Temporomandibular Joint (TMJ)

- Articular eminence
- Synovial cavity
- Condyle
- Articular disc
- Post. thick band
- Ant. thick band
- Intermediate zone
- Venous plexus
- Ext. acoustic meatus
- Bilamellar region
- Ant. extension
- Lateral pterygoid muscle
front > lat. pterygoid, temporalis & masseteric vessels & nerve

behind > parotid gland, sup. temporal vessels, auriculo-temporal nerve & external acoustic meatus

laterally > subcutaneous

medially > lat. period, roots of auriculo-temporal nerve enclosing middle meningeal artery, spine of sphenoid & sphenomandibular ligament & chorda tympanic nerve

above > floor of middle cranial fossa separated by thin plate of bone
Anterior temporal attachment of meniscus

Temporomandibular ligament

Anterior extension

Anterior band

Intermediate zone

Posterior band

Medial wall of capsule

Sphenomandibular ligament

Lateral wall of capsule

Bilaminar region

Posterior wall of capsule

Posterior temporal attachment

A Superior aspect.
Movements of synovial joint initiated & effected by muscle coordination.
Achieved in part through sensory innervation.

Hilton’s Law:
The muscles acting on a joint have the same nerve supply as the joint.

Therefore:
Branches of the mandibular division of the fifth cranial nerve supply
the TMJ (auriculotemporal, deep temporal, and masseteric)
PROTUSION > LAT & MED PTERYGOID
RETRACTION > TEMPORALIS - POST FIBRES
FORCEFULL > DEEP % & MIDDLE FIBRES OF MASSETER,
DIGASTRIC & GH
DEPRESSION > GRAVITY, LAT PTERYGOID, GH MH DIAGARTRIC
ELEVATION > MASSETER, TEMPORALIS, MP
S-S > LAT & MED PTERYGOID
D. Biomechanics

Complex combinations of muscle activity
Disk enables complex movements