Muscles of mastication:

The muscles which are required for mastication are called Muscles of mastication.

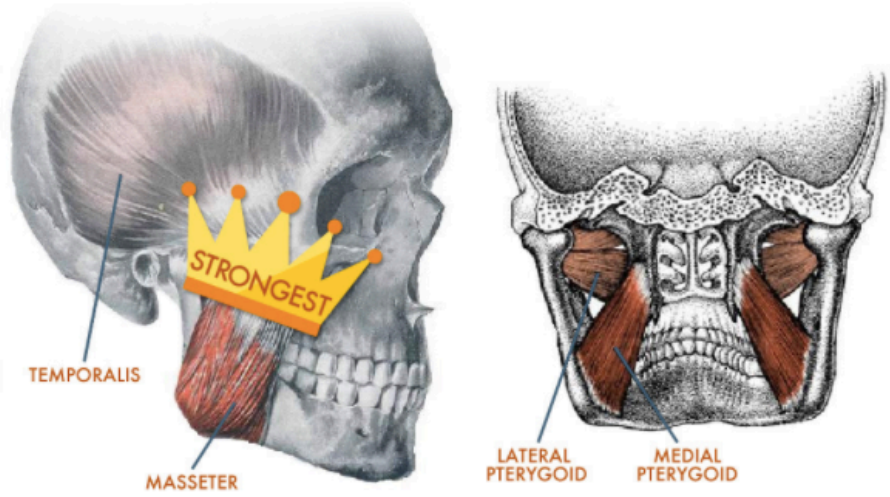
- These muscles are mainly act on the **mandible**.
- They develop from the **first pharyngeal arch**.
- They're innervated by the **Trigemenal nerve** (CN V) , the mandibular branch

The **main muscles** are:

- Masseter (most powerful)
- Temporal
- Lateral pterygoid
- Medial pterygoid

Accessory muscles that aids with mastication are:

- Suprahyoid muscles
  - Digastric
  - Stylohyoid
  - Mylohyoid
  - Geniohyoid
- Infrahyoid muscles:
  - Sternohyoid
  - Thyrohyoid
  - Omohyoid



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Muscle		Origin	Insertion	Main function	Blood supply	Nerve supply
Masseter	• Superficial • Middle • Deep:	Zygomatic bone (maxillary process) and zygomatic arch (lateral Aspect of ant. 2/3). Zygomatic arch(medial aspect of anterior 2/3). Zygomatic arch (deep surface of posterior third)	Mandibular angle and ramus (Inferior lateral surface). Mandibular ramus (central part of occlusal surface) Mandibular ramus(superior lateral surface) and inferior coronoid process.	▪ Elevation of the mandible. ▪ Lateral movements of the mandible for efficient chewing and grinding. ▪ Unilateral chewing ▪ Retraction of the mandible	Massetreric artery	Massetric nerve
Temporal	• Superficial head • Deep head	Temporal fossa. Temporal fossa(inferior temporal line)	Coronoid process of mandible(apex, medial surface, and anterior surface of mandibular ramus)	▪ Elevation of the mandible ▪ Retraction of the mandible ▪ Crushing of food between the molars. ▪ Posterior fibers draw the mandible backwards after it has been protruded	The deep temporal artery	Trigemenal nerve. ((Deep temporal nerve (anterior division of CN V3)))

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Lateral pterygoid	• Superior (upper) head • Inferior(lower) head	Greater wing of sphenoid bone (infratemporal crest) Lateral pterygoid plate (lateral surface)	Mandible (pterygoid fovea) and TMJ (articular disc). Mandible (pterygoid fovea and condylar process)	▪ Depresses the mandible. ▪ Protrudes it forward for opening the jaw ▪ Side movement	Pterygoid branch of maxillary artery.	Mandibular nerve (anterior division of CN3) via medial pteryoid nerve
Medial pterygoid	.	Deep head the lateral pterygoid plate, and from the maxillary tuberosity	Insert on the medial angle of the mandible	▪ Elevates the mandible ▪ Closes the jaw ▪ Helps in side to side movement.	Pterygoid branch of maxillary artery	Mandibular nerve through the medial pterygoid

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Clinical importance:

Masseter	• Masseter muscle can be palpated both intra-orally and extra-orally. • Most common muscle involved in myositis ossificans • Masseter muscle shown dual action in complete denture • Undergoes hypertrophy in bruxism.
Temporal	• Sudden contraction of temporalis will result in coronoid fracture (rare).
Lateral pterygoid	• Most commonly involved in **MPDS**. • Among all the muscle of attachment lateral pterygoid only has its attachment to the TMJ. • Forms the roof of the pterygomandibular space
Medial pterygoid	• Can only be palpated intra-orally. • Most commonly involved in **MPDS** • Trismus following Inferior alveolar nerve block mostly due to involvement of medial pterygoid muscle.

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