

Anatomy lec8

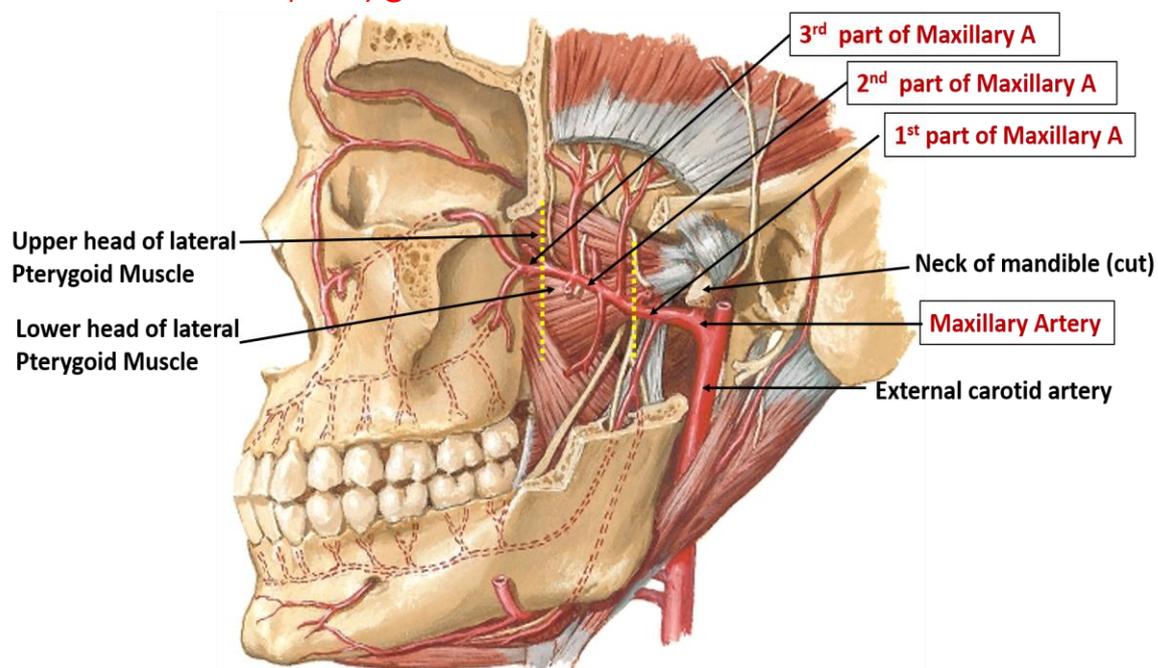
Maxillary artery (it supplies all teeth)

Begins as one of the 2 terminal branches of external carotid artery, behind the neck of mandible (within parotid gland)

Ends as infraorbital artery

Course and relations:

- The first part:** passes forward, deep to the neck of the mandible.
- The second part:** crosses the lower head of lateral pterygoid muscle.
- The third part:** passes medially, between the two heads of the lateral pterygoid muscle.



Branches:

I- The First Part: (5 branches)

- The inferior alveolar artery: artery of the gums & lower teeth
- The middle meningeal artery through the foramen spinosum
ده الي موجود في منطقة ال pterion و بيخليها خطيرة
- The accessory meningeal artery
- The anterior tympanic artery

5. The deep auricular artery

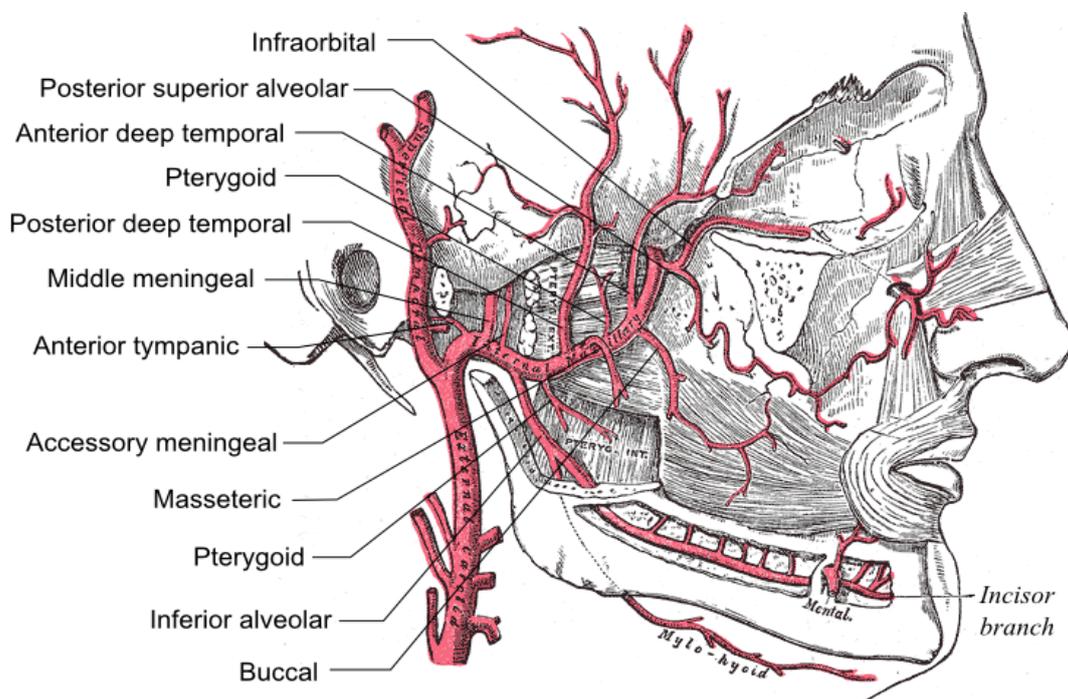
II- The Second Part: supply muscles of mastication (5 Muscular branches):

1. The deep temporal arteries (2)
2. The masseteric arteries
3. The pterygoid arteries
4. The buccal artery

III- The Third Part: (5 branches all in bony canals)

1. The posterior superior alveolar: artery to the upper molars & premolars.
2. The infraorbital artery: in its way to the face it gives:
 - The middle superior alveolar artery: supply the premolars
 - The anterior superior alveolar artery: supply the upper incisors & canine
3. Terminal branches that supply the:
 - Nose (long & short nasopalatine)
 - Palate (greater & lesser palatine)
 - the pharynx (pharyngeal branch)

♦ All alveolar arteries are branches of maxillary artery.



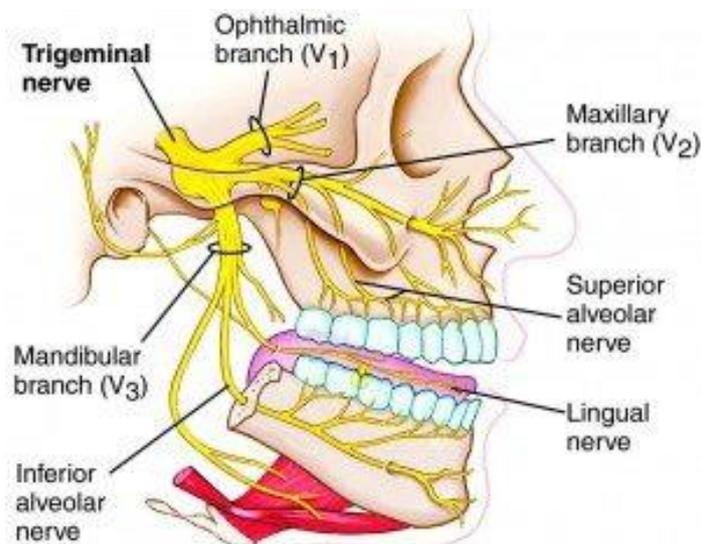
- **The pterygoid venous plexus**

It lies around the lateral pterygoid muscle, draining the nearby structures & it's drained by a short **maxillary vein**

- **Maxillary vein**

- It's short & it drains the pterygoid venous plexus
- It accompanies the first part of maxillary artery, passing deep to the neck of mandible
- It **joins** the superficial temporal vein within the parotid gland to form **the retromandibular vein**
(maxillary v. + superficial temporal = retromandibular v.)

☞ Trigeminal nerve (5th cranial nerve)

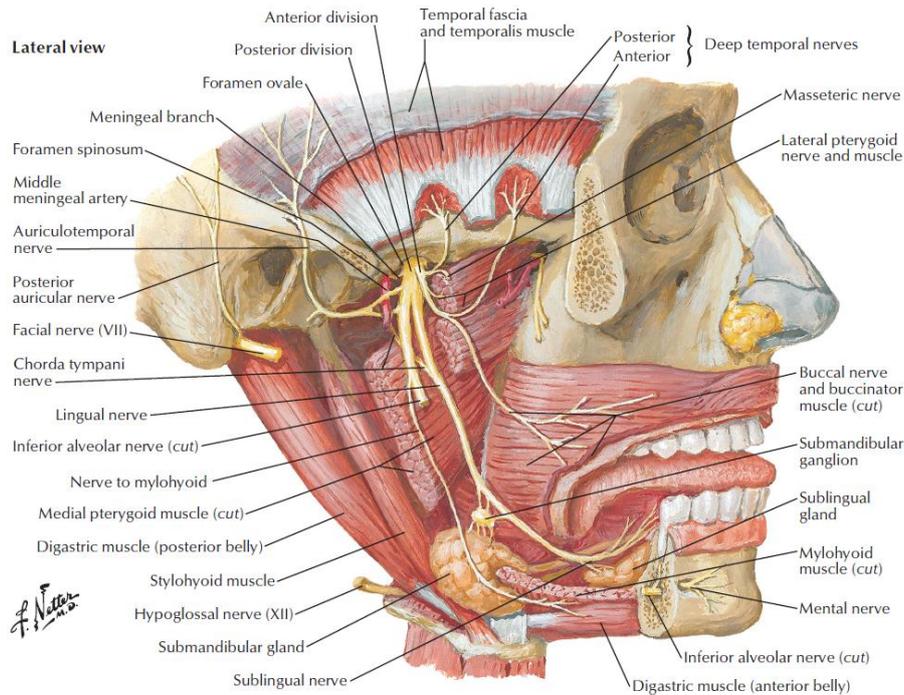


بيتكون من جزء sensory و جزء motor

- Sensory root → trigeminal ganglion → ophthalmic (VA), maxillary (VB), mandibular (VC)
- Motor root → mandibular nerve (only)

1) The ophthalmic nerve (هيجي عملي بس)

2) The mandibular nerve



- It's the 3rd division of trigeminal & the largest division
- It's a mixed nerve (sensory + motor) formed by union of:
 - The third division of trigeminal ganglion (sensory)
 - The motor root of trigeminal n.

بيتكون لما الجزء ال motor يتحد كله مع فرع من ال trigeminal ganglion الي
ببقي sensory عشان كده هو mixed

- It passes through the foramen oval as a **mixed trunk**
- This trunk is short (1 cm) and is **deep** to the lateral pterygoid muscle
- In the infratemporal fossa, it divides into two divisions that also lie **deep** to the lateral pterygoid muscle:

1) Anterior division (mainly motor)

2) Posterior division (mainly sensory) (sensory to all lower teeth)

◆ **Branches of mandibular nerve:**

1. Branches from the mixed trunk:

➤ **Nervous spinosus → foramed spinosum → sensory to meninges**

- Nerve to medial pterygoid → motor to the medial pterygoid muscle + tensor tympani + tensor palati
 - 2. Branches from anterior division:
 - All its branches are **MOTOR** except the **buccal nerve**
 - Deep temporal nerves (2 nerves)(to temporalis muscle)
 - Nerve to masseter
 - Nerve to lateral pterygoid muscle
 - Buccal nerve: the only sensory branch → sensory to the cheek
 - 3. Branches from posterior division:
 - All its branches are **SENSORY** except the **nerve to mylohyoid**
 - Auriculotemporal nerve: sensory to upper part of auricle & middle of the scalp
 - The inferior alveolar nerve:
 - It passes through the mandibular canal (which descends in the mylohyoid groove) to lower teeth and terminates as mental nerve
 - Before it enters, it gives **the mylohyoid nerve (motor & doesn't enter mandibular canal)**: it supplies the mylohyoid muscle & anterior belly of digastric
 - Lingual nerve (general sensation to tongue):
 - It is joined by **corda tympani** (a branch of facial n.):
 - Corda tympani carries **taste** sensation to the anterior 2/3 of the tongue
 - It carries parasympathetic fibers to the submandibular & sublingual salivary glands (preganglionic that relay in submandibular ganglion)
 - It curves around the submandibular duct (triple relation: lateral then below then medial to the duct)
- Distribution:**

- It gives preganglionic fibers that relay in submandibular ganglion & the postganglionic fibers supply the submandibular & sublingual glands
- It supplies the anterior 2/3 of the tongue by:
 - General sensory fibers (pain, touch & temperature)
 - Special sensory fibers (taste via facial nerve)

3) Maxillary nerve:

- It's the 2nd division of the trigeminal nerve, it's purely sensory
- It starts from the trigeminal ganglion below the ophthalmic division (2nd)

Course & relation:

- It runs in the lateral wall of the cavernous sinus
- It passes out of the cranial cavity through foramen rotundum
- It exits the infraorbital foramen to end as the **infraorbital nerve in the face**

Branches:

1. in the middle cranial fossa

- meningeal branches

2. in the pterygopalatine fossa

- **ganglionic branches:** to & from the **pterygopalatine ganglion**
 - the sensory fibers pass through the ganglion without relaying to supply **nose (as long & short nasopalatine), palate (as greater & lesser palatine), and nasopharynx**
- **zygomatic nerve:** branches into zygomaticofacial n. (to face) and zygomaticotemporal n. (to temple)

3. in the infratemporal fossa

- **posterior superior alveolar nerve** (to upper premolars & molars)
- **infraorbital nerve: it gives:**
 1. middle superior alveolar nerve
 2. anterior superior alveolar nerve
 3. 3 sets of terminal branches to the face, palpebral, nasal, and superior labial to supply skin of **lower eyelid, side of nose, and upper lip**