

Midterm Lab Assignment no.01**Fall 2020.****Submitted by: Shahid iqbal****Submitted to: Dr. Arooba sajjad****ID: 17716****Topic: write note on the joints of upper limb****Joints of the upper limb**

1. Shoulder joint
2. Elbow joint
3. Wrist joint

Shoulder joint

The shoulder joint (glenohumeral joint) is a ball and socket joint between the scapula and the humerus. It is the major joint that connecting the upper limb to the trunk. It is the one of the most mobile joint in human body.

Articulating surfaces of shoulder joint

The shoulder joint is formed by the articulation of the head of humerus with glenoid cavity or fossa of the scapula. This gives rise to the alternate name for the shoulder joint (glenohumeral joint). Like most synovial joint, the articulating surfaces are covered by the hyaline cartilage. The head of the humerus is much larger than glenoid fossa, giving the joints a wide range of movement at the cost of inherent instability. To reduce the disproportion in the surfaces, the glenoid fossa is deepened by a fibrocartilage rim, called the glenoid labrum.

Ligament of the shoulder joint

In the shoulder joint, the ligament play a key role in stabilising the bony structure

➤ Glenohumeral joint

(Superior, middle and inferior) the joint capsule is formed by this group of ligament connecting the humerus to glenoid fossa. They are the main source of stability for shoulder, holding it in place and preventing it from dislocating inferiorly.

➤ Coracohumeral ligament

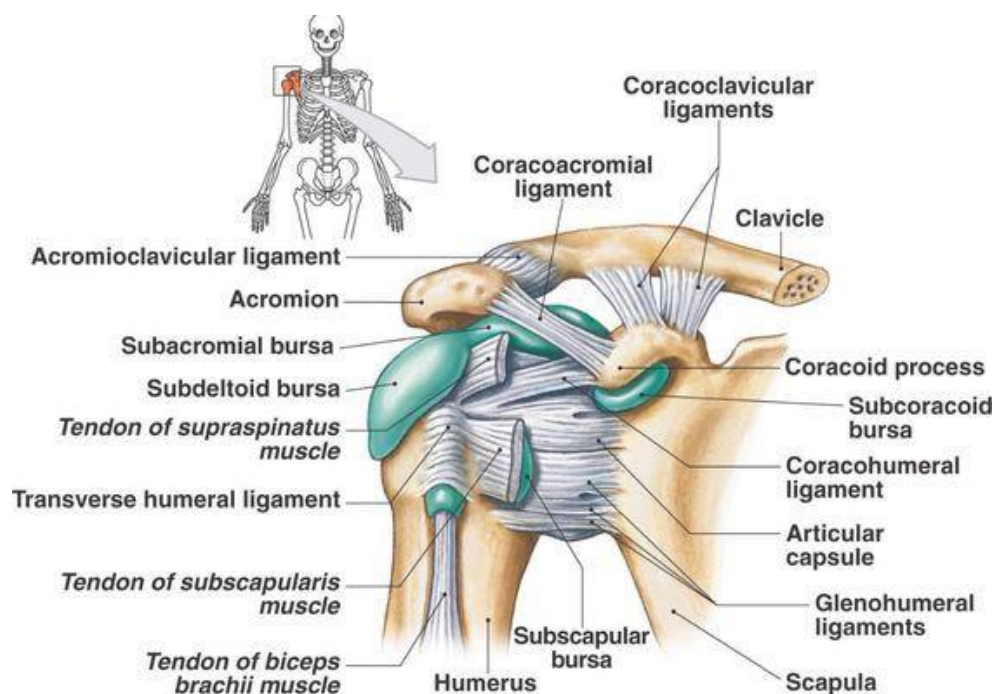
Coracohumeral ligament attaches the base of coracoid process to the greater tubercle of the humerus. It support the superior part of the joint capsule.

➤ Transverse humeral ligament

Transverse humeral ligament spans the distance between the two tubercle of the humerus. It hold the tendon of a long head of biceps in the intertubercular groove.

➤ Coraco clavicular ligament

It composed of the trapezoid conoid ligament and runs from clavicle to the coronoid process of scapula. The other major ligament is the coracoacromial ligament. Running between the acromion and coracoid process of scapula it forms the coracoacromial arch. This structure overlies the shoulder joint, preventing superior displacement of the humeral head.



Elbow joint

The elbow is a joint connecting the upper arm to the fore arm. It is classed as hinge type synovial joint.

Articulating surfaces of the elbow joint

It consists of two separate articulation;

- Trochlear notch of the ulna and trochlea of the humerus.
- Head of the radius and capitulum of the humerus.

Ligament of the elbow joint

The joint capsule of the elbow is strengthened by ligament laterally and medially.

Laterally

The radial collateral ligament is found on the lateral side of the joint, extending from the lateral epicondyle, and blending with annular ligament of the radius .

Medially

The ulnar collateral ligament originates from the medial epicondyle, and attaches to the coronoid process and olecranon of the ulna.

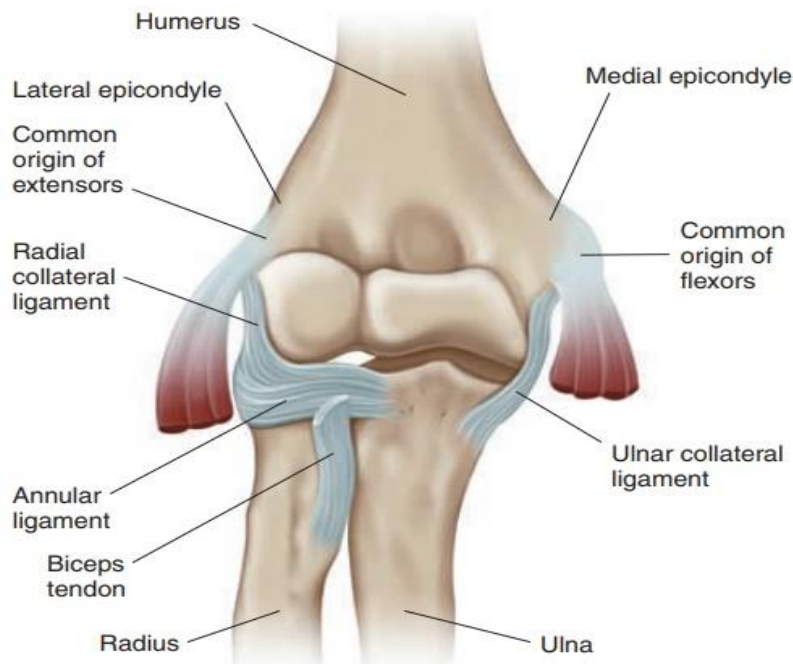


FIGURE 3.41. Right Elbow Joint, Radius, and Ulna—Anterior View, Showing the Ligaments

Wrist joint

The wrist joint is also called radiocarpal joint, and it is the synovial joint of the upper limb, making the area of transition between the forearm and the hand.

Articulating surfaces of the wrist joint

The wrist joint is formed by;

Distally

The proximal row of the carpal bone except the pisiform

Proximally

The distal end of the radius, and the articular disk

The ulna is not the part of the wrist joint, it articulated with the radius, just proximal to the wrist joint, at the distal radioulnar joint. It is prevented from articulating with the carpal bones by a fibrocartilaginous ligament, Called the articular disk, which lies over the superior Surface of the ulna.

Ligament of the wrist joint

There are four ligament of the wrist joint, one for each side of joint.

Palmar radiocarpal

It is found on the palmar (anterior) side of the hand. It passes from the radius to both rows of carpal bones. Its function, apart from increasing stability, is to ensure that the hand follows the forearm during supination.

Dorsal radiocarpal

It is found on the dorsum (posterior) side of the hand. It passes from the radius to both rows of carpal bones. It contributes to the stability of the wrist, but also ensures that the hand follows the forearm during pronation.

Ulnar collateral

Runs from the ulnar styloid process to the triquetrum and pisiform. Works in union with the other collateral ligament to prevent excessive lateral joint displacement.

Radial collateral

Runs from the radial styloid process to the scaphoid and trapezium. Works in union with the other collateral ligament to prevent excessive lateral joint displacement.

