

MUSCLES OF MASTICATION

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Department of Anatomy

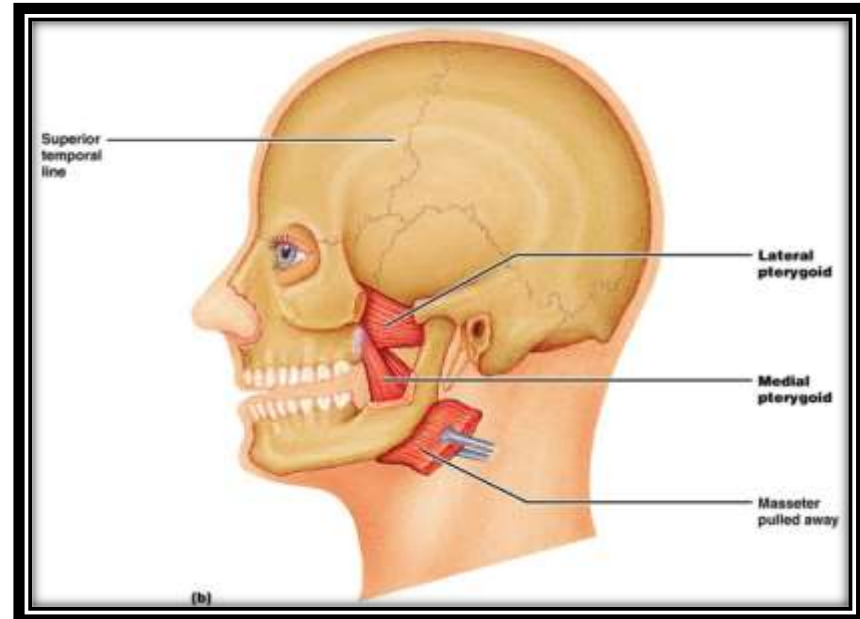
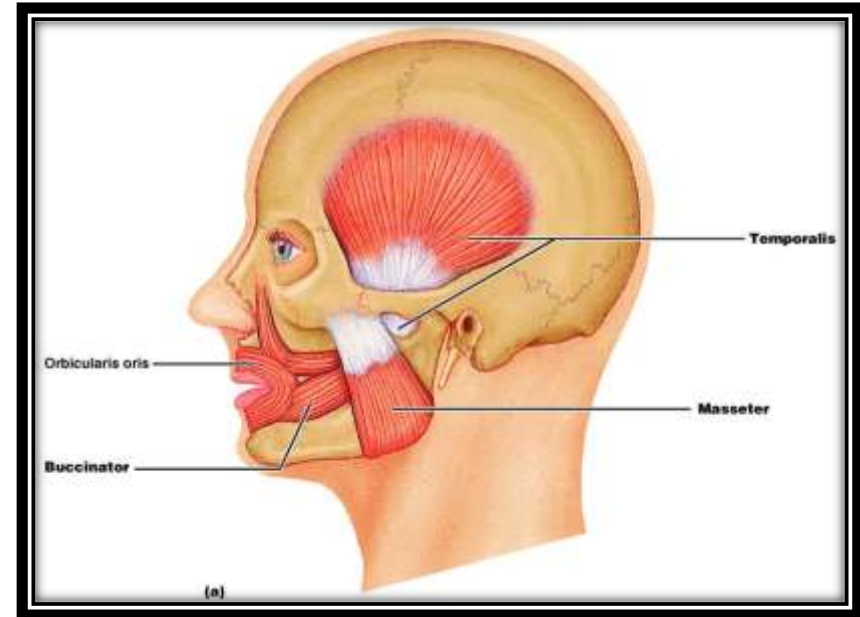
MUSCLES OF MASTICATION

PRINCIPAL MUSCLES OF MASTICATION-

- Four paired muscles:-
- Masseter
- Temporalis
- Medial Pterygoid (internal pterygoid)
- Lateral Pterygoid (external pterygoid)

ACCESSORY MUSCLES OF MASTICATION-

- 1) Buccinator
- 2) Digastric
- 3) Mylohyoid.
- 4) Geniohyoid.



MASSETER

- **Quadrilateral** muscle.
- Consists of 3 layers of fibers.

ORIGIN:

Superficial layer (largest):-

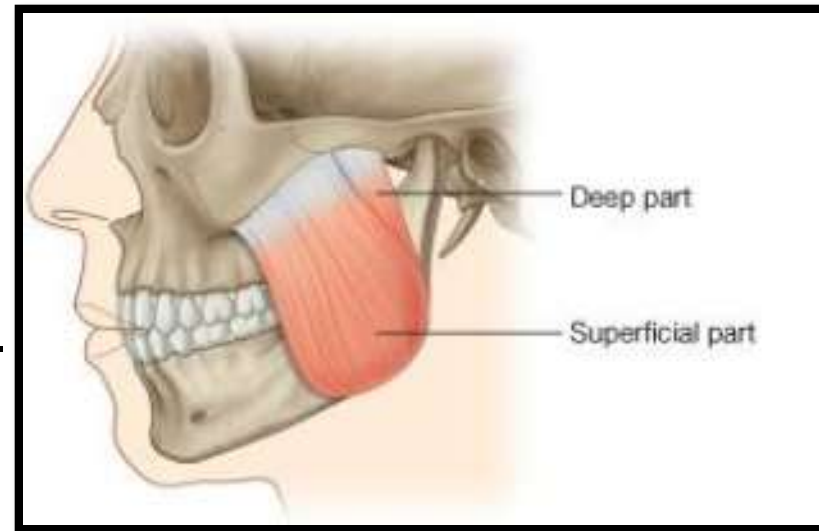
- Lower border of anterior 2/3rd of zygomatic arch.
- Adjoining maxillary process of zygomatic bone.

Middle layer:-

- Lower border of posterior 1/3rd of zygomatic arch.

Deep layer:-

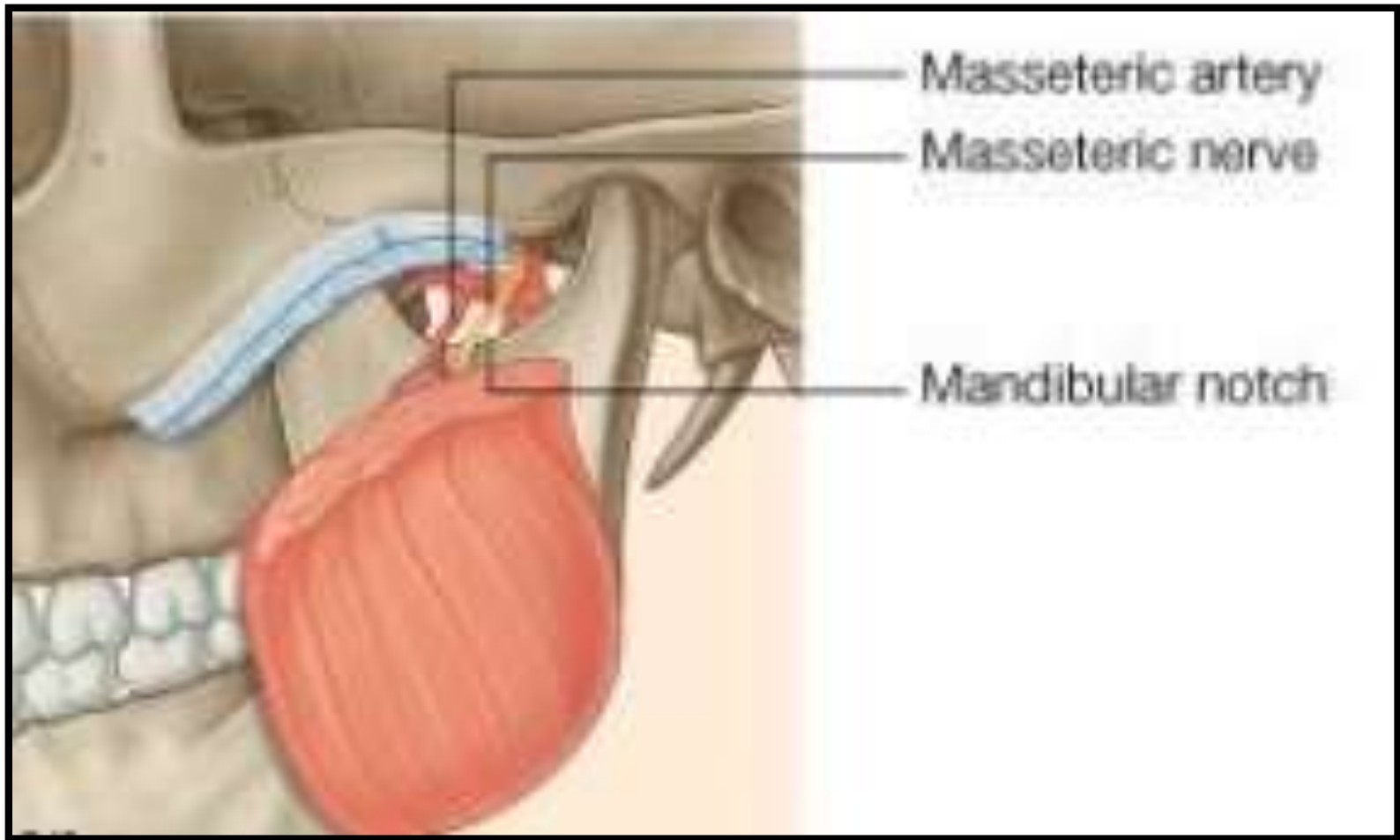
- Deep surface of zygomatic arch.



MASSETER contd...

INSERTION: Lateral surface of the ramus of the mandible.

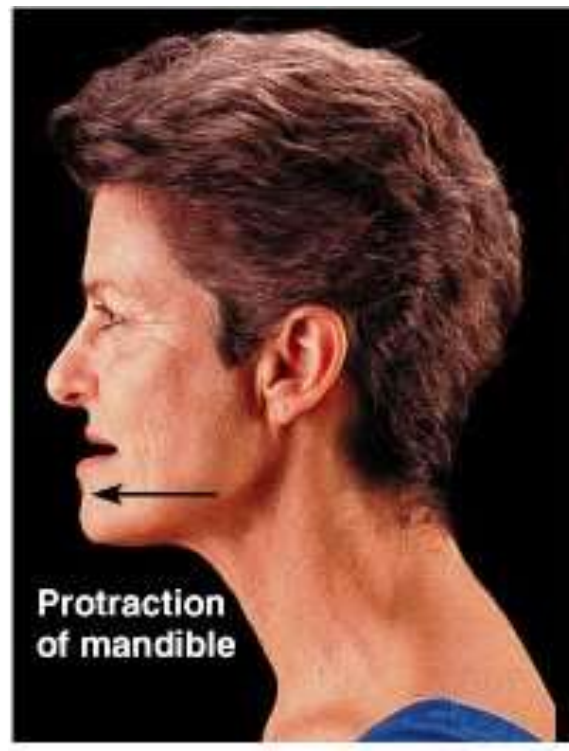
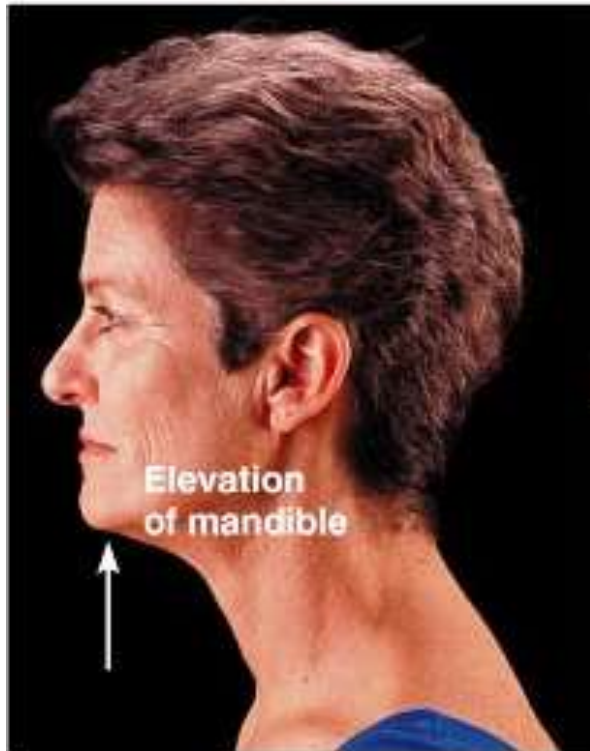
NERVE SUPPLY: **Masseteric branch** of anterior division of mandibular nerve.



MASSETER contd...

ACTIONS:

- **Elevation** of the mandible.
- **Protraction** of mandible (by **superficial fibers**).
- **Retraction** of mandible (by **deep fibers**).



APPLIED ASPECTS OF MASSETERS

TRISMUS

- Tonic spasm of both masseters in tetanus.

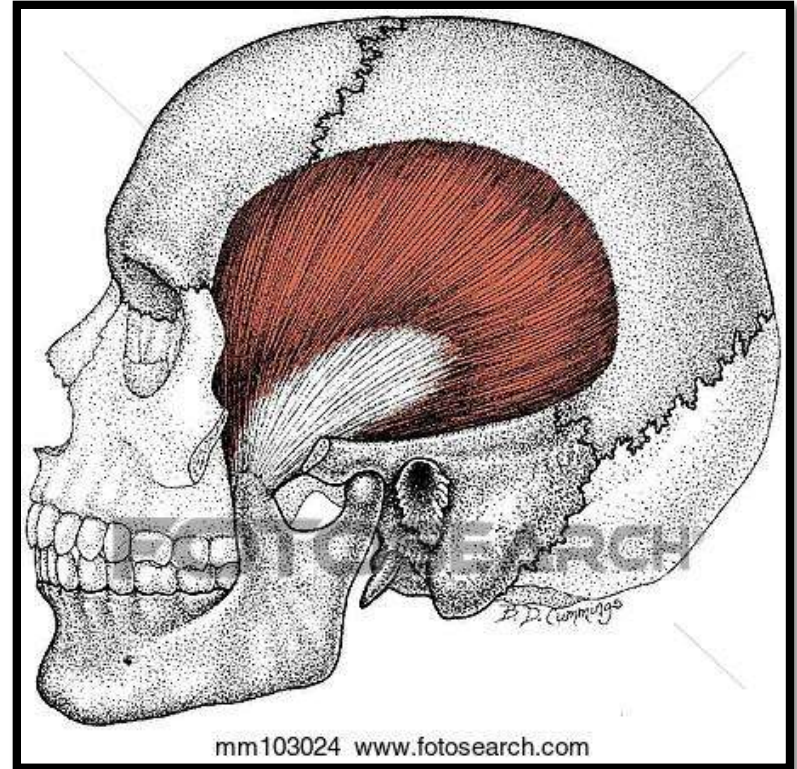


TEMPORALIS

- A **fan-shaped** muscle.
- **Bipennate** muscle.

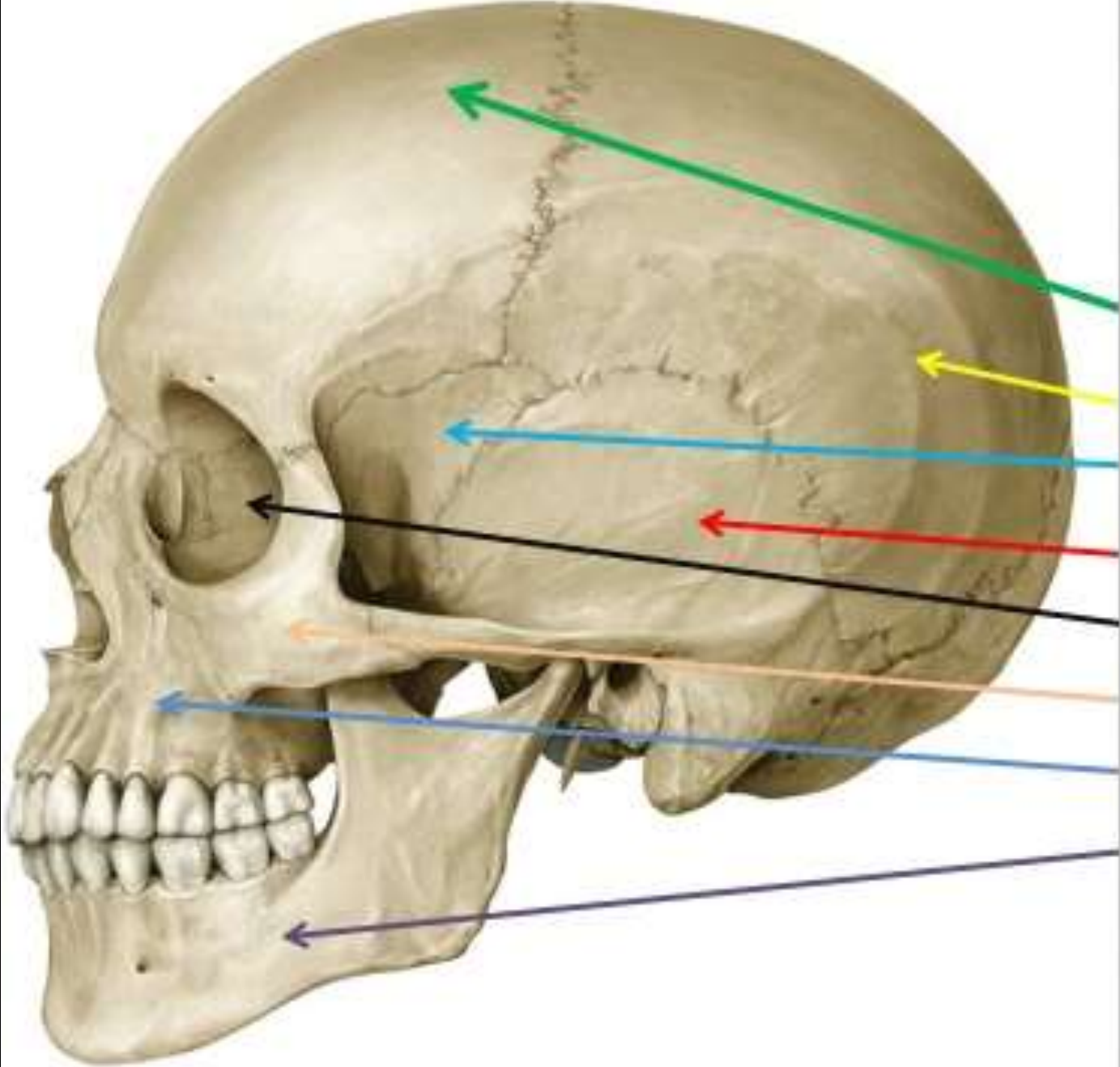
ORIGIN:

- **Floor of temporal fossa** below the inferior temporal line.
- From overlying **temporal fascia**.
- ❖ It covers the majority of the **temporal** bone and lesser portions of the **frontal** and **parietal** bones.



INSERTION:

- On the coronoid process of the mandible.
- Anterior border of ramus of mandible.



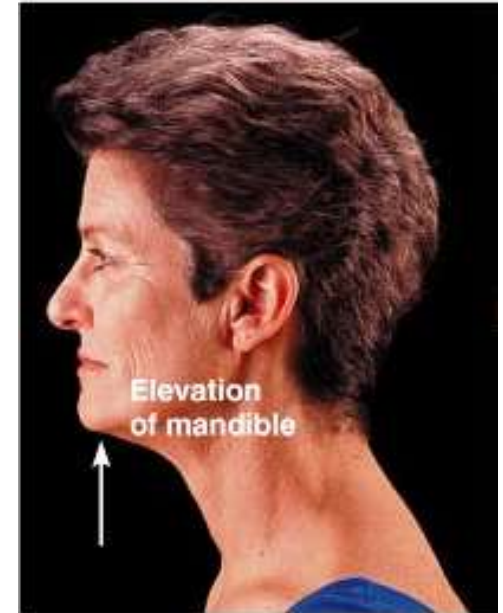
TEMPORALIS contd...

NERVE SUPPLY:

- **Deep temporal branches** of mandibular nerve.

ACTIONS:

- **Elevation** of mandible.
- **Retraction [Retrusion (pull back)]** of the mandible (by posterior fibers).



MEDIALPTERYGOID

(INTERNAL PTERYGOID)

- **Quadrilateral** muscle.

ORIGIN:

- Arises by **2 heads** - **Superficial head.**
- **Deep head.**

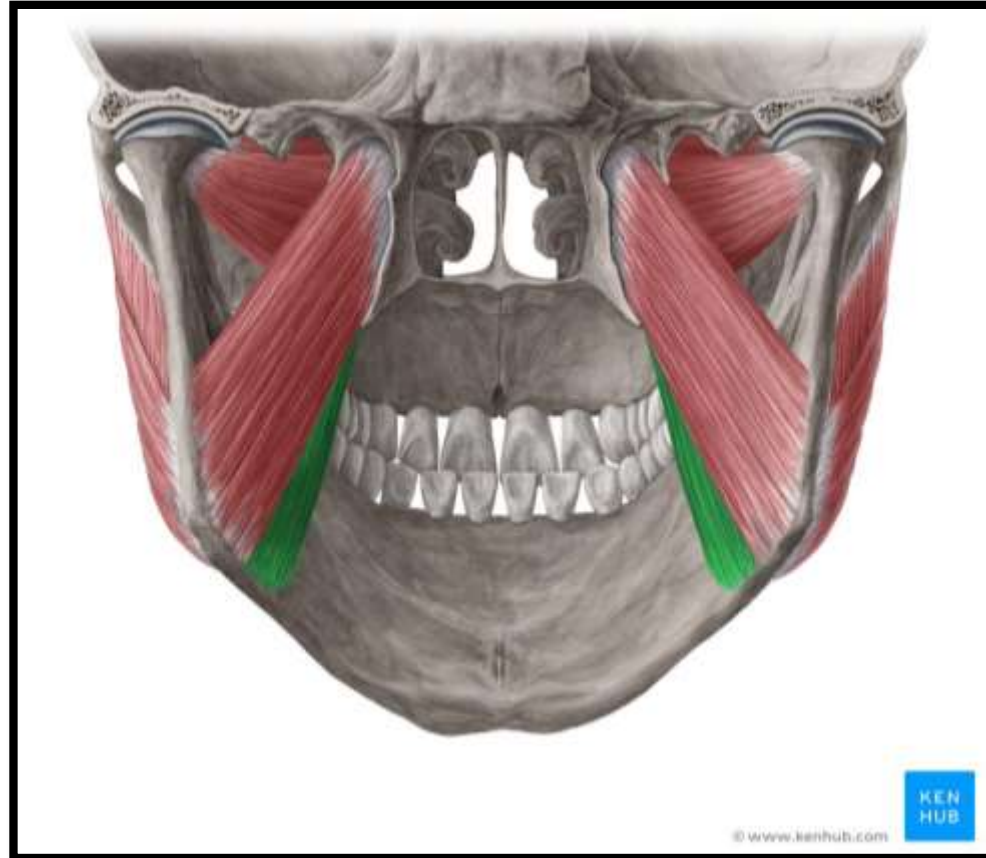
SUPERFICIAL HEAD (small):-

- From tuberosity of maxilla.
- Lateral surface of pyramidal process of palatine bone.

DEEP HEAD (large):-

- Medial surface of lateral pterygoid plate.

INSERTION: Medial surface of the ramus of the mandible below and behind the mandibular foramen and mylohyoid groove.



Infratemporal crest

Upper head of lateral pterygoid

Articular disc

Lower head lateral pterygoid

Capsule

Superficial head medial pterygoid

Sphenomandibular ligament

Deep head medial pterygoid

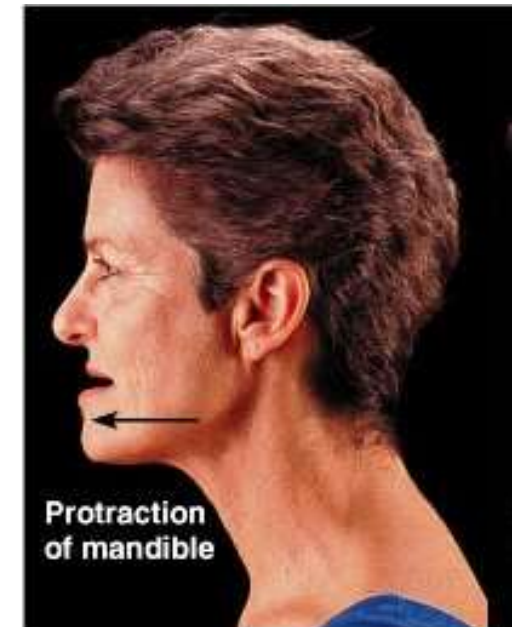
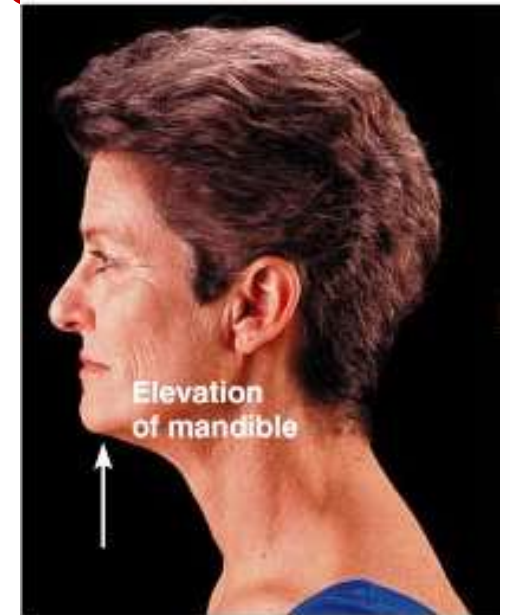
MEDIALPTERYGOID contd...

NERVE SUPPLY:

- Branch from **trunk of mandibular nerve.**

ACTION:

- **Elevation** of mandible (closing of mouth).
- **Protrusion** of mandible (along with lateral pterygoid).
- **Side to side movements of mandible (chewing)** (lateral and medial pterygoid muscles of two sides contract alternately).



LATERAL PTERYGOID (EXTERNAL PTERYGOID)

- **Key muscle** of infratemporal region.

ORIGIN:

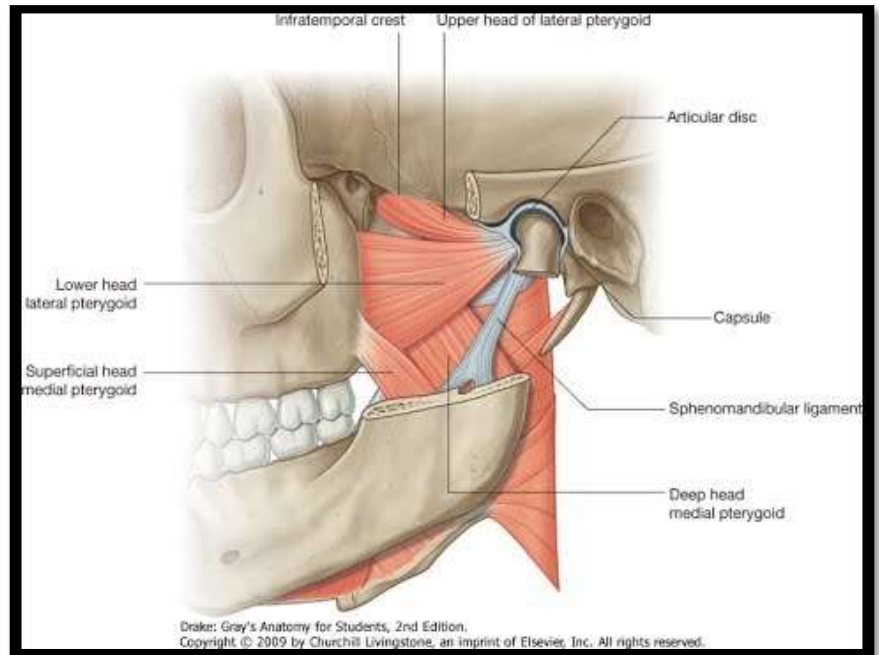
- Arises by **2 heads- Upper head.**
- **Lower head.**

UPPER HEAD:-

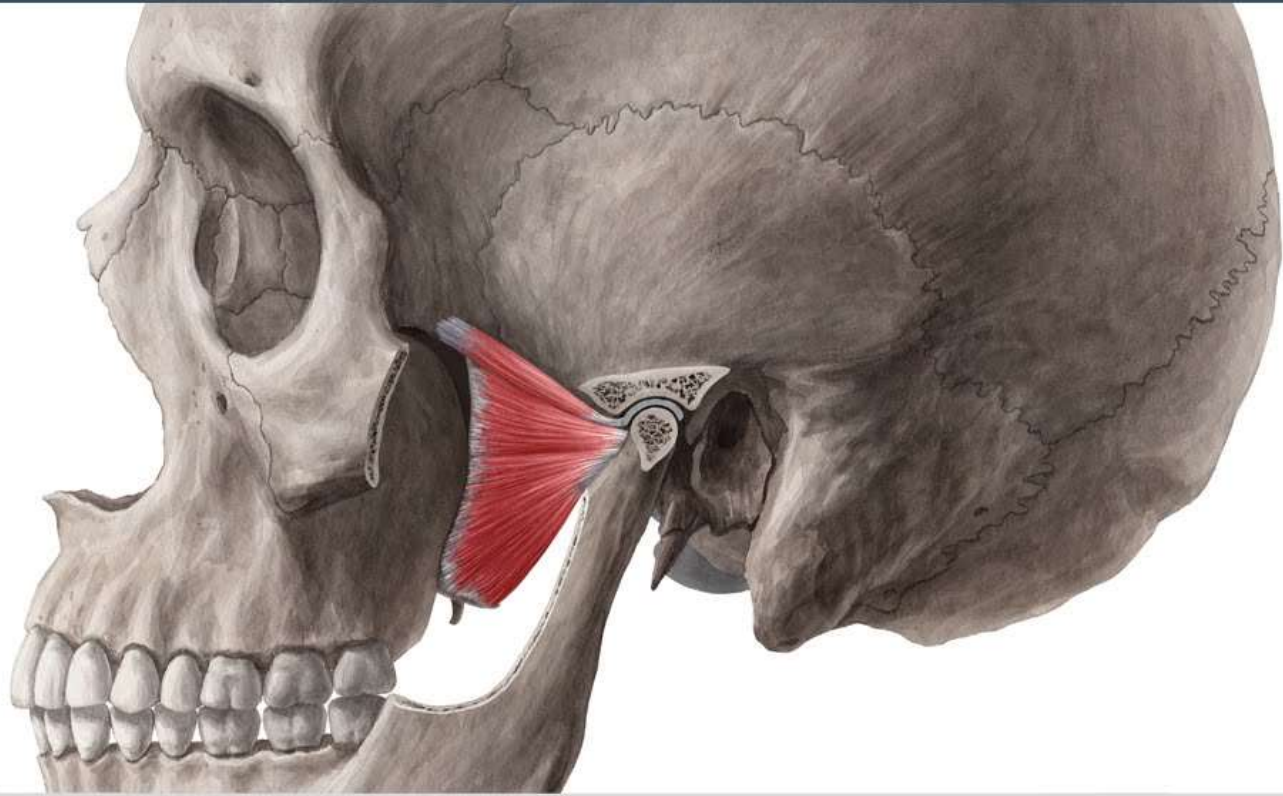
- Infratemporal surface and infratemporal crest of **greater wing of the sphenoid.**

LOWER HEAD:-

- Lateral surface of lateral pterygoid plate.



Lateral pterygoid muscle



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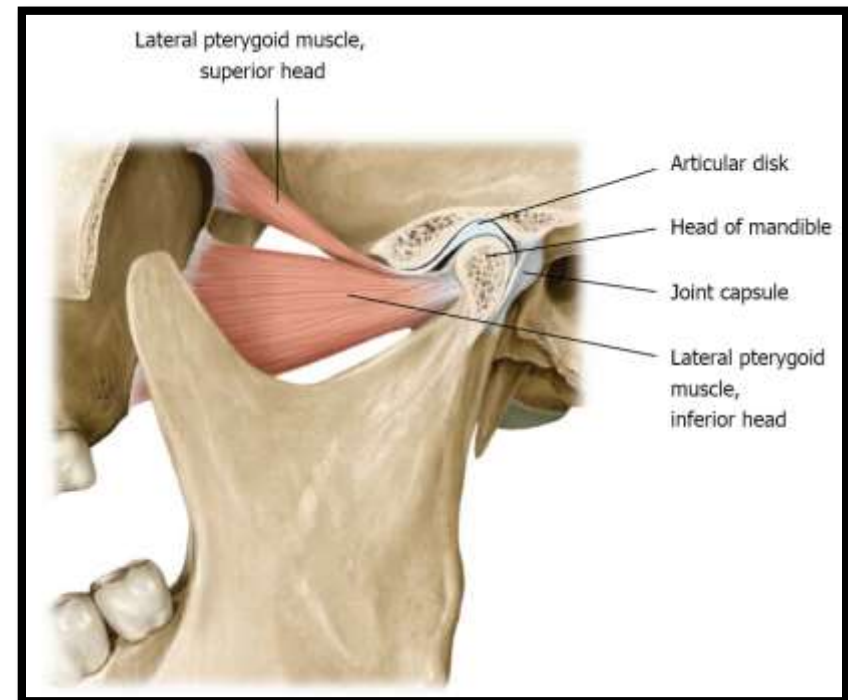
LATERAL PTERYGOID contd...

INSERTION:

- **Pterygoid fovea** at anterior surface of Neck of mandible.
- Capsule and articular disc of temporo-mandibular joint.

NERVE SUPPLY:

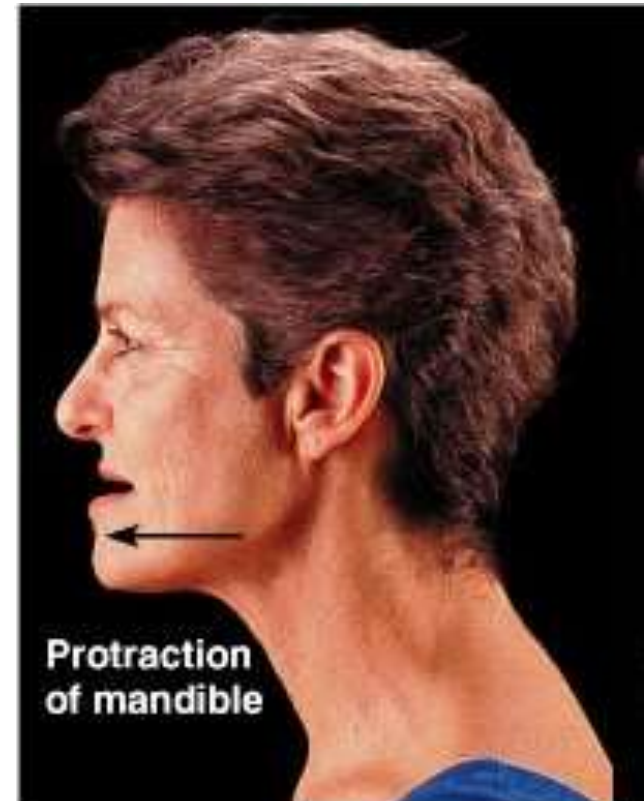
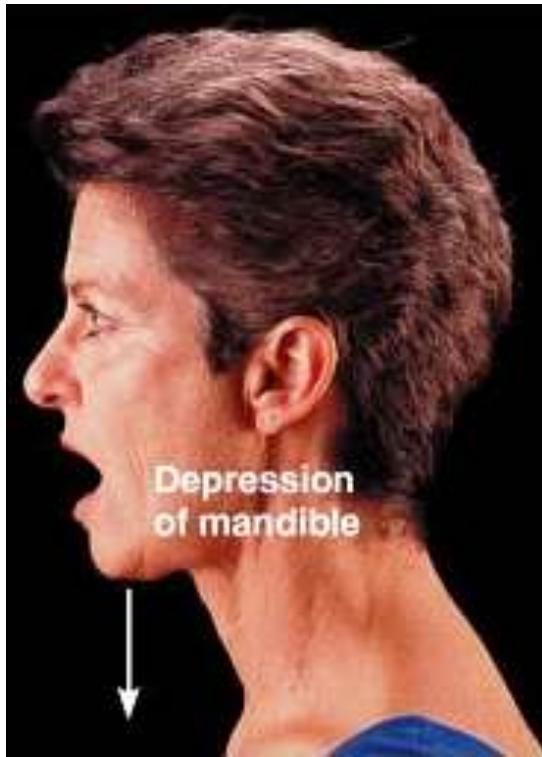
- Branch from **anterior division of mandibular nerve.**

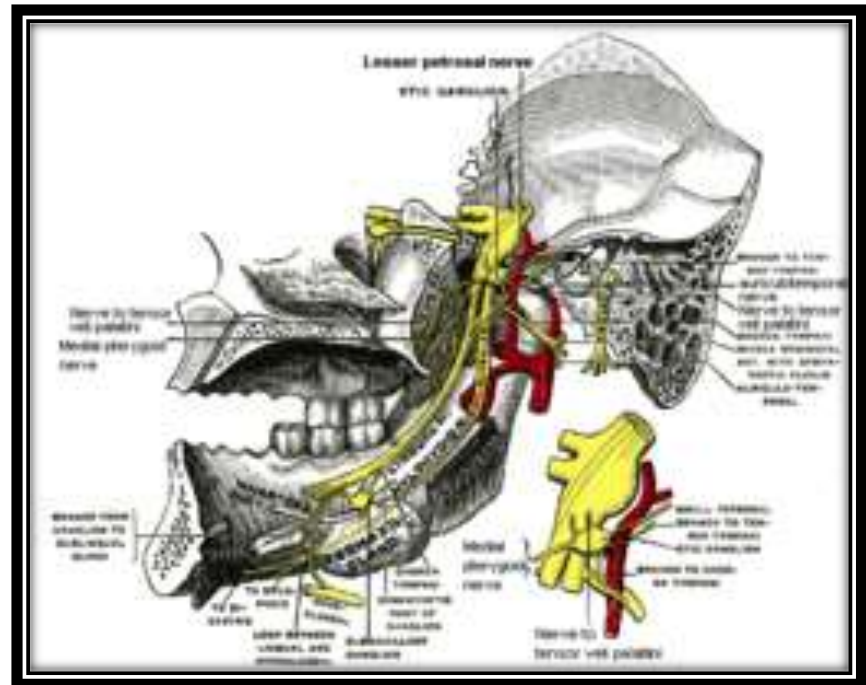
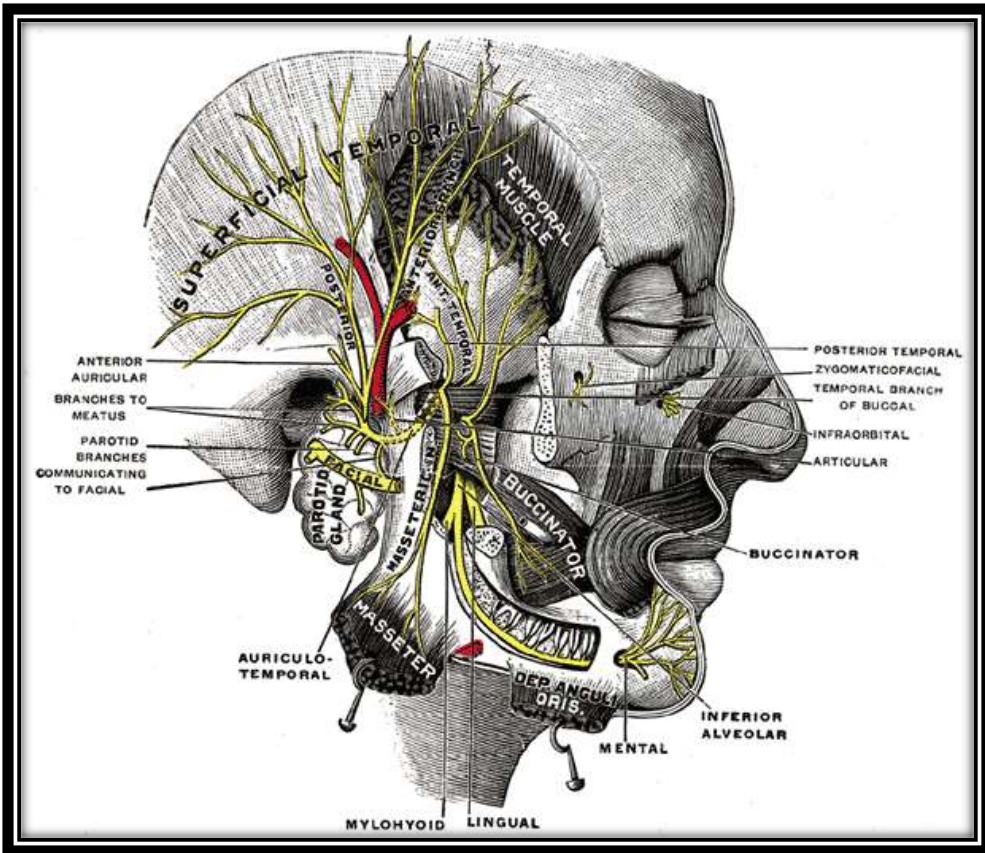


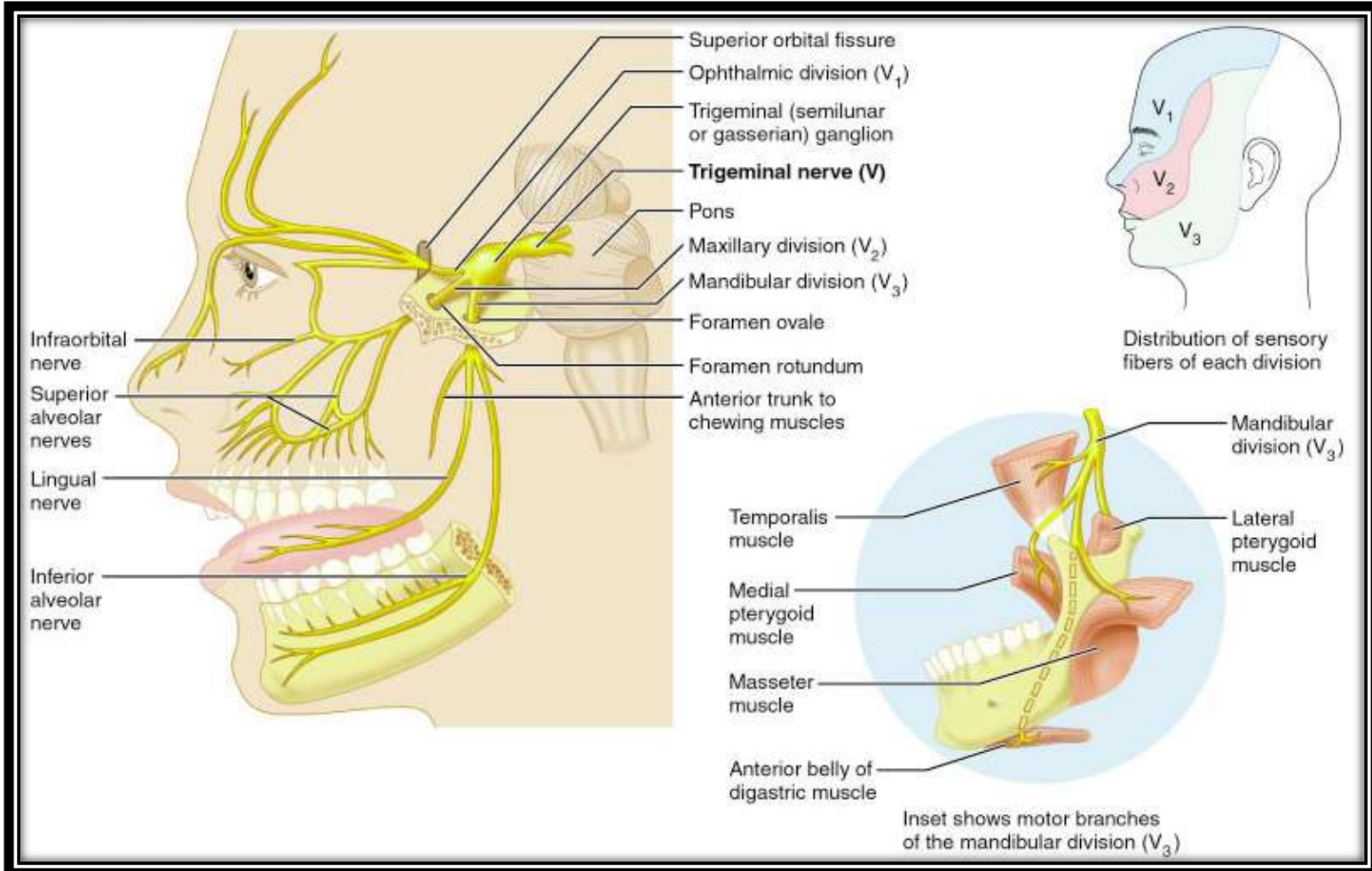
LATERAL PTERYGOID contd...

ACTIONS:

- **Depression of mandible (opening of mouth).**
- **Protrusion of mandible (along with medial pterygoid)**
- **Side to side movements of mandible (chewing)** (lateral and medial pterygoid muscles of two sides contract alternately).







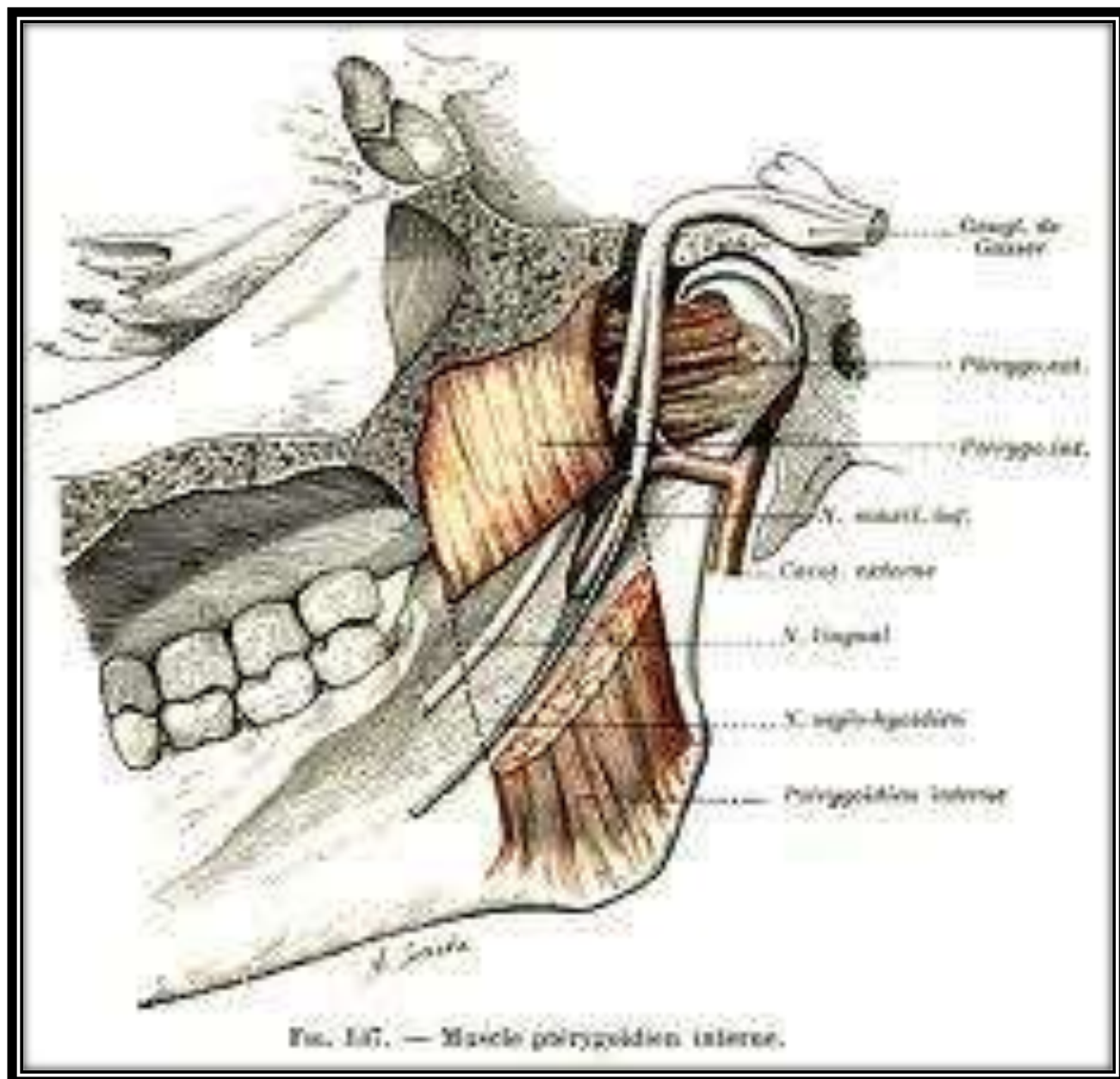


FIG. 147. — Muscle pterygoides internus.

Thank
You

