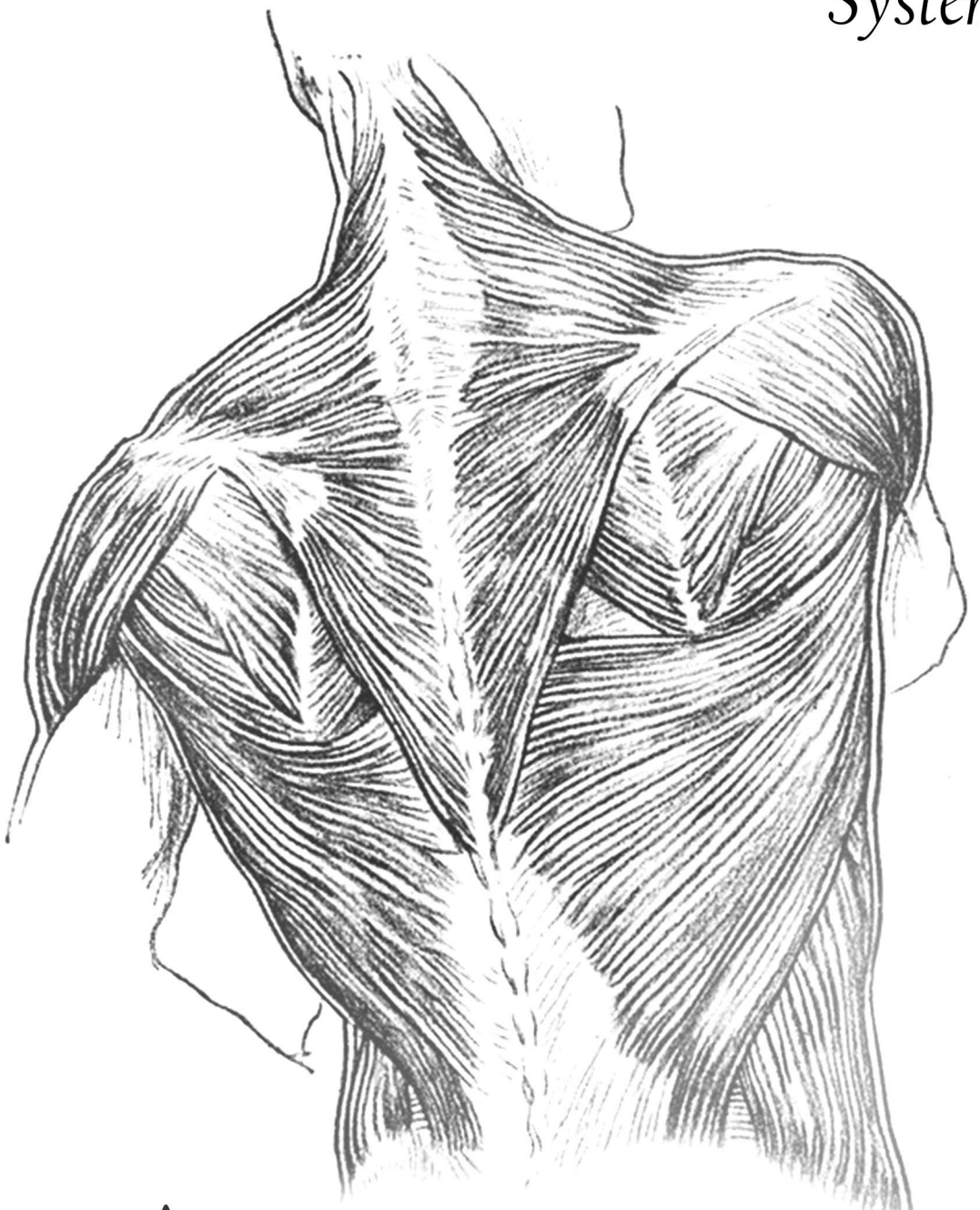
Medical Committee
The University of Jordan

The Skin and
MUSCULOSKELETAL
System



ANATOMY

SLIDES ■
SHEET □

DOCTOR: Amjad Al-Shatrat

SLIDE: Lab 5, Muscles of Mastication

By Mohamed F. Abu Alia in dedication to Rakan Radi

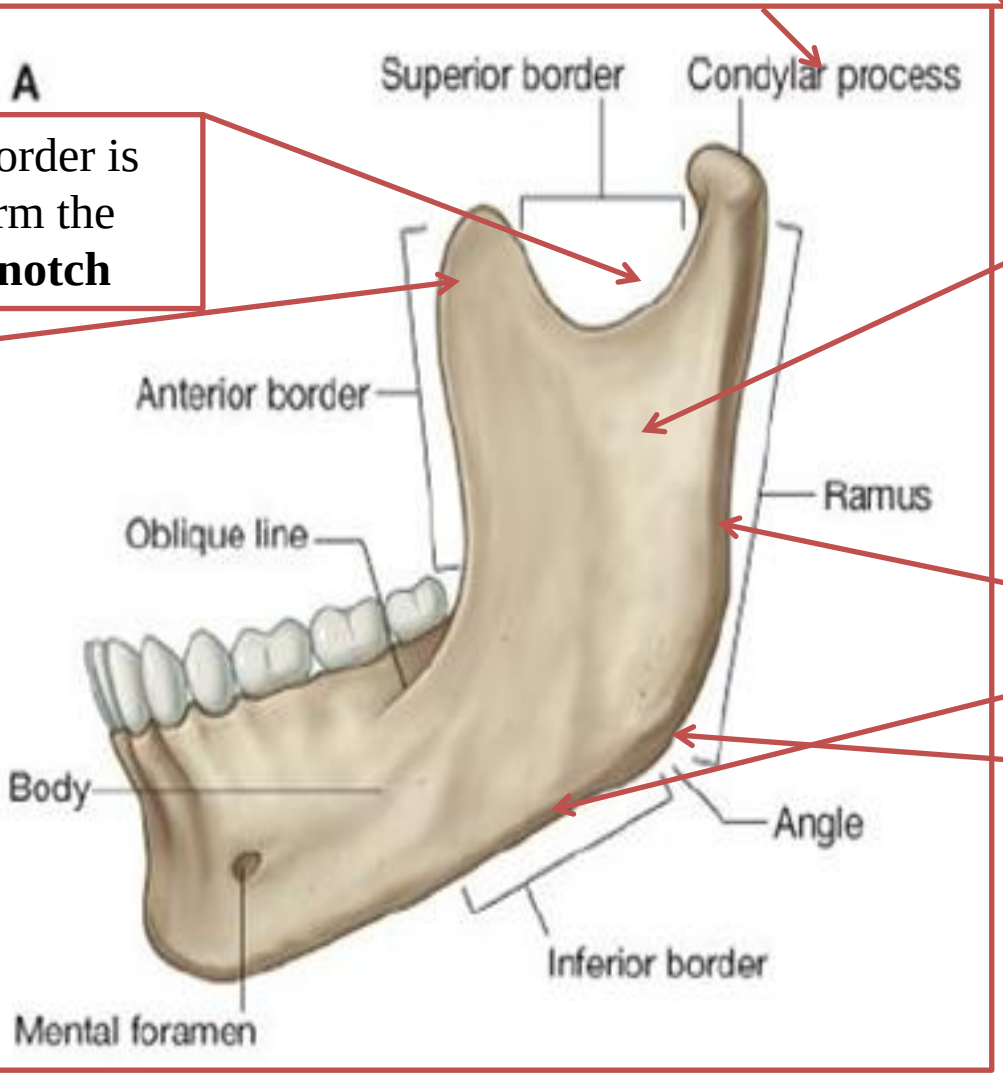
Condylar and coronoid processes

Most of the lateral surface provides attachment for the masseter muscle.

The **ramus of mandible is quadrangular in shape and has medial and lateral surfaces**

The superior border is notched to form the **mandibular notch**

The **coronoid process extends superiorly from the junction of the anterior and superior borders of the ramus**.

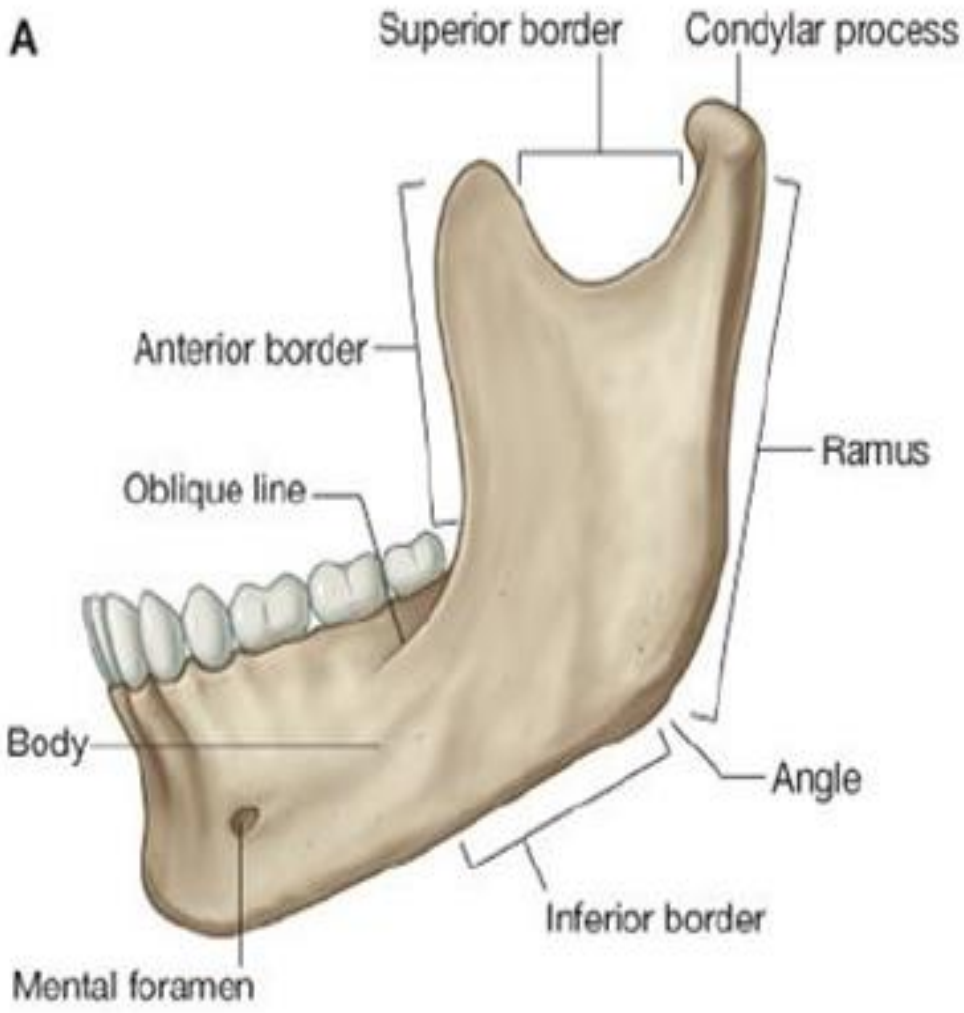


The posterior and **inferior** borders of the ramus intersect to form the **angle of mandible**

provides attachment for **temporalis muscle**

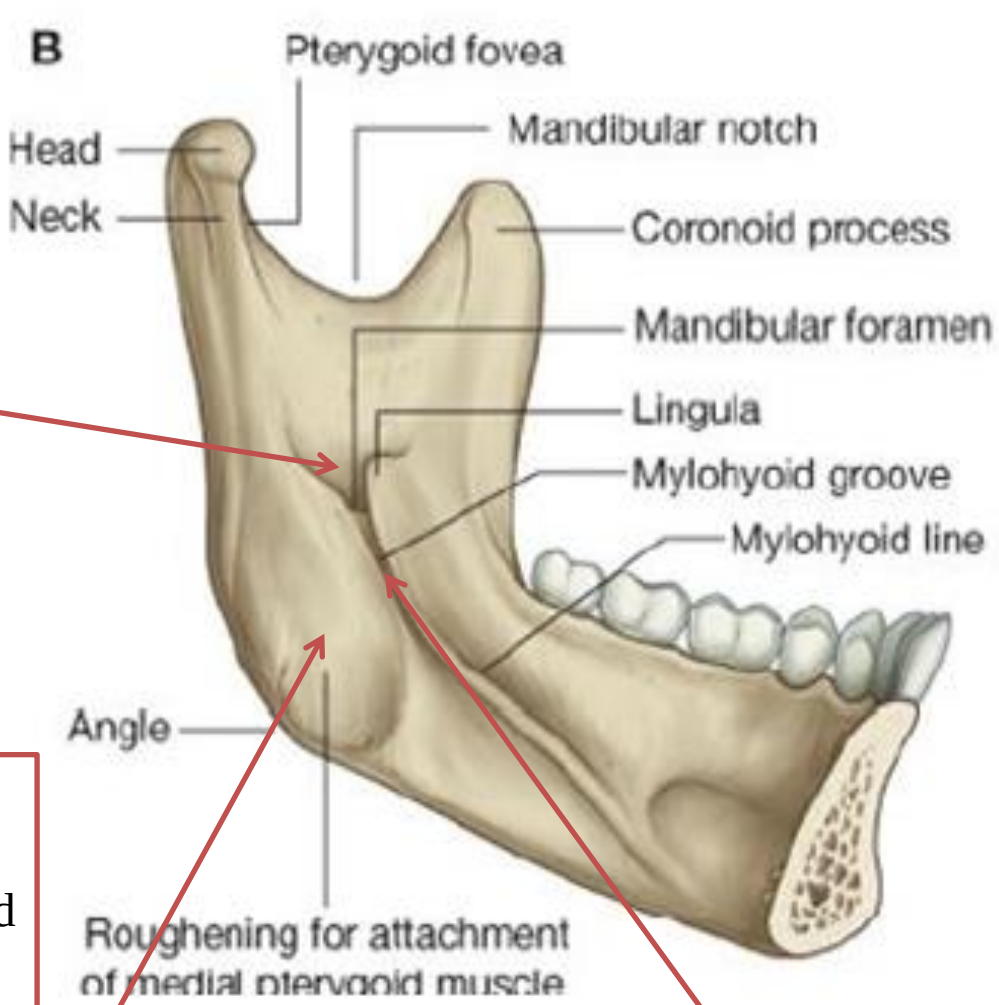
The condylar process is made of:

1-the **head of mandible, participates in forming the** temporomandibul ar joint;
and
2-the **neck of mandible, which bears a shallow depression (the pterygoid fovea) on its anterior** surface for **attachment of the lateral pterygoid muscle**.



The medial surface of the ramus shows the following features:

1-Mandibular foramen, which is the superior opening ofthe mandibular canal. The inferior alveolar nerve and vessels pass through this foramen.



2-A **<u>triangular elevation</u>** (the **lingula) for** attachment of the mandibular end of the sphenomandibular ligament

3-Roughened for attachment of the medial pterygoid muscle

4-An elongate groove (the **mylohyoid groove) extends anteroinferiorly from the mandibular foramen.** The **nerve to mylohyoid is in this groove**

Masseter muscle

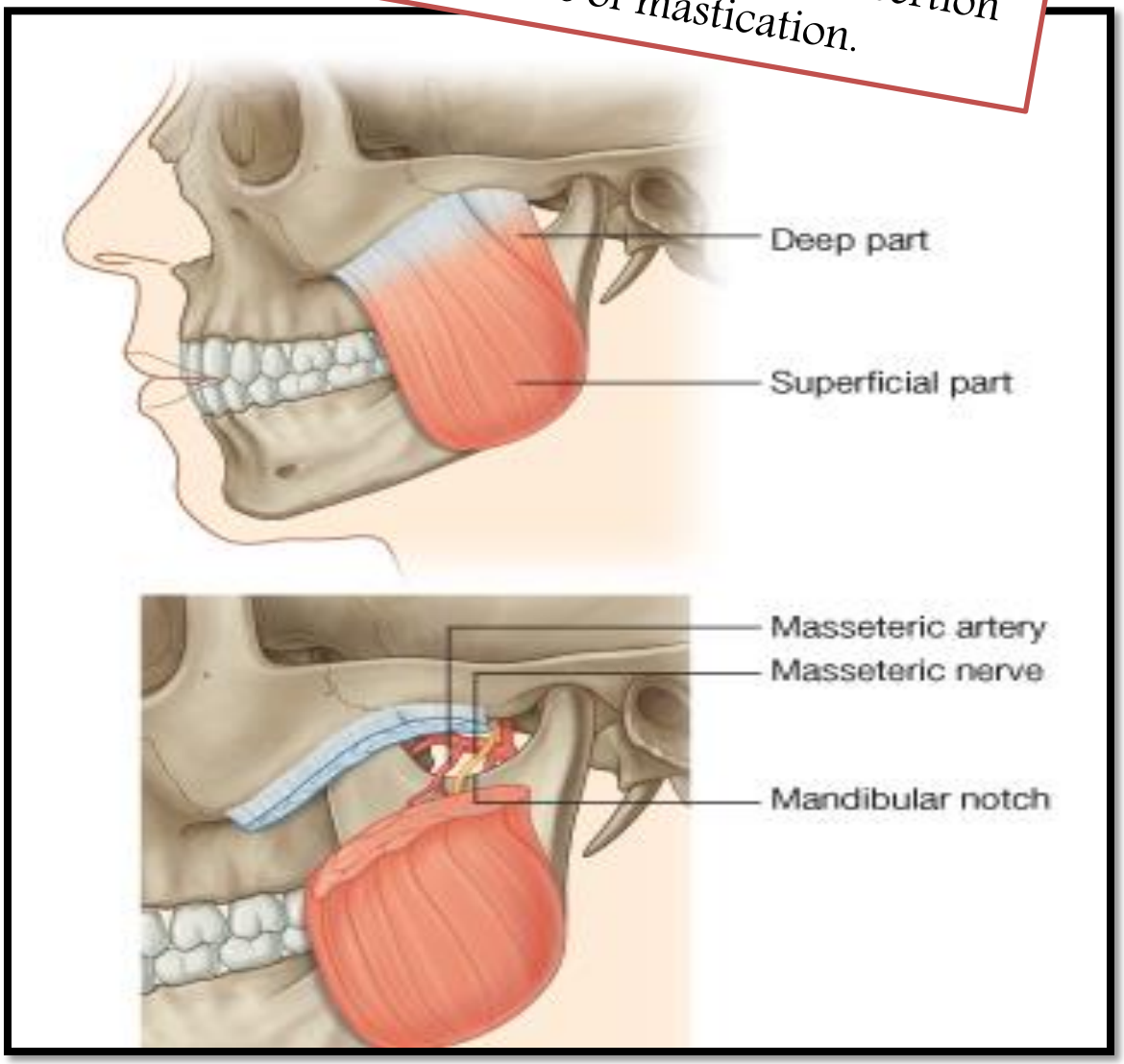
The masseter muscle is quadrangular in shape

Origin: inferior border and inner surface of the zygomatic arch.

insertion: into the lateral surface of the ramus of the mandible and its coronoid process.

The masseter is innervated by the masseteric nerve from **the mandibular** nerve [V_3]

Note: the mandible is the only movable bone in the skull !!! Therefore , it receives the insertion of all the muscles of mastication.



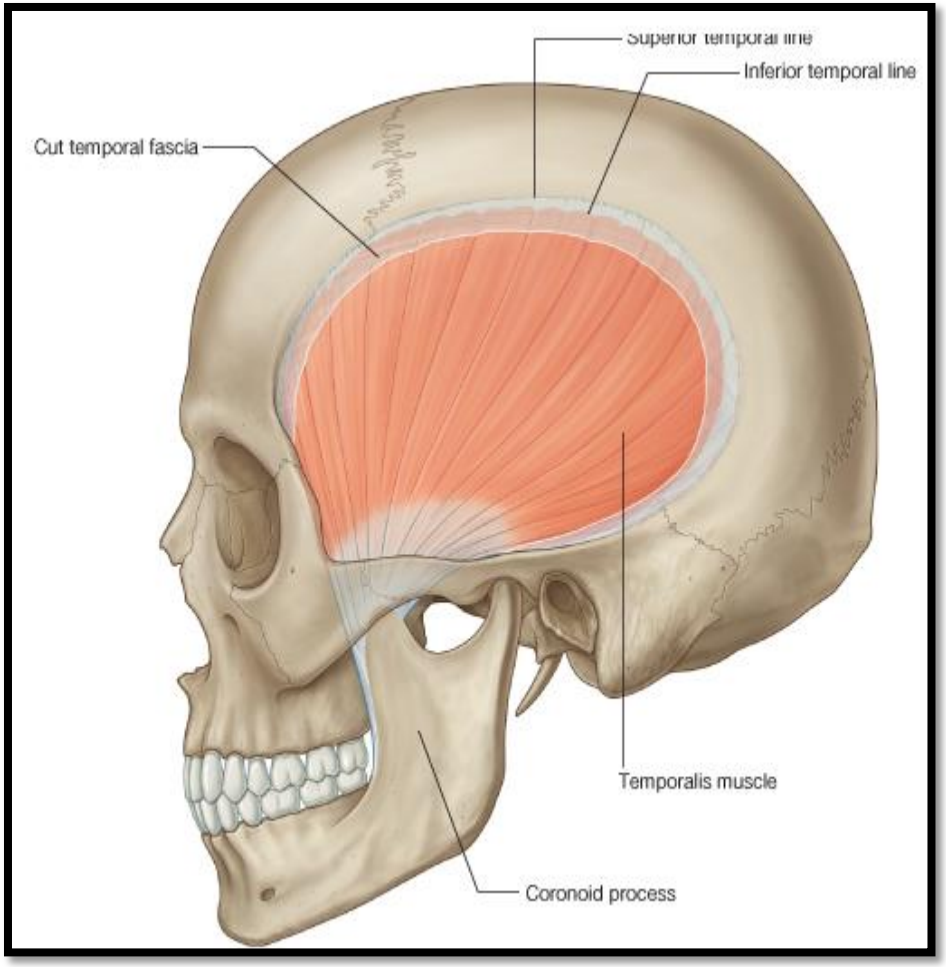
Temporalis muscle

The temporalis muscle is a large fan-shaped muscle that fills much of the temporal fossa

It originates from the bony surfaces of the temporal fossa superiorly to the inferior temporal line

Tip and medial surface of the coronoid process

And anterior border of the ramus of the mandible



Temporalis is a powerful elevator of the mandible, **closes the mandible**

Temporalis is innervated by deep temporal nerves that originate from the **mandibular nerve**

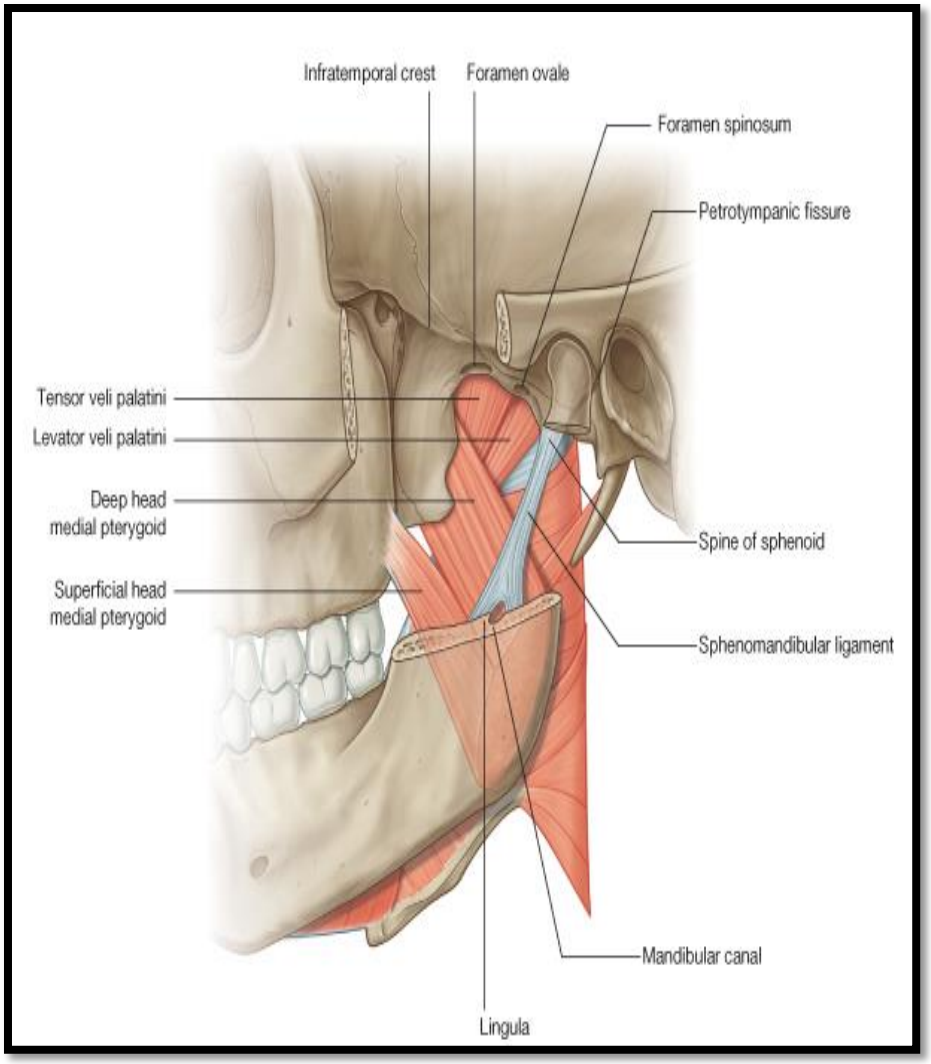
Medial pterygoid

The medial pterygoid muscle is quadrangular in shape and has deep and superficial heads

Origin: medial surface of the lateral plate of the pterygoid process and the pyramidal process of the palatine bone
Insertion: medial surface of the ramus of mandible inferior to mandibular foramen

The medial pterygoid is innervated by the nerve to medial pterygoid from the **mandibular nerve** [V_3].

The medial pterygoid mainly elevates the mandible, **closing jaws**

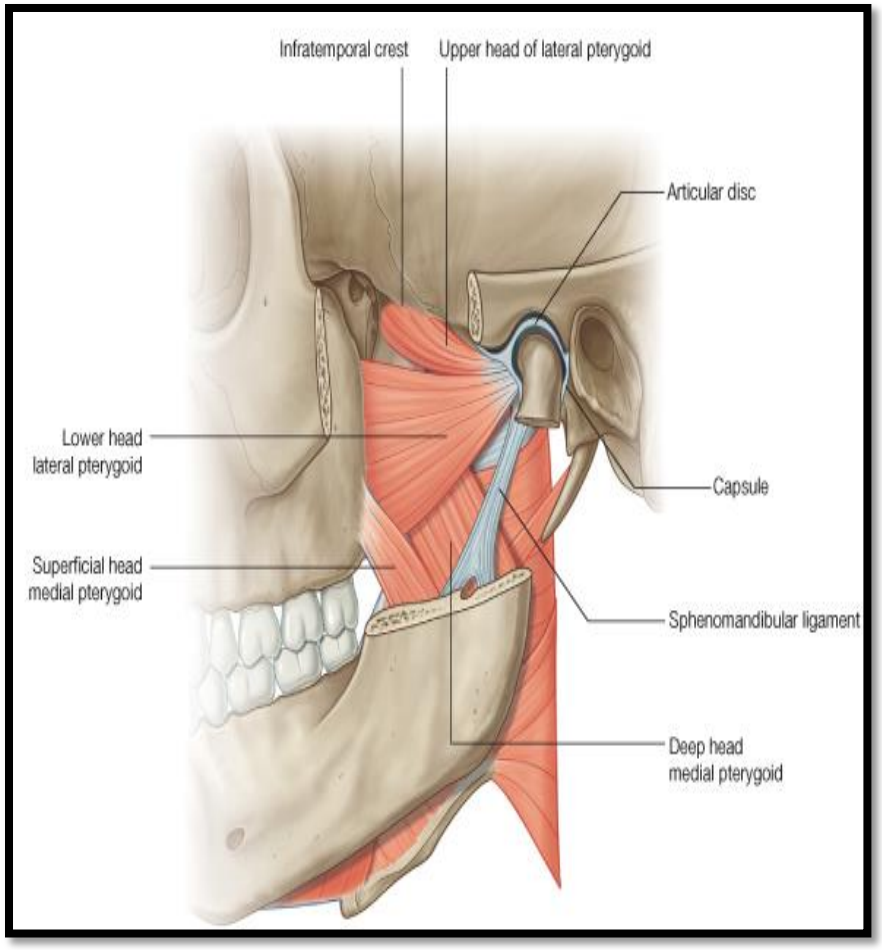


Lateral pterygoid

The lateral pterygoid is a thick triangular muscle

The upper head originates from the roof of the infratemporal fossa (inferior surface of the greater wing of the sphenoid and the infratemporal crest

The lower head is larger and originates from the lateral surface of the lateral plate of the pterygoid process



Insertion:

into the neck of mandible
into the capsule of the Temporomandibular joint
Into the articular disc.

The lateral pterygoid is innervated by the nerve to lateral pterygoid from the mandibular nerve [V_3].