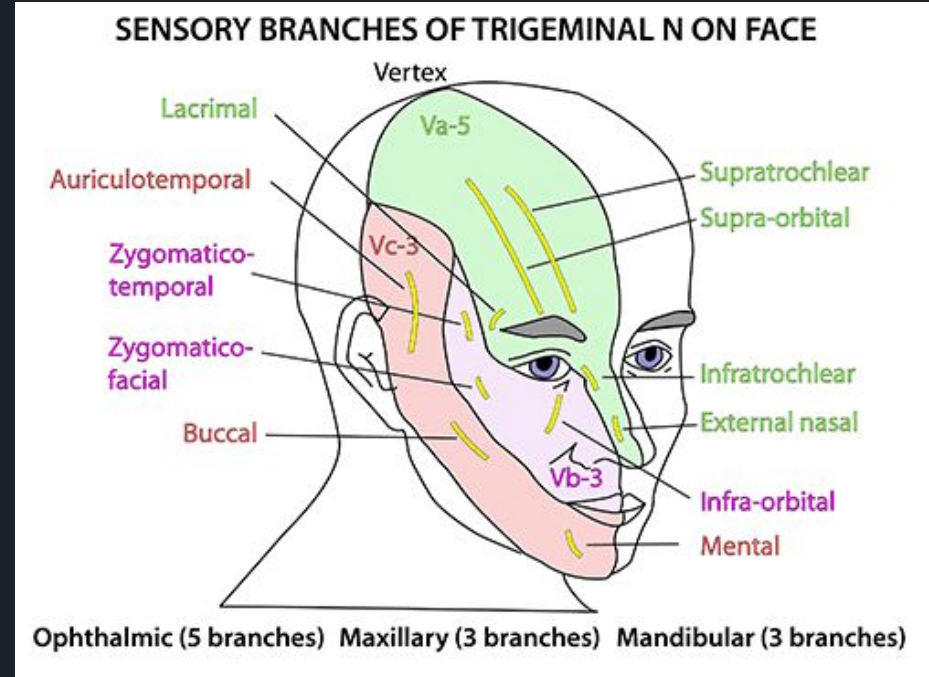


Facial Nerve Post-parotid

- Temporal
- Zygomatic
- Buccal
- Marginal mandibular
- Cervical

Trigeminal

- Ophthalmic V1
- Maxillary V2
- Mandibular V3





Ophthalmic V1

- Lacrimal
- Supraorbital
- Supratrochlear
- Infratrochlear
- External nasal



Maxillary V2

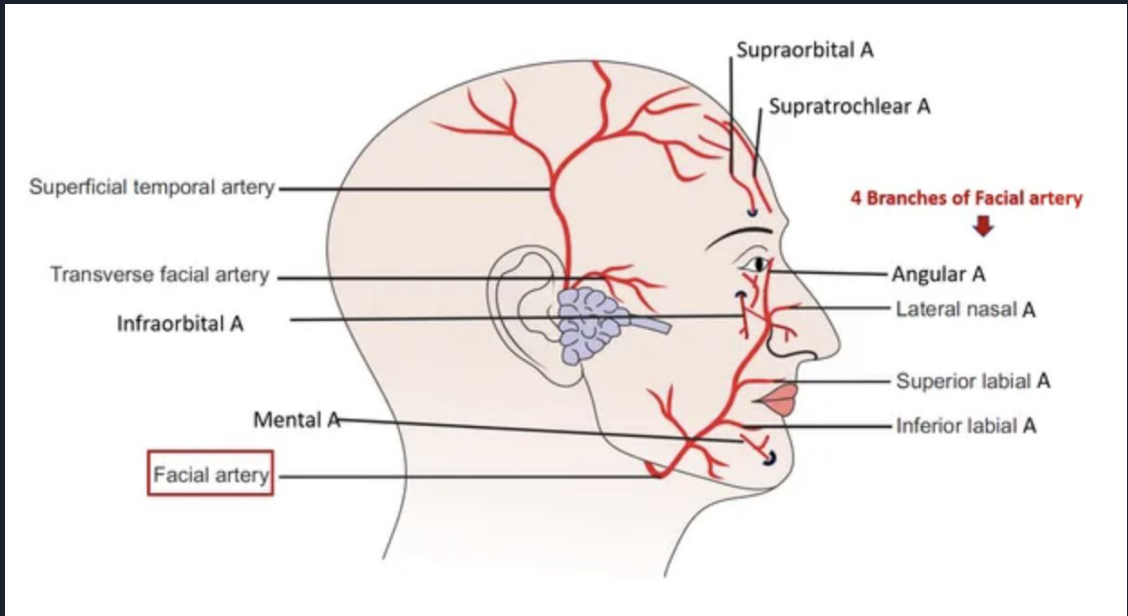
- Infra-orbital
- Zygomaticofacial
- Zygomaticotemporal



Mandibular V3

- Auriculotemporal
- Buccal
- Mental

Arterial Supply



Arterial Supply

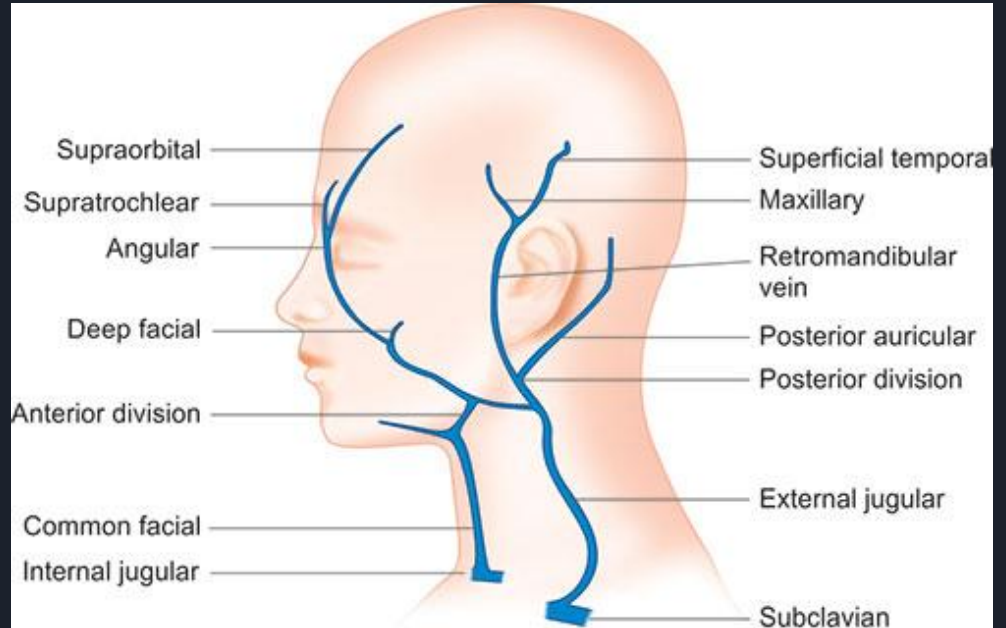
- Facial artery
 - Anterior branch of external carotid
 - Superior and inferior labial branches (anastomose)
- Superficial temporal artery
 - Branch of external carotid
- Supra-orbital and supra-trochlear
 - Branches of ophthalmic artery



Communication between internal and external carotid systems

- *Anastomoses between superficial temporal and supra-orbital and supra-trochlear arteries*

Venous Drainage





Venous Drainage

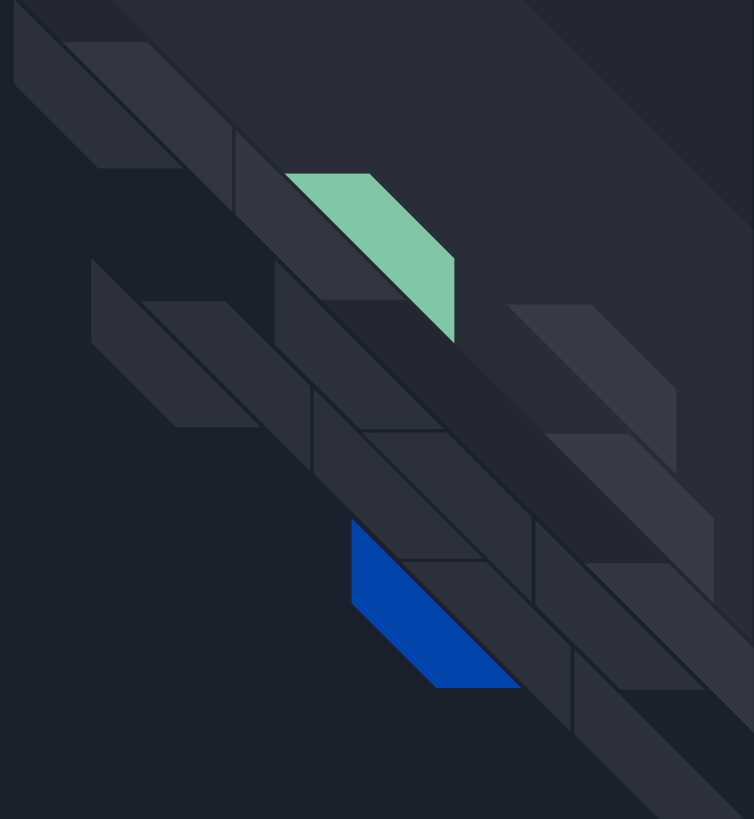
- Facial vein
 - Angular vein
 - Supra-orbital and supratrochlear veins
- Retromandibular vein
 - Superficial temporal vein
 - Maxillary vein
- External jugular



Deep anastomoses

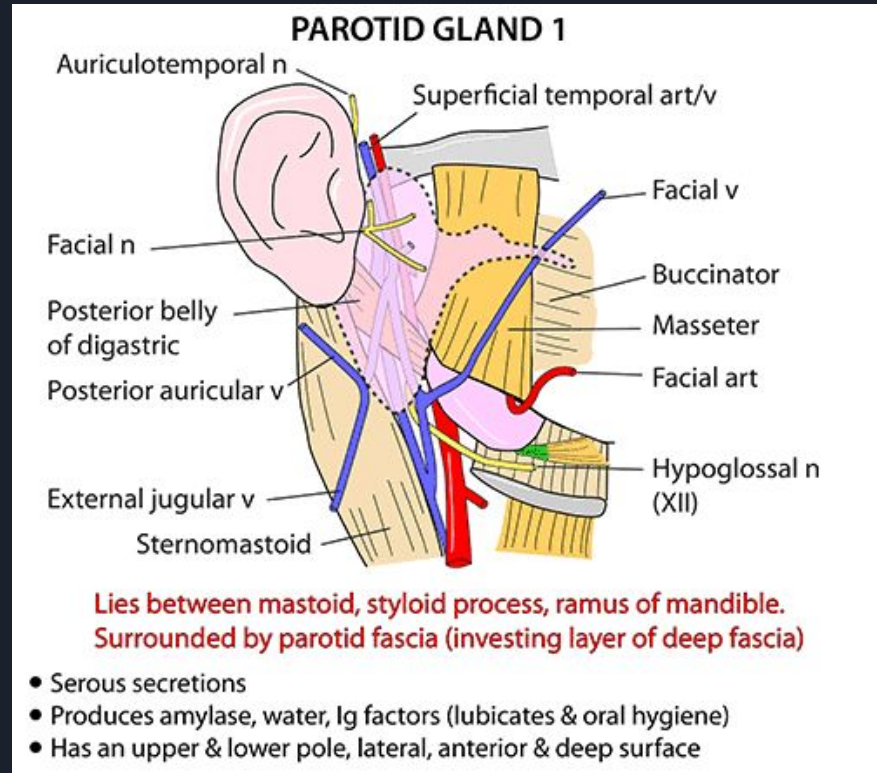
- *Facial vein communicates with cavernous sinus via ophthalmic veins and deep facial vein*

Parotid



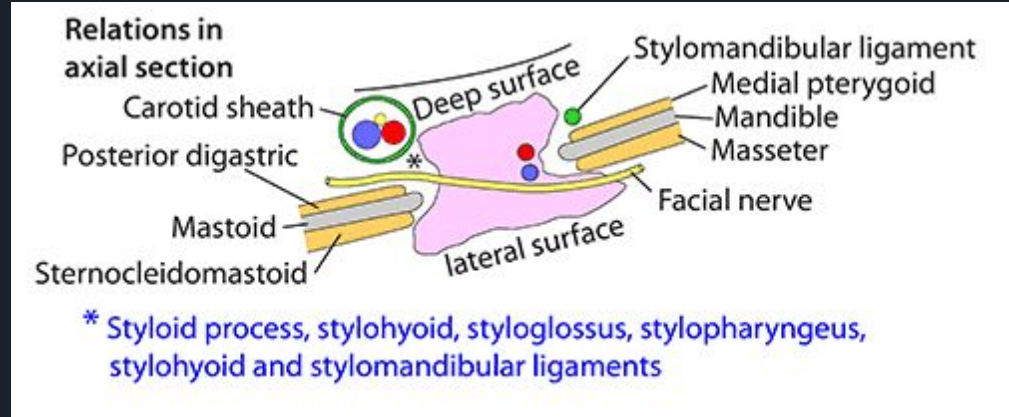
Parotid Gland

- *Serous salivary gland*
- *Surrounded by parotid sheath*



Parotid Gland Contents

- *Facial nerve*
- *Retromandibular vein*
- *External carotid artery*





Parotid Duct

(Of Stenson)

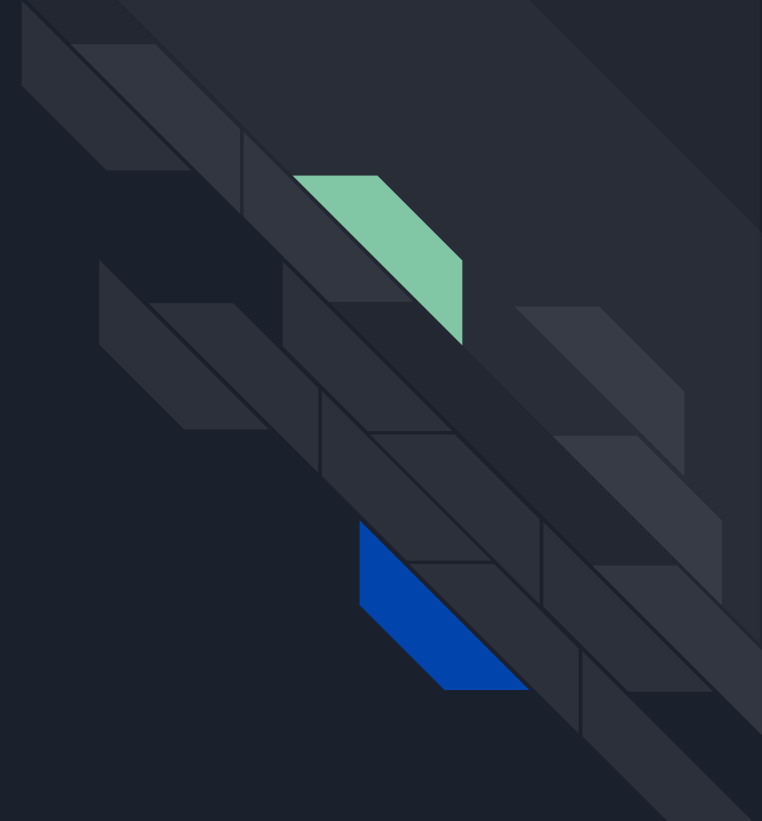
- *5cm length*
- *Passes across masseter*
- *Pierces buccinator*
- *Opens opposite second upper molar*



Parotid Gland Innervation

- **Secretomotor**
 - *Otic ganglion via auriculotemporal nerve*
- **Sympathetic**
 - *Superior cervical ganglion*

Infratemporal Fossa



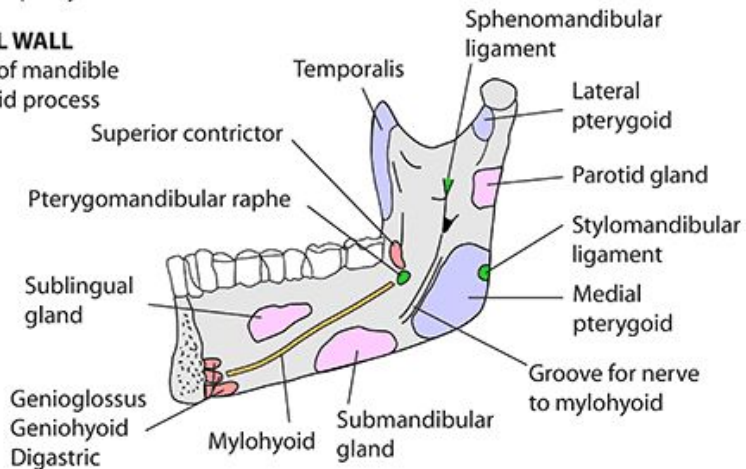
Infratemporal Fossa - Boundaries

INFRA TEMPORAL FOSSA - BOUNDARIES

- Base of skull
- Between pharynx & ramus of mandible

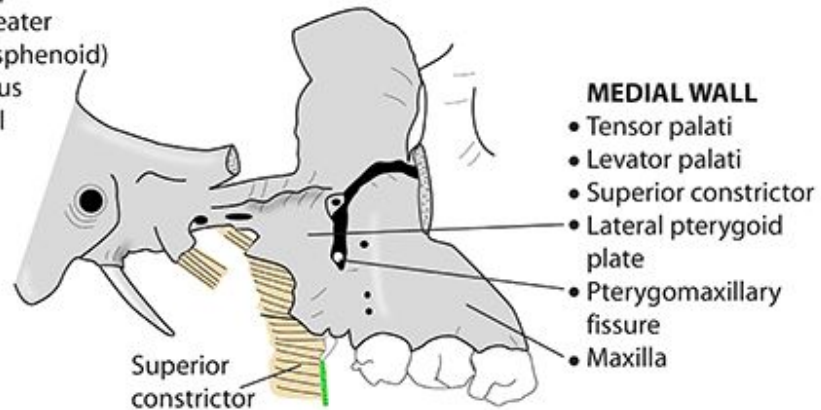
LATERAL WALL

- Ramus of mandible
- Coronoid process



ROOF

- Infratemporal crest (greater wing of sphenoid)
- Squamous temporal



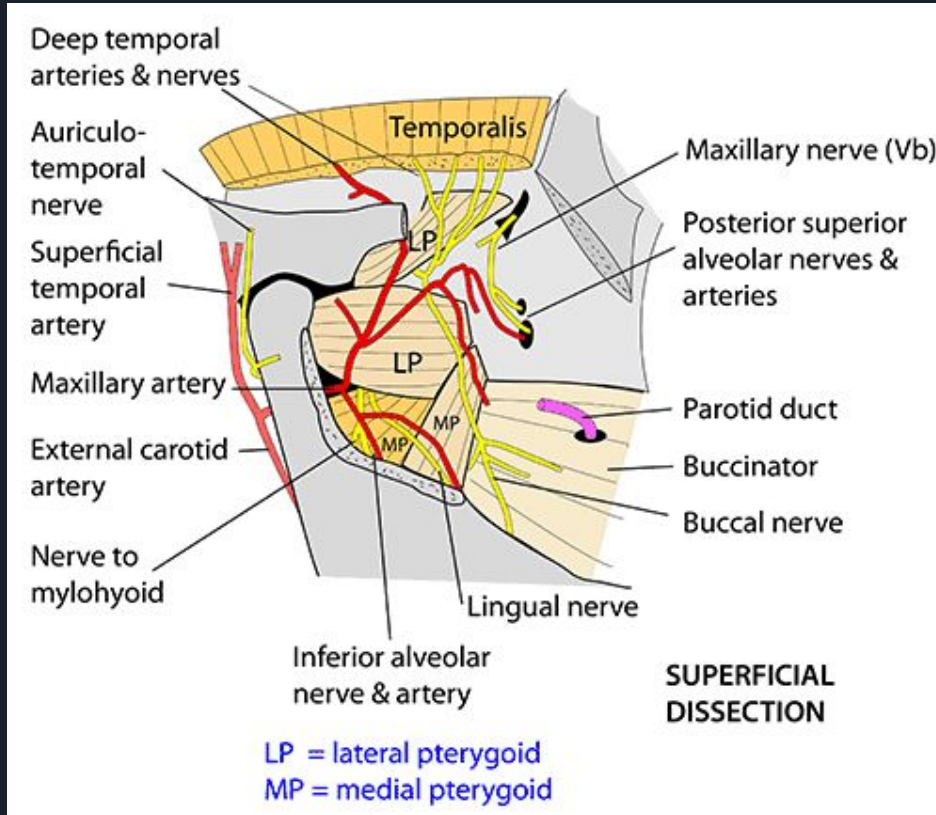
POSTERIOR WALL

- Carotid sheath

ANTERIOR WALL

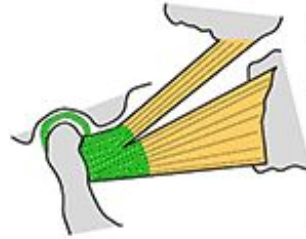
- Posterior maxilla
- Inferior orbital fissure

Infratemporal Fossa - Contents



- *Medial and lateral pterygoids*
- *Insertion of temporalis*
- *Maxillary artery*
- *Pterygoid venous plexus*
- *Mandibular nerve*
- *Otic ganglion*
- *Chorda tympani*
- *Posterior superior alveolar branch of mandibular nerve*

Lateral Pterygoid



LATERAL PTERYGOID

Arises: 2 heads

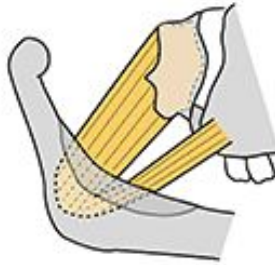
Upper: infratemporal surface sphenoid

Lower: lateral surface of lateral pterygoid plate

Inserts: pterygoid fossa below head of mandible, disc, and capsule of temporomandibular joint

Action: protrudes jaw and opens mouth

Medial Pterygoid



MEDIAL PTERYGOID

Arises: 2 heads

Deep: medial side of lateral pterygoid plate and fossa between plates

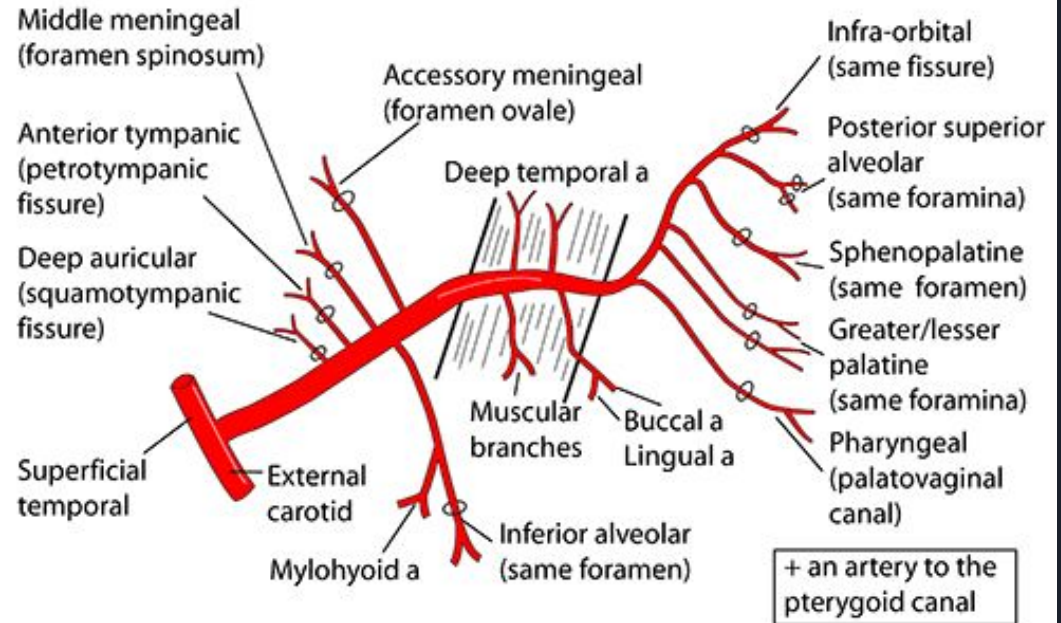
Superficial: smaller. Tuberosity of maxilla and pyramidal process of palatine bone

Inserts: Medial ramus of mandible

Action: pulls mandible upwards, forwards and medially (closes mouth and chews)

Maxillary Artery

- *Terminal branch*
ECA
- *Three parts*
- *15 branches*



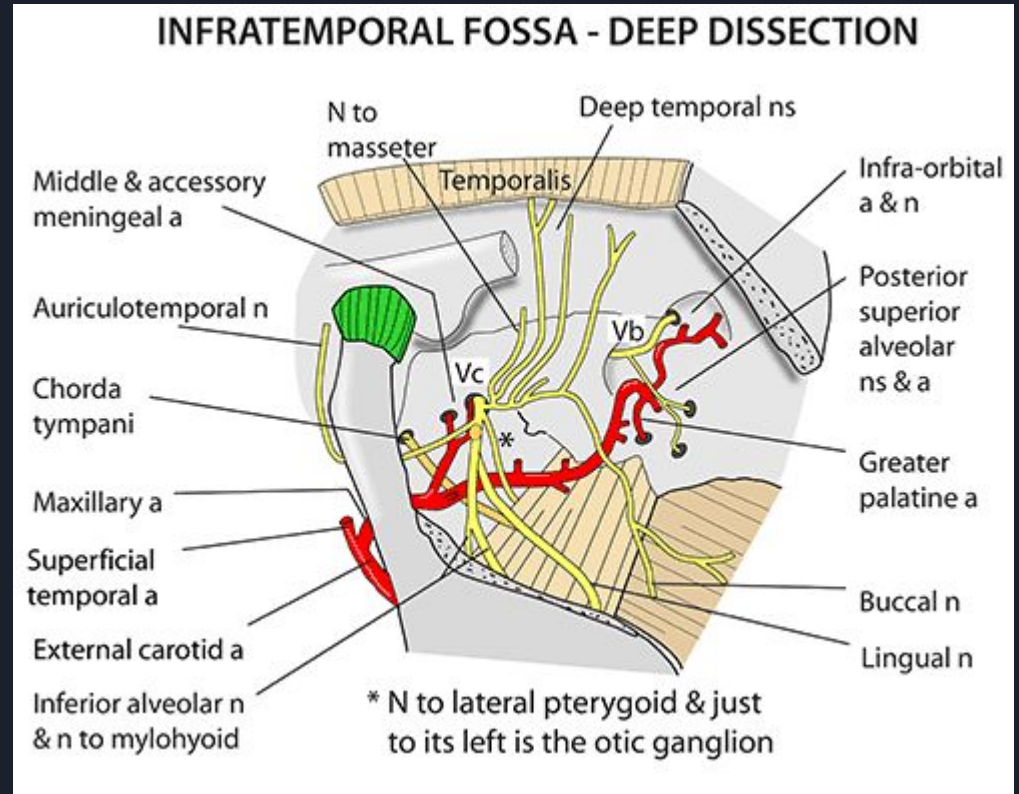
**BEFORE LATERAL
PTERYGOID
5 BRANCHES
INTO BONE**

**LATERAL OR
WITHIN LATERAL
PTERYGOID. 4/5
BRANCHES TO
SOFT TISSUE**

**BEYOND
LATERAL
PTERYGOID
5/6 BRANCHES
WITH NERVES**

Mandibular Nerve

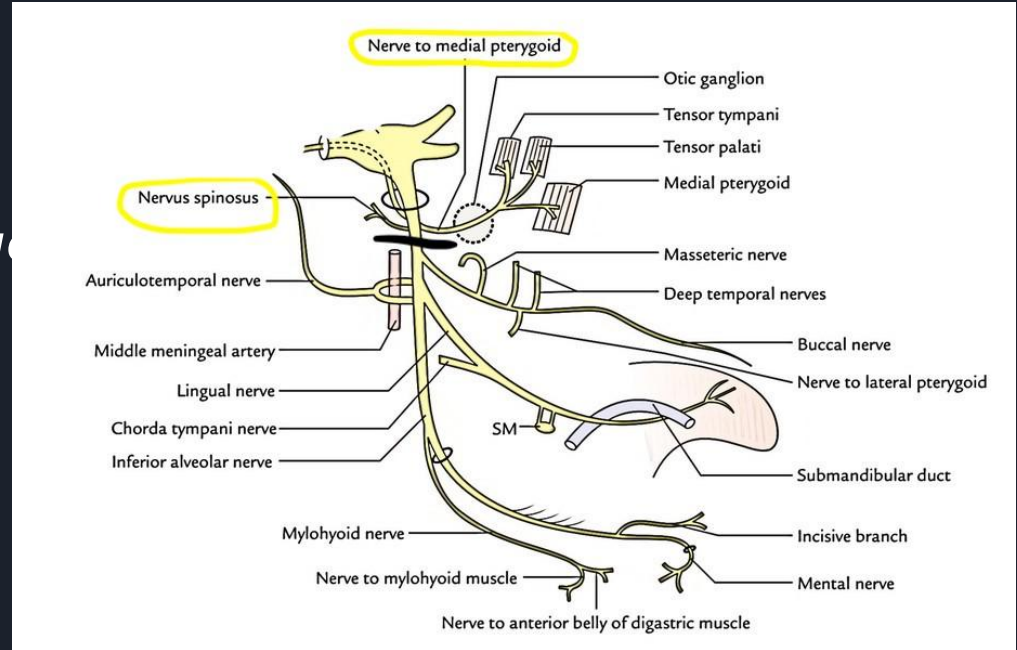
- *Deep to upper head lateral pterygoid*
- *On tensor palati*



Mandibular Nerve

Main Trunk

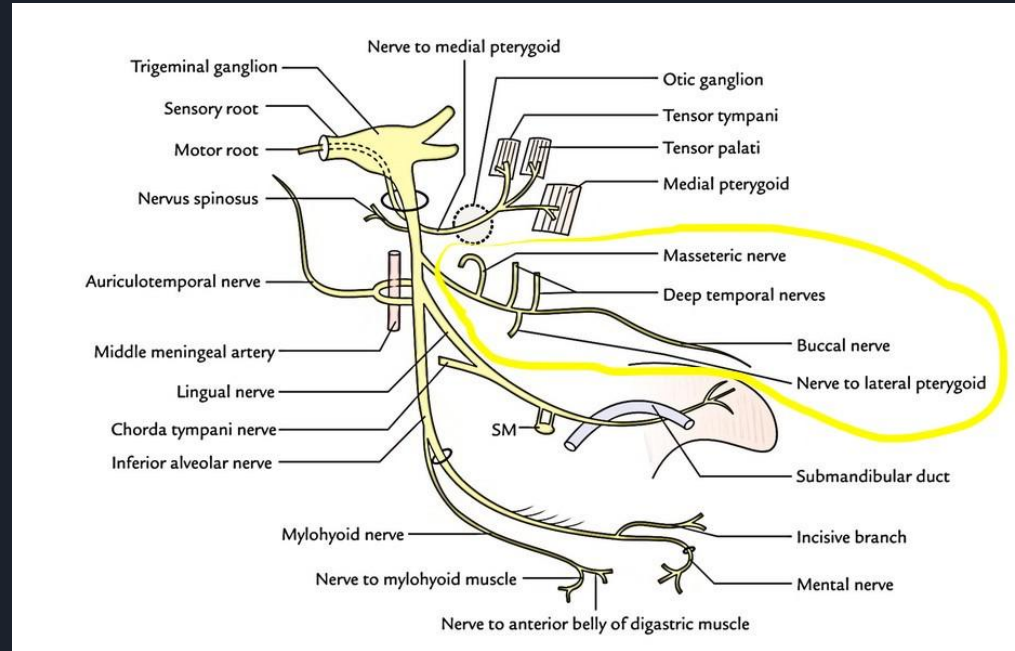
- *One sensory (meningeal branch)*
- *One motor (nerve to medial pterygoid)*



Mandibular Nerve

Anterior Division

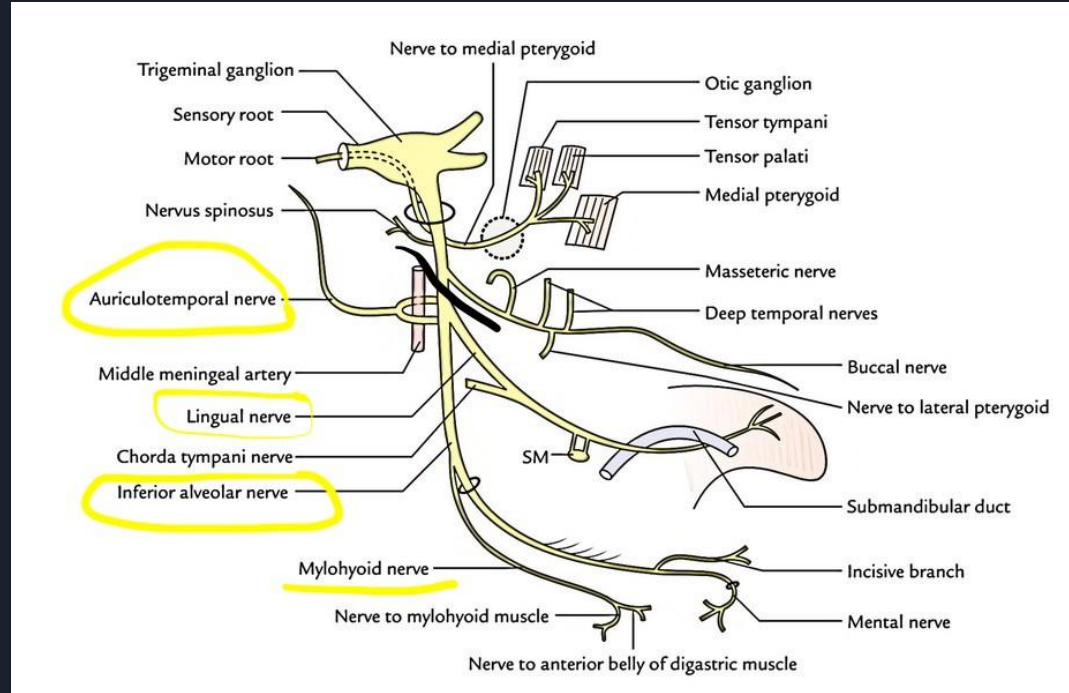
- *Deep temporal*
- *Masseteric*
- *Nerve to lateral pterygoid*
- *Buccal*



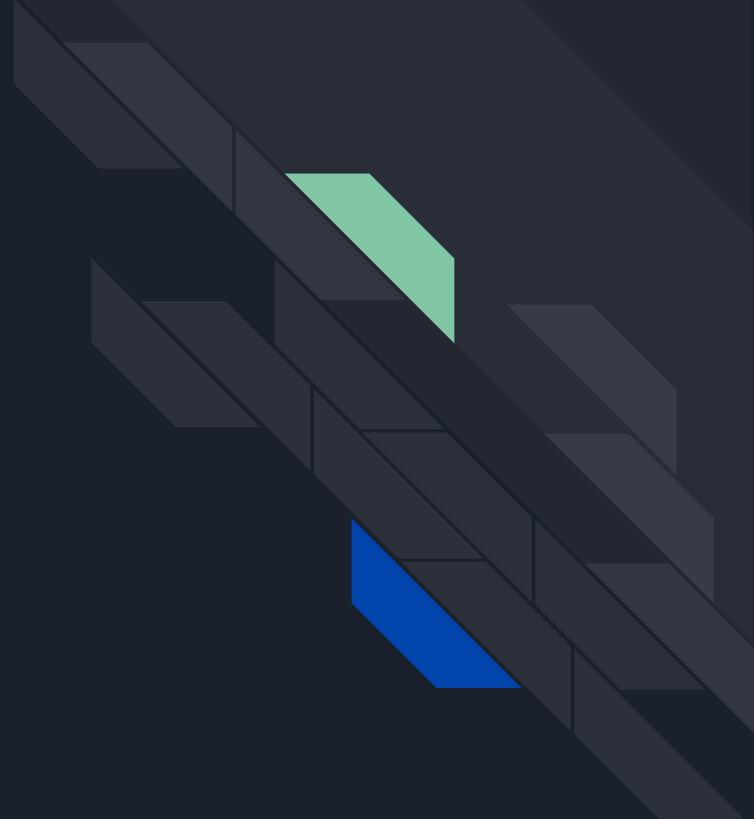
Mandibular Nerve

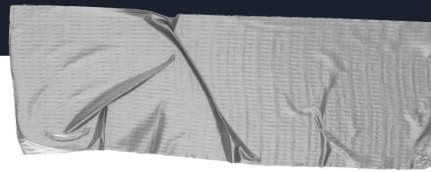
Posterior Division

- *Auriculotemporal*
- *Inferior alveolar*
 - *Nerve to mylohyoid*
- *Lingual*



Questions

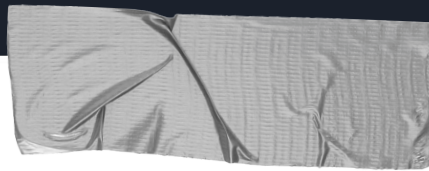




True or False

**The buccinator muscles is pierced
by the parotid duct**

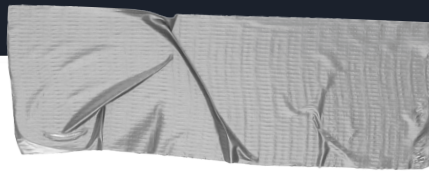
**Receives its motor innervation from
the mandibular nerve**



True or False

The buccinator muscles is pierced
by the parotid duct **True**

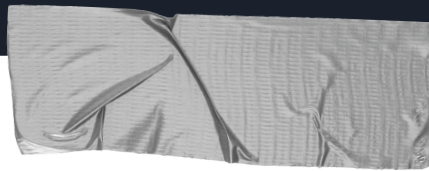
Receives its motor innervation from
the mandibular nerve **False**



True or false

The facial nerve supplies the muscles of lower lip through its cervical branch

Emerges from the skull through the stylomastoid foramen



True or false

The facial nerve supplies the muscles of lower lip through its cervical branch **False**

Emerges from the skull through the stylomastoid foramen **True**



True or false

The auriculotemporal nerve

- Takes its origin from the posterior division of the mandibular nerve
- Supplies the temporalis muscle



True or false

The auriculotemporal nerve

- Takes its origin from the posterior division of the mandibular nerve **True**
- Supplies the temporalis muscle **False**



MCQ

The occipital belly of the occipitofrontalis muscle is supplied by:

- A - The greater auricular nerve
- B - The greater occipital nerve
- C - The auriculotemporal nerve
- D - The facial nerve
- E - The third occipital nerve



MCQ

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- B - The greater occipital nerve
- C - The auriculotemporal nerve
- D - The facial nerve**
- E - The third occipital nerve



MCQ

All the following are branches of the maxillary artery EXCEPT

A - Ascending pharyngeal

B - Middle meningeal

C - Infra-orbital

D - Inferior alveolar

E - Deep auricular



MCQ

All the following are branches of the maxillary artery EXCEPT

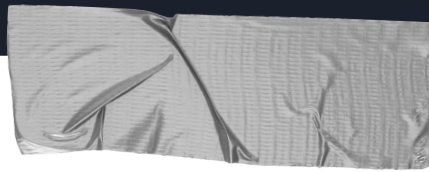
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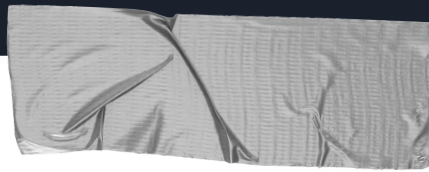


Statement & Reason

S. A lesion of the buccal branch of the mandibular nerve may disrupt chewing

BECAUSE

R. paralysis of the buccinator allows food to lodge in the vestibule between cheek and gum



Statement & Reason

S. A lesion of the buccal branch of the mandibular nerve may disrupt chewing

False

BECAUSE

R. paralysis of the buccinator allows food to lodge in the vestibule between cheek and gum **True**

Good Luck!

Hope this was partly helpful

