

وسهلا

أهلا

يُمنع أخذ السلايدات بدون
إذن المحرر واي اجراء
يخالف ذلك يقع تحت طائلة
المسؤولية القانونية
جميع المعلومات للاستخدام
التعليمي فقط



الأستاذ الدكتور يوسف حسين

أستاذ التشريح وعلم الأجنة - كلية الطب - جامعة الزقازيق - مصر

رئيس قسم التشريح والأنسجة والأجنة - كلية الطب - جامعة مؤتة - الأردن

دكتورة من جامعة كولونيا المانيا

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Prof. Dr. Youssef Hussein Anatomy - YouTube

https://www.youtube.com/channel/UCVSNqbibj9UWYaJdd_cn0PQ

* Muscles of Mastication:

1 Temporalis:

- origin: Temporal Fossa + Inf Temporal line.

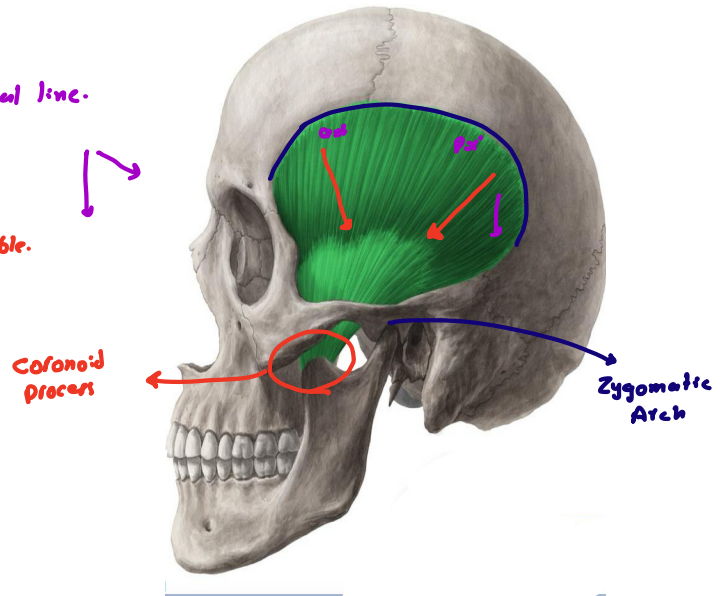
- Insertion: coronoid process of Mandible.

Fan shaped:

- Direction of Fibers:

ant fibers: vertical Downward.

post fibers: Downward Forward



2 Masseter:

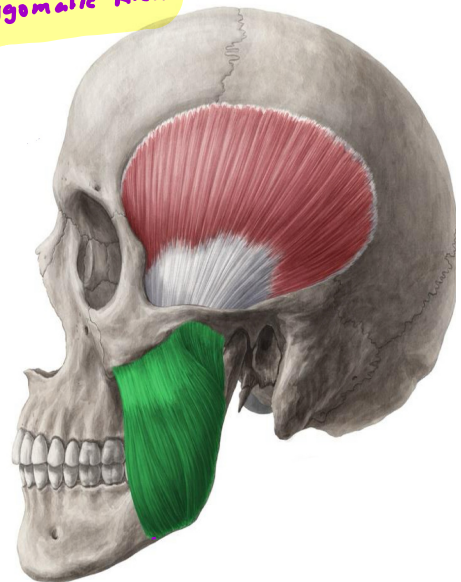
- origin:
 superficial fibers: Lower Border of Zygomatic Arch
 Deep fibers: Deep surface of Zygomatic Arch

- Insertion: outer / lateral surface of the ramus of Mandible.

- Direction of Fibers:

ant fibers: Directed Downward & Backward.

post fibers: Vertically Downward.

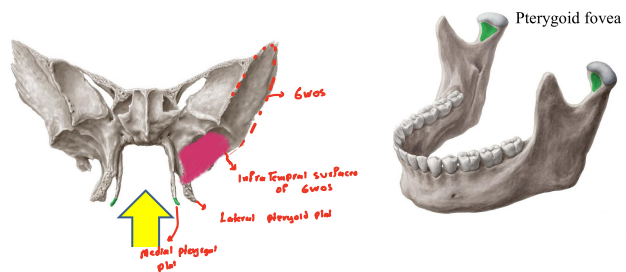
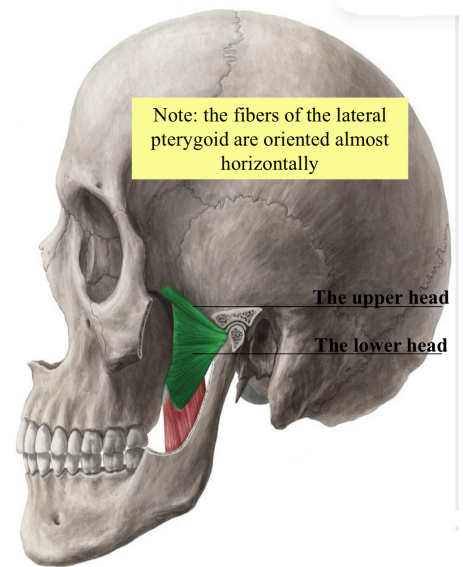


3 Lateral pterygoid muscle:

- origin:
 - upper Head : Infra Temporal surface of greater wing of sphenoid
 - Lower Head : Lateral surface of Lateral pterygoid plate
- Insertion : pterygoid fovea + capsule of Temporomandibular Joint.

- Direction of Fibers:

Horizontally. #.

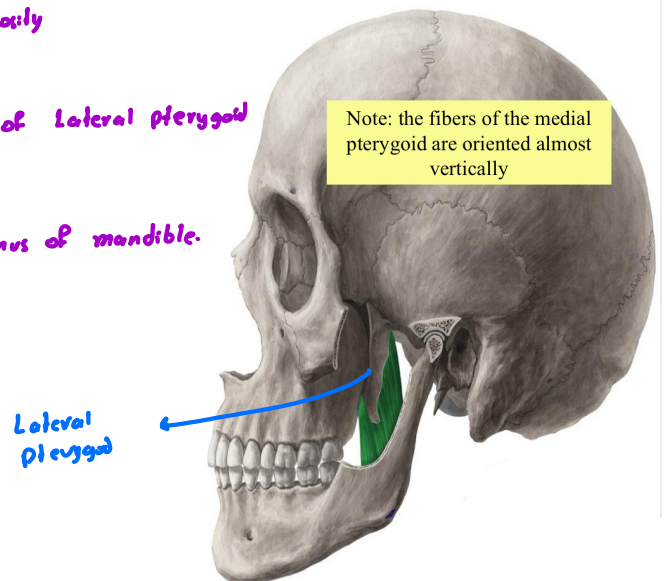


4 Medial pterygoid muscle:

- origin:
 - superficial Fibers : Maxillary tuberosity
 - Deep Fibers : Medial surface of Lateral pterygoid
- Insertion : Inner / Medial surface of the ramus of mandible.

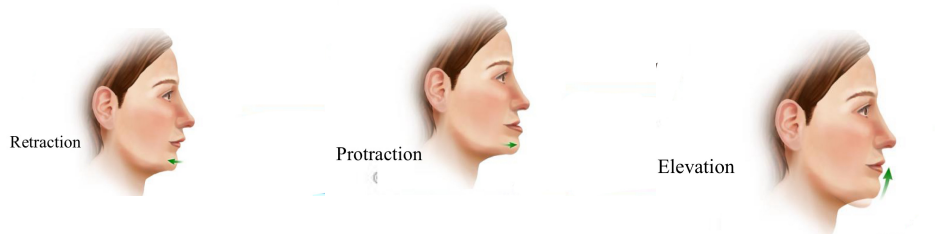
- Direction of Fibers:

Downward . Backward, laterally



• **Actions of the muscles of mastication**

	Elevation (closing) Chewing	Depression (opening)	Protrusion	Retraction	Side to side movement
1- Masseter	+ve main		+ve		
2- Temporalis	+ve		+ve	+ve (posterior fibres)	
3- M. pterygoid	+ve		+ve		+ve
4- L. pterygoid		+ve	+ve		+ve



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* Muscles of mastication

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Muscles of mastication

- **General rules** : <https://www.youtube.com/@ProfDrYoussefHusseinAnatomy/playlists>

They include **4 muscles**:

1) Temporalis

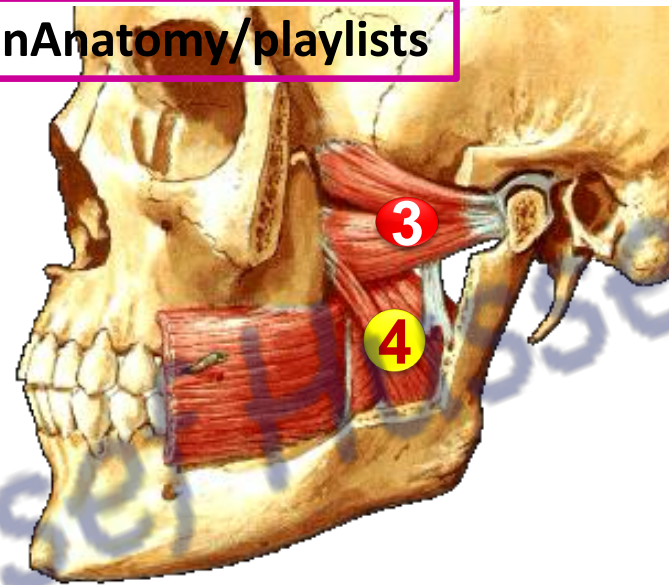
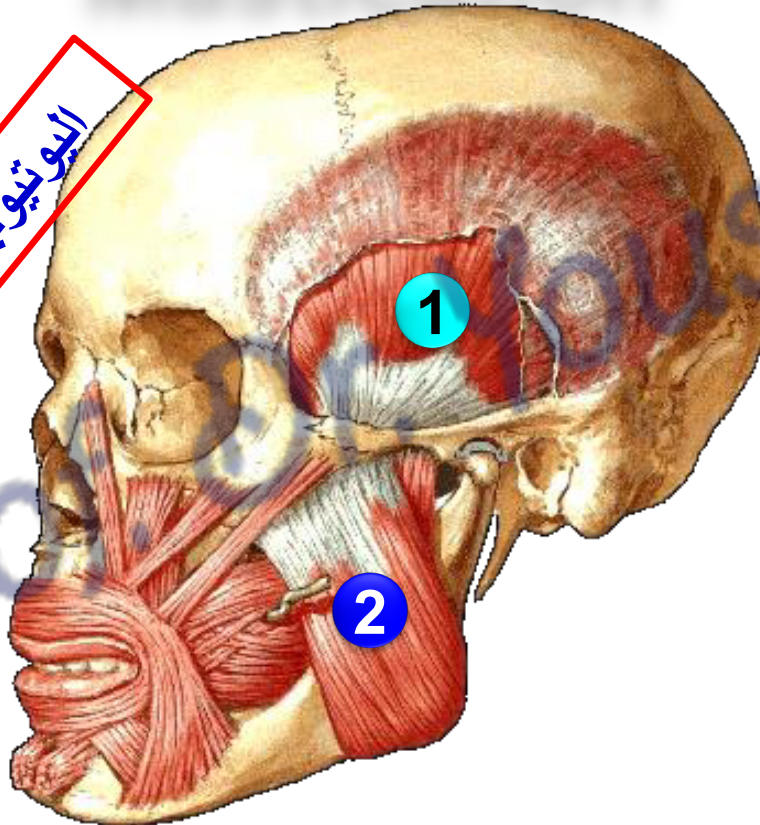
2) Masseter.

3) Lateral pterygoid.

4) Medial pterygoid.

- **Origin**: they arise from the temporal and infratemporal fossa.
- **Insertion**: they are inserted into the ramus of the mandible.
- **Nerve supply**: they are supplied by the mandibular nerve.
- **Development**, they developed from the 1st pharyngeal arch.

Muscles of Mastication



1. Temporalis
2. Masseter
3. Lateral Pterygoid
4. Medial pterygoid

Temporalis

Origin From
Temporal fossa
and temporal
fascia

**Zygomatic
arch.**

**Fan shaped
muscle**

Origin From
Inferior temporal
line

- **Direction of fibres;**
 - **Anterior** fibers are vertical downward.
 - **Posterior** fibers are downward and forward.

Insertion: into the tip, anterior border and posterior border and inner surface of the **coronoid process.**

Masseter muscle

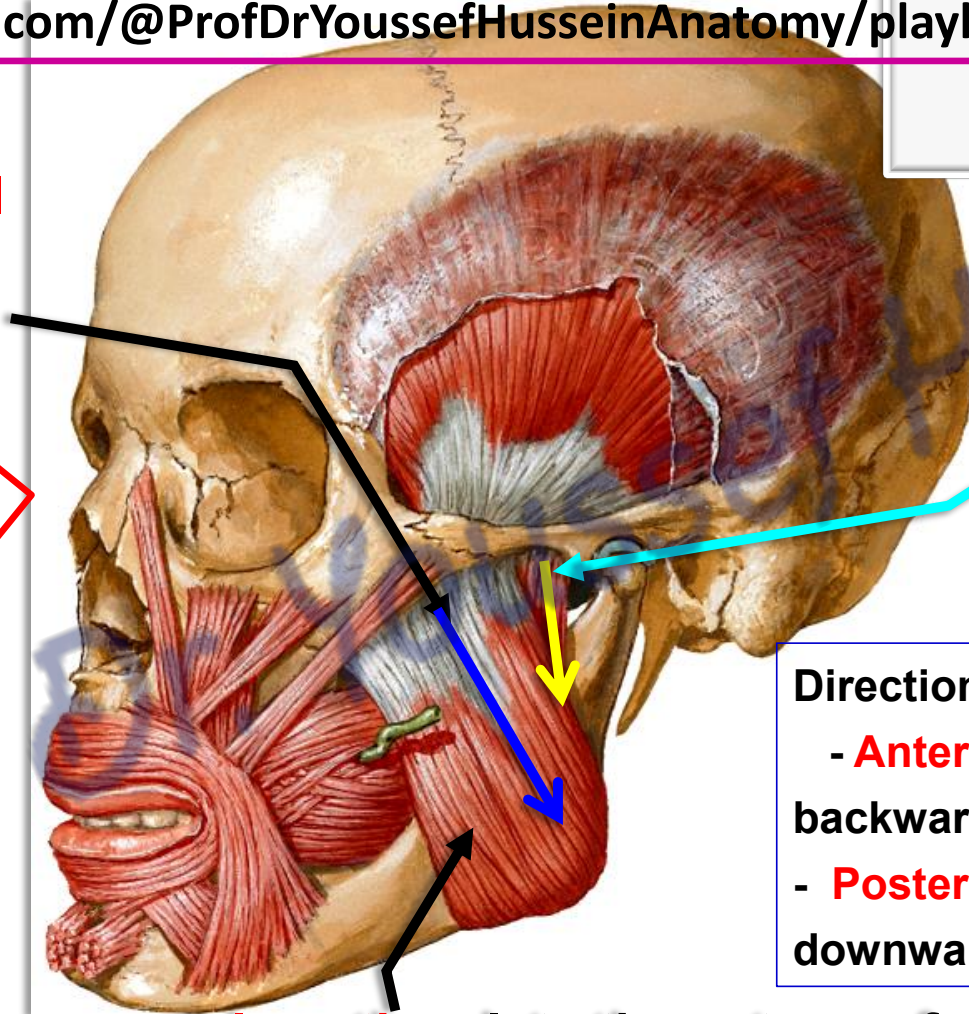
Origin: Superficial fibers from lower border zygomatic arch

Origin: Deep fibers from deep surface of zygomatic arch

Direction of the fibres:

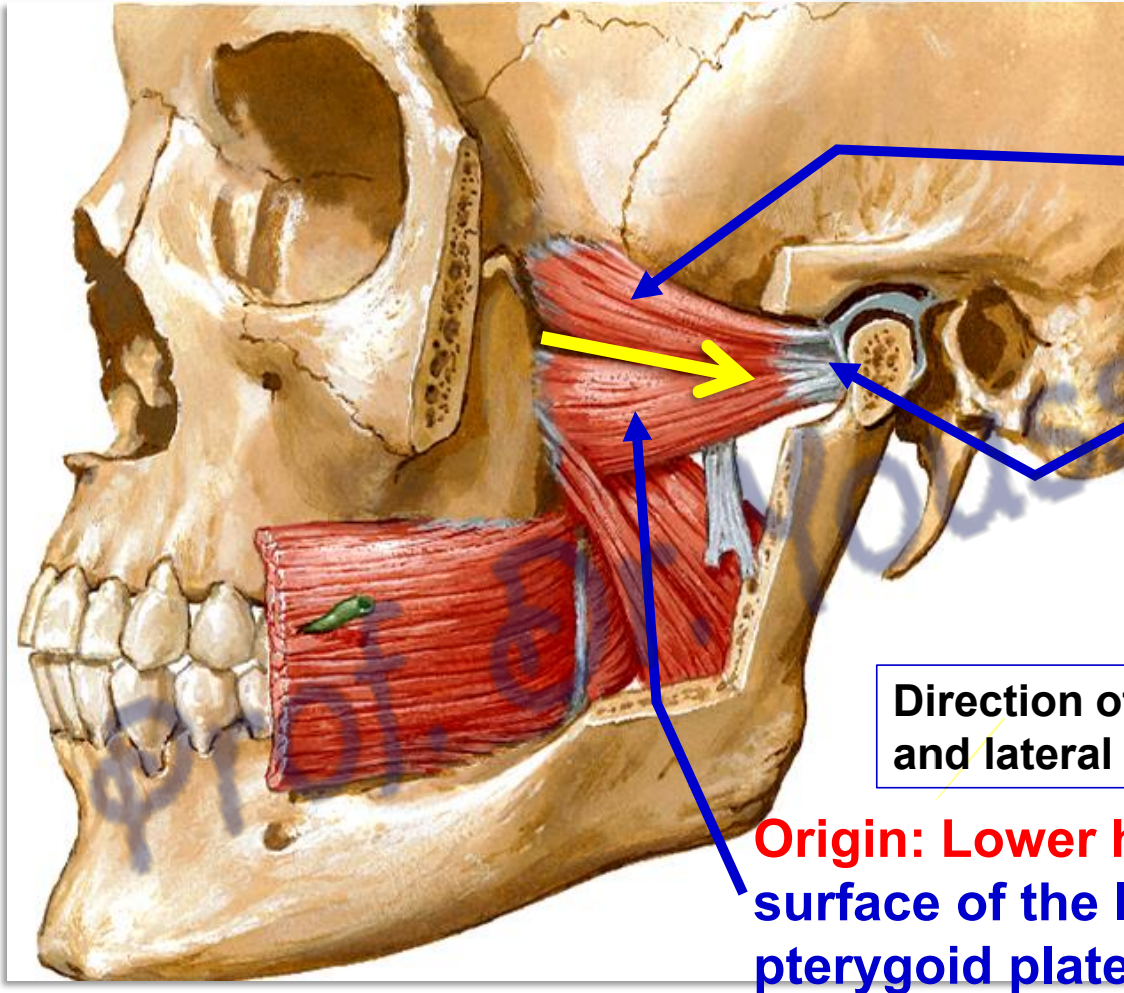
- **Anterior** directed downwards and backwards.
- **Posterior** directed vertically downwards.

Insertion: Into the outer surface of the ramus of the mandible



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Lateral Pterygoid muscle



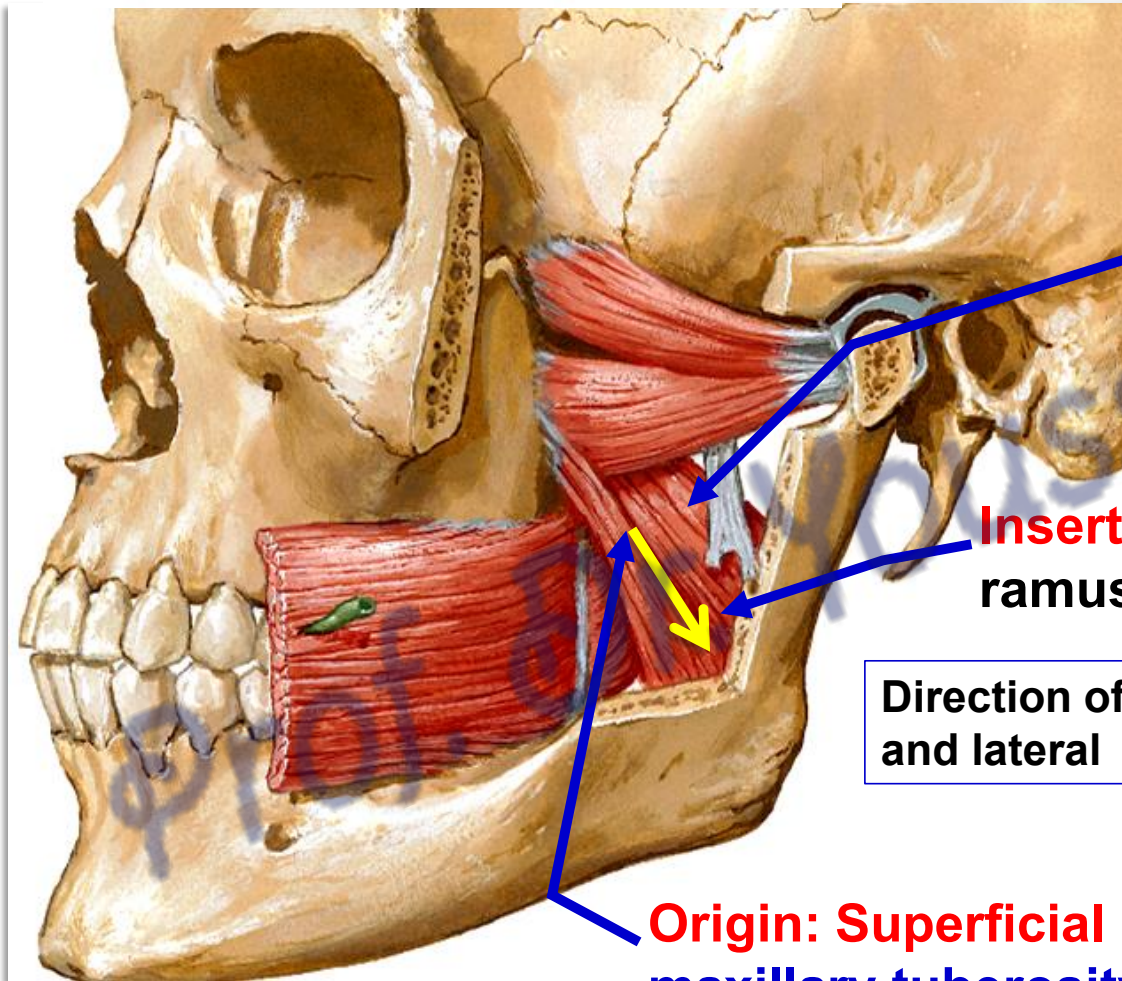
Origin: Upper head from infratemporal surface of greater wing of sphenoid

- **Insertion:** Pterygoid fovea on anterior aspect of neck of mandible.
- Capsule and articular disc of temporomandibular joint.

Direction of the fibres: horizontally backward and lateral

Origin: Lower head lateral surface of the lateral pterygoid plate

Medial Pterygoid muscle



Origin: Deep head from medial surface of lateral pterygoid plate

Insertion: Into the inner surface of the ramus and angle of the mandible

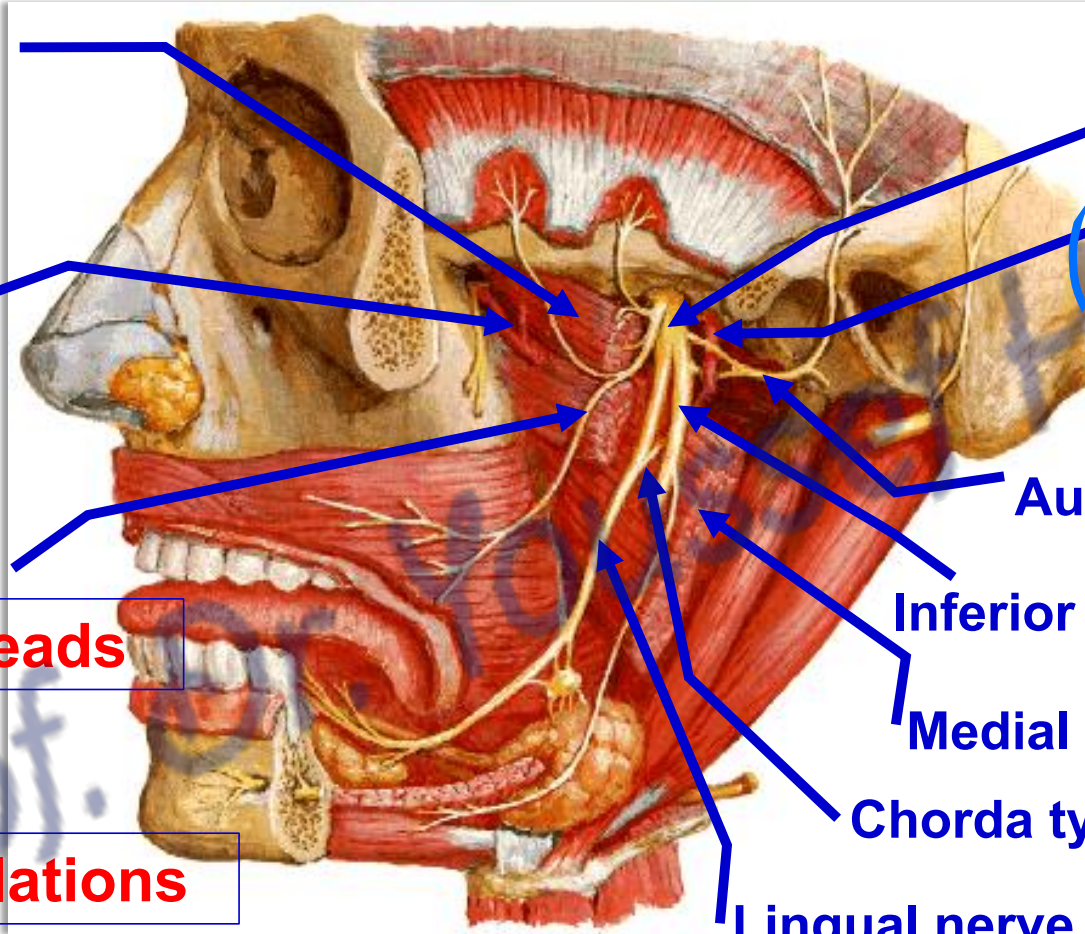
Direction of the fibres: downward, backward and lateral

Origin: Superficial head from maxillary tuberosity

- Actions of the muscles of mastication**

	Elevation (closing) Chewing	Depression (opening)	Protrusion	Retraction	Side to side movement
1- Masseter	+ve main		+ve		
2- Temporalis	+ve		+ve	+ve (posterior fibres)	
3- M. pterygoid	+ve		+ve		+ve
4- L. pterygoid		+ve	+ve		+ve

Deep Relations



Lateral
pterygoid

3rd part of
Maxillary
artery

Buccal nerve

Between 2 heads

Inferior Relations

★ 1st part of maxillary artery

Mandibular nerve

Middle meningeal
artery

Otic ganglion

Auriculotemporal nerve

Inferior alveolar nerve ★

Medial pterygoid muscle

Chorda tympani

Lingual nerve ★

2nd part of maxillary artery

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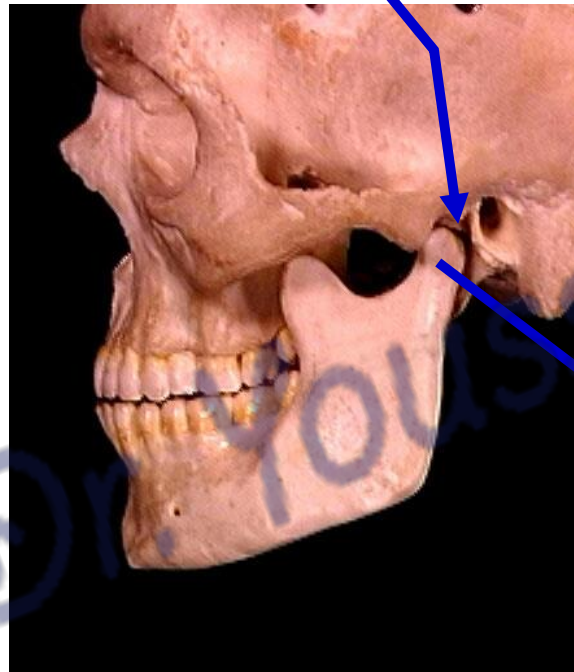
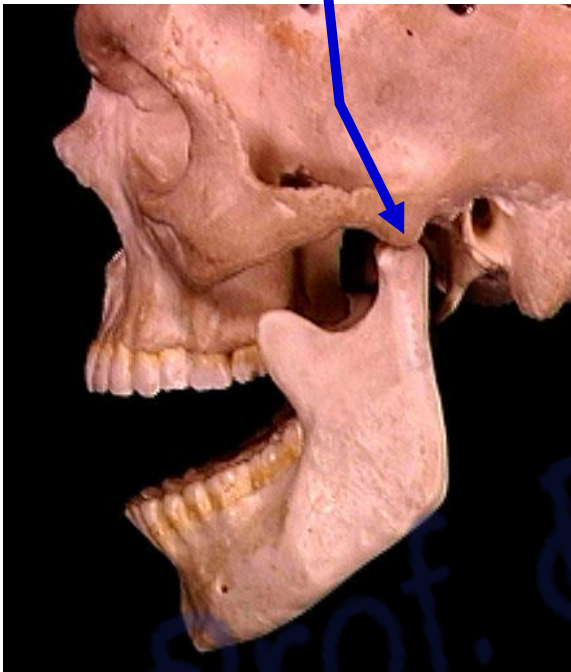
Temporomandibular joint

<https://www.youtube.com/@ProfDrYoussefHusseinAnatomy/playlists>

Type: synovial joint of **ellipsoid** variety

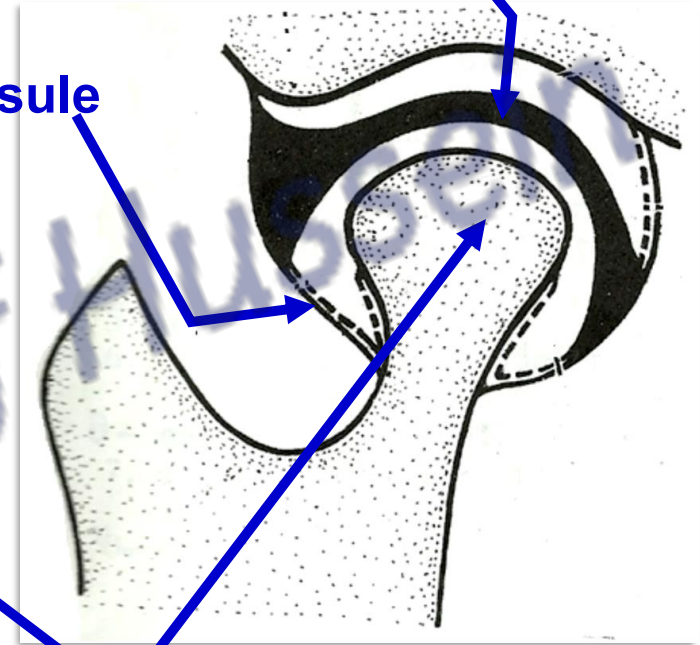
Articular tubercle

Mandibular fossa



Capsule

Articular disc

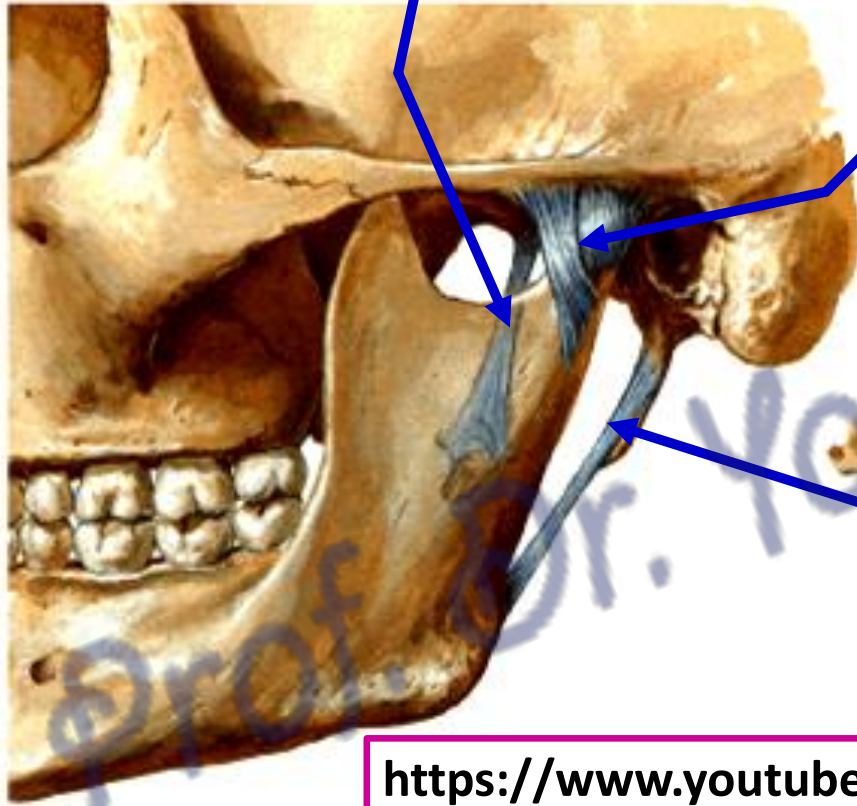


Head of mandible

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- **Articular surfaces:** a) Head (condyle) of the mandible.
b) Articular (glenoid) fossa and articular tubercle of temporal bone.
c) Articular disc divided the cavity into upper and lower parts.
- **Capsule:** attached around the articular surfaces. It is lined by synovial membrane.

2- Sphenomandibular ligament from spine of sphenoid to lingula



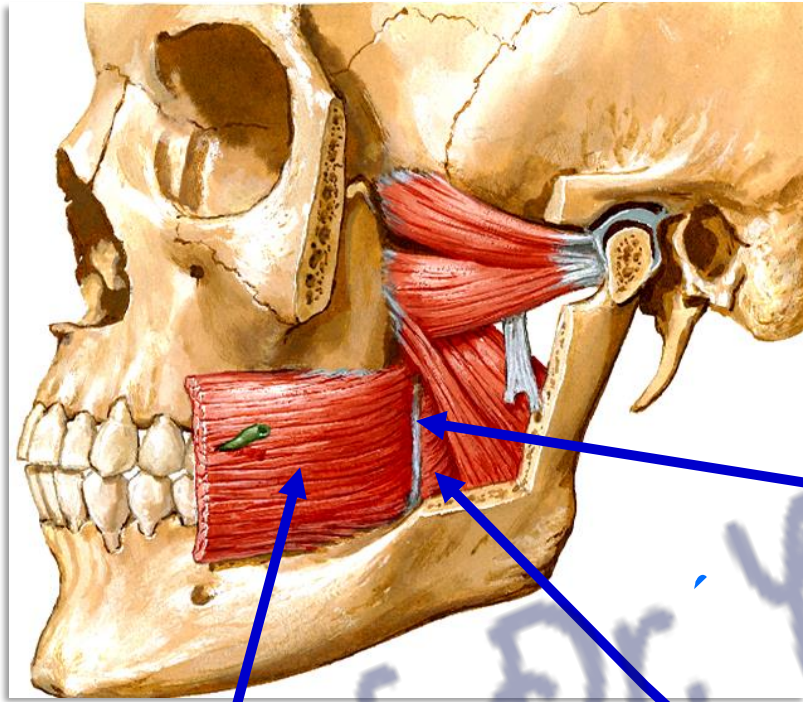
3- Tempromandibular ligament from articular eminence (root of zygomatic arch) to lateral side of neck of mandible

1- Stylomandibular ligament from styloid process to angle of mandible, separates parotid gland from submandibular gland

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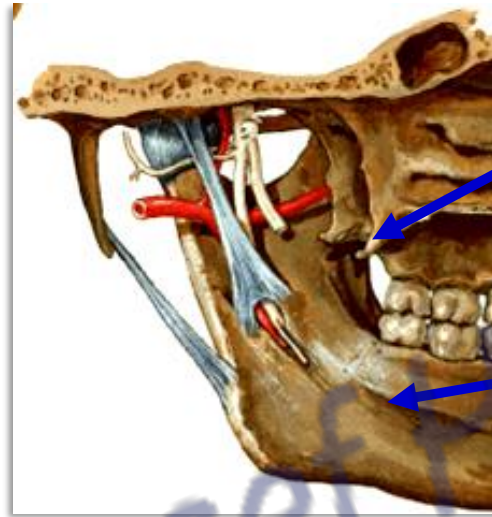
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Ligaments of temporomandibular joint



Buccinator

Superior constrictor
muscle of pharynx



Pterygoid
hamulus

Mylohyoid line

4- **Pterygomandibular ligament**: extends from **pterygoid hamulus** to the **posterior end of mylohyoid line** of mandible.

- It gives origin to buccinator and superior constrictor muscle of the pharynx.

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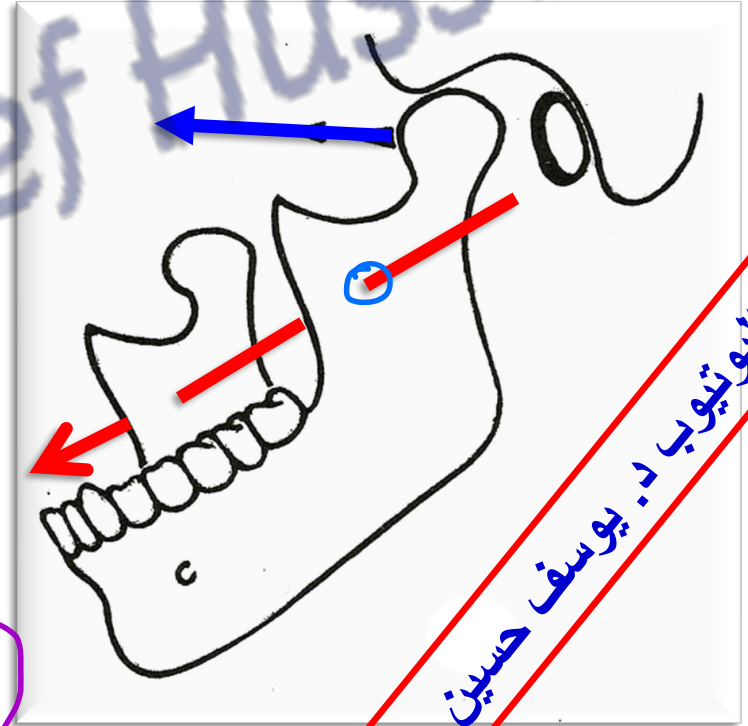
Ligaments of temporomandibular joint

❖ Movements of TMJ

	Elevation (closing) Chewing	Depression (opening)	Protrusion	Retraction	Side to side movement
1- Masseter	+ve main		+ve		
2- Temporalis	+ve		+ve	+ve (posterior fibres)	
3- M. pterygoid	+ve		+ve		+ve
4- L. pterygoid		+ve	+ve		+ve

- **Depression:** Lateral pterygoid, digastric, geniohyoid, mylohyoid and gravity.

- 1- **Resting position**, the lower teeth are slightly behind the level of the upper teeth.
- 2- **Closing position**, jaws are closed, the upper and lower teeth come into apposition.
- **Nerve supply**: 1) auriculotemporal nerve. 2) Masseteric nerve.
- **Arterial supply**, from the superficial temporal and maxillary arteries.
- **During opening of the mouth** Forward sliding movement of the head of mandible with articular disc **Over** of the articular tubercle/*eminence*.
- The axis of movement passes through the **Mandibular foramina**



All Prom Mandibular N:

3
Cml Division

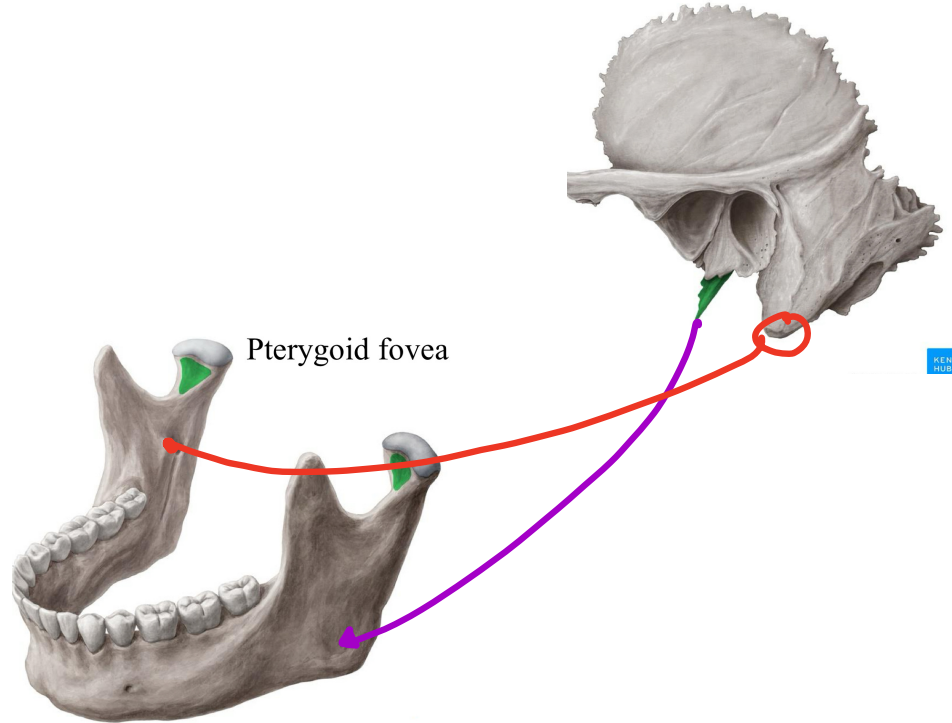
1 Trunk.

↓
Medial Pterygeal

↓
Deepart.

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* TMJ Dislocation:

one or both of Mandibular condyles
are displaced in front of articular eminence.

Causes:

- spontaneously
- Traumatic

Types:

- subluxation: reducible
condyle move out but return to normal position
- luxation:
condyle remain dislocated

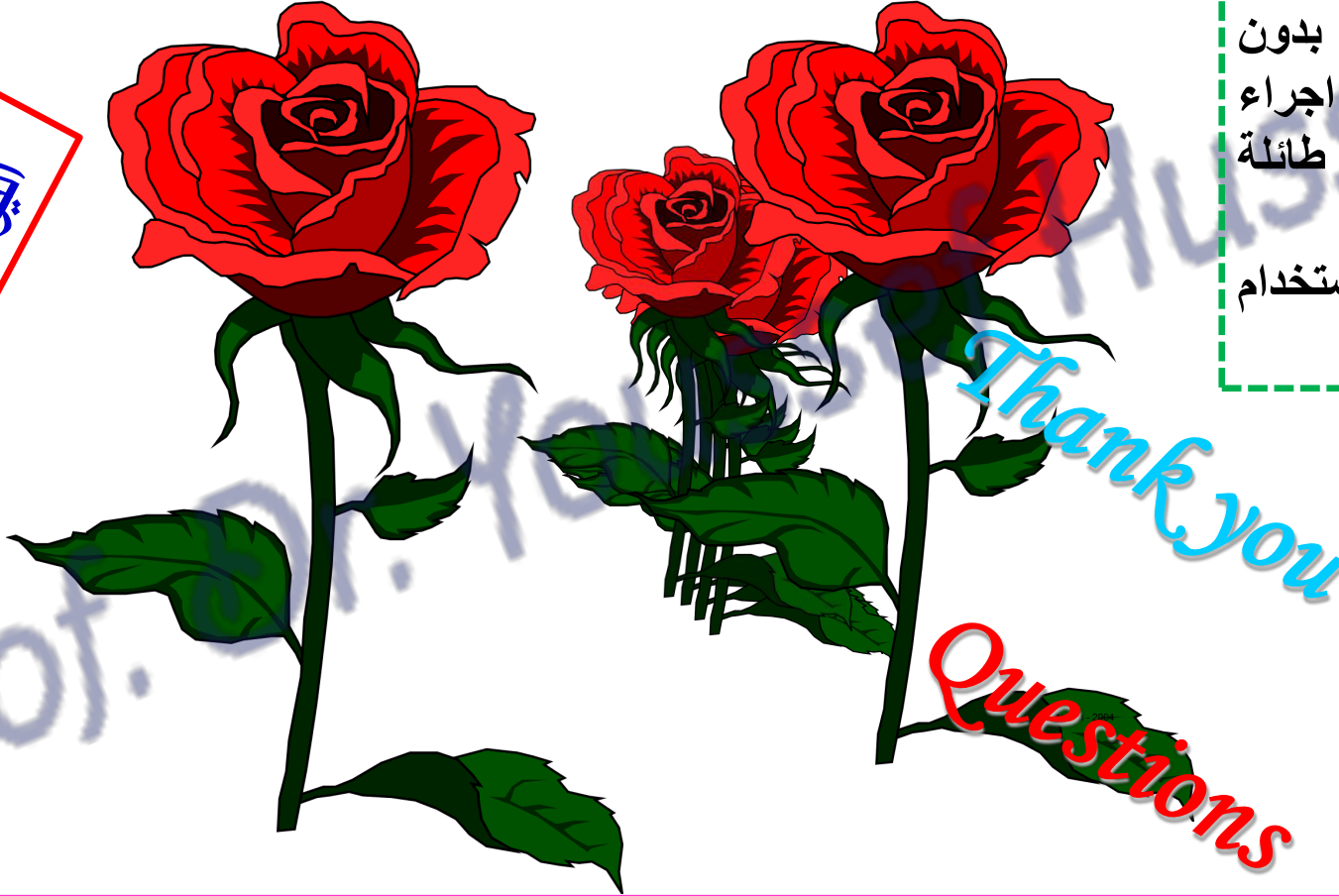
symptoms: Intense orofacial pain due to ligament stretch.

- **Causes**, spontaneous or traumatic.
- It occurs when **one or both mandibular condyles** are displaced in front and above articular eminence outside the articular surfaces.
- Dislocation may be **reducible** if the condyle (head of mandible) returns spontaneously to the mandibular (glenoid) cavity (**subluxation**) or **irreducible** when one or two condyles remain dislocated (**luxation**).
- In the latter condition, the mouth remains open
- There are stretch of the ligaments and muscles causing intense **local orofacial pain**

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