

ننصح ان تكون قراءة الموضوع بتفصيله وللاستزادة
من المعلومات من الكتاب المنهجي

**We advice our students to read this lecture
note in your recommended textbook**

[References that you can depends on:](#)

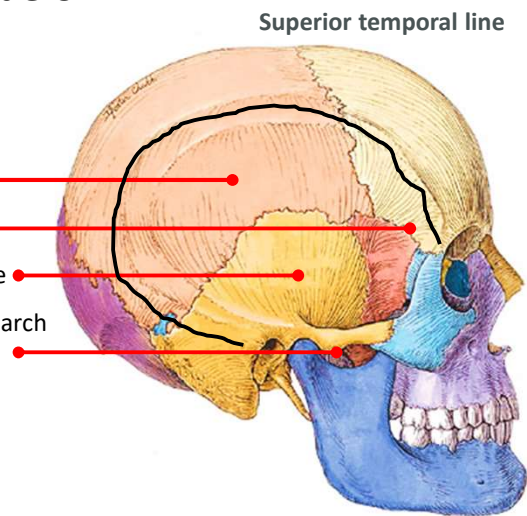
- [Gray's Anatomy for Students. By: Richard Drake, A. Wayne Vogl, Adam Mitchell](#)
- [Snell's Clinical Anatomy by Regions. By Dr. Lawrence E. Wineski PhD](#)

We are going to discuss:

- 1. Temporal fossa** - boundaries & contents
- 2. Infratemporal fossa** - boundaries & contents
- 3. Mandibular nerve** - course, divisions & branches
- 4. Maxillary artery** - course & branches

Temporal Fossa is made of:

- The parietal bone
- Little part of the frontal bone
- The squama of the temporal bone
- Limited outside by the zygomatic arch



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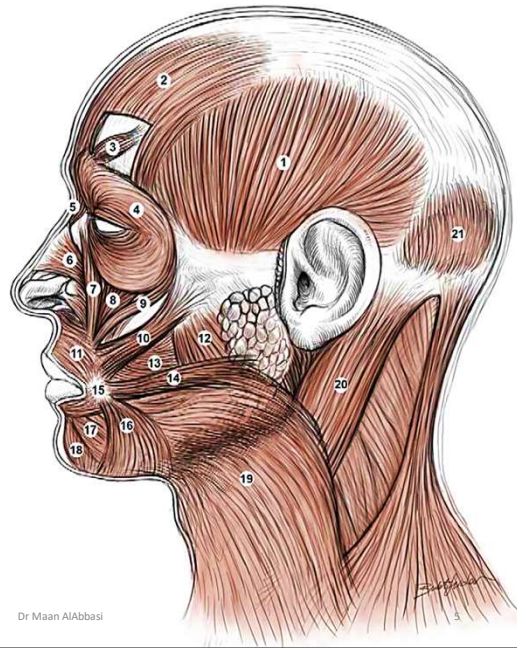
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Temporal Fossa contains:

• Muscles:

- 1. Temporalis muscle**



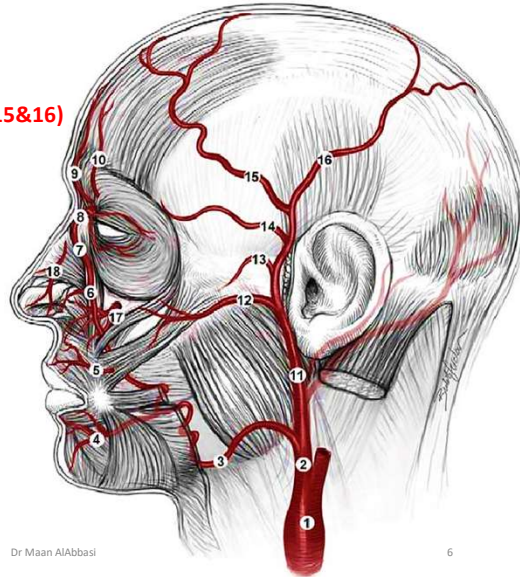
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Temporal Fossa contains:

Vessels:

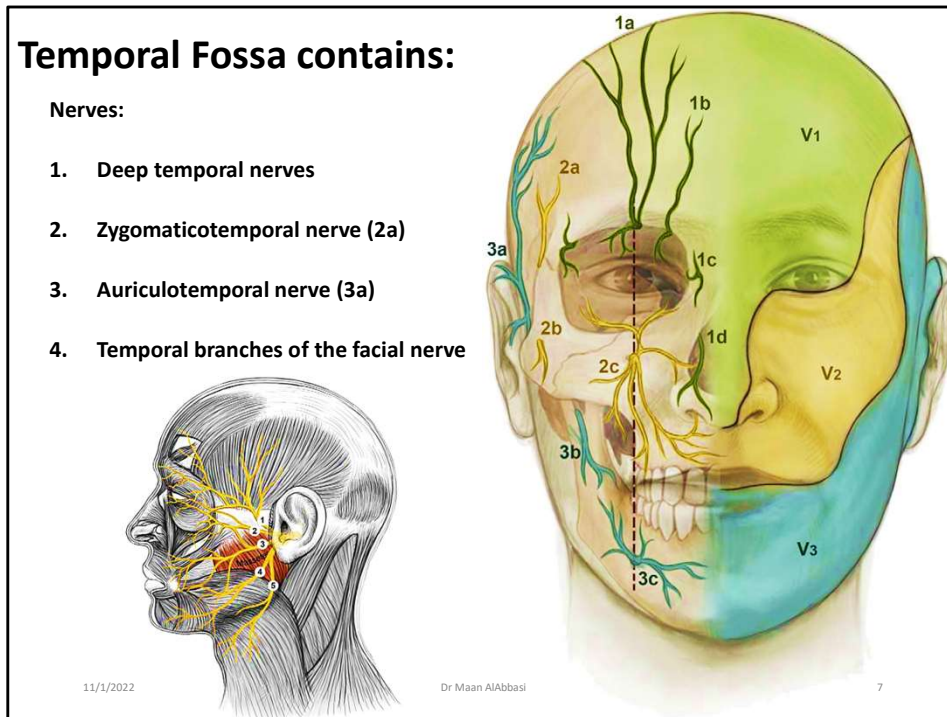
1. Superficial temporal artery & vein (15&16)
2. Middle temporal artery & vein (14)
3. Deep temporal arteries & veins



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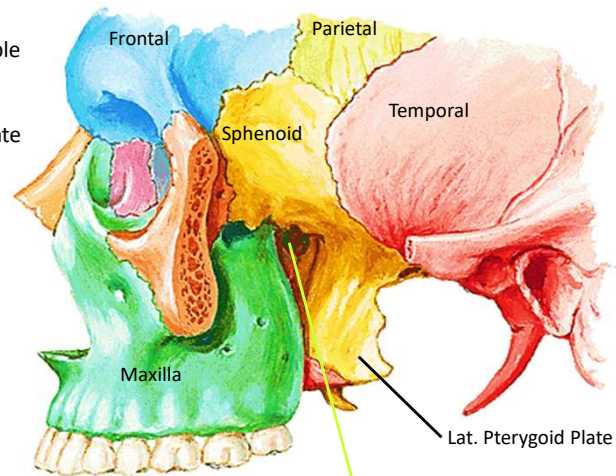
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Boundaries of the infratemporal fossa

- Lateral=Ramus of Mandible
- Anterior=Maxilla
- Medial=Lat. Pterygoid Plate
- Roof=Sphenoid

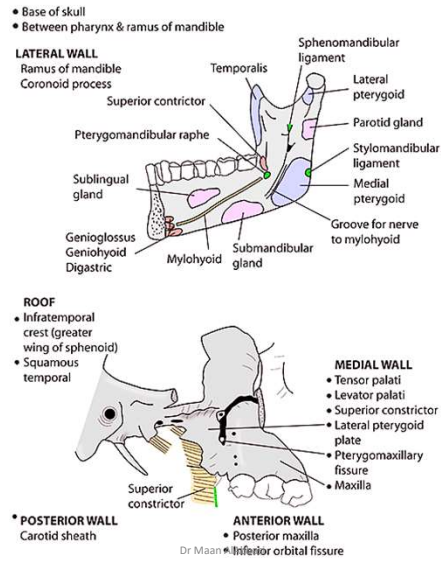


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Boundaries of the infratemporal fossa



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Infratemporal fossa contains the 1st pharyngeal arch

**Responsible for the complex movements of the jaw
(speaking, swallowing, chewing, and breathing)**

<ul style="list-style-type: none"> ▪ Muscles of mastication ▪ Anterior belly of digastric ▪ Mylohyoid ▪ Tensor tympani ▪ Tensor veli palatini 	<ul style="list-style-type: none"> ▪ Malleus ▪ Incus ▪ Meckel's cartilage ▪ Sphenomandibular ligament
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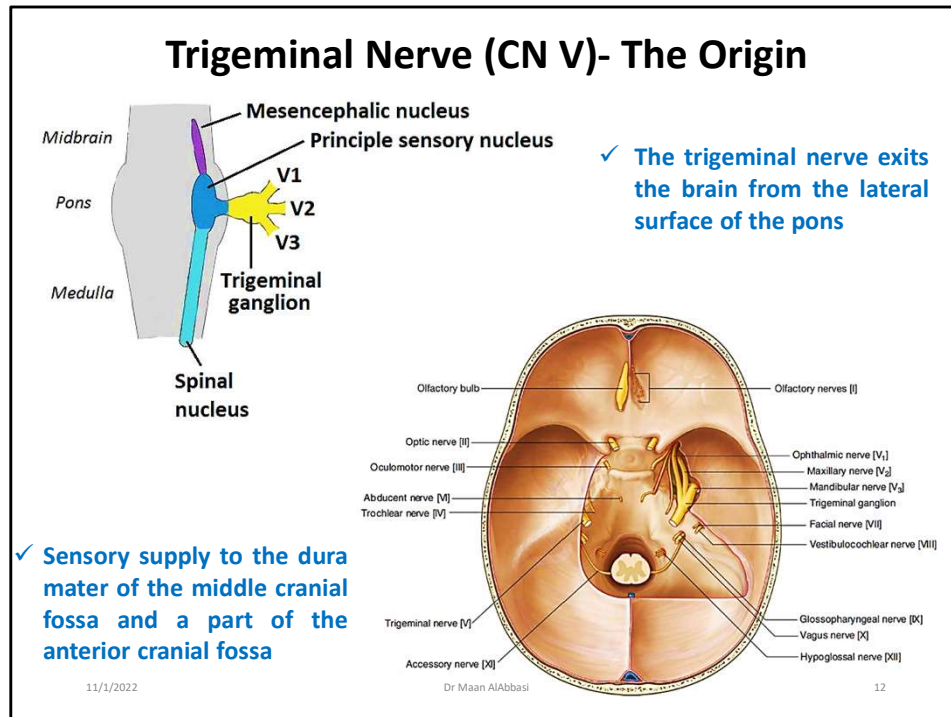
Infratemporal Fossa Contains

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

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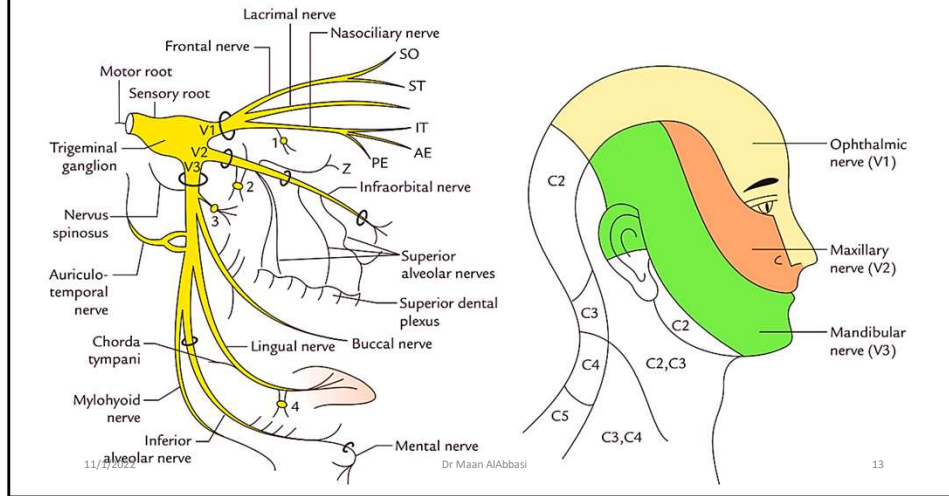
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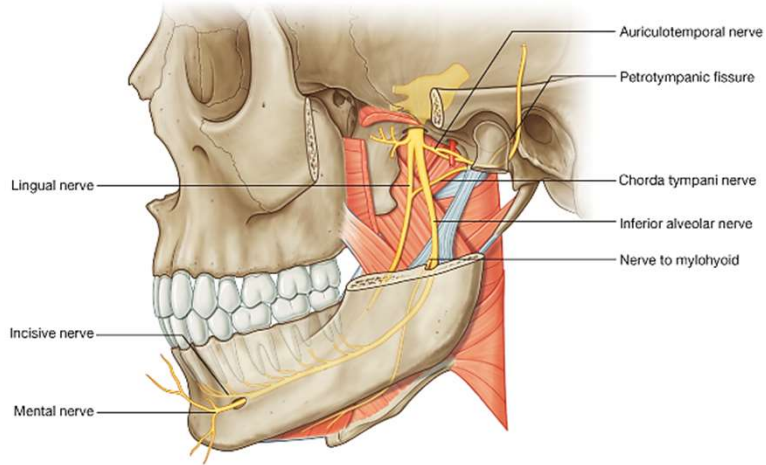


Trigeminal Nerve (CN V)

Mandibular nerve is the only branch of the trigeminal nerve that contains a motor root.



Mandibular nerve (CN Vc)

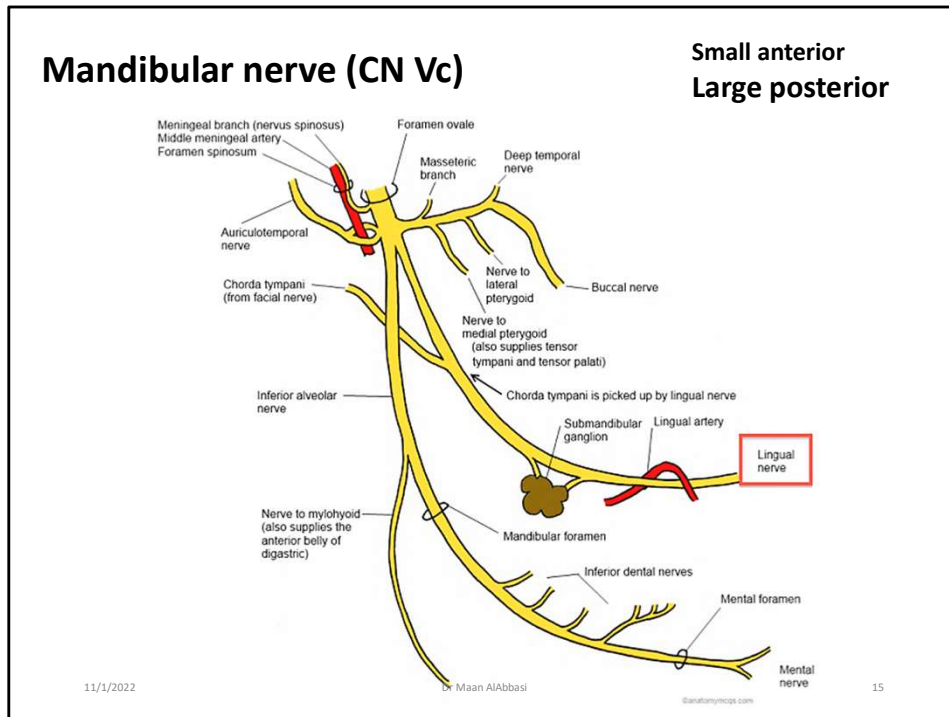


In the infratemporal fossa, near the skull base, the main trunk immediately gives off the sensory meningeal branch and motor muscular branches to the medial pterygoid, tensor tympani, and tensor veli palatini muscles.

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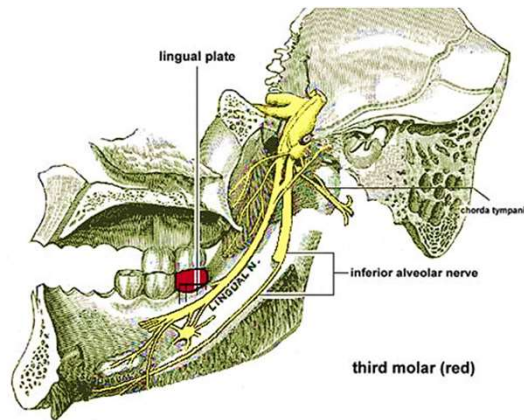
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Lingual Nerve – Sensory to:

1. Anterior 2/3 of the tongue, **excluding taste!**
2. Floor of the mouth
3. Lingual gingivae



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Inferior alveolar nerve supplies:

Figure 18A



Figure 18B

- **Motor** innervations to the mylohyoid & anterior belly of digastric muscles
- **Sensory** innervation to the teeth & mucoperiosteum of mandibular teeth, as well as sensory to the chin and lower lip

Quiz:

Match the following divisions (A–C) to the branches [3–6].

A. CN V1

B. CN V2

C. CN V3

[3] Auriculotemporal nerve

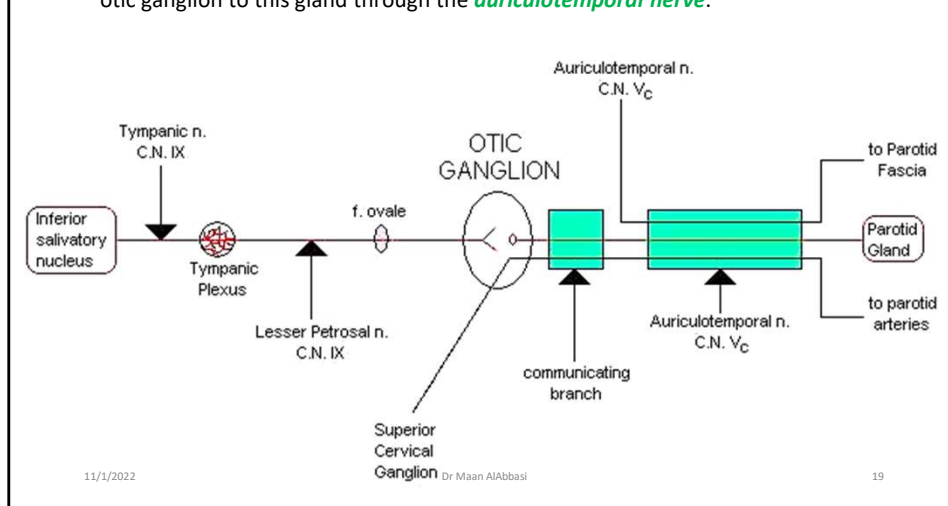
[4] Lacrimal nerve

[5] Supraorbital nerve

[6] Infraorbital nerve

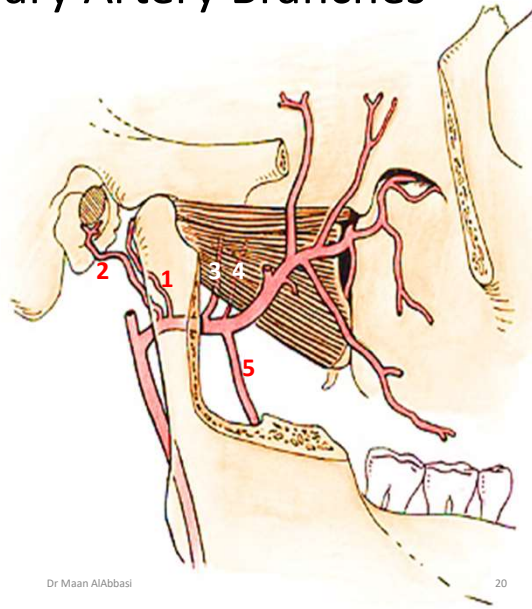
Otic parasympathetic ganglion

- **Presynaptic parasympathetic fibers**, derived mainly from the **glossopharyngeal nerve** (via the *lesser petrosal nerve*), synapse in the otic ganglion.
- **Postsynaptic parasympathetic fibers**, secretory to the parotid gland, pass from the otic ganglion to this gland through the **auriculotemporal nerve**.



1st part – Maxillary Artery Branches enters foramina

1. Deep auricular
2. Anterior tympanic
3. Middle meningeal
4. Accessory meningeal
5. Inferior alveolar



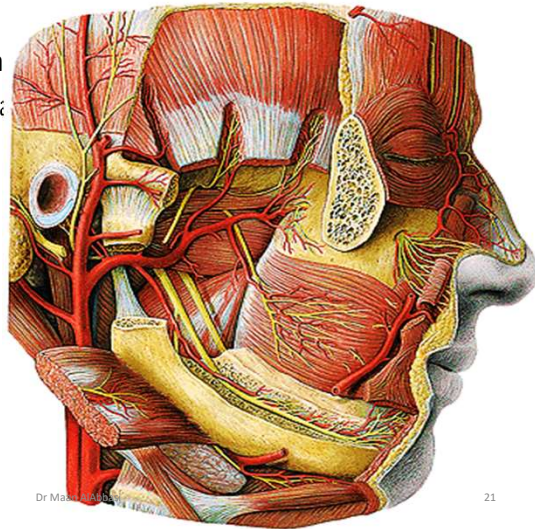
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2nd part – Maxillary Artery Branches enters soft tissues

1. Masseteric
2. Anterior deep temporal
3. Posterior deep temporal
4. Pterygoid
5. Buccal



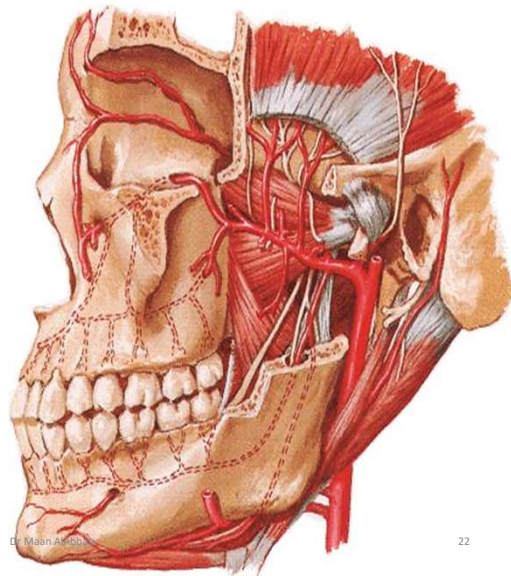
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3rd part – Maxillary Artery Branches enters foramina

1. Posterior superior alveolar
2. Infraorbital
3. Descending palatine
4. Artery of pterygoid canal
5. Pharyngeal
6. Sphenopalatine



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