Tm and shoulder joints

*during movement: the head of the mandible cross over the fossa toward tubercle

**Tmj innervations:**

*auriculotemporal nerve is a branch from mandibular nerve and it crosses over the TMJ*

**tmj (ligament):**

1. **Lateral temporomandibular ligament**
   Between the articular tubercle and neck of mandible, part of it is thicking of capsule itself

2. **Sphenomandibular ligament**
   Between spine of sphenoid and lingula of mandibular foramen

   *Lingual: small process of the beging of the mandibular foramen*

3. **Stylomandibular ligament**
   Between the styloid process of temporal bone and angle of mandible

   *the TMJ is the only synovial joint in the skull (moving part)*

**Articular disc:**

*the articular disc is fixed mostly toward the head of the mandible (move with the head of the mandible against other parts of temporal bone)*

*Divide the joint into two cavities (upper and lower)*

**Lower cavity:**

*Between it and the head of the mandible*

*Rotation of TMJ between the head of the mandible and articular disc*
Upper cavity:
*Between it and the temporal part
*opening of the mouth :sliding of head on tubercle and rotation (both together

**Muscles of mastification:**
*Masseter, temporalis & pterygoids
*Origin:fixed part (skull)
*Insertion: mandible

1. **temporalis muscle:**
*It is very large muscle and superficial
*Its origin from temporal fossa ,cross deep to zygomatic arch and insert in coronoid process of the mandible
Action:
*Posterior part :retraction
*Anterior part :elevation

2. **masseter :**
When we occlude our teeth ,we feel it
Origin: zygomatic process
Insertion :angle of the mandible externally
Action :elevation of the mandible

3. **pterygoids:**
Medial: the same as masseter but from inside
Lateral: it goes from origin anteriorly toward insertion
It may depress the mandible
Depression of mandible: suprathyoid muscle

**Movement:**

Two joints move together at the same time

**Sternoclavicular joints:**

Only bony attachment between upper limb and axial skeleton, rest of them muscle attachment

*the disc separates into 2 cavities (medial and lateral)*

*Medial part: anterior and posterior movement*

*Supraclavicular nerve: branch from cervical nerves*

**Shoulder joint:**

*Capsule: on the outer edges of glenoid cavity*

*Because it is rounded by a labrum (fibrocartilagenous).....it increases the depth of the socket*

*outside labrum....capsule*

*Inside the capsule ... attachment of the long head of the biceps*

*synovial cavity inside synovial membrane*

*biceps tendon inside capsule but outside synovial membrane*

*synovial membrane lines capsule and covers tendon*

*inside tendon sheath fluid, this fluid is continuous with fluid of synovial cavity*

*tendon sheath goes outside shoulder joint toward bicipital groove (opening)*

*subscapularis bursa:

Tendon of supscapularis muscle comes anteriorly (I am not sure)
**Supporting structures at shoulder**

* glenohumeral ligament: mostly thickening of fibrous capsule

* transverse humeral ligament: fixation of biceps tendon

* coracoacromial ligament: when the shoulder goes upward, it limits its movement

* Subacromial bursa and subscapularis bursa are most common bursa in shoulder

**Rotator cuff muscles:**

Superior: supraspinatus

Posterior: teres minor and infraspinatus

Anterior: subscapularis

Inferior: there is no ligaments or muscles support it

**Arterial anastomosis:**

Superficial cervical artery gives deep branch (runs at the medial border of the scapula)

Suprascapular artery: it runs at the superior border of the scapula and enters the suprascapular notch

**Surface anatomy:**

We can feel the coracoid process in clavipectoral triangle

We can feel the deltoid when we resist the muscle against abduction

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