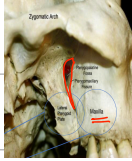


بسم الله الرحمن الرحيم

pterygopalatine fossa



* useful for carrying
→ blood supply
→ nerve supply.

Space (connection loop with surrounding organs).

Communications:

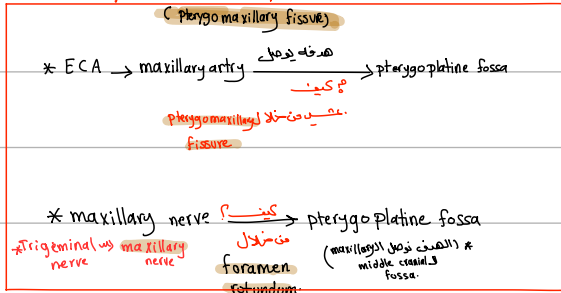
- orbit
- nasopharynx
- oral cavity
- nose (sphenoplatine foramen)
- middle cranial fossa
- infra temporal fossa

1. anterior: maxilla (posterior surface)

2. posterior: lateral pterygoid plate of sphenoid bone

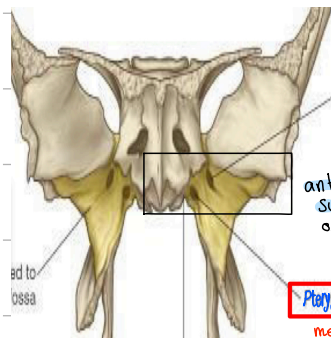
3. medial wall: lateral surface of sphenoid bone
→ sphenoplatine foramen
→ sphenoplatine artery/vein
→ nose

4. lateral: space lead to infra temporal fossa



5. roof: Greater wing of sphenoid bone

Sphenoid bone



pterygopalatine fossa

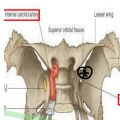
- * maxillary artery
- * maxillary nerve
- * para sympathetic ganglia
- * vein + lymphatics
- * nerve to Pterygoid canal

Foramen rotundum:

* maxillary nerve (branch from trigeminal)

pterygoid canal:

* Related to foramen lacerum (roof of f)



* communicate with middle cranial fossa (posteriorly)

* nerve of pterygoid canal

Passes through pterygoid canal
→ greater petrosal join with sympathetic fiber (deep petrosal) from internal carotid = nerve of pterygoid plexus

* sympathetic fiber

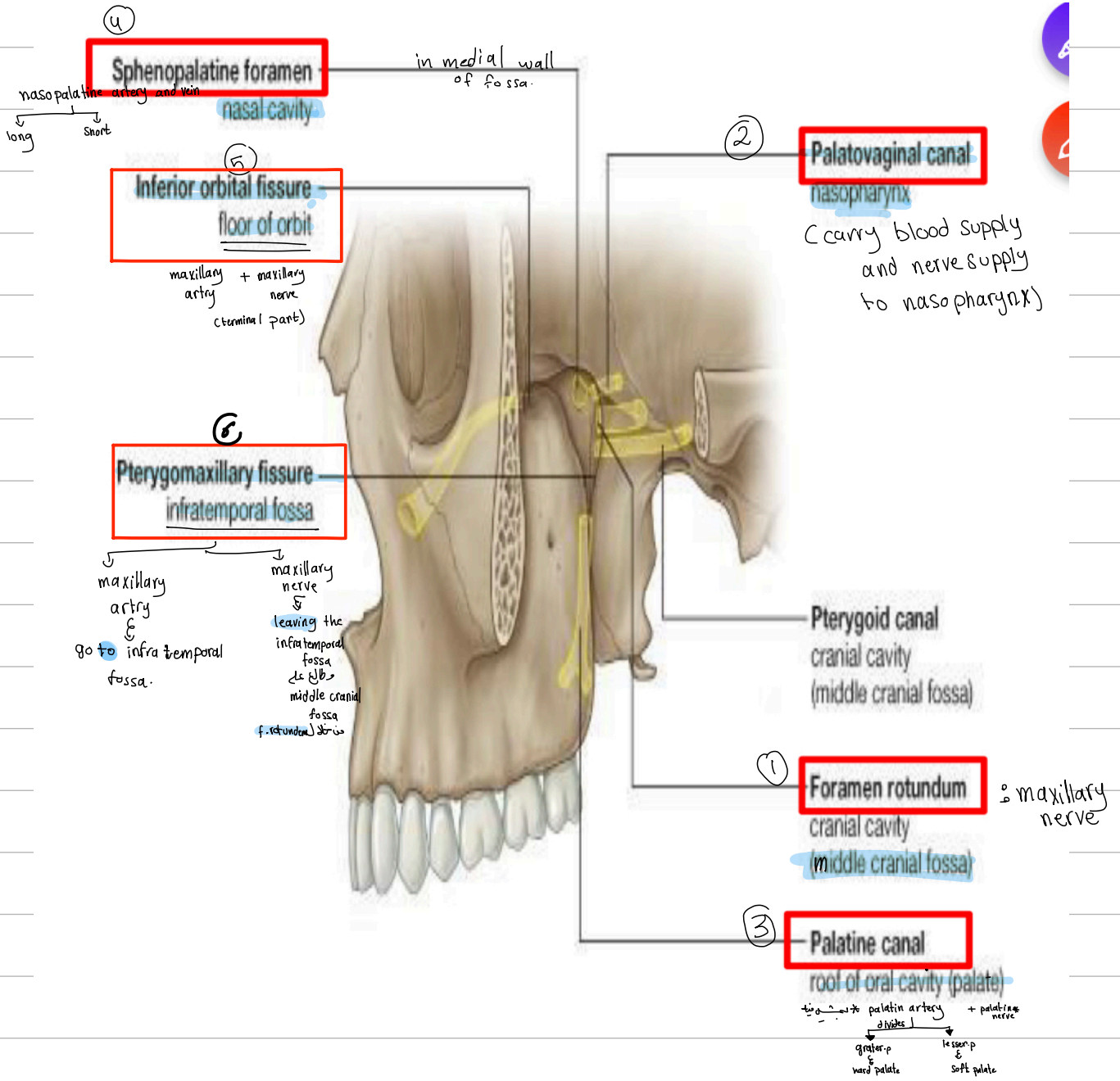
* parasympathetic

→ post ganglionic fiber
→ synapse in pterygoplatine fossa
→ deep petrosal nerve

Synapse in the pterygoplatine ganglia (Parasympathetic ganglia)

→ greater petrosal nerve (branch from facial nerve) → synapse in pterygoid ganglia (pre ganglionic fibers)

Gate ways



Note: 3 sympathetic ganglia in neck:
 ① superior
 ② middle
 ③ inferior

tho raxalumber from lateral horn of spinal cord (pre-ganglionic) → Superior sympathetic ganglia

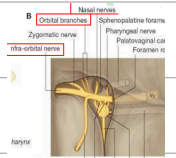
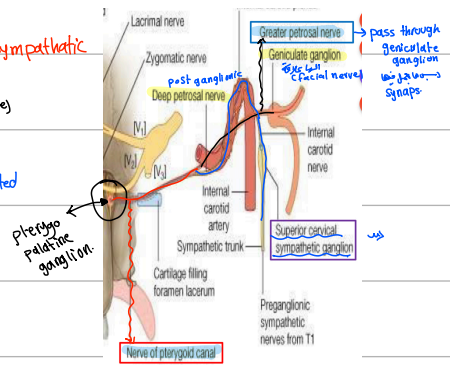
deep petrosal nerve (post-ganglionic) → level-synaps → Superior sympathetic ganglia

pterygopalatine ganglion:

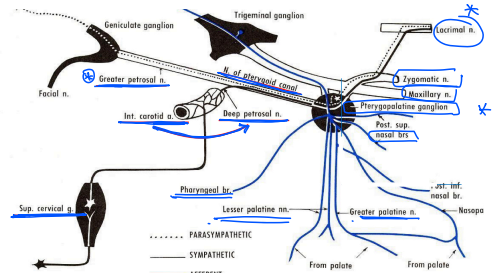
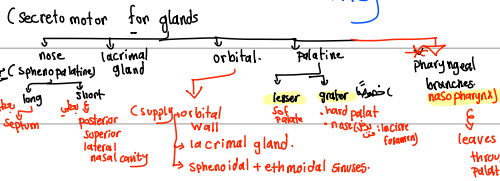
pre-ganglionic Para Sympathetic → pterygopalatine ganglion → post-ganglionic sympathetic fibres.

Greater petrosal nerve: post-ganglionic parasympathetic distribute with maxillary nerve and artery

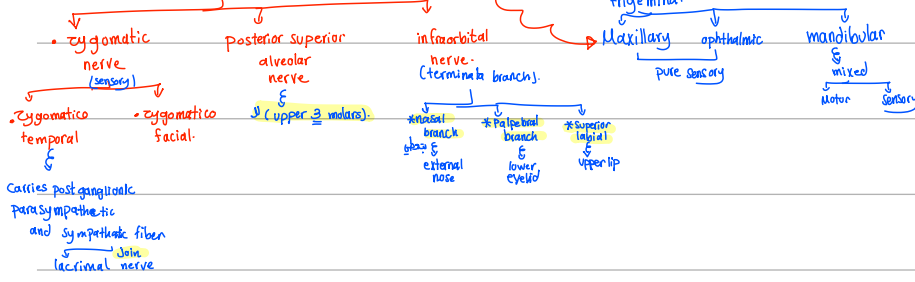
Deep petrosal nerve → Branches distributed with maxillary nerve+artery



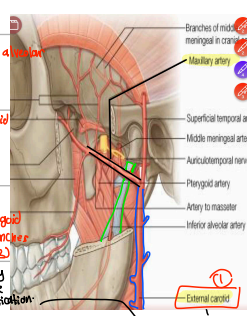
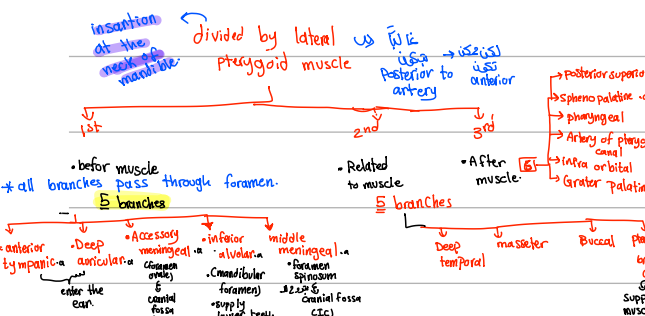
maxillary nerve artery



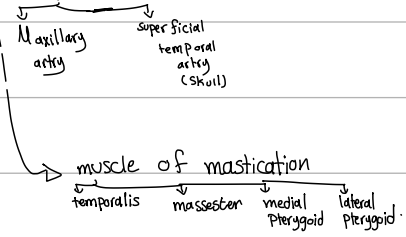
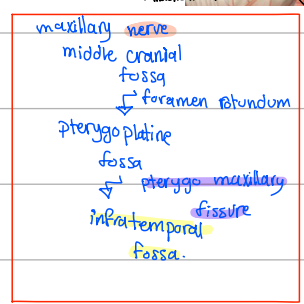
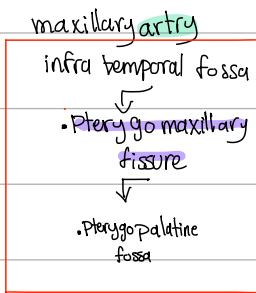
* Maxillary nerve (purely sensory)



Maxillary Artery



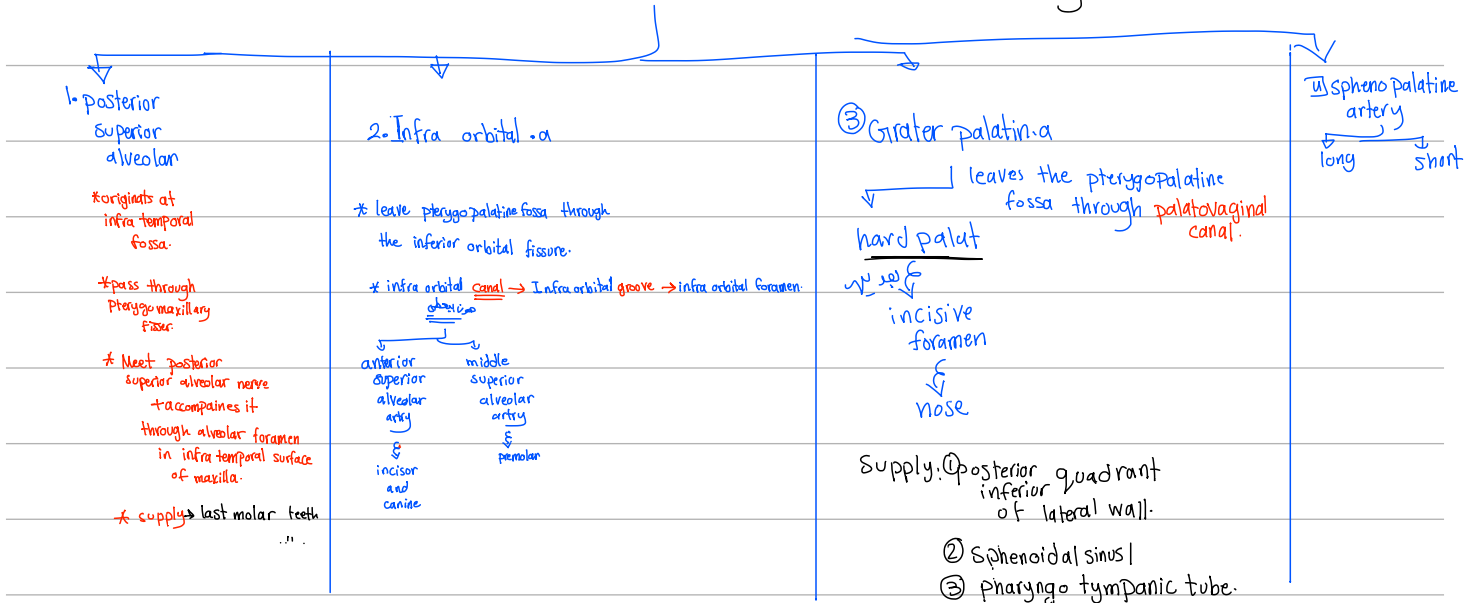
- * branch from ECA
- * originate within the substance of parotid gland.
- * passes forward through infra temporal fossa.



* Both give posterior superior alveolar artery in inferior temporal fossa.

* meeting → nerve + artery at pterygo maxillary fissure (نقطۃ التقاطع)

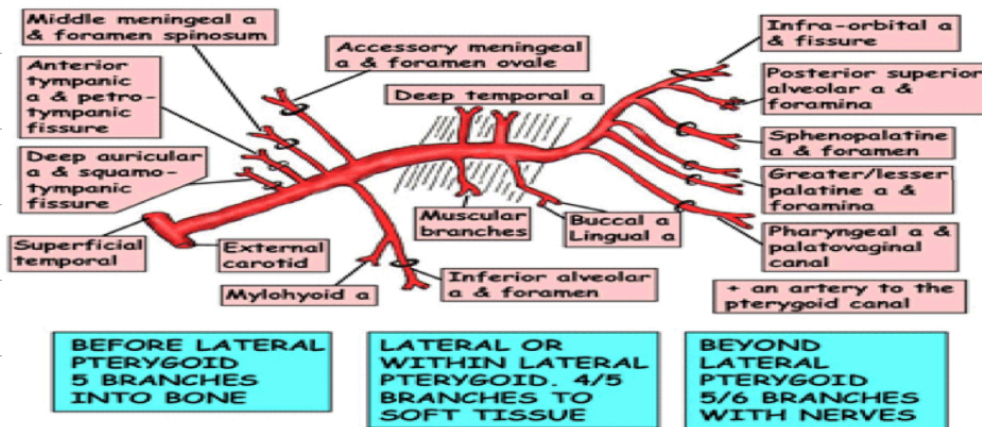
Branches of the 3rd part maxillary . a



Maxillary artery

MAXILLARY ARTERY

In infratemporal fossa, either within or lateral to the superficial head of lateral pterygoid muscle. This muscle is shown below



Veins → travel with these branches back into pterygo palatine fossa posteriorly to pterygoid plexus of vein around lateral pterygoid muscle

plexus of vein → maxillary vein → join with superficial temporal vein → retromandibular vein → travel within infra orbital vein → cavernous sinus

* pterygoid plexus has connection to cavernous sinus

emissary veins (travel through)

- * Foramen Spinosum
- * Foramen Ovale