

BONES OF UPPER LIMB

Shoulder joint:

Articulation: Thus occur between the rounded head of the humerus and the shallow pear shaped glenoid cavity of the scapula.

- The glenoid cavity is deepened by the presence of a fibrocartilaginous rim called the glenoid rim.
- **Type:** synovial ball and socket joint.
- **Capsule:** This surrounds the joint and is attached medially to the margin of the glenoid cavity outside the labrum. Laterally it is attached to the anatomic neck of the humerus.
- The capsule is thin and lax allowing wide range of movement. It is strengthened by wide fibrous slips from the tendon of the subscapularis, supraspinatus, infraspinatus and teres minor muscle. (the rotator cuff muscle)
- The glenohumeral ligaments are three weak bands of fibrous tissue that strengthen the front of the capsule.

- The transvers humeral ligament strengthens the capsule and bridges the gap between the two tuberosities.



ELBOW JOINT:

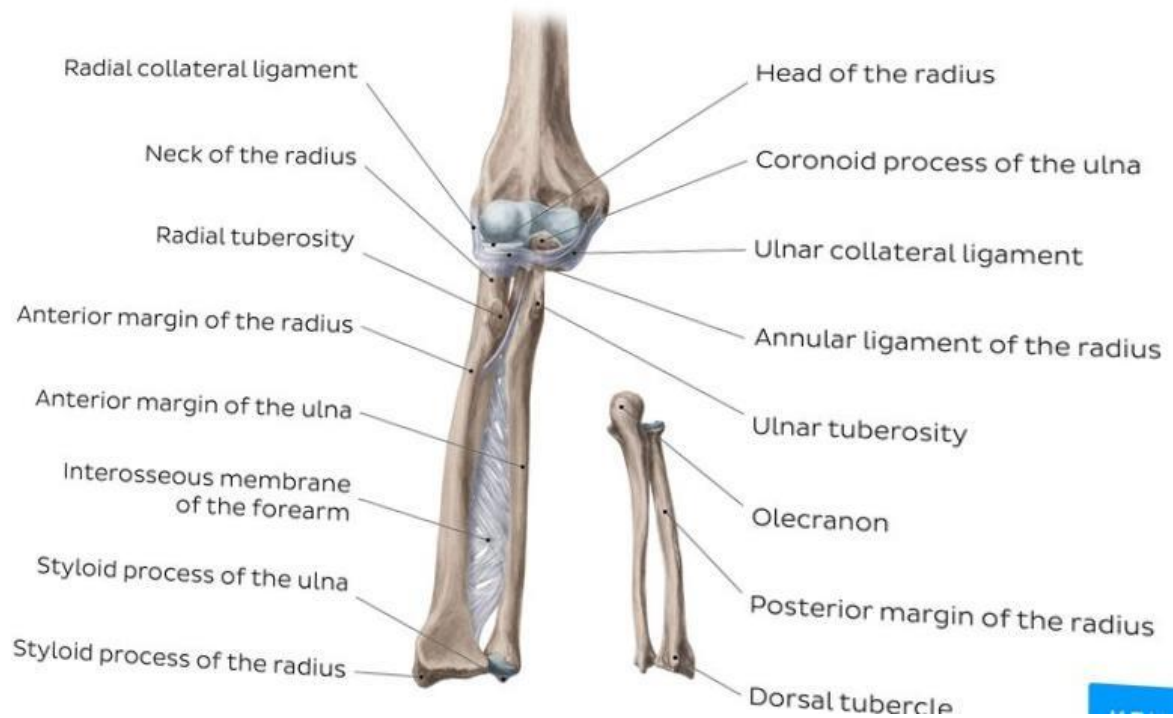
Articulation: This occurs between the trochlea and capitulum of the humerus and the trochlear notch of the ulna and the head of the humerus.

Type: compound synovial hinge joint.

Capsule

Anteriorly it is attached above humerus to the upper margins of coranoid And radial fossa and to the front of the medial and lateral epicondyles and below to the margin of the coranoid process of the ulna to the ulnaer ligament, which surround the head of the radius .

Posteriorly it is attached to above to the margin of the olecranon fossa of the olecranon fossa of the humerus and below to the



upper margin and side of the olecranon process of the ulna and to the annular ligament.

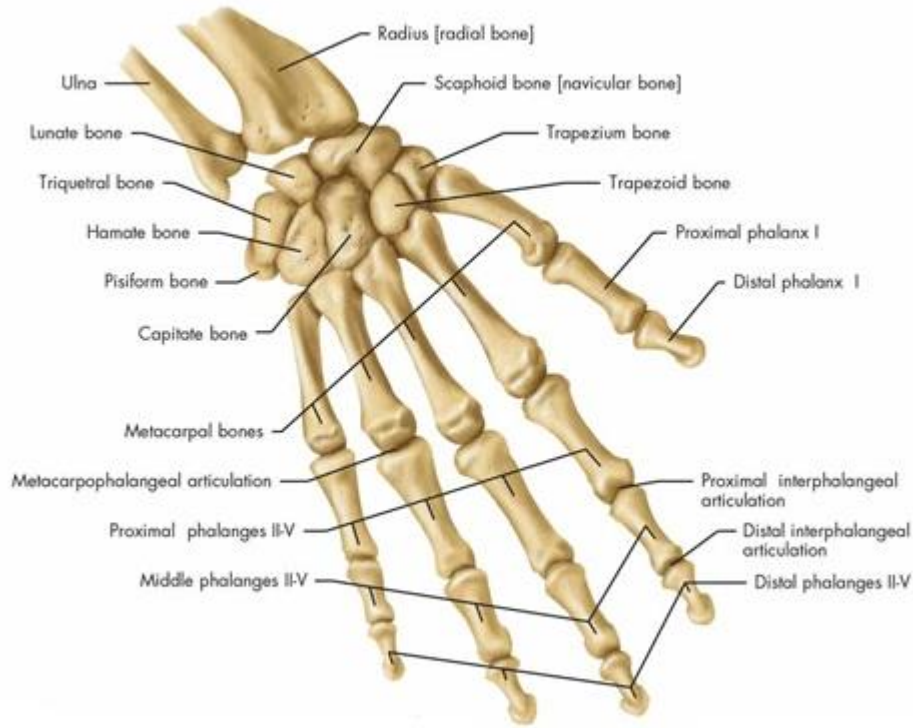
WRIST JOINT:

Articulation between the distal end of the radius and the articular disc above and the scaphoid lunate and triquetral bone below

- The proximal articular surface from an ellipsoid concave surface which is adapted to the distal ellipsoid convex surface.
- **Type** synovial ellipsoid joint.
- **Capsule** The capsule encloses the joint and is attached above to the distal end of the radius and ulna below to the proximal row of carpal bone.
- **Capsule** Anterior and posterior ligaments strengthen the capsule.
- **Medial ligament attached to the styloid process of the ulna and to the triquetral bone.**
- The lateral ligament is attached to the styloid process of the radius and to the scaphoid bone.
- **Synovial membrane** This line the capsule is attached to the margin of the articular surface. The joint cavity does not communicate with that of the distal radioulnar joint or with the joint cavities of the intercarpal joint.

- **Nerve supply** Anterior interosseous nerve and the deep branch of the radial nerve.

Bones of shoulder GIRDLE:



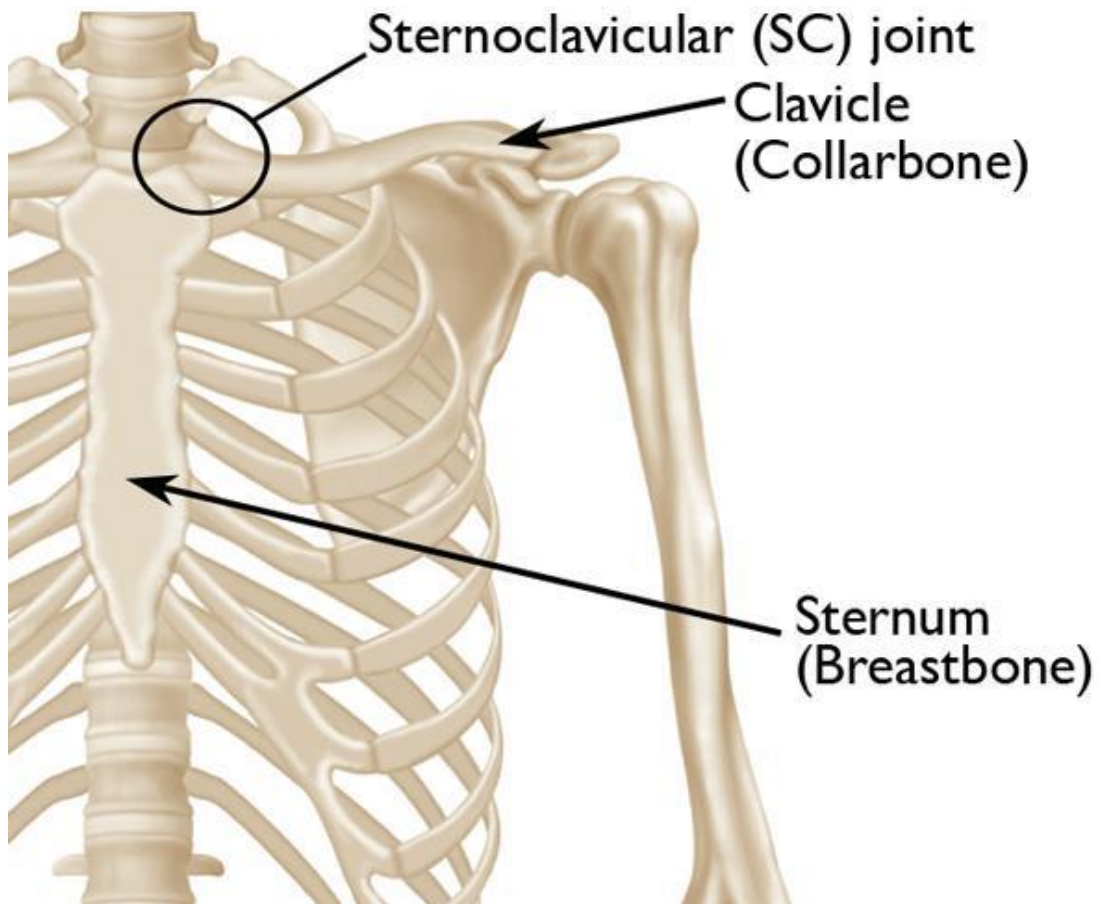
- **The clavicle**
- **The scapula**
- **Bones of arm: humerus**
- **Forearms bone: radius and ulna.**
- **Hand** carpal bone are eight
- **Metacarpel 8**
- **Phalanges 14**

The shoulder GIRDLE consist of

The clavicle

The scapula

- **The clavicle:** The clavicle is a long slender bone that lies horizontally across the root of the neck just beneath the skin.
- It is also called collar bone.
- It connects upper limb to the trunk



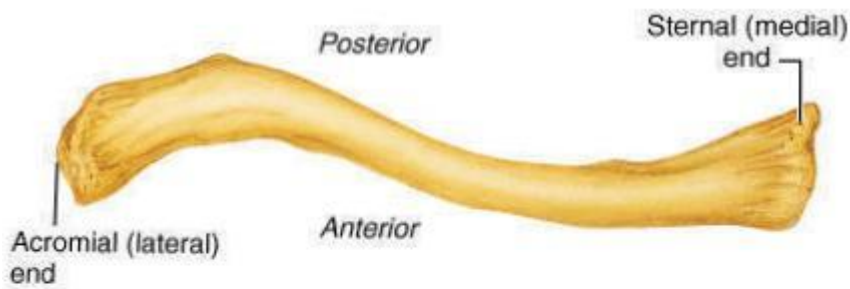
End and surfaces:

It's consist of

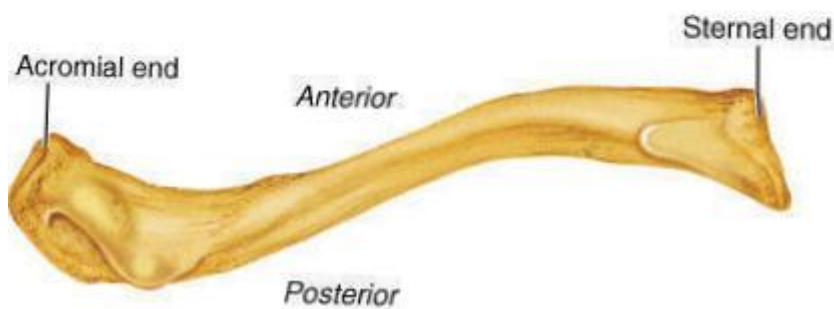
- Sternal end
- Acromial end
- Body (shaft)

It consists of four surface

- Inferior
- Superior
- Anterior
- Posterior



(b) Right clavicle, superior view



Articulation: it articulate

Medially: with manubrium of sternum and first costal cartilage at sternoclavicle joint.

LATERALLY: with the acromiam process of scapula at acromclavicular joint.

Surfaces:

CORANOID TUBURCEL: near the end of the clavicle give attachment to the conoid process.

Trapezoid line: near the acromial end of the clavicle end, give attachment to the trapezoid ligament.

Subclavin Grove:Is the medial third of the shaft of the clavicle give attachment to the subclavis muscle.

Impression costoclavicular ligament:rough depressed oval area at sternal end that give attachment to the costoclavicular ligament.

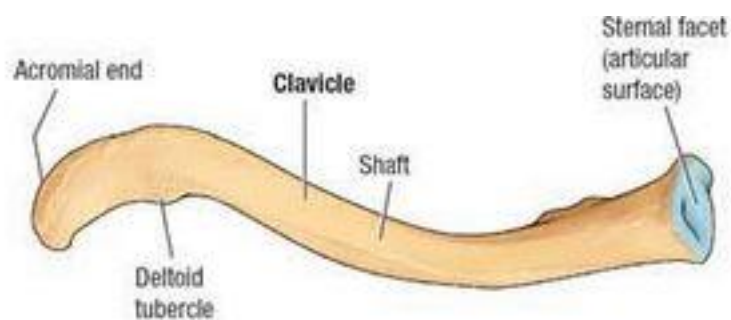
Superior surface:

Attachment for sternoclavicular muscle at medial two third of the clavicle

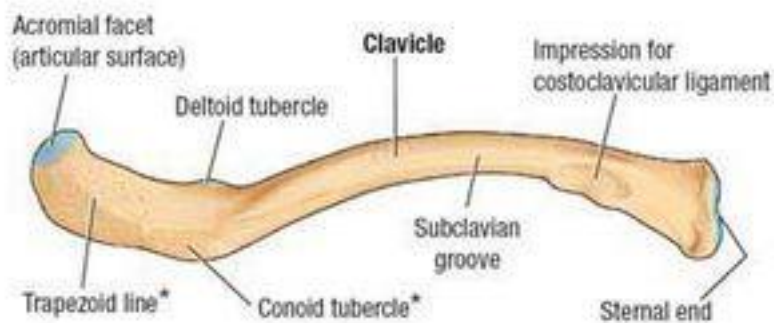
Attachment for trapezius muscle at one third of the clavicle.

Anterior surface: attachment for pectorilis major muscle at medial two third of the clavicle

Attachment for the deltoid muscle lateral one third of the clavicle



A. Superior Surface



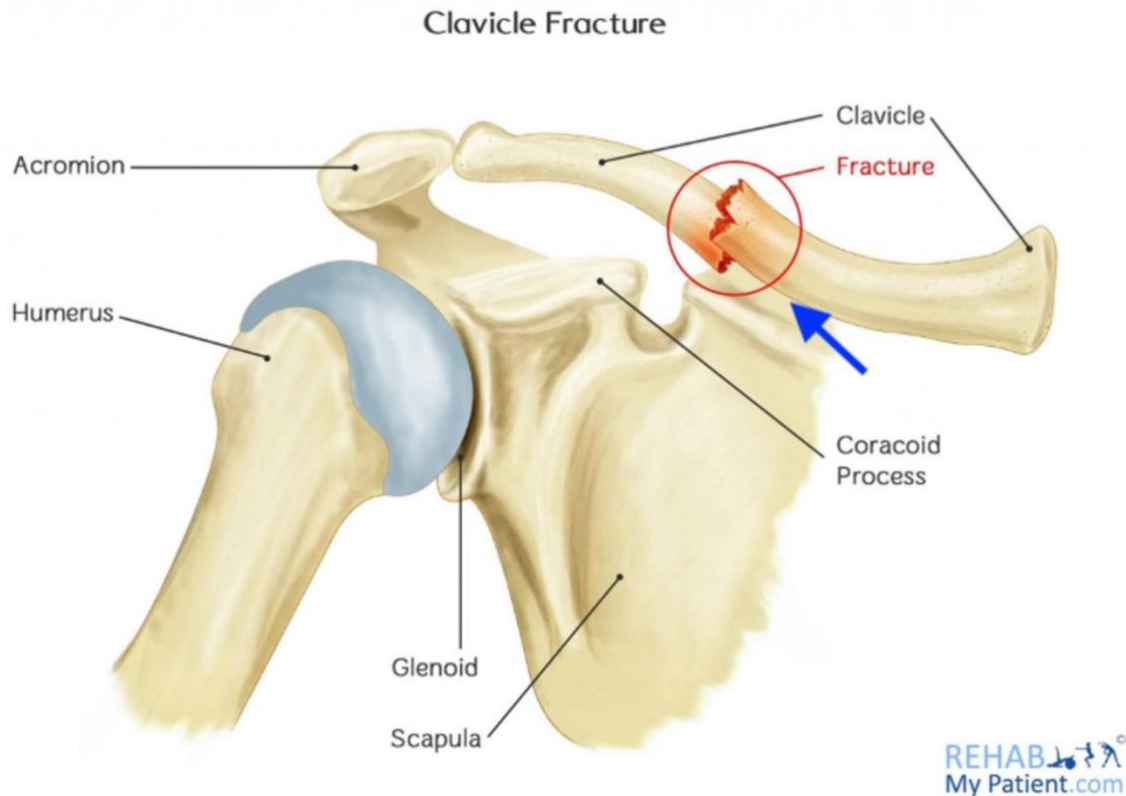
B. Inferior Surface

*Tuberosity for coracoclavicular ligament

FRACTURE OF THE CLAVICLE:

- The fracture is occur as result of a fall of the shoulder or outstretched hand. The force is transmit along the clavicle which breaks to its weakest point the junction of the middle and outer thirds.

- After the fracture, the lateral fragment is depressed by the weight of the arm, and it is pulled medially and forward by strong adductor muscle of the joint, especially the pectoralis major.



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