TMJ & Muscles of Mastication + Mandibular Nerve

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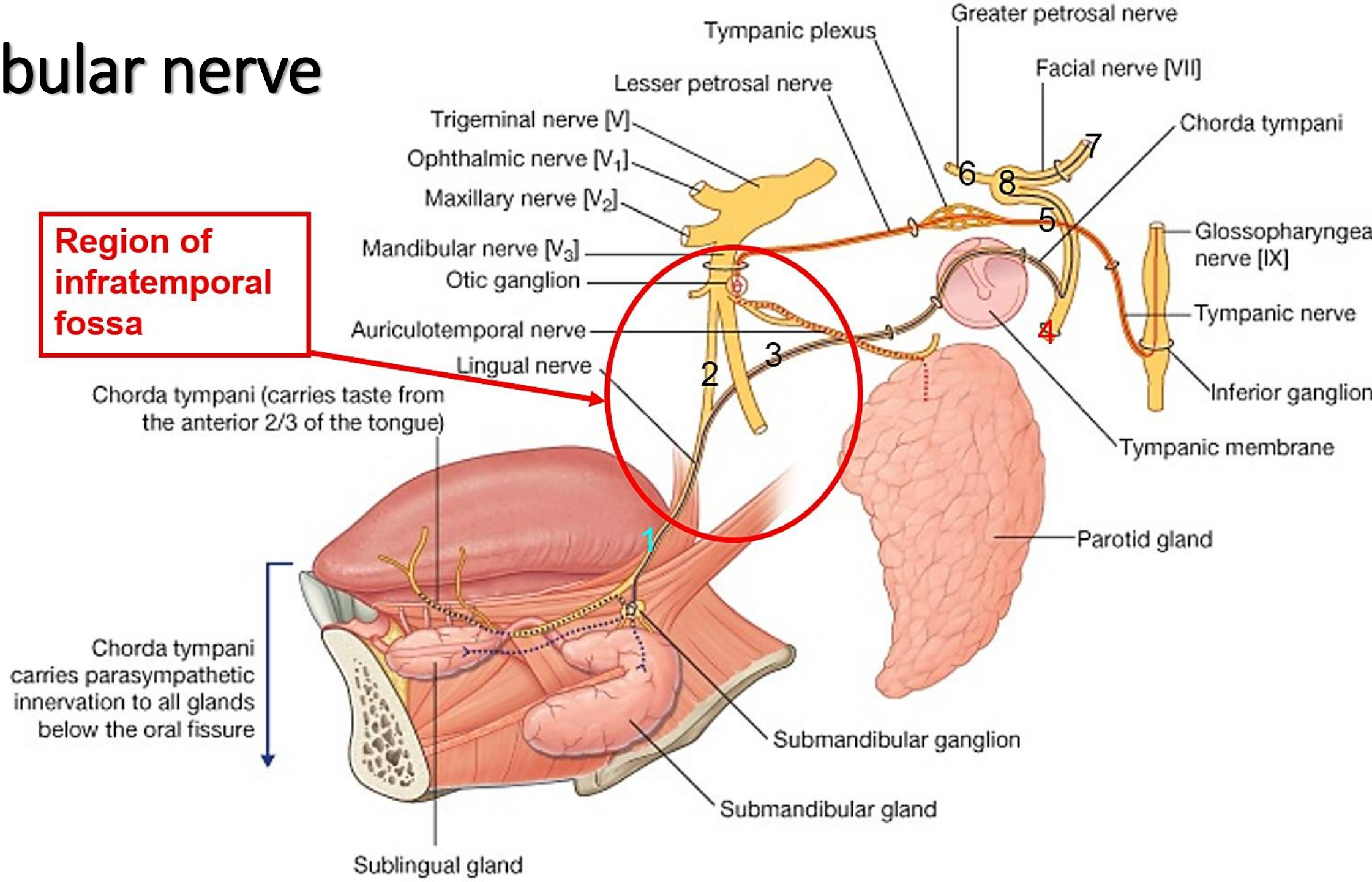
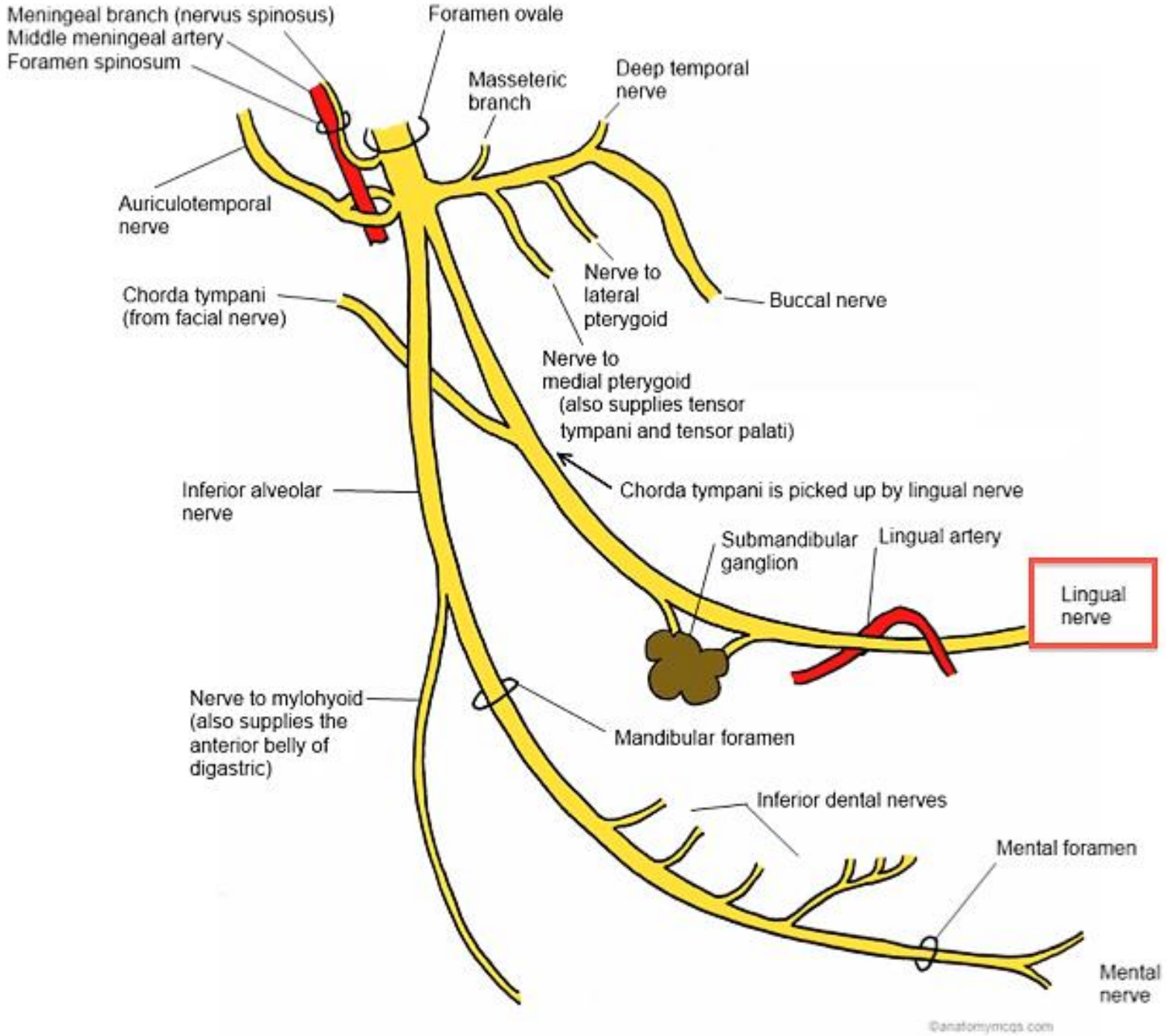
Infratemporal Fossa Contents

- Parotid gland (glenoid process)
- Maxillary artery
- Pterygoid venous plexus
- Otic PS ganglion
- Muscles of mastication
- Mandibular nerve
- Sphenomandibular ligament

Mandibular nerve



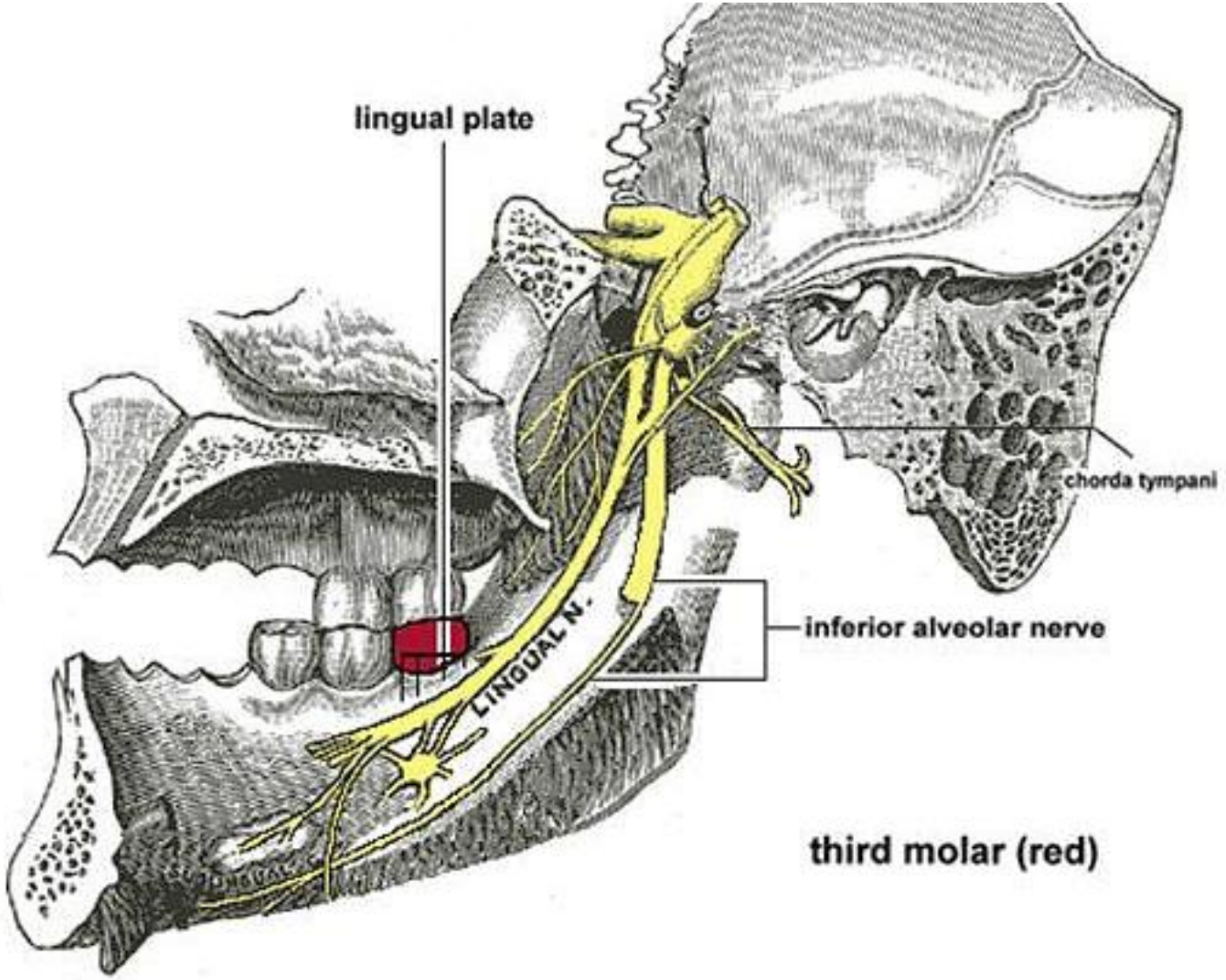
Mandibular nerve



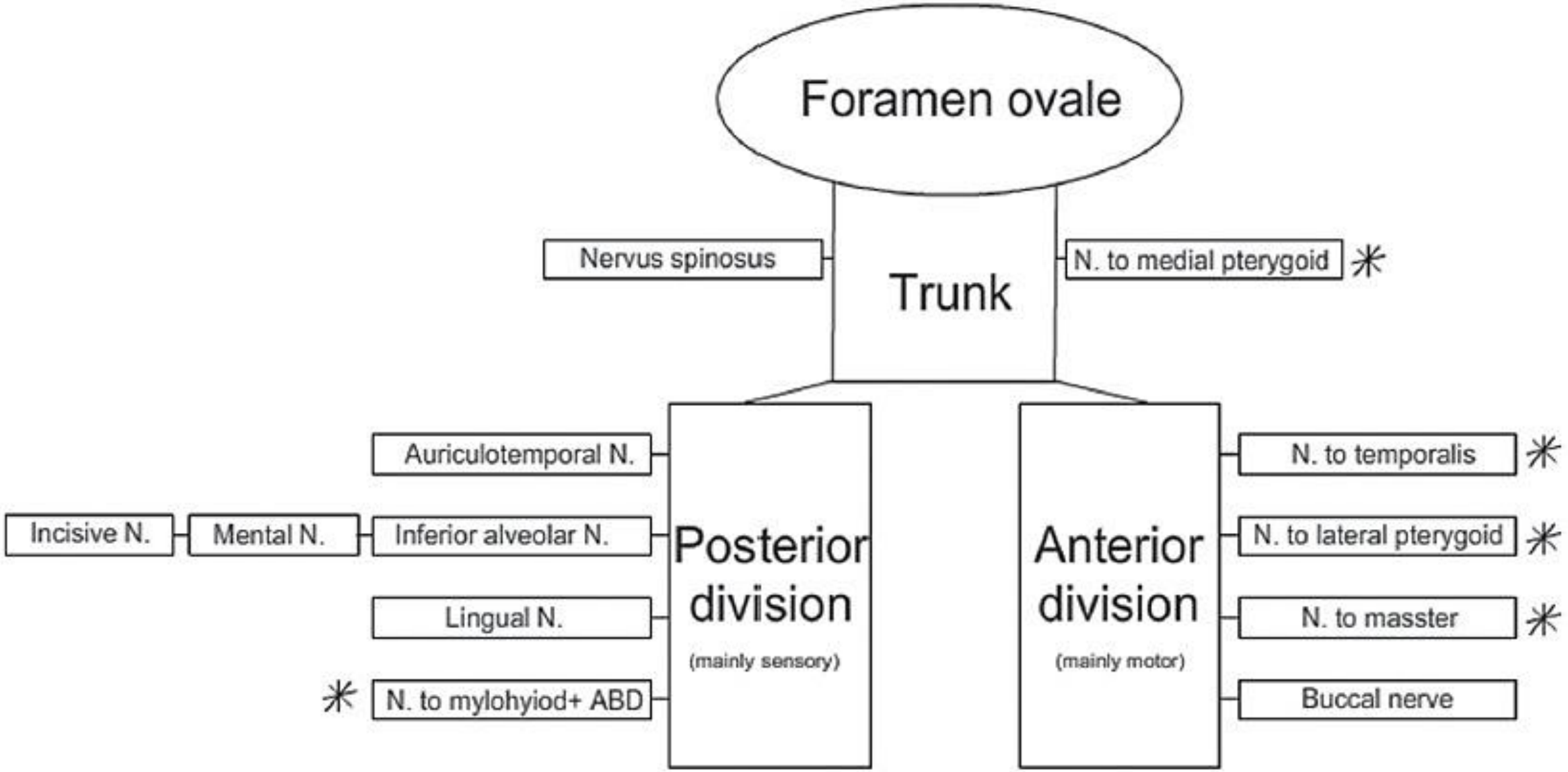
Lingual Nerve

- sensory to the:

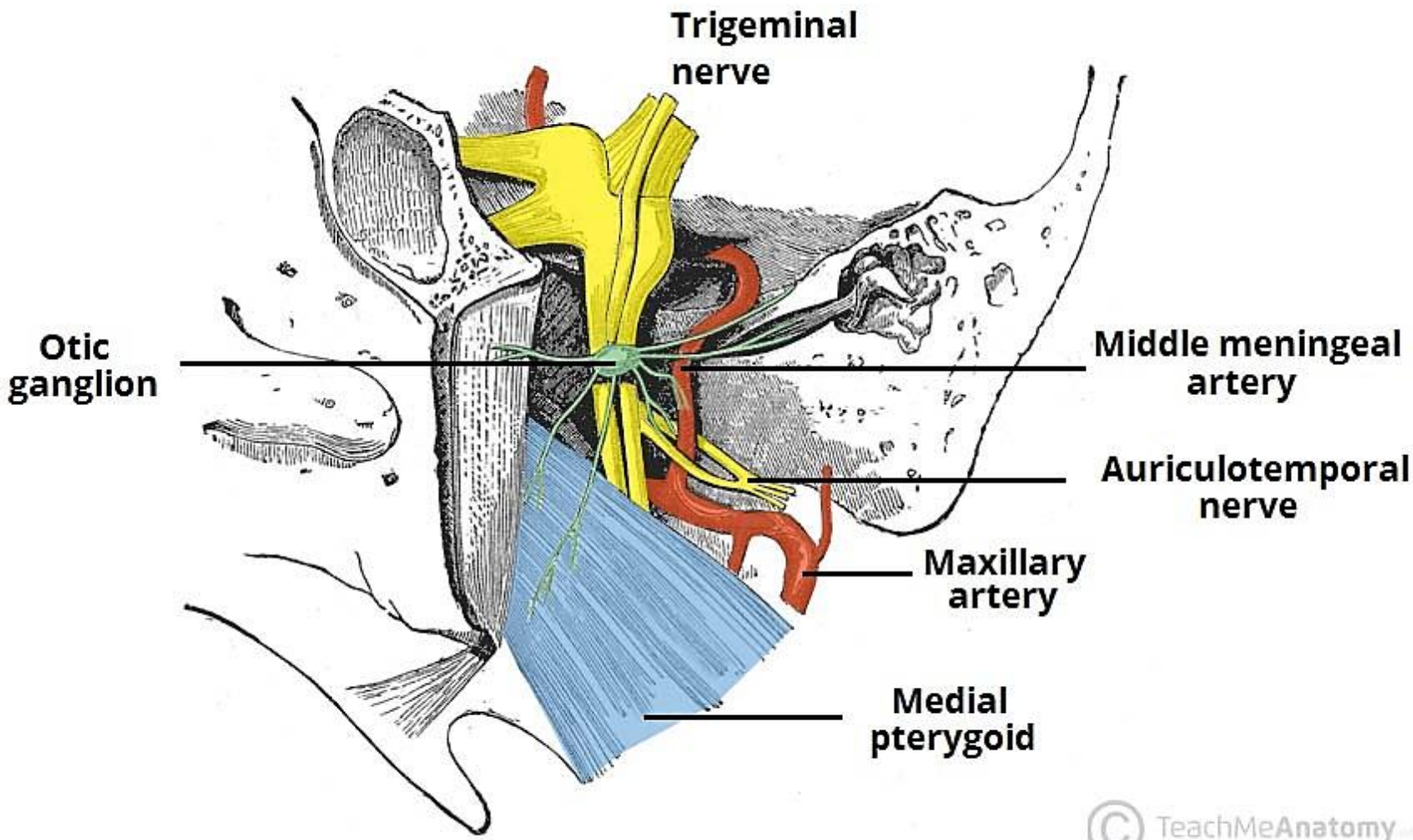
1. anterior two thirds of the tongue,
2. the floor of the mouth, and
3. the lingual gingivae.



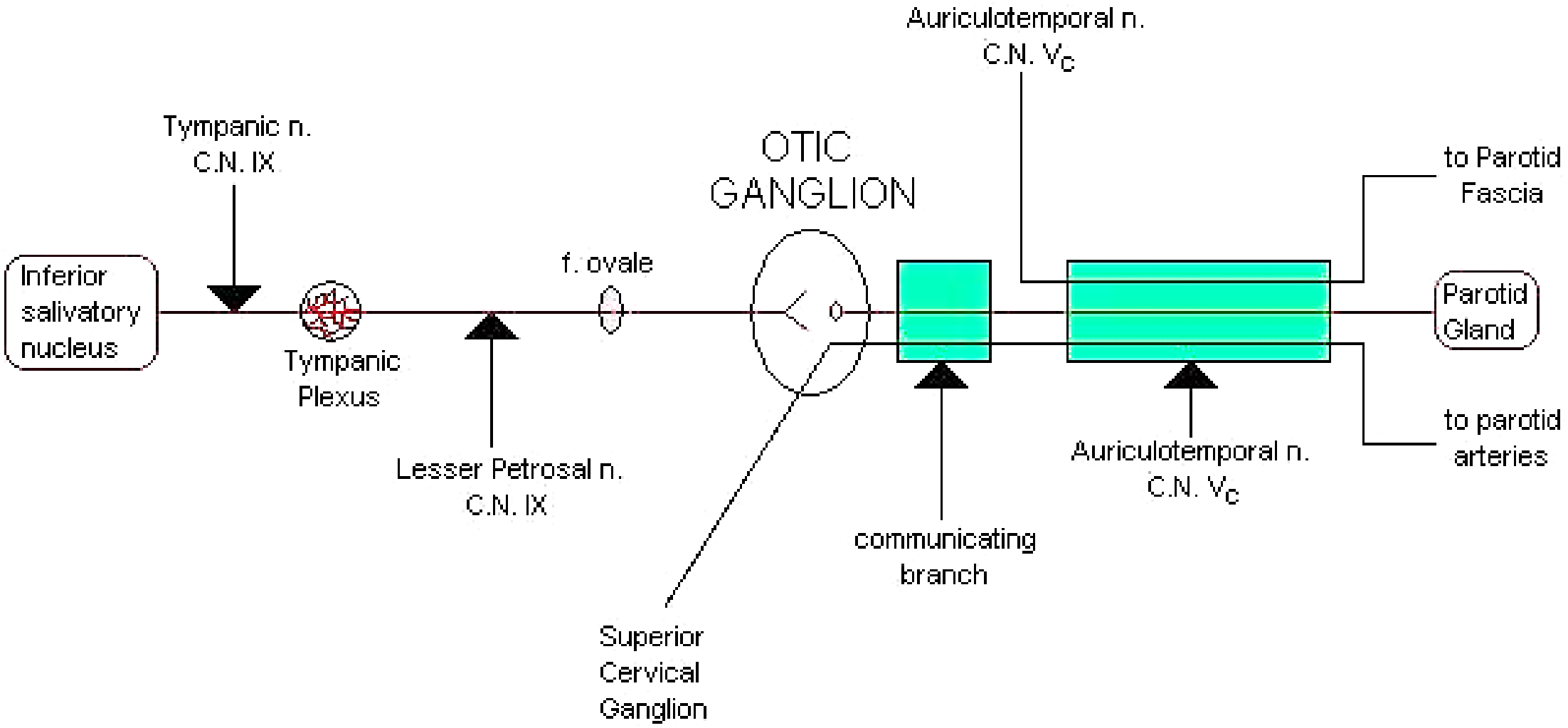
Mandibular Nerve V3



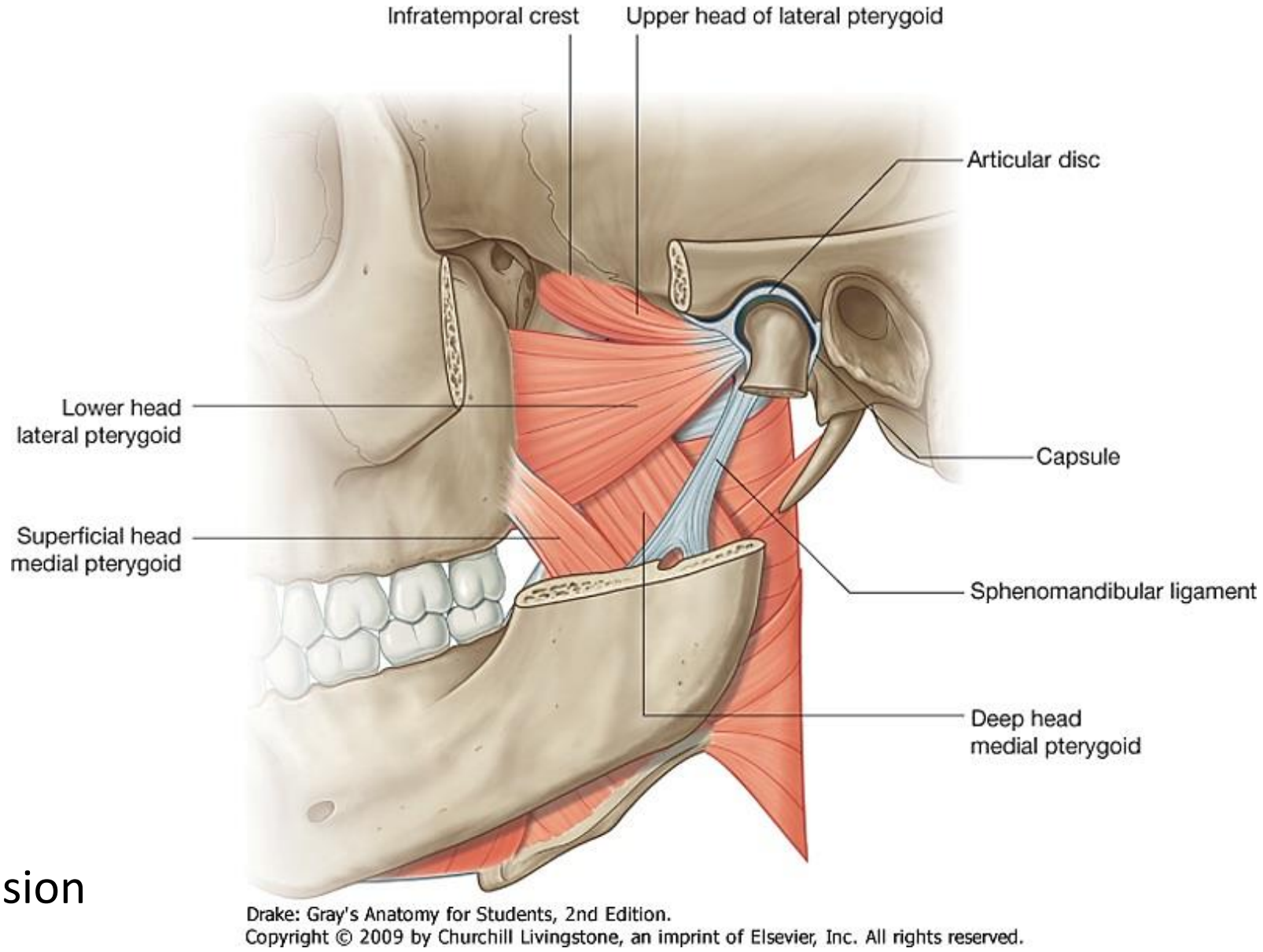
Otic parasympathetic ganglion



Otic parasympathetic ganglion

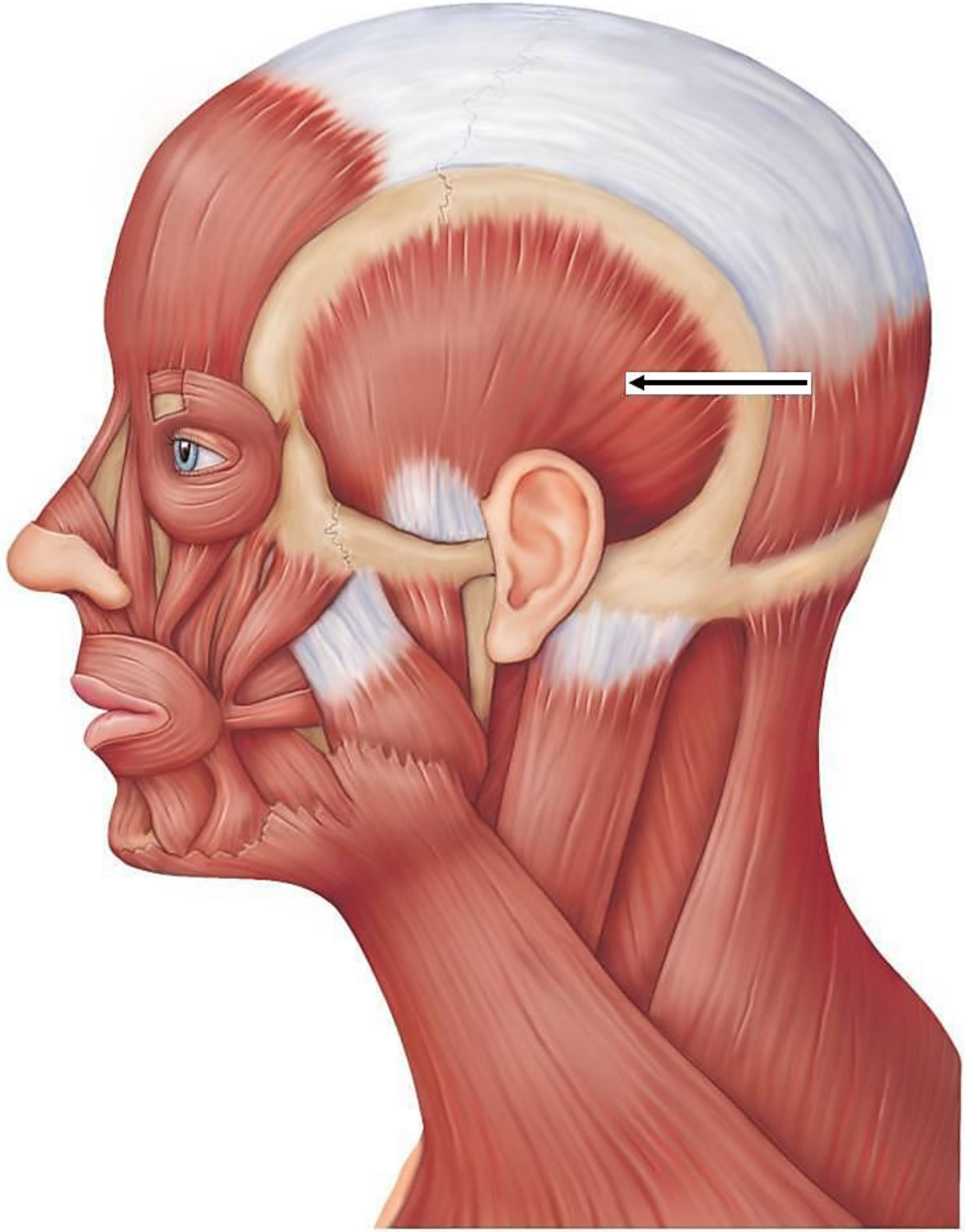


Muscles of Mastication

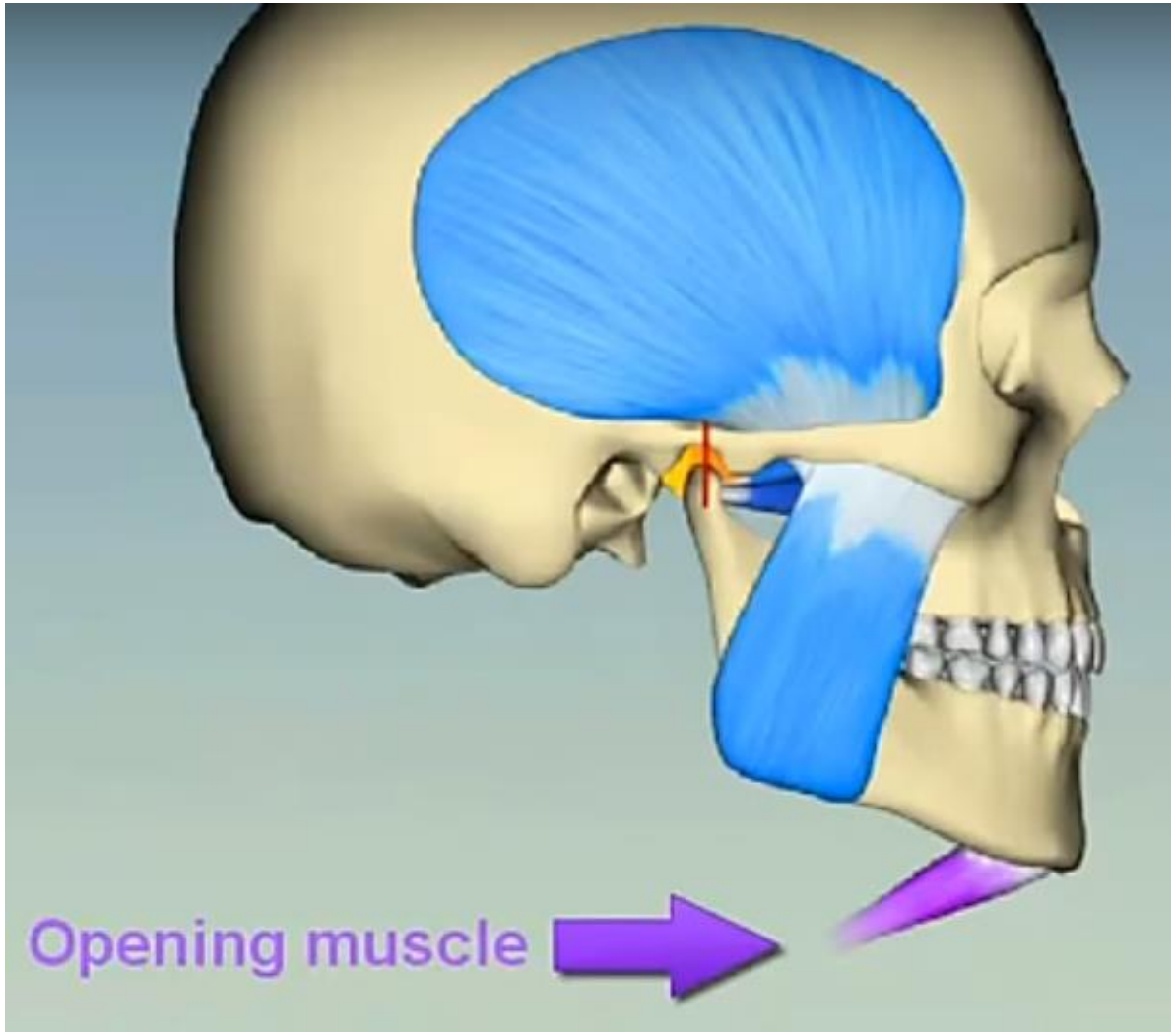


- All supplied by Mandibular division of Trigeminal (V3)
- All derived from pharyngeal arch

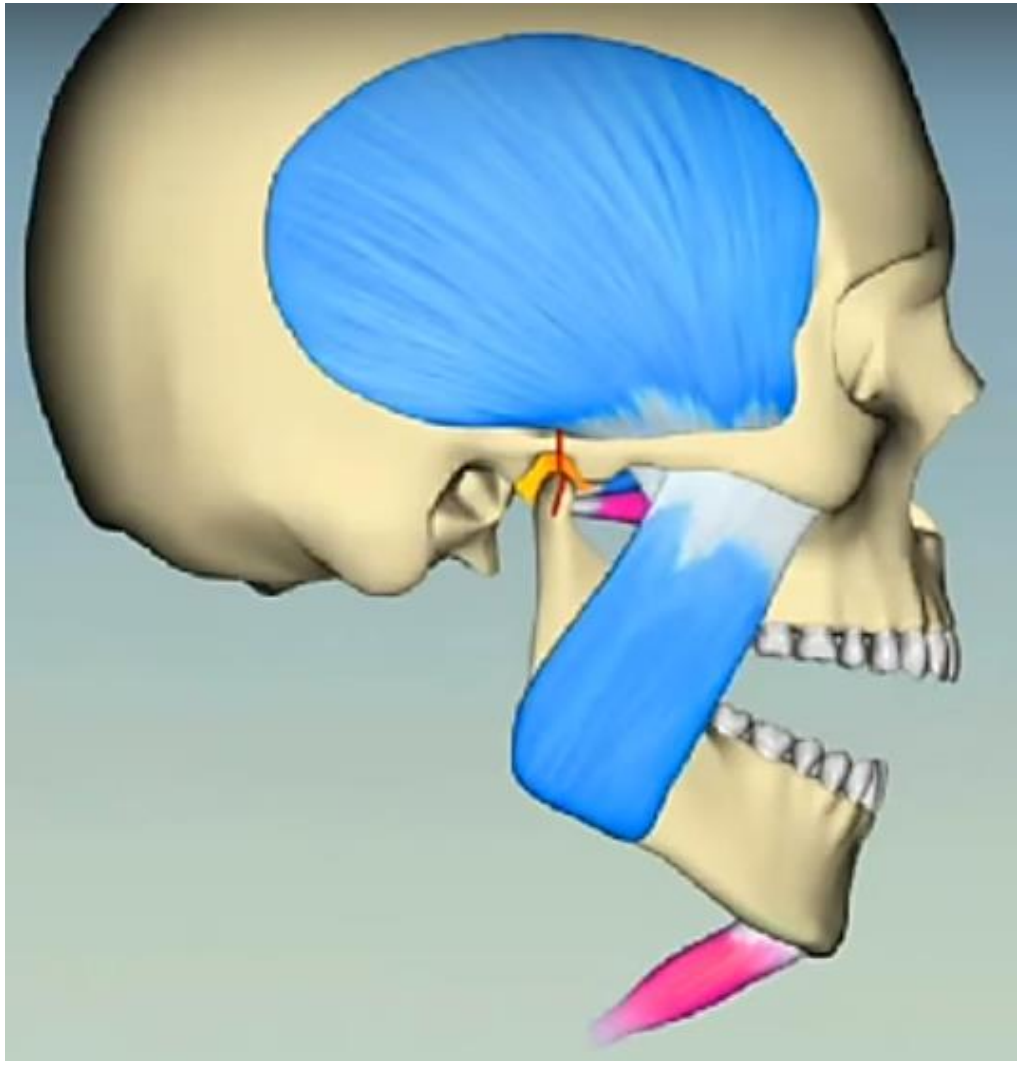
Temporalis



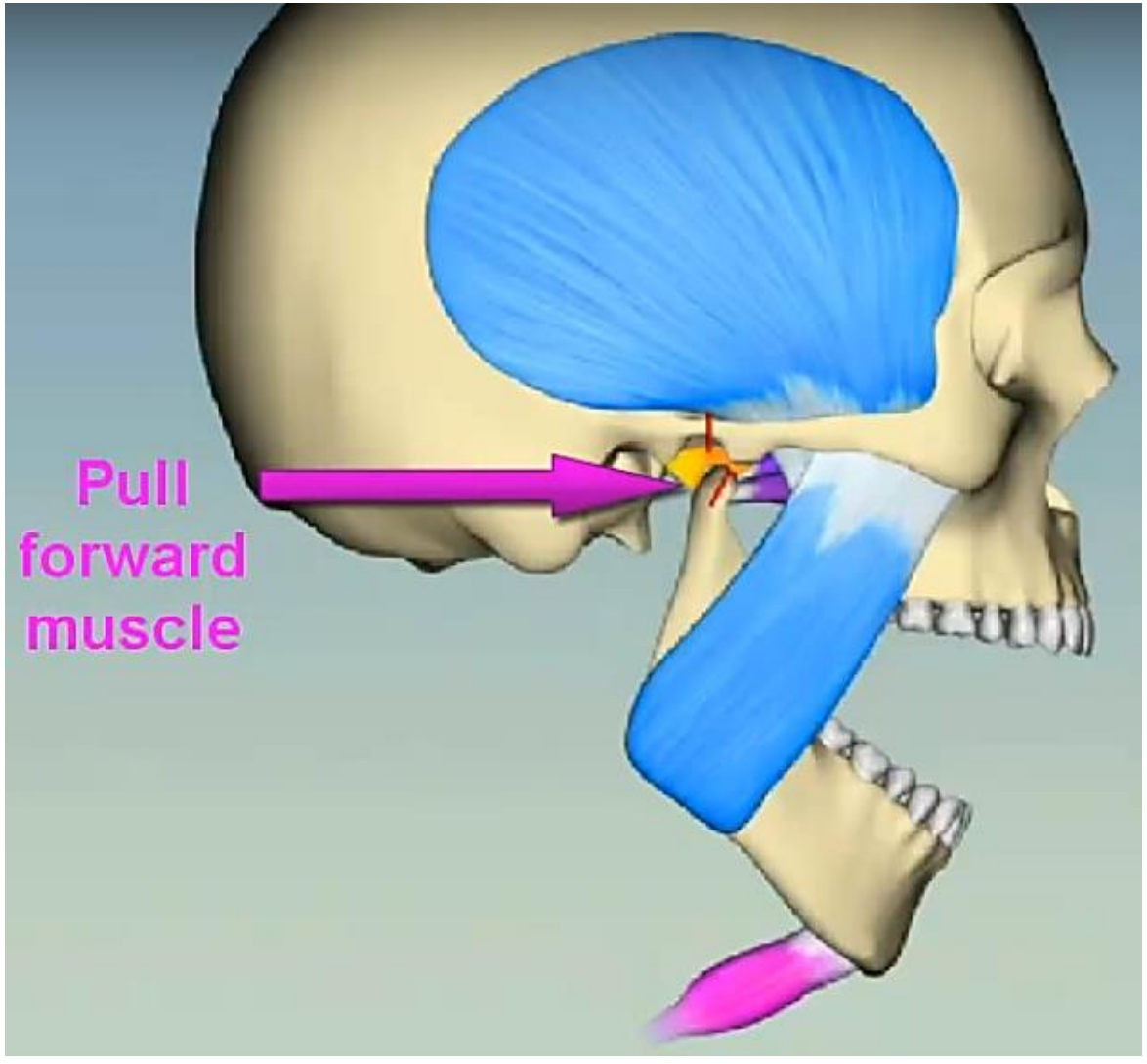
Opening - Depression



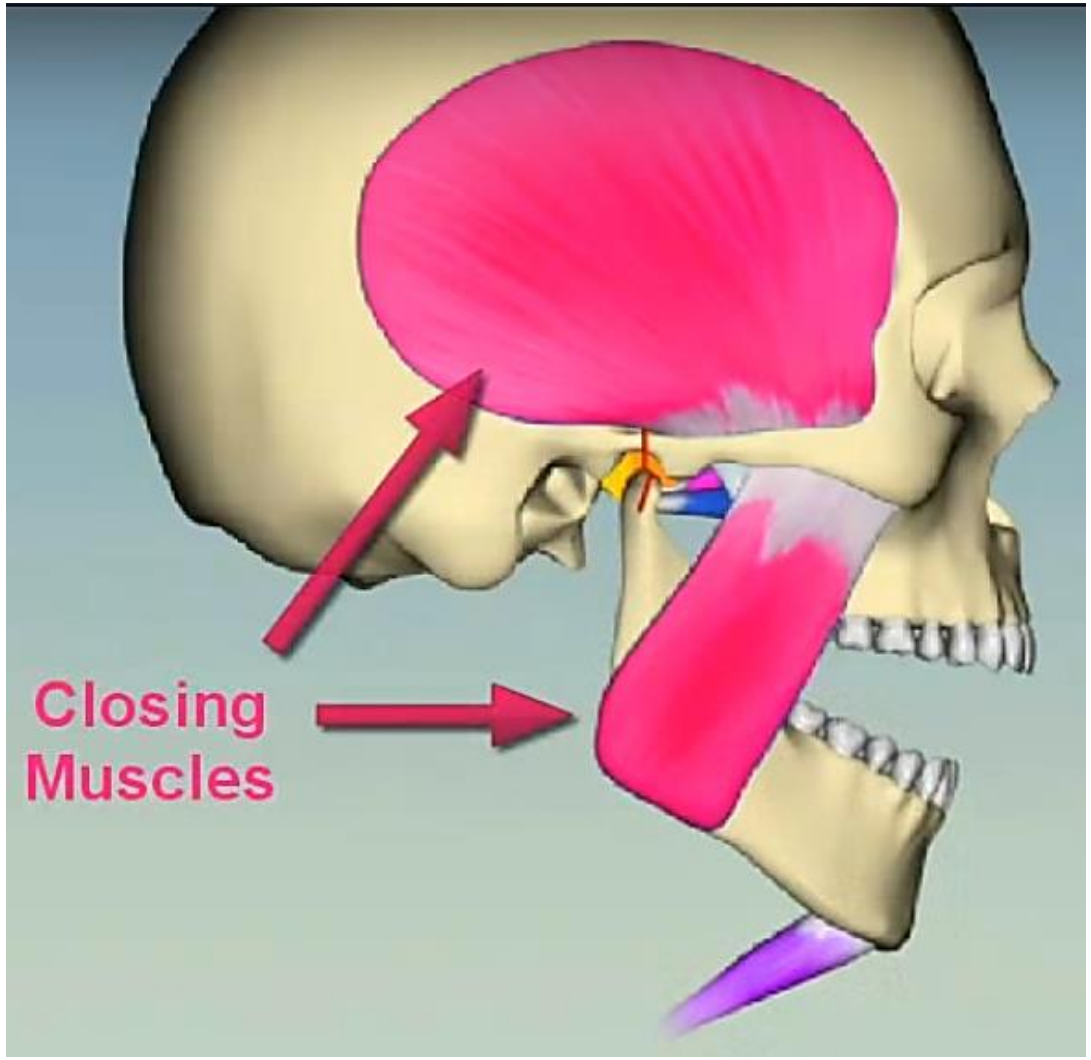
Opening - Depression



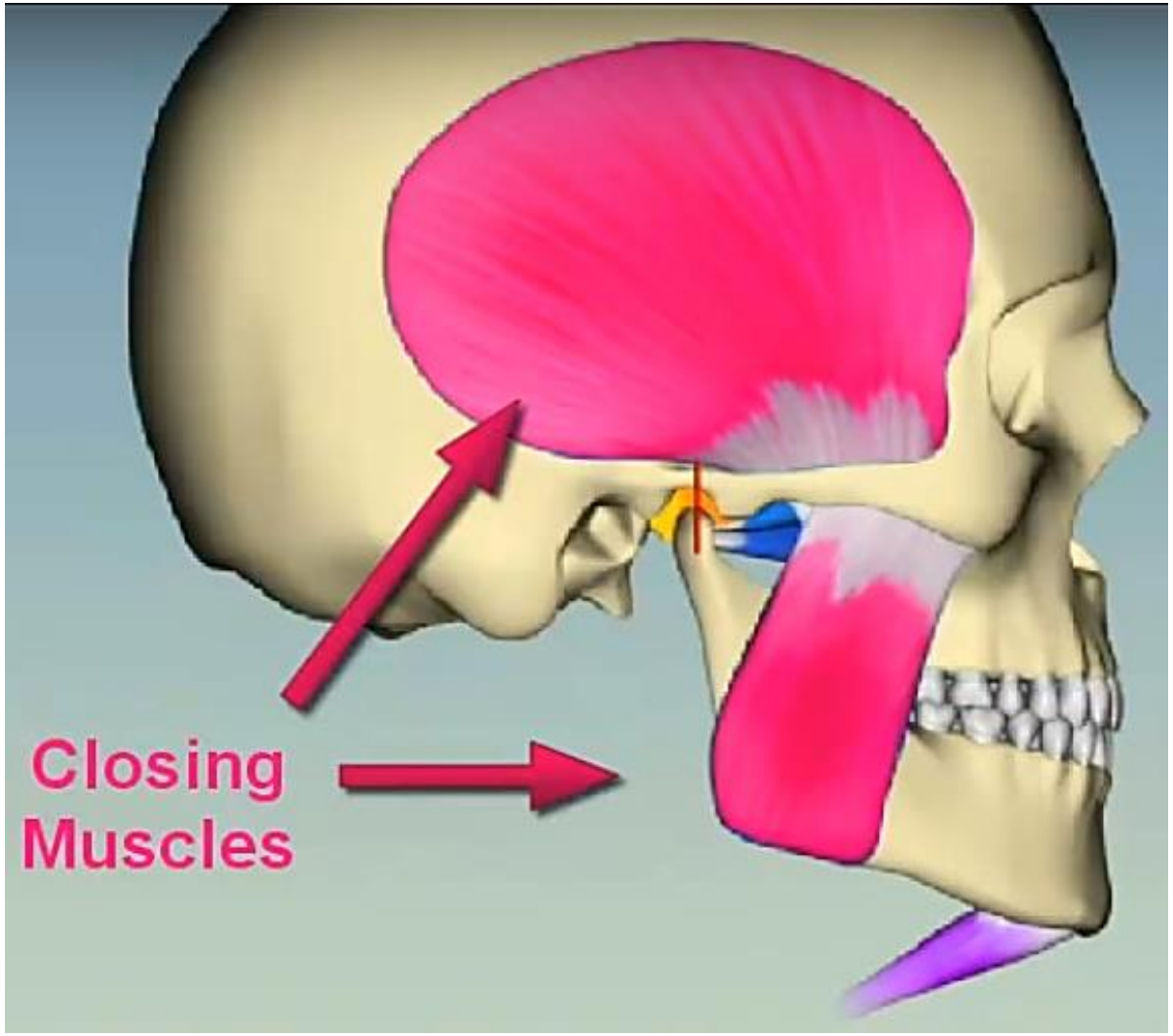
Opening - Depression



Closing - Elevation



Closing - Elevation



Functions of muscles of mastication

Lateral Pterygoids

- Upper head - involved mainly with chewing, and functions to anteriorly rotate the disc on the condyle during the closing movement
- Lower head - exerts an anterior, lateral, and inferior pull on the mandible, thereby opening the jaw, protruding the mandible, and deviating the mandible to the opposite side

Medial Pterygoids

- Working bilaterally - assists in mouth closing.
- Working unilaterally – deviation of the mandible toward the opposite side

Functions of muscles of mastication

Masseter

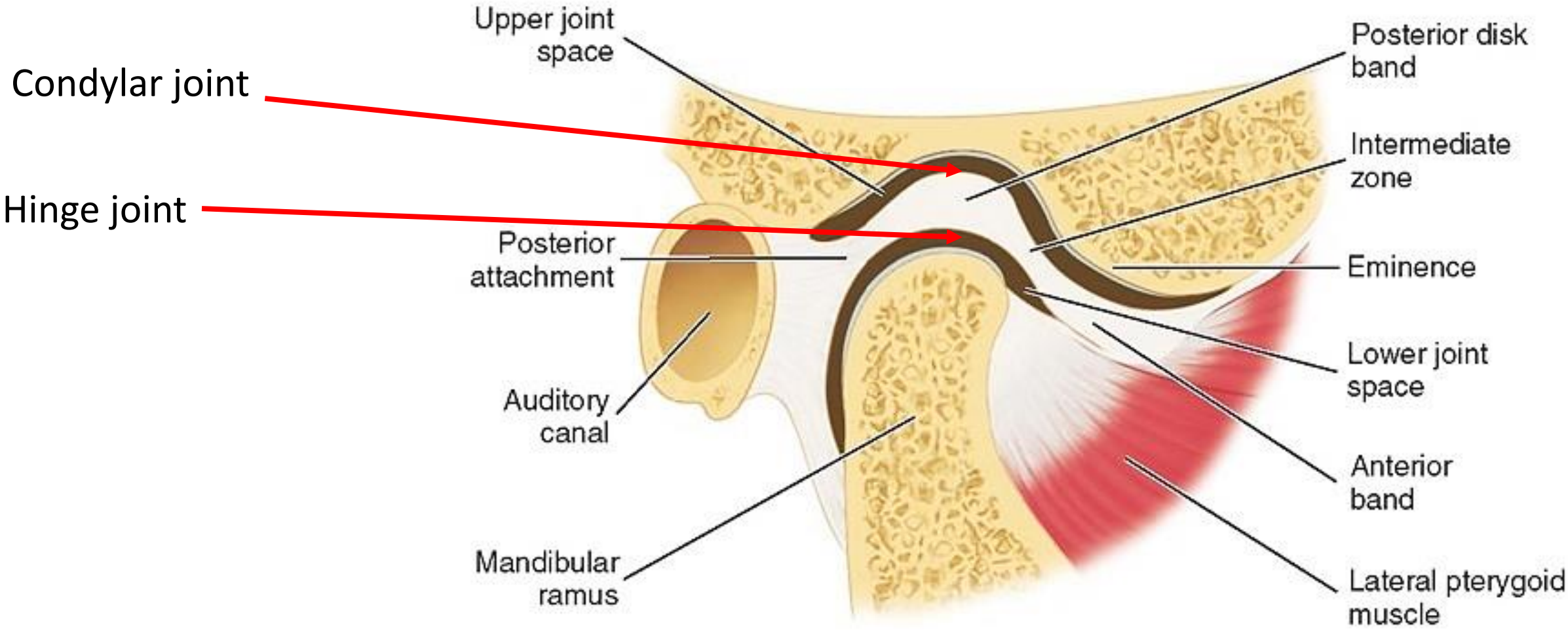
- Elevate the mandible, thereby occluding the teeth during mastication.

Temporalis

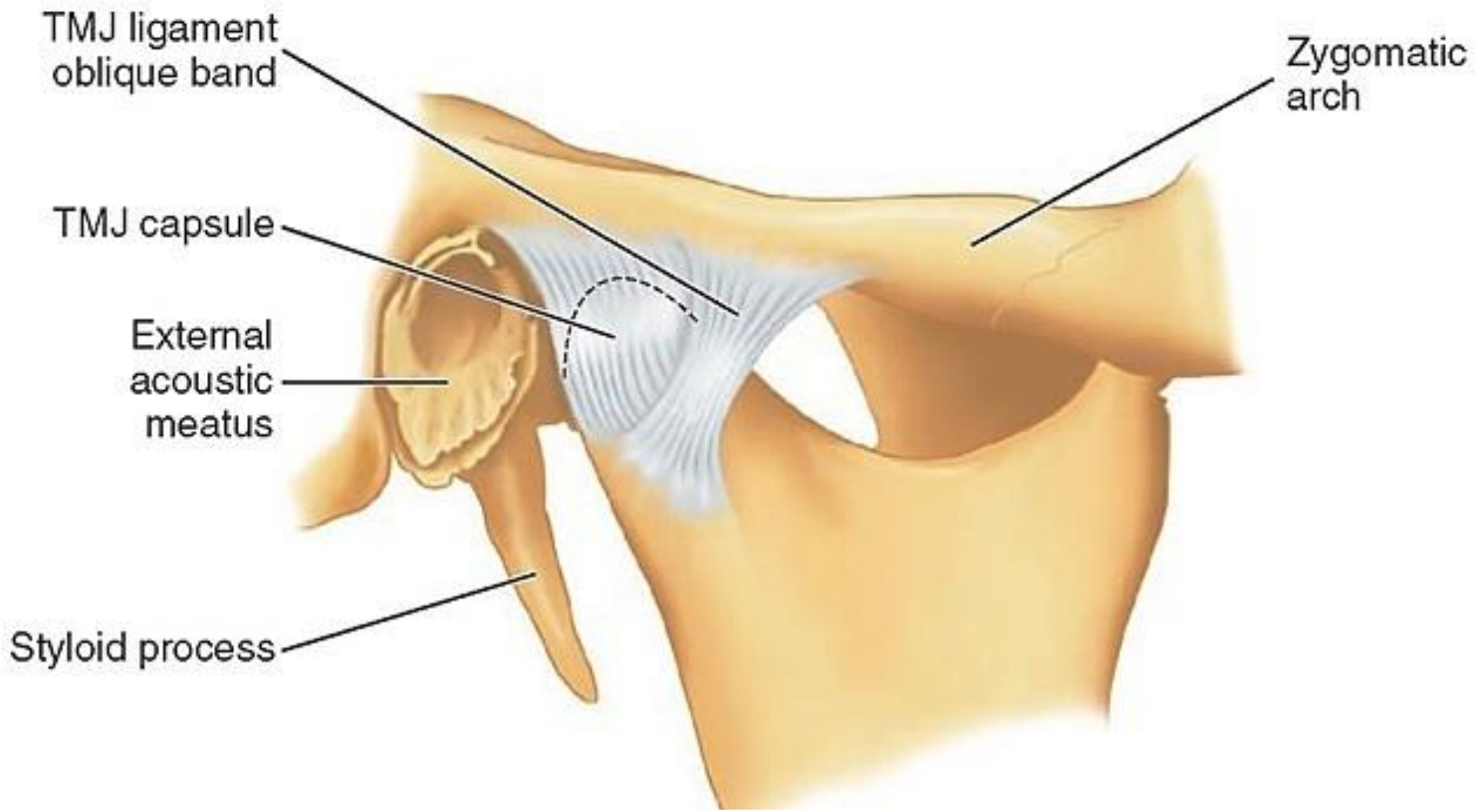
- Assists with mouth closing/side-to-side grinding of the teeth.
- Also provides a good deal of stability to the joint

Temporomandibular Joint

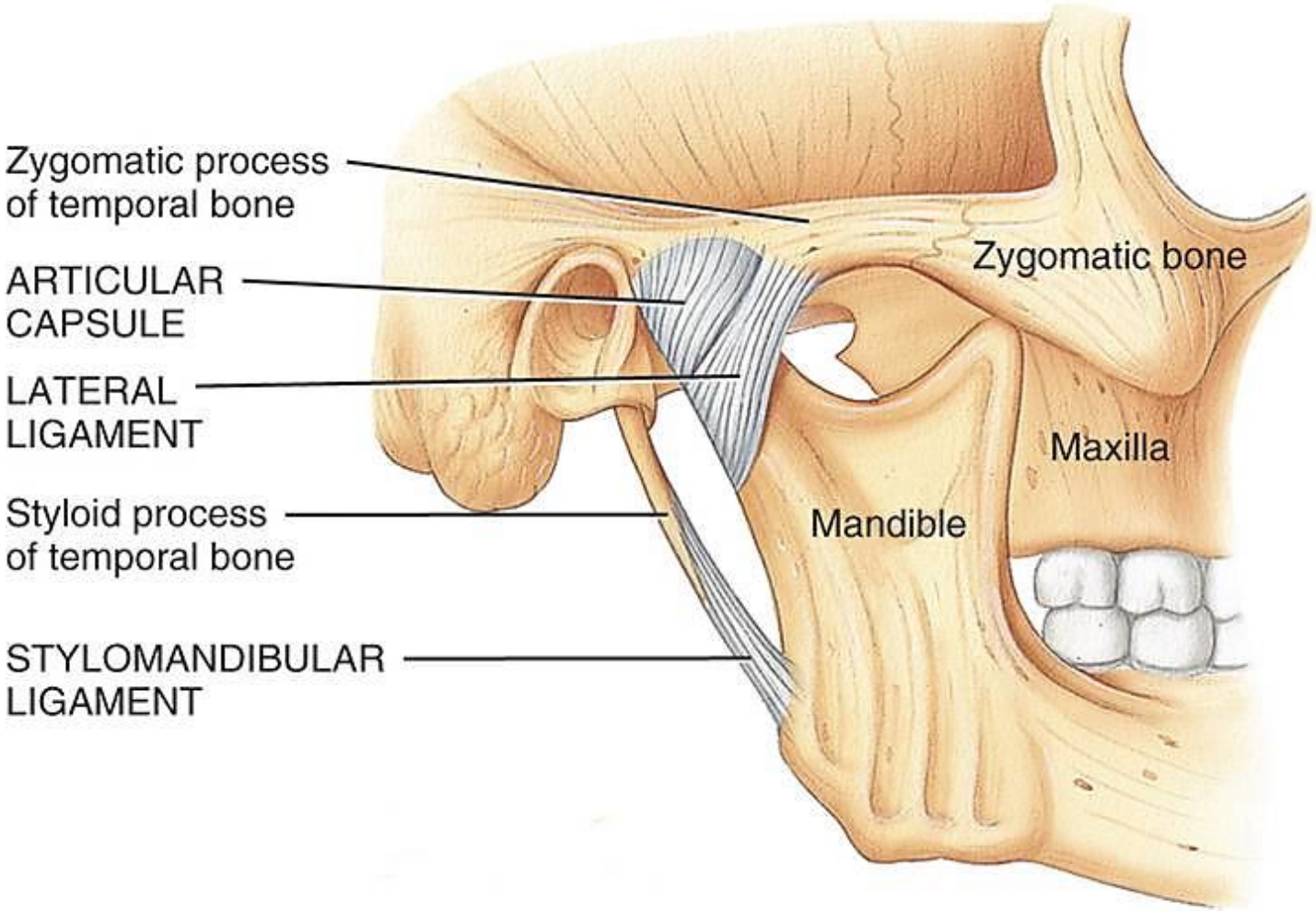
- The articular surfaces of the TMJ are lined by fibrous tissue (i.e. develops in membrane)



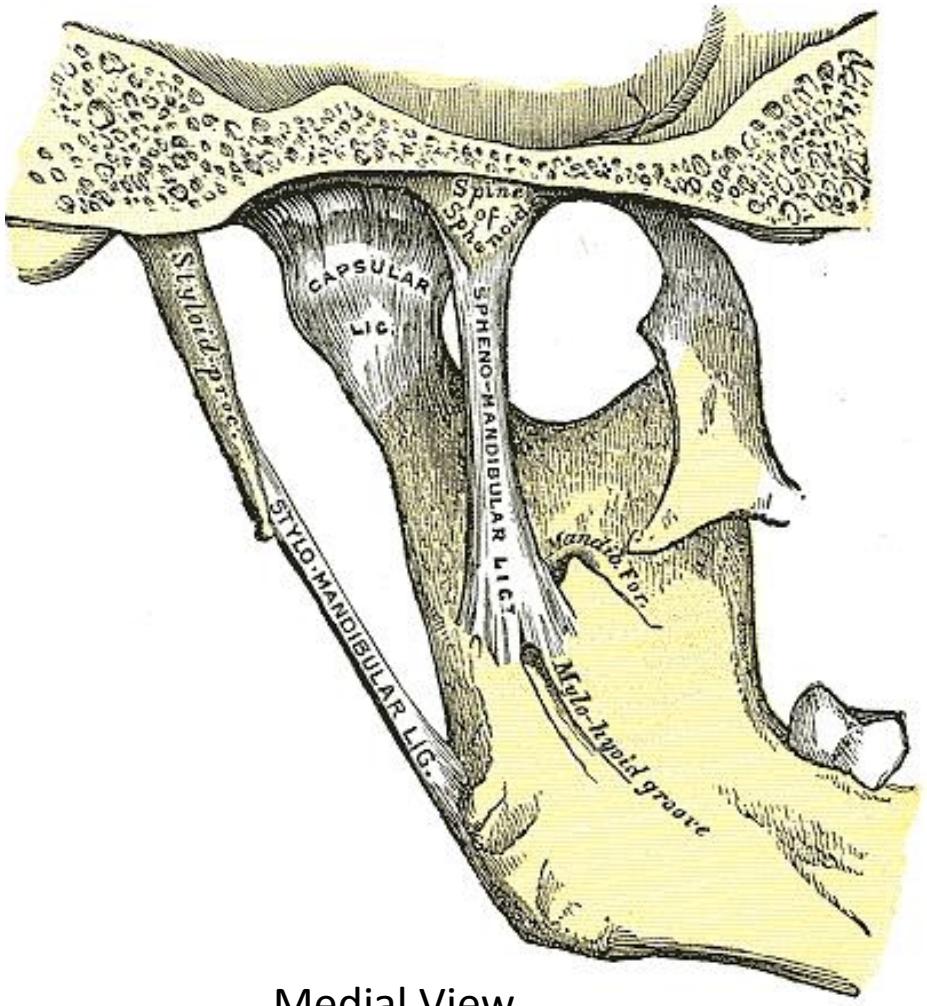
Temporomandibular Joint



Temporomandibular Joint

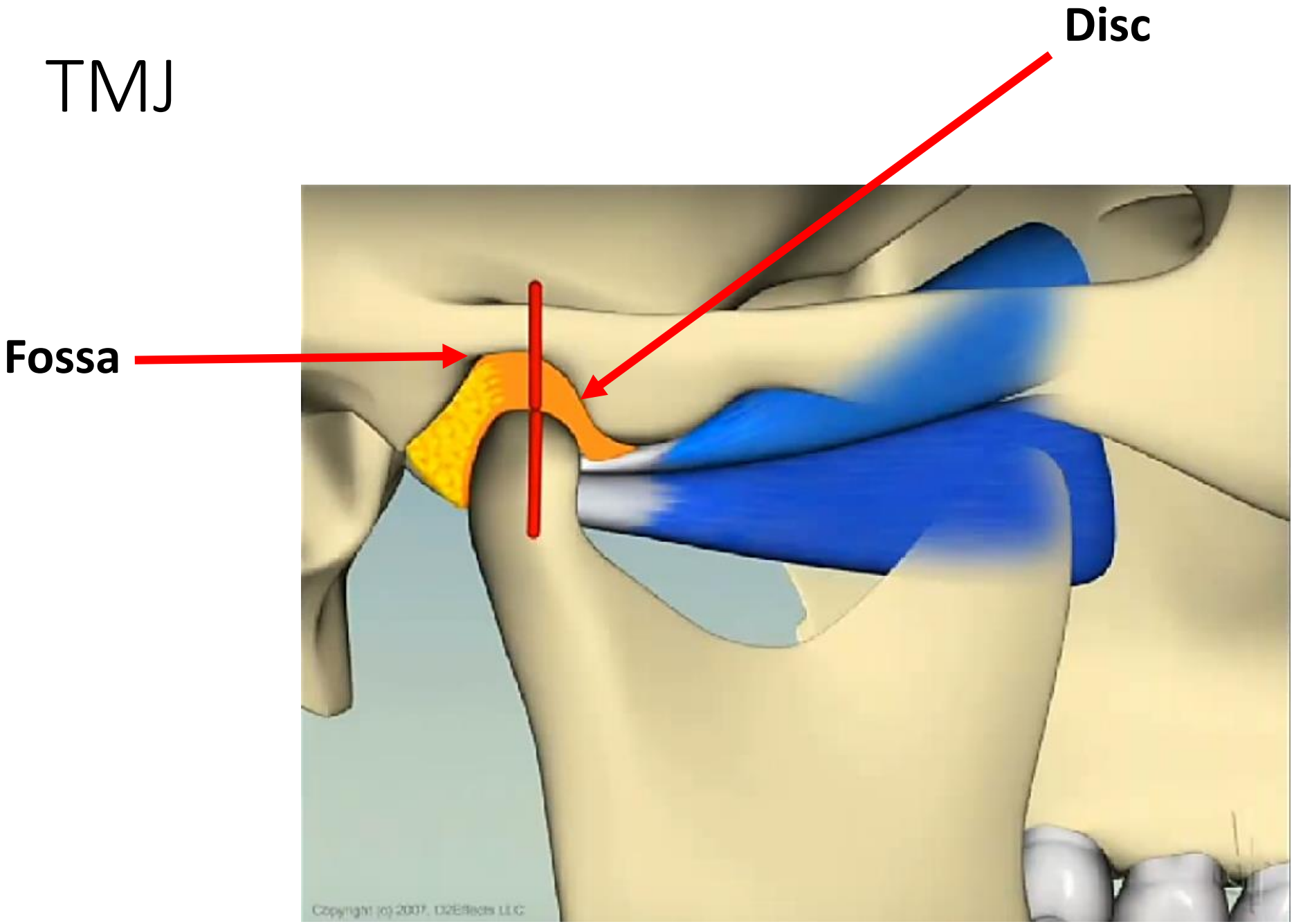


(a) Right lateral view

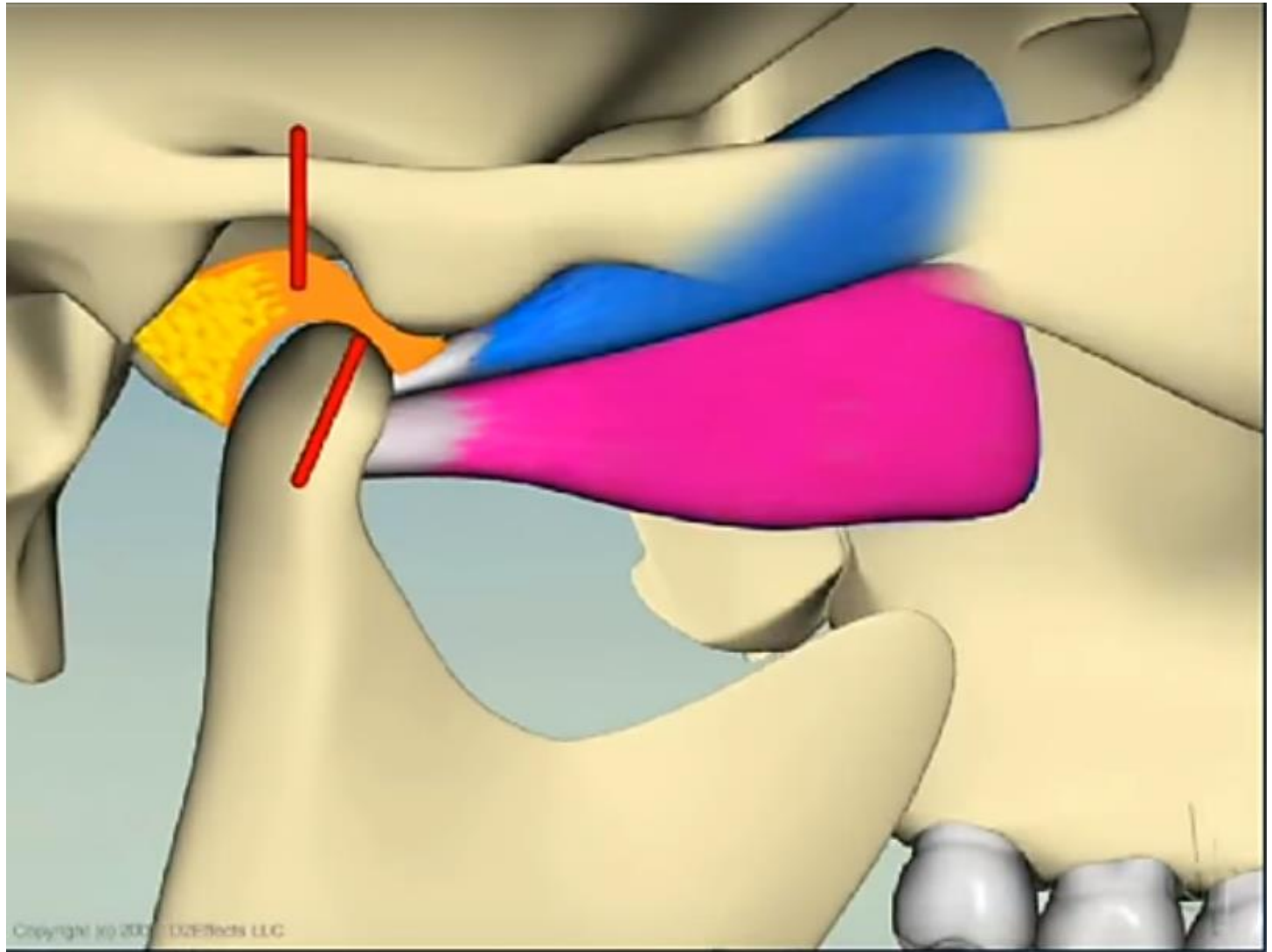


Medial View

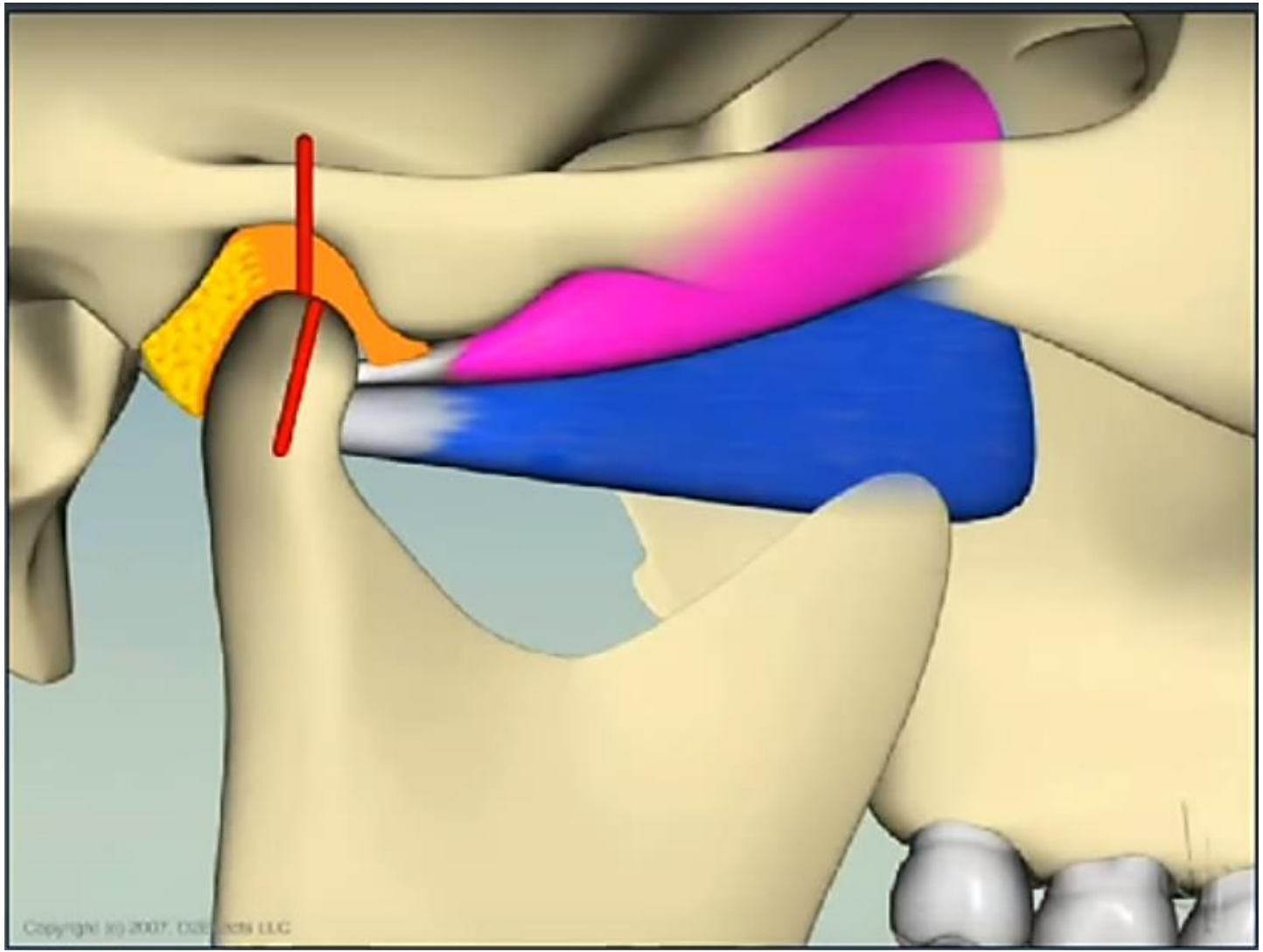
TMJ

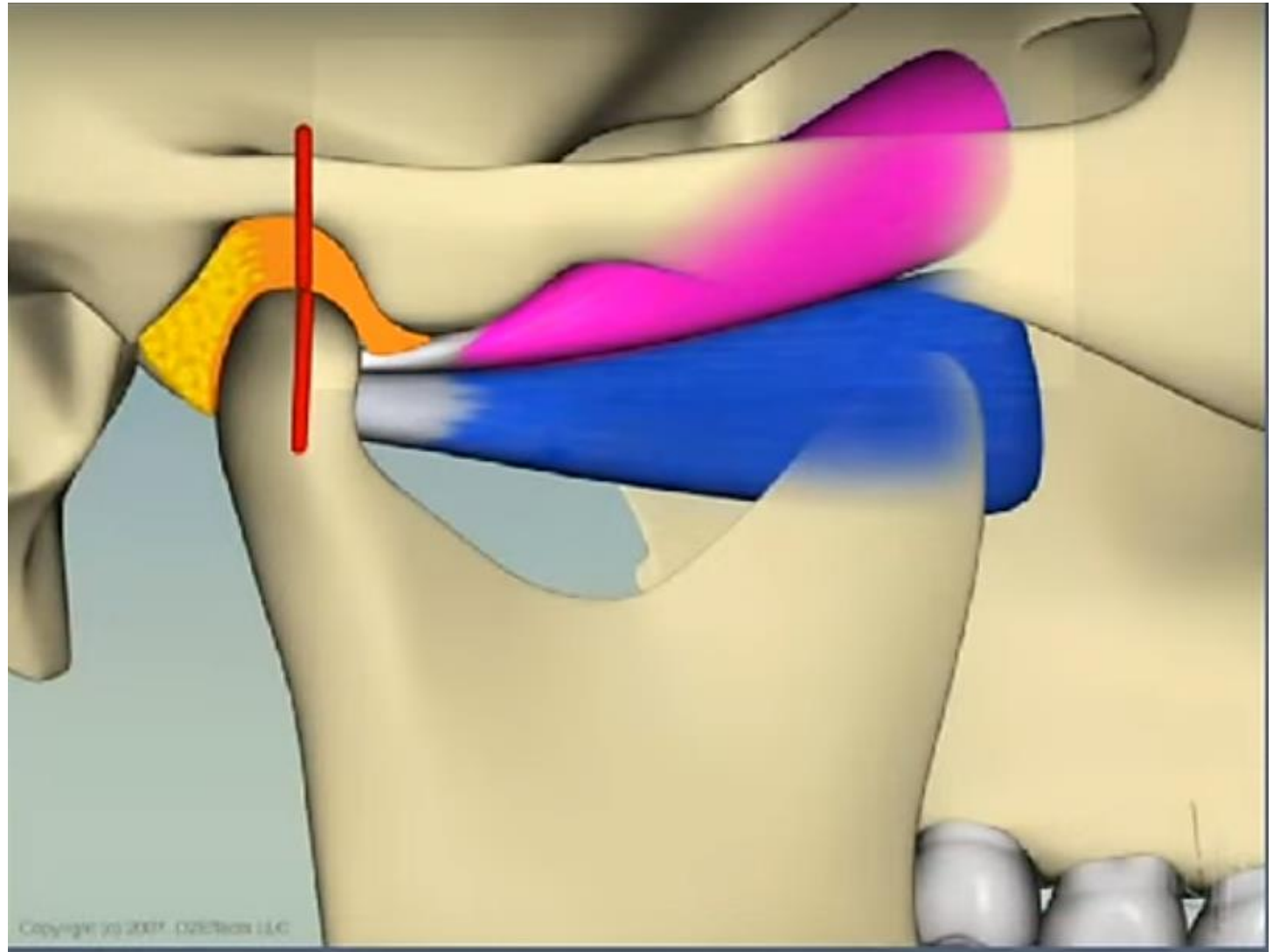


TMJ



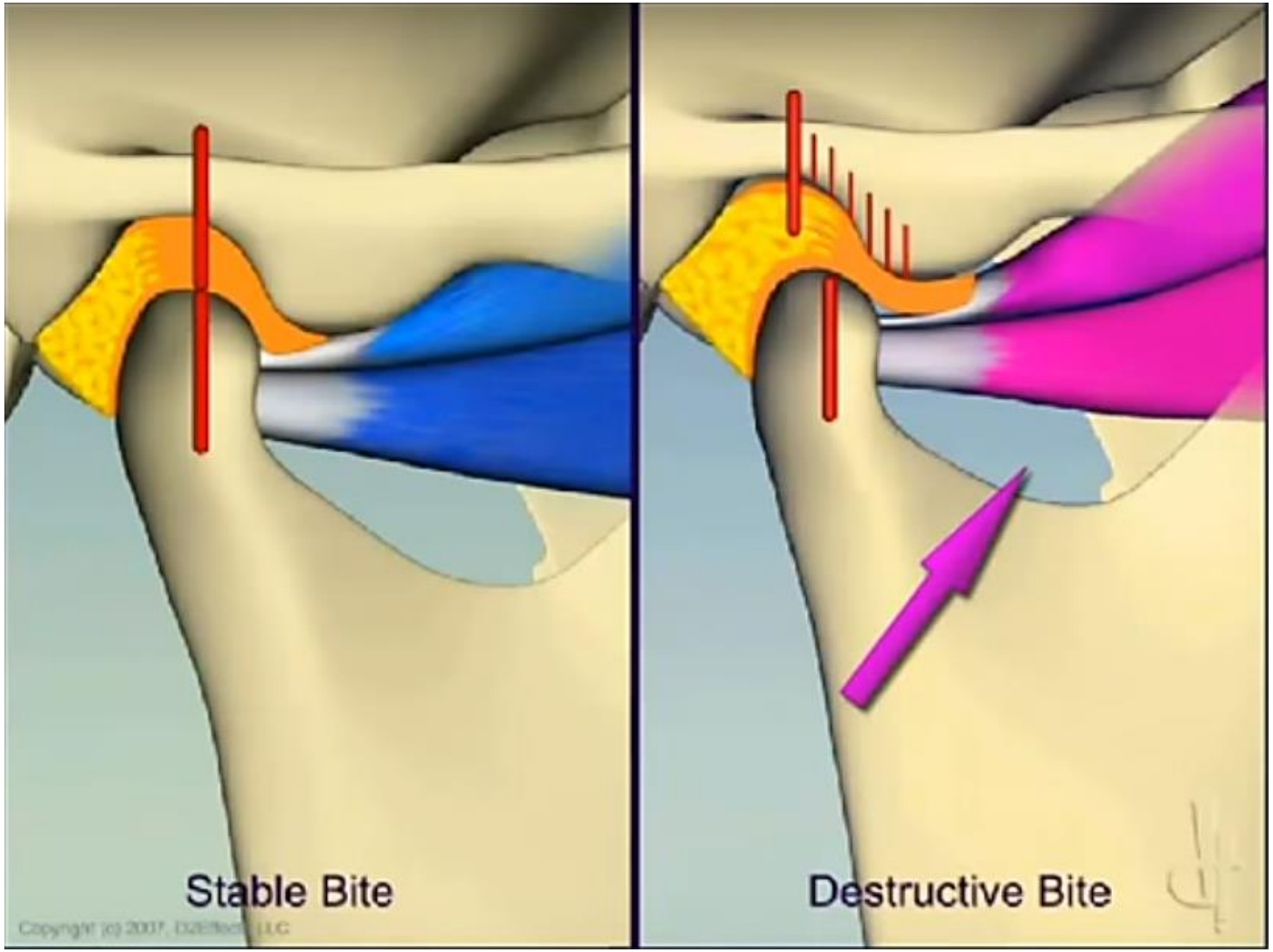
TMJ

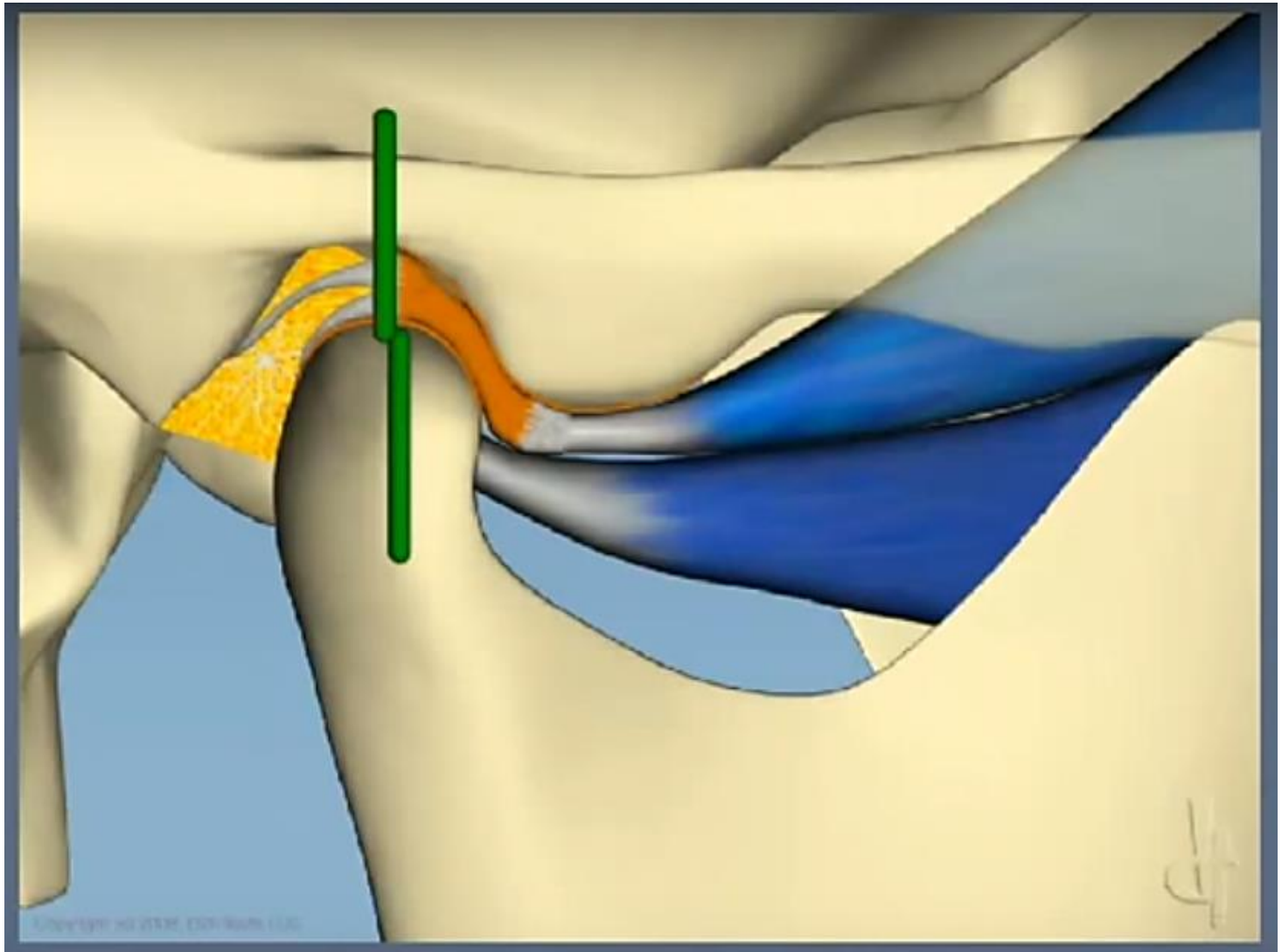


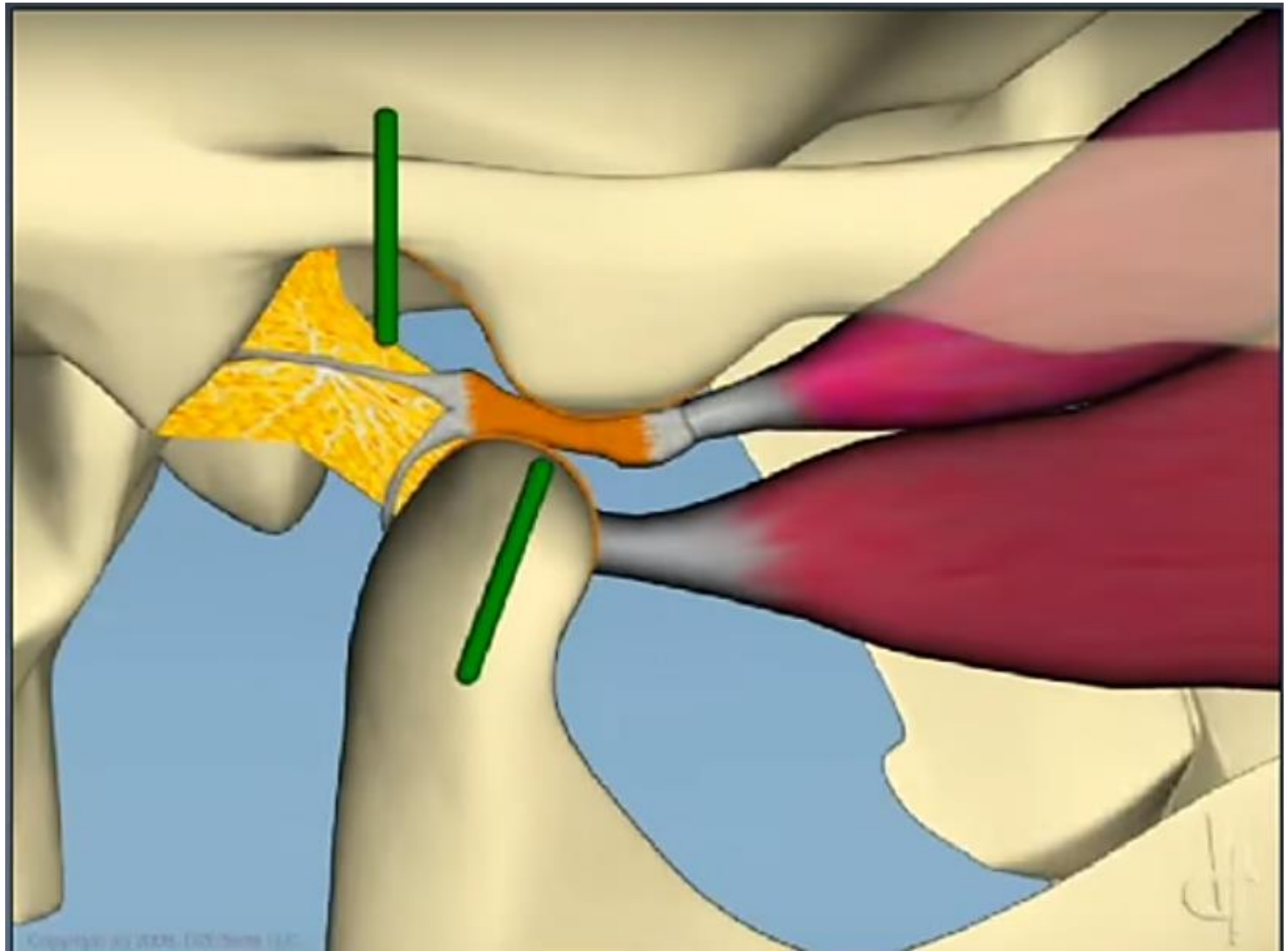


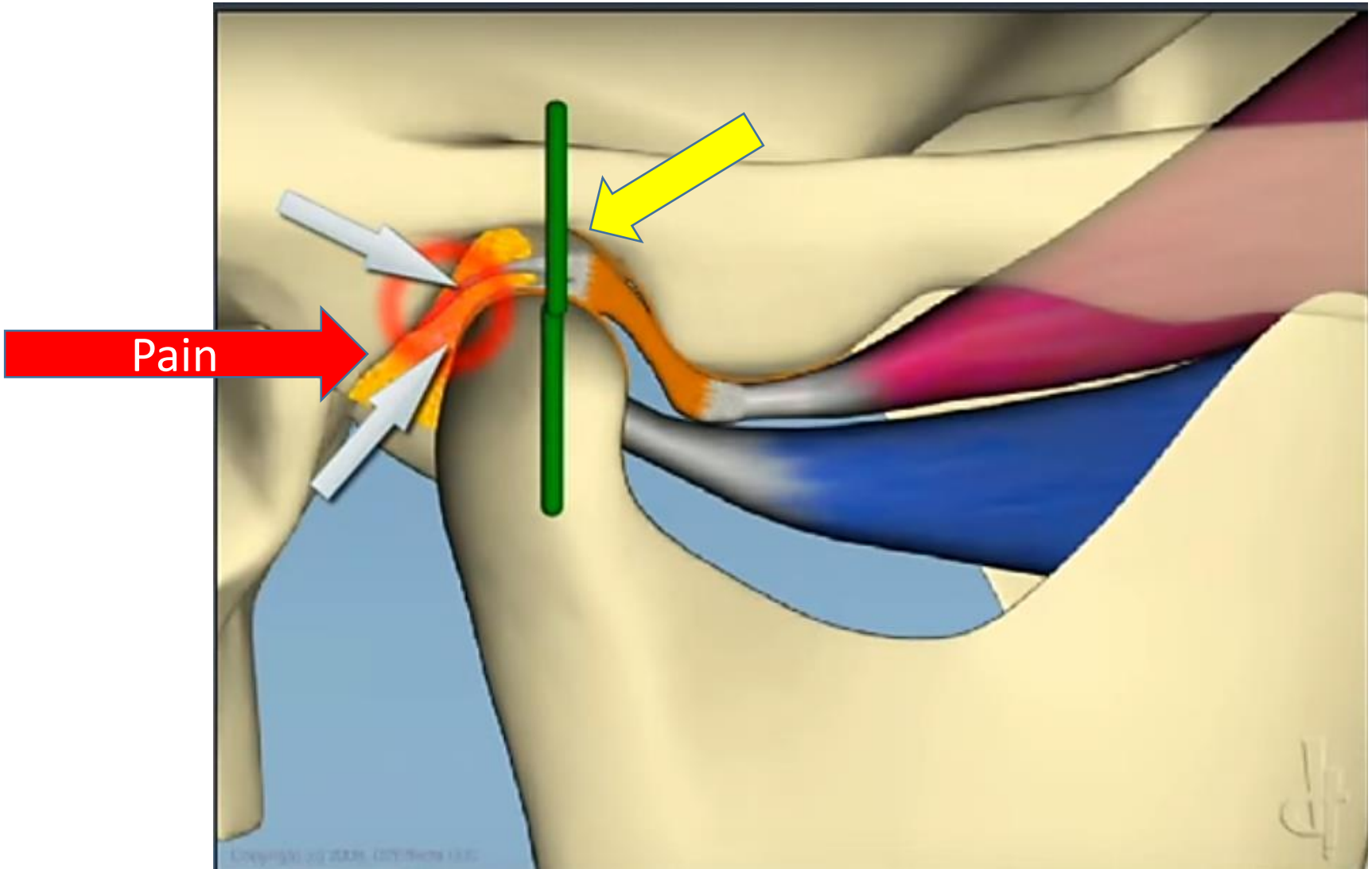
Biting

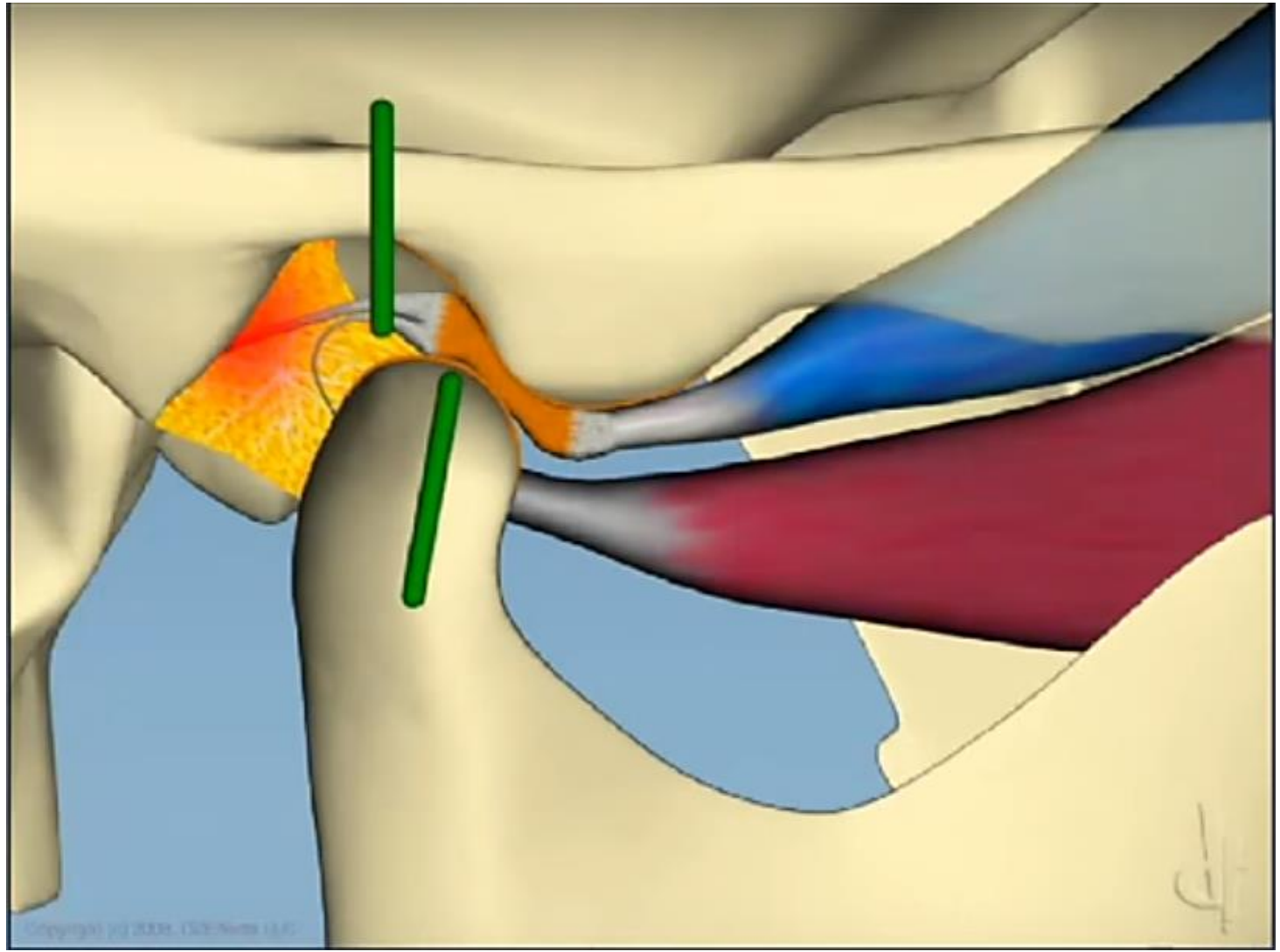
Biting

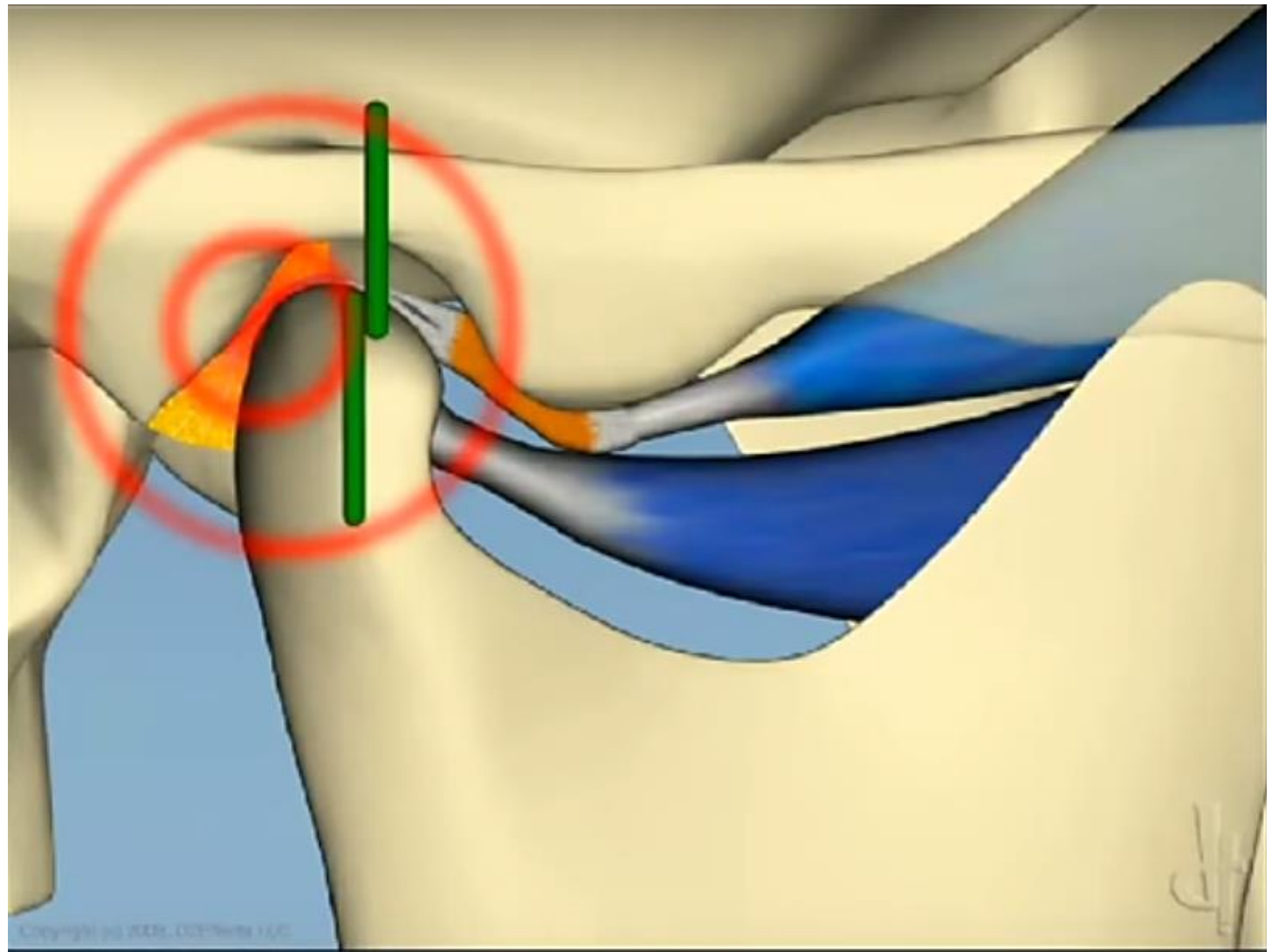


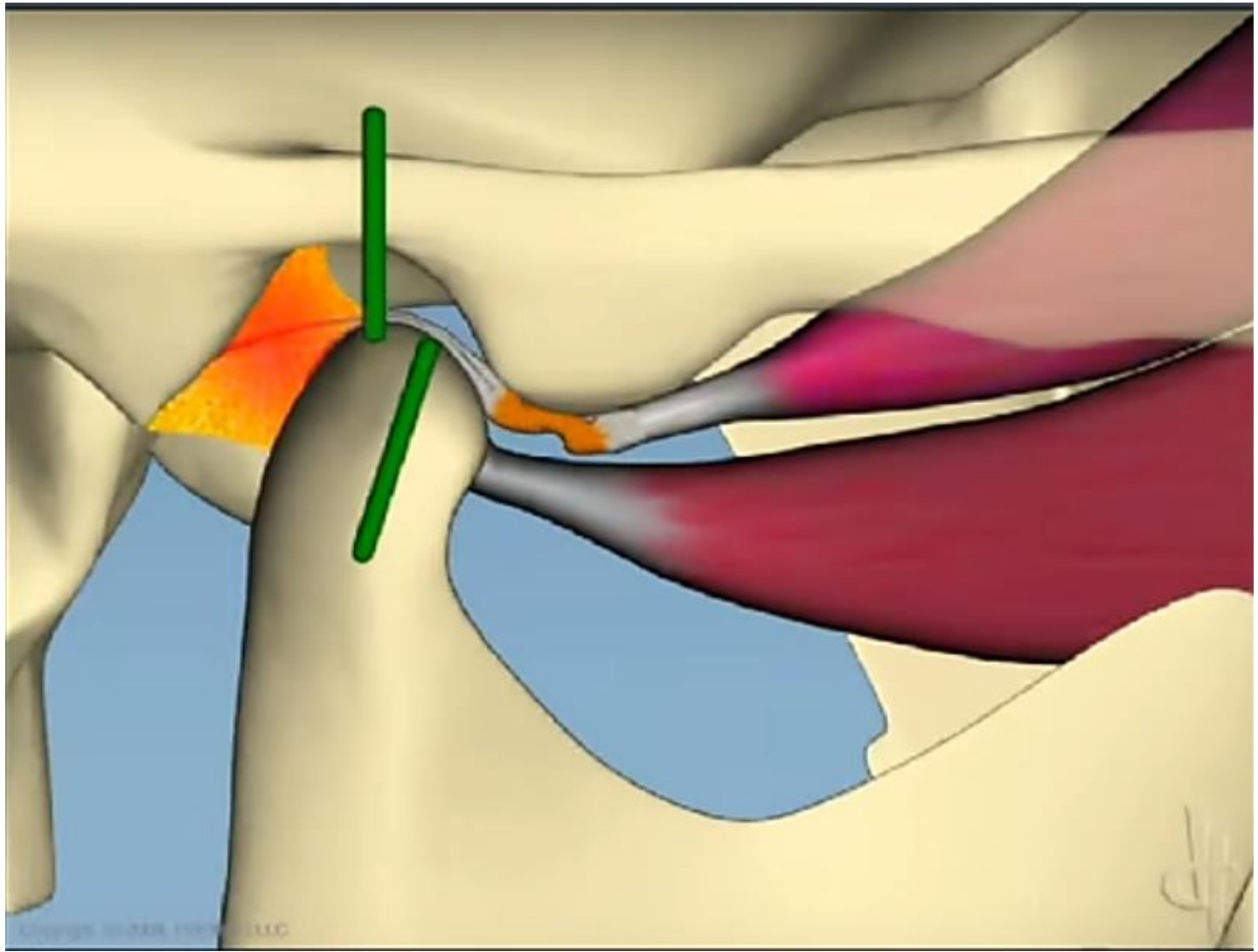


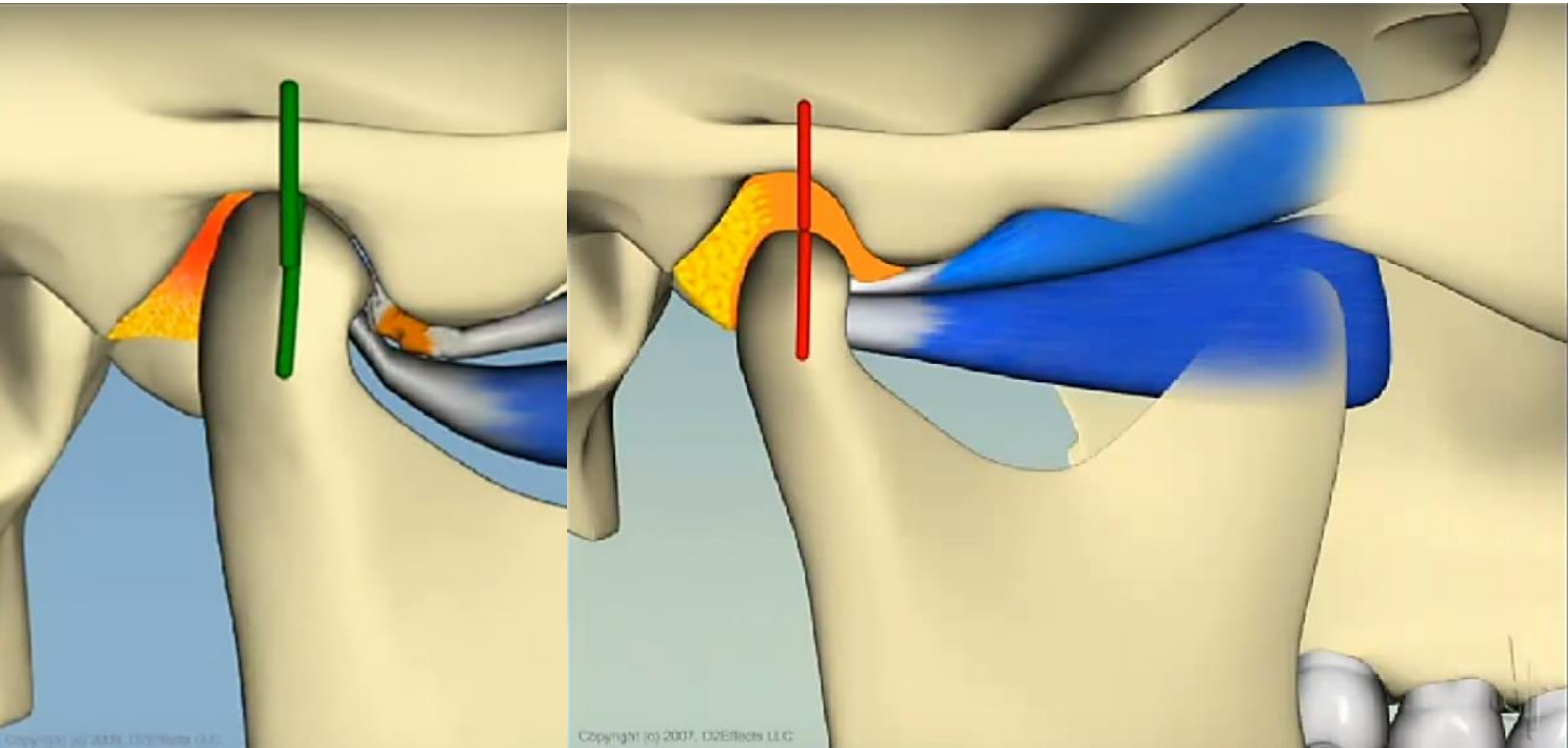



Pain





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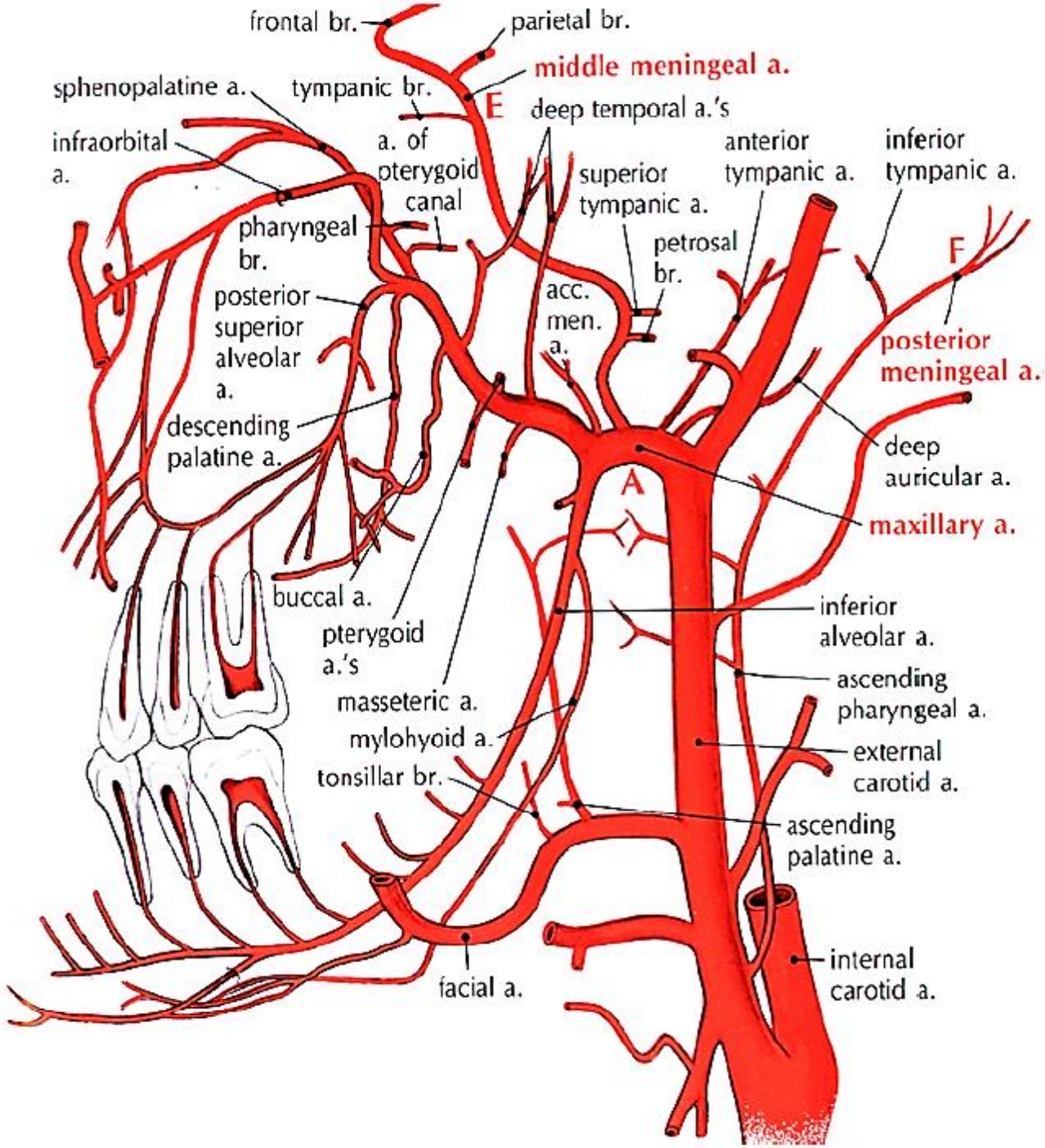

For those who really want to study the maxillary artery