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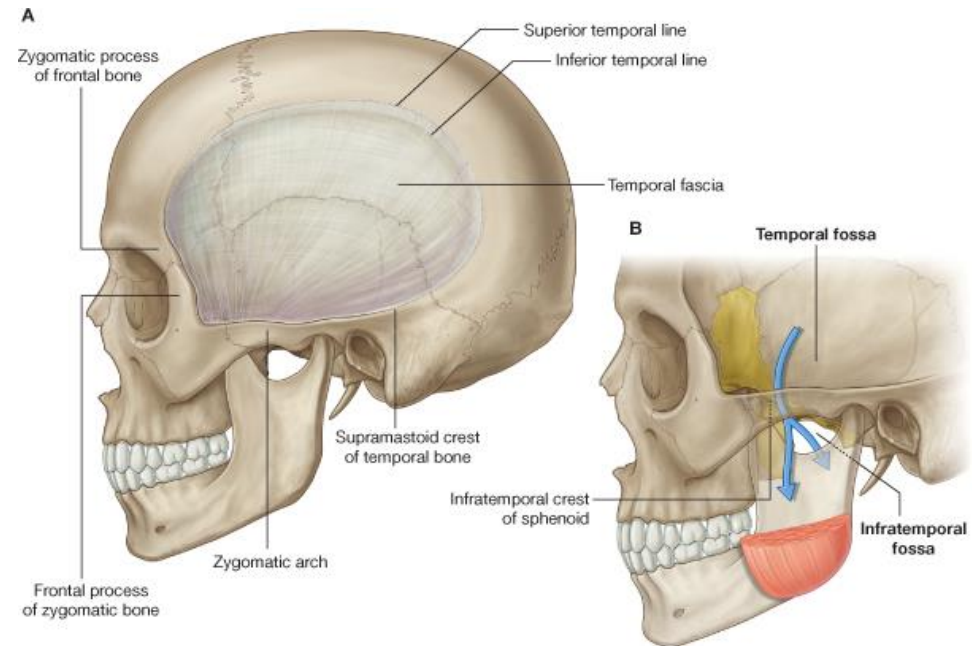
*In the name of Allah, the most gracious, the most merciful*

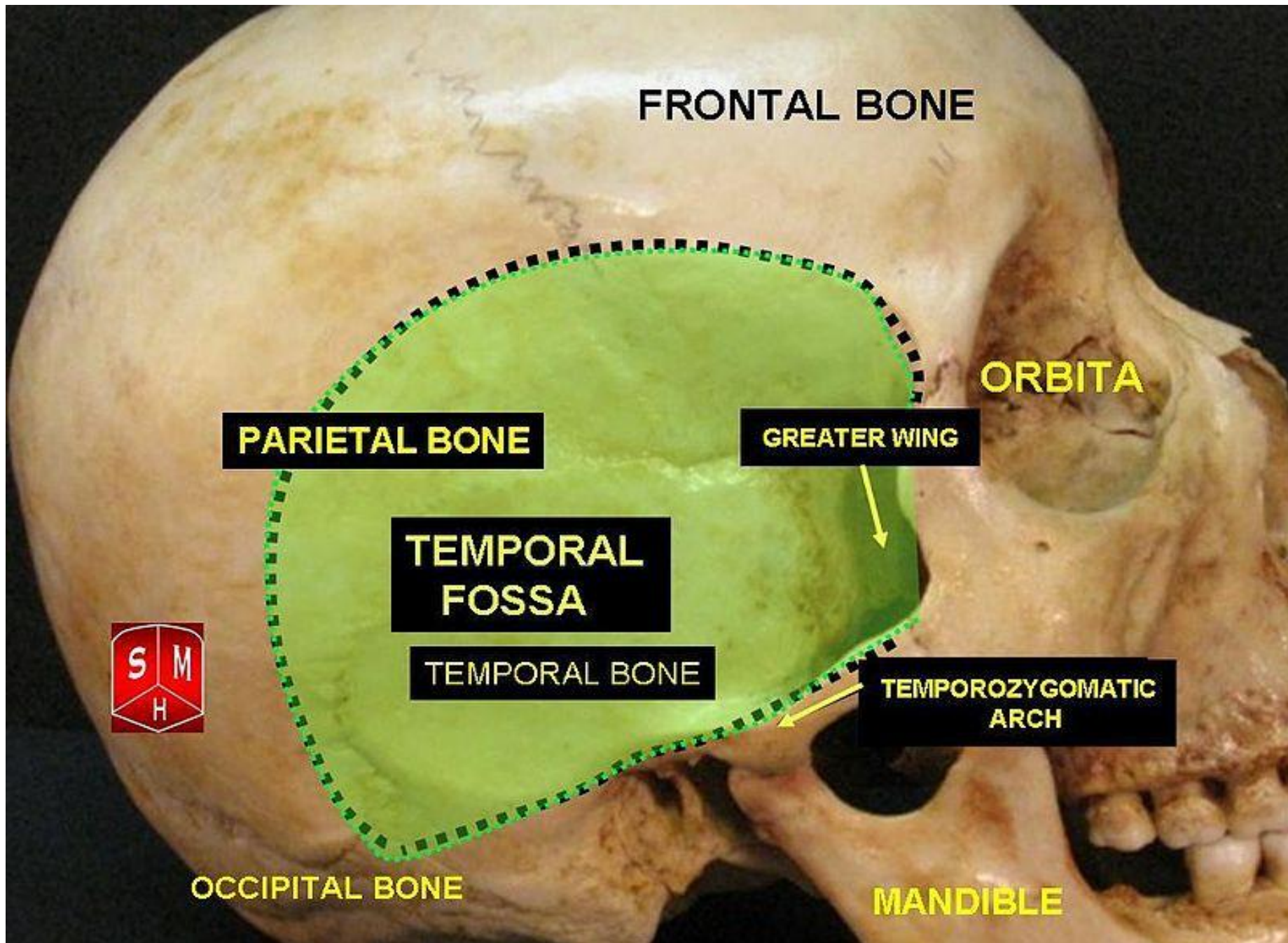
# Temporal Fossa

**Dr. NOMAN**

# TEMPORAL FOSSA

- Is a narrow fan shaped space that covers the lateral surface of the skull and bounded superiorly by the temporal lines and terminating below at the level of the zygomatic arch.





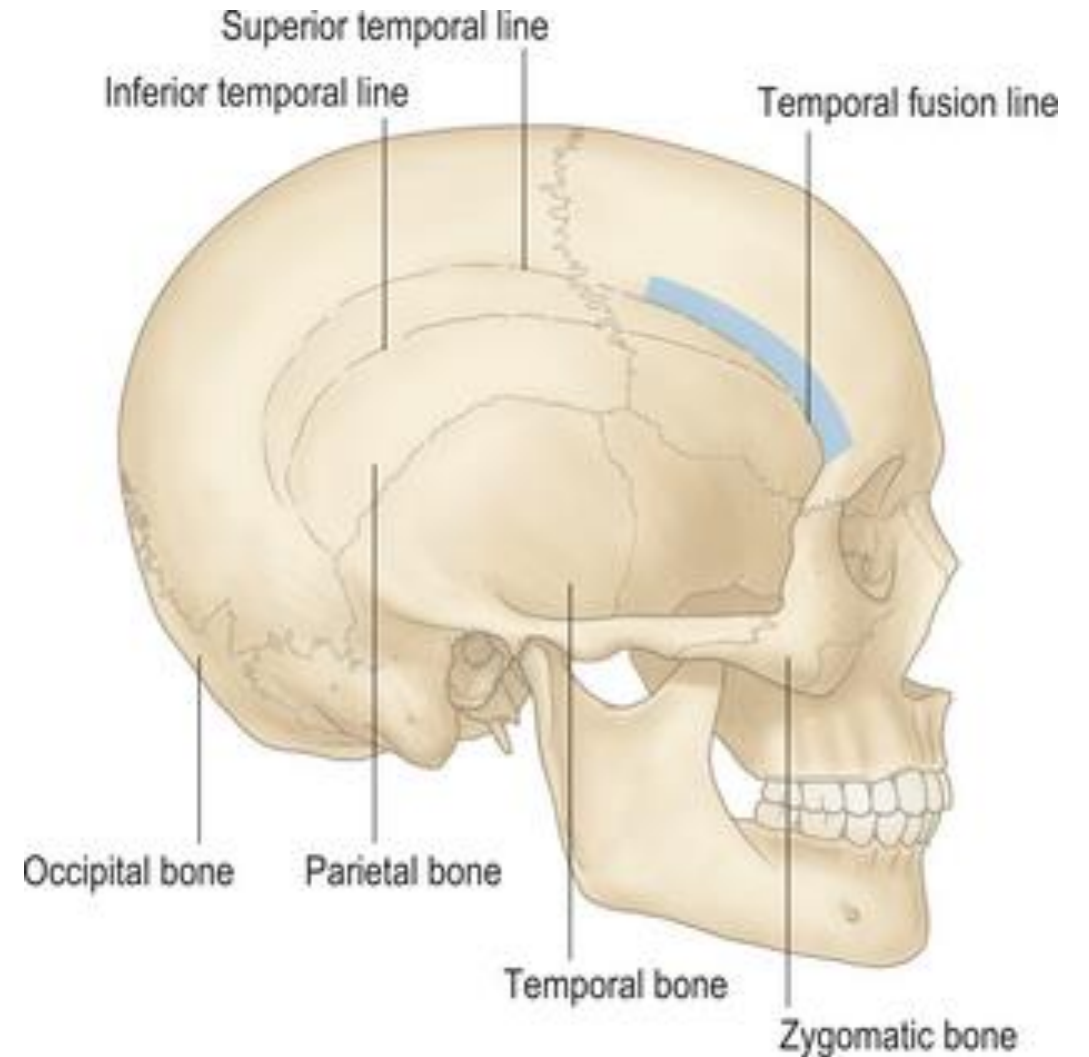
# BOUNDRIES

## **Superior:**

Pair of temporal lines (superior and inferior temporal lines) that arch across the skull from the zygomatic process of the frontal bone to the supramastoid crest of the temporal bone

## **Inferior:**

Zygomatic arch laterally and by the infratemporal crest of the greater wing of the sphenoid medially.



## Medial:

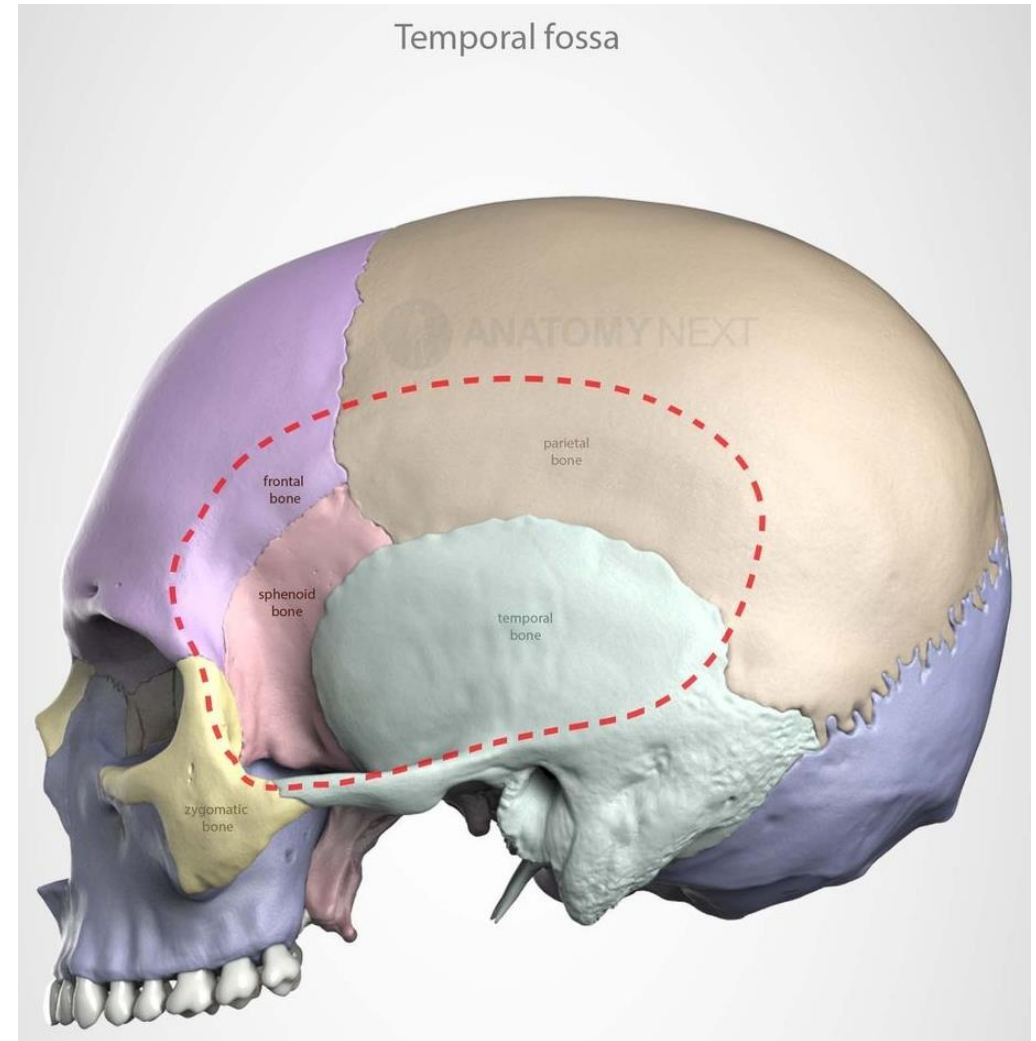
Frontal, Parietal, Temporal, Sphenoidal  
(bones of Neurocranium).

## Lateral:

Temporal fascia

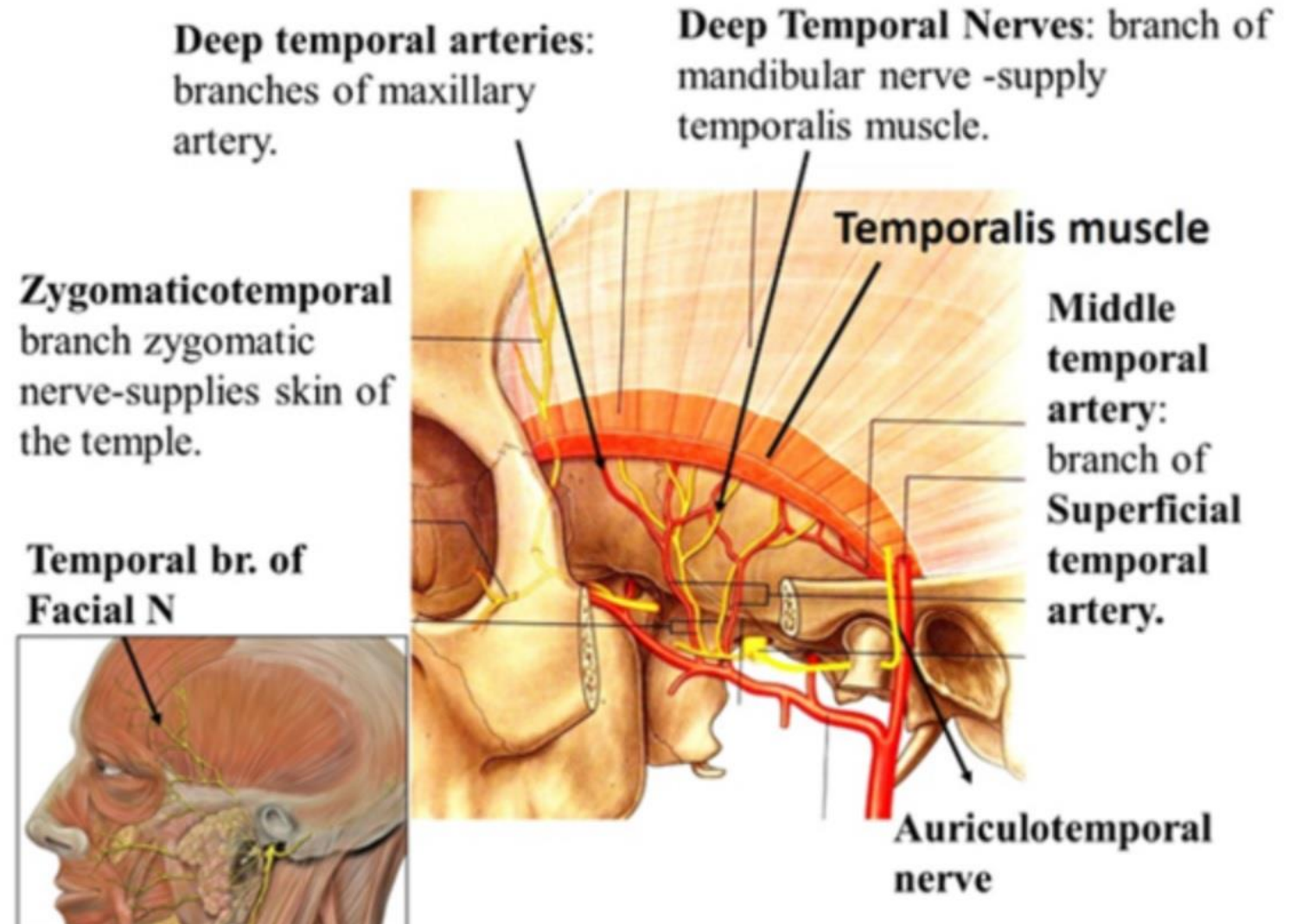
## Anterior:

Posterior surface of the frontal  
process of the zygomatic bone and the  
posterior surface of the zygomatic  
process of the frontal bone.



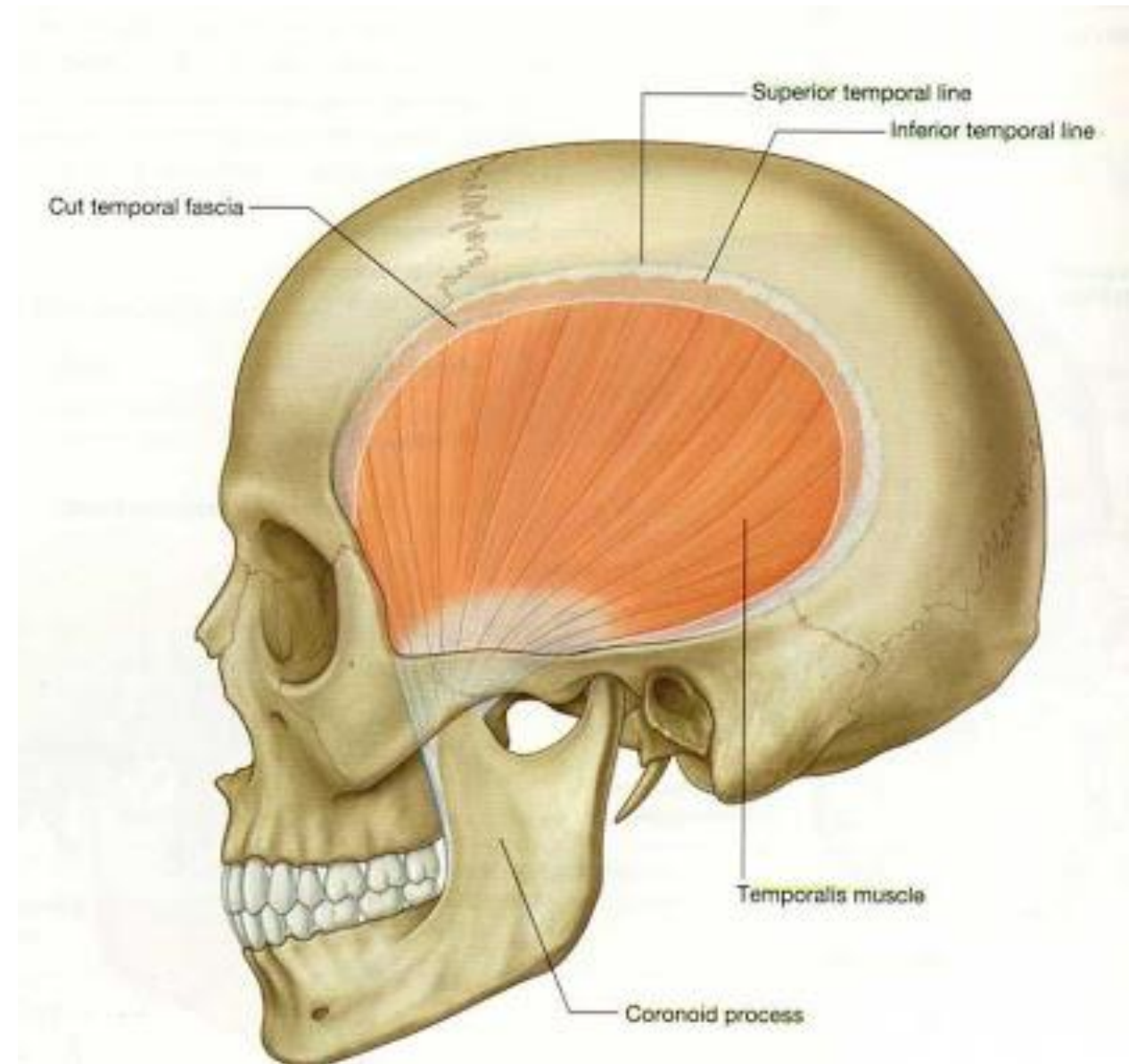
# Contents

- Temporalis muscle
- Deep temporal arteries
- Deep temporal nerves
- Superficial temporal artery (from external carotid)
- Zygomaticotemporal nerve



# TEMPORALIS MUSCLE

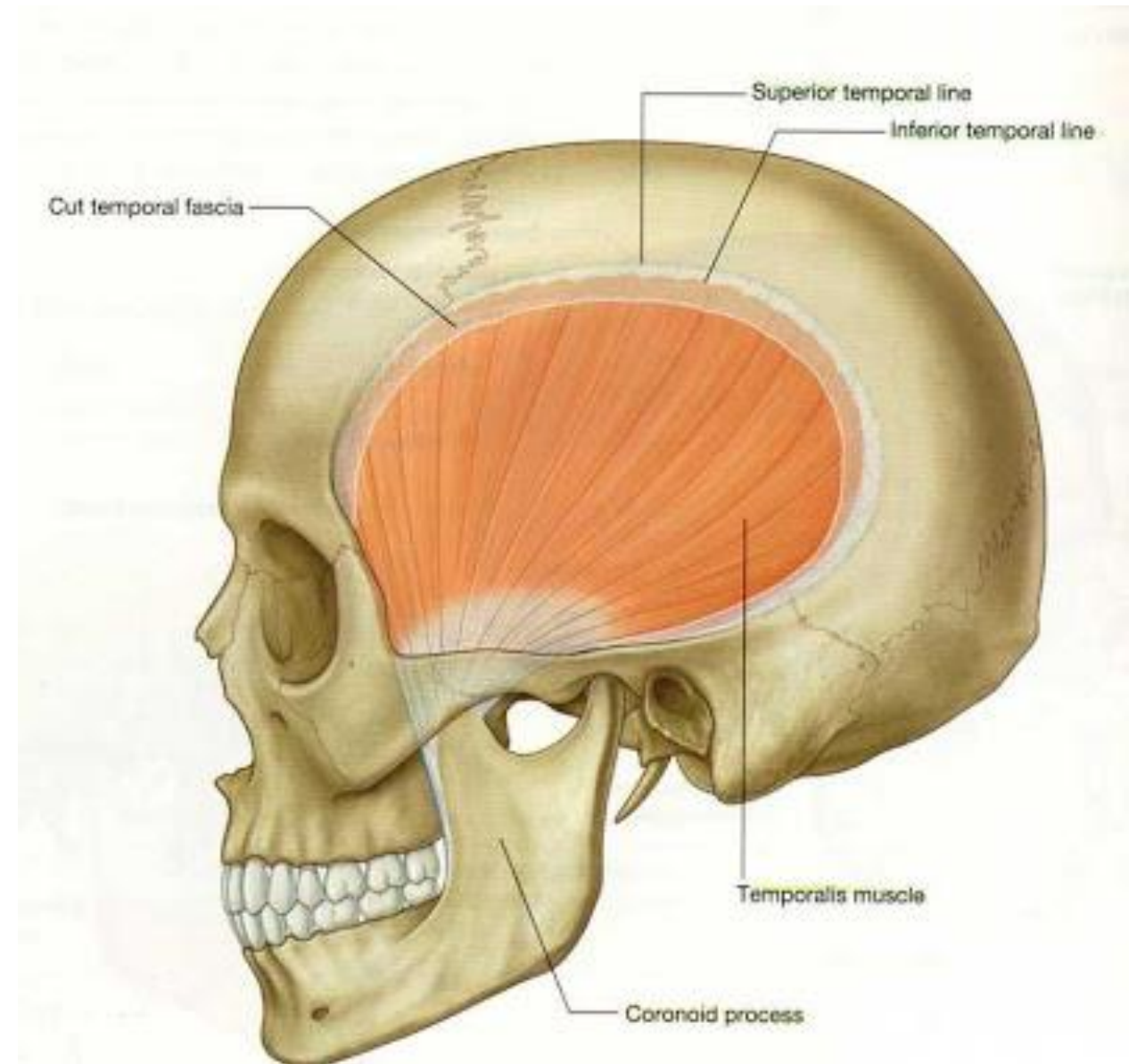
- Temporalis is a large, fan – shaped muscle that fills much of the temporal fossa.
- It is a powerful elevator of mandible.
- Along with the medial pterygoid, lateral pterygoid and masseter muscles, it belongs to the group masticatory muscles.





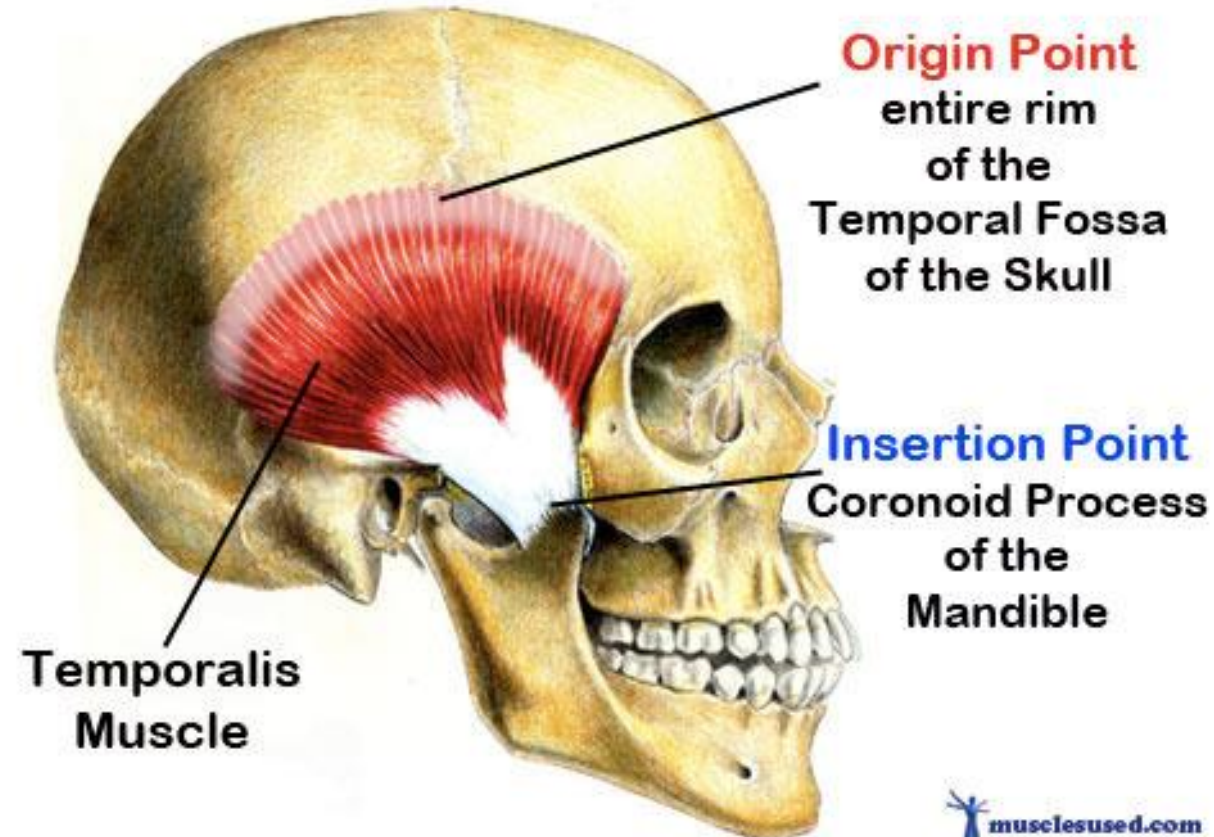
# TEMPORALIS MUSCLE

- Its origin point spans the entire surface of the fossa below the temporal line. Additionally, some fibers originate from the temporal fascia as well.



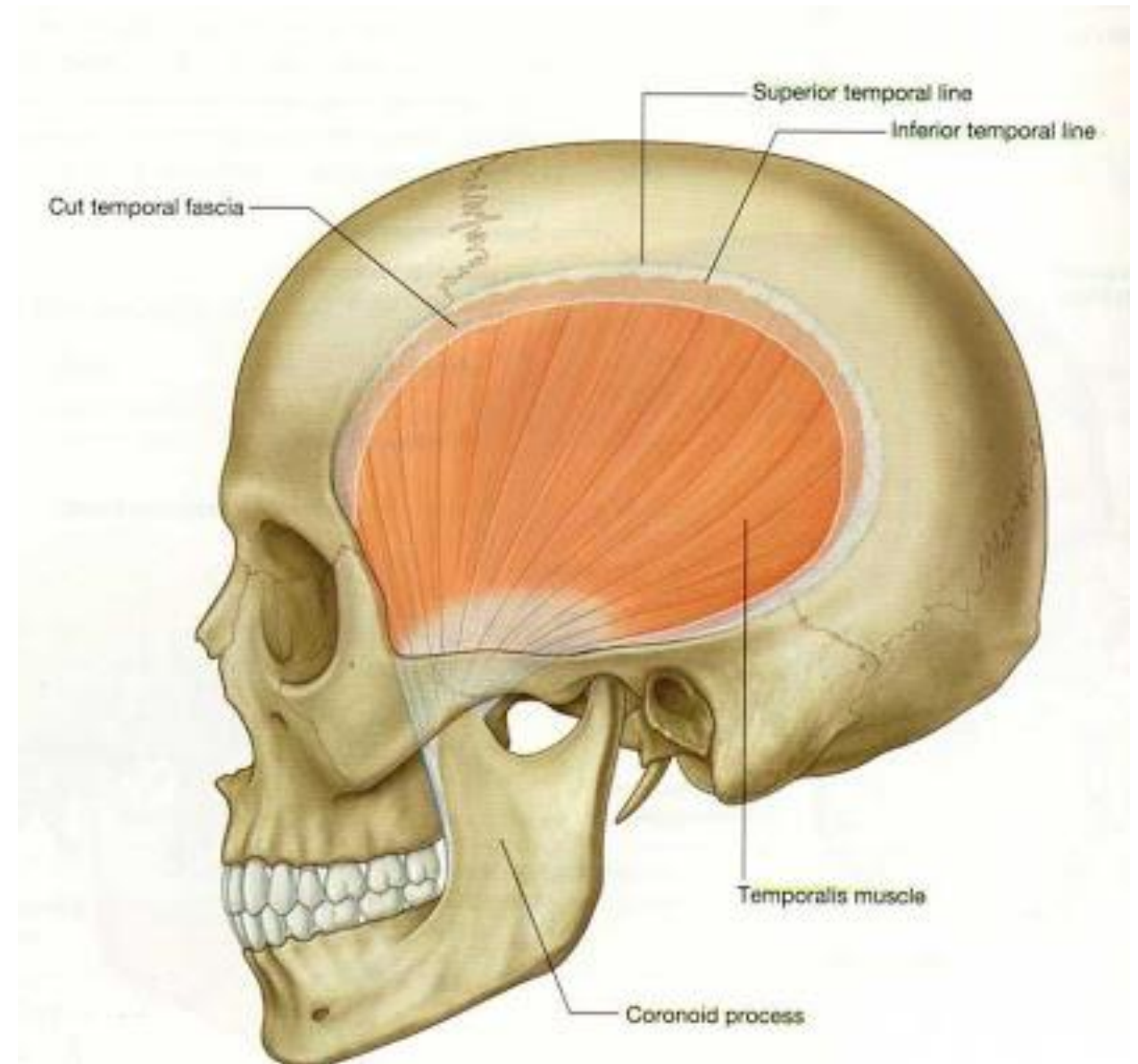
# TEMPORALIS MUSCLE

- The temporalis muscle is divided into the anterior and posterior parts.
- The anterior fibers run inferiorly, in an almost vertical direction, while its posterior fibers are directed almost horizontally.
- Both anterior and posterior fibers converge onto a narrow tendon that runs medial to the zygomatic arch.
- The tendon inserts onto the apex and medial surface of the coronoid process of mandible.



# TEMPORALIS MUSCLE

- The main function of this muscle is to produce the movements of the mandible at the temporomandibular joint and thus facilitate the act of mastication.
- It is innervated by deep temporal nerve.
- Blood supply from deep temporal and middle temporal artery.

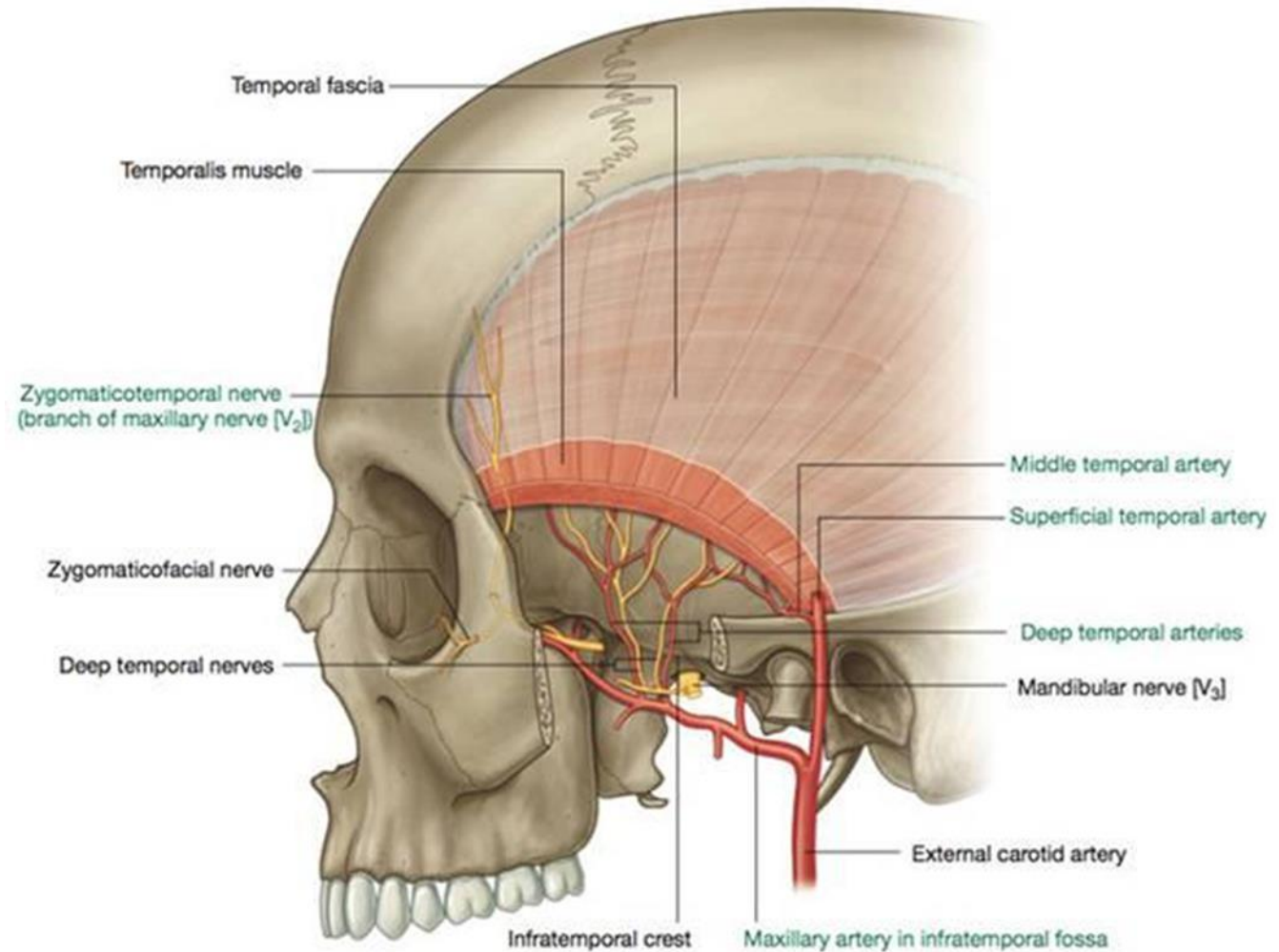


## Deep Temporal Nerves: (to Muscle)

Usually 2 in number; originates from the anterior branch of the mandibular nerve (V3) in the infratemporal fossa; Pass superiorly, around the infratemporal crest of the sphenoid bone, deep to the temporalis muscle to innervate it

## Zygomaticotemporal Nerve (To skin)

Branch of the zygomatic nerve, a branch of the maxillary nerve (V2); Originates in the pterygopalatine fossa; Penetrates temporal fascia to supply skin of the temple region.

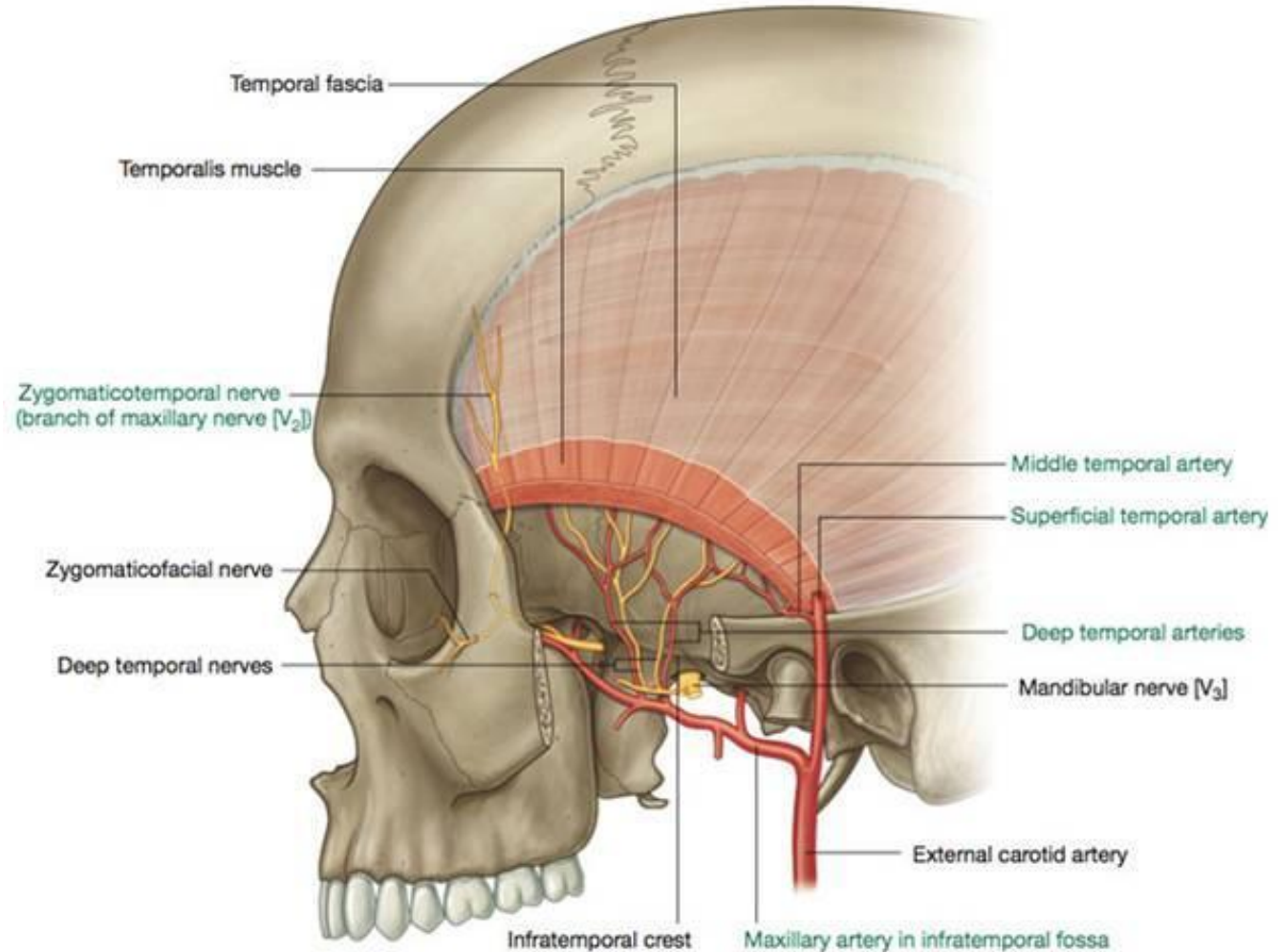


## Deep Temporal Arteries:

Originate from the maxillary artery in the infratemporal fossa; Travel superiorly with the deep temporal nerves; Anastomoses with Middle temporal arteries.

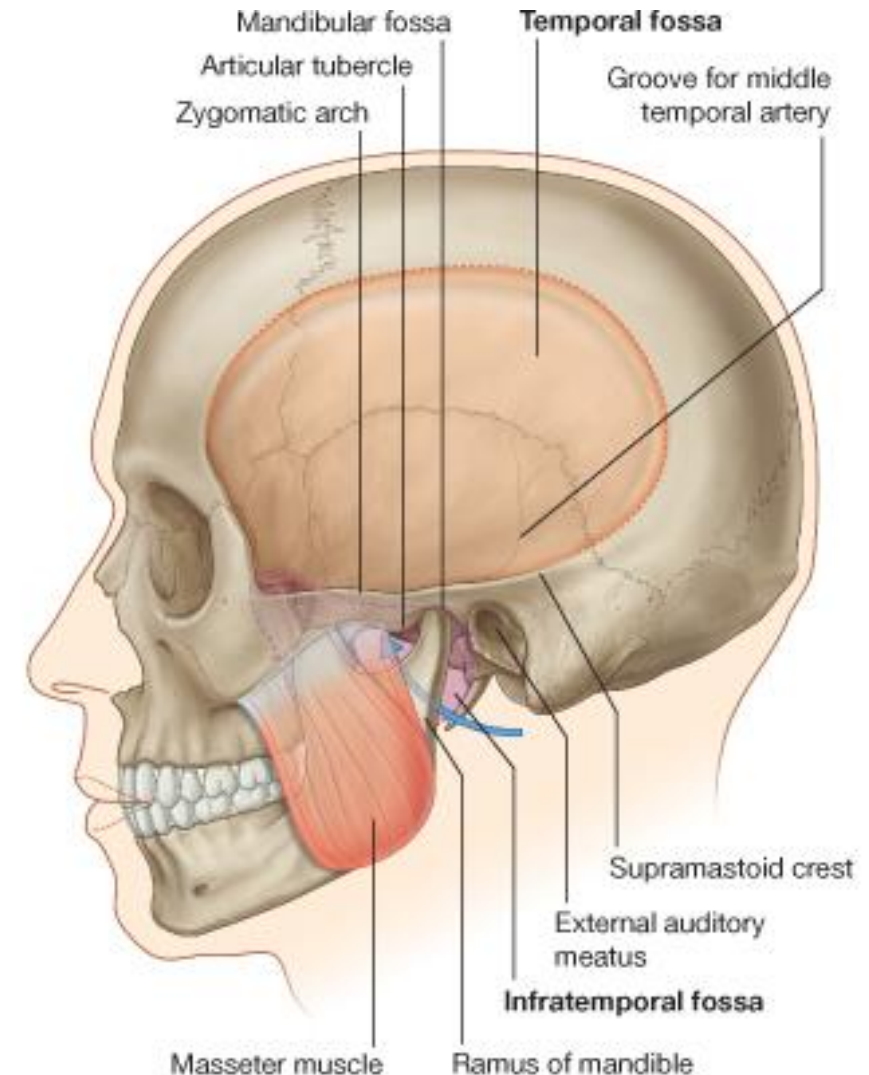
## Middle Temporal Artery:

A branch of the superficial temporal artery. Penetrates under the temporal fascia and goes deep to temporalis muscle; Supplies temporalis muscle and anastomoses with deep temporal arteries.



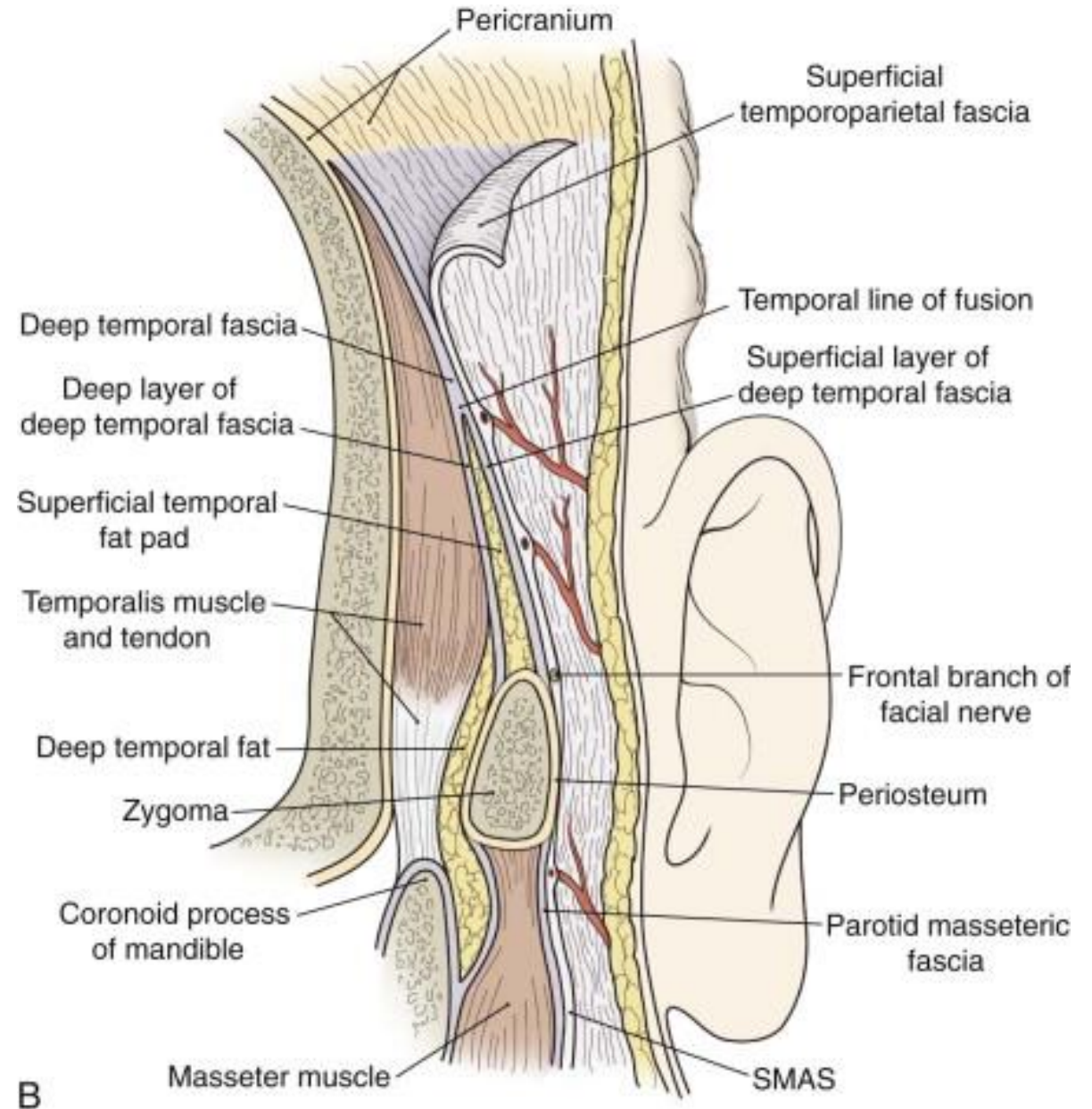
# TEMPORAL FASCIA

- The **temporal fascia** covers the Temporalis muscle.
- It is a strong, fibrous investment, covered, laterally, by the small external muscle of ear and by part of the Orbicularis oculi.



# TEMPORAL FASCIA

- The superficial temporal vessels and the auriculotemporal nerve cross it from below upward.
- Above, it is a single layer, attached to the entire extent of the superior temporal line; but below, where it is fixed to the zygomatic arch, it consists of two layers, one of which is inserted into the lateral, and the other into the medial border of the arch.



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