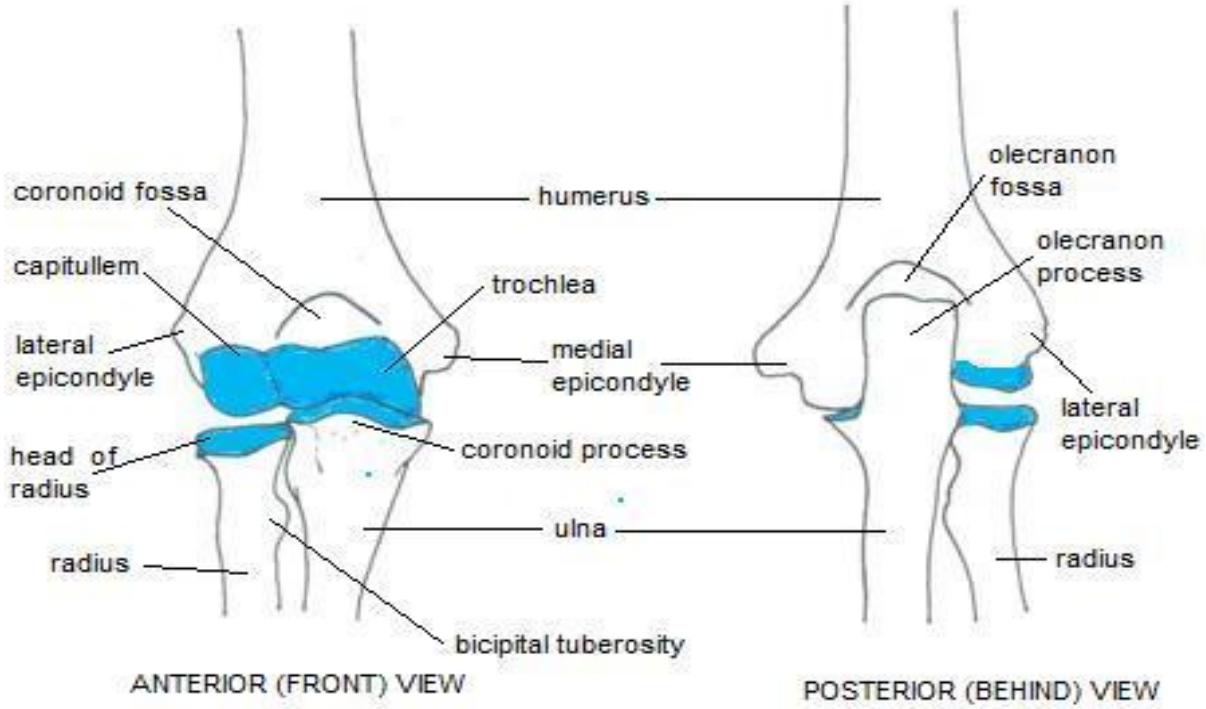
JOINTS IN THE UPPER EXTRIMITY

Objectives of the Lecture

To the elbow and radioulnar joint

1. Introduction
2. Type of the joint
3. Articular surfaces
4. Ligaments
5. Relations
6. Bursae around the joint
7. Blood and nerve supply
8. Movements and muscles producing them
9. Clinical anatomy

Elbow Joint : Articular surface and type



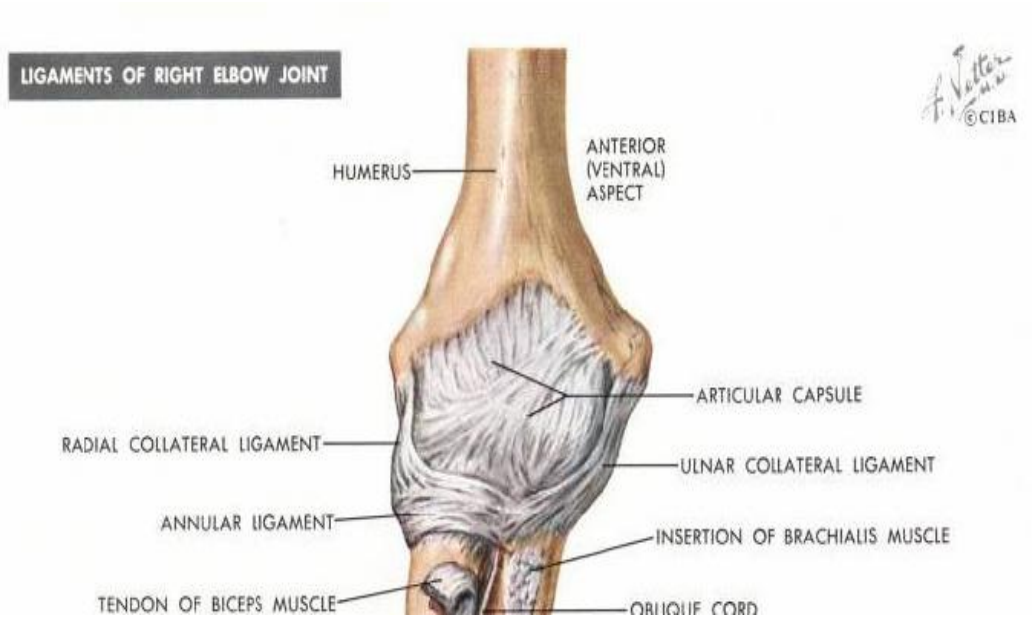
Elbow Anatomy (Cubital articulations)

Elbow joint is made of

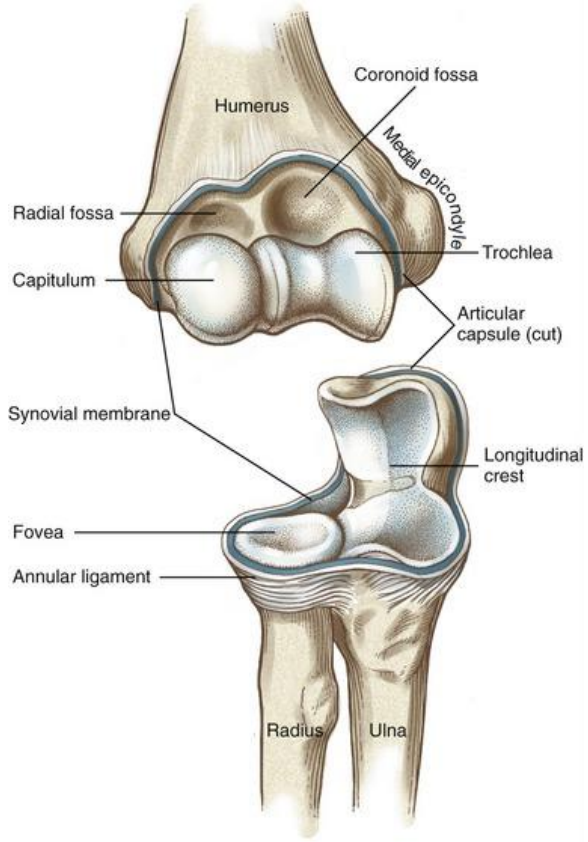
- 3 bones
- 2 joints
- One capsule
- Hinge joint
- Flexion(140) and extension

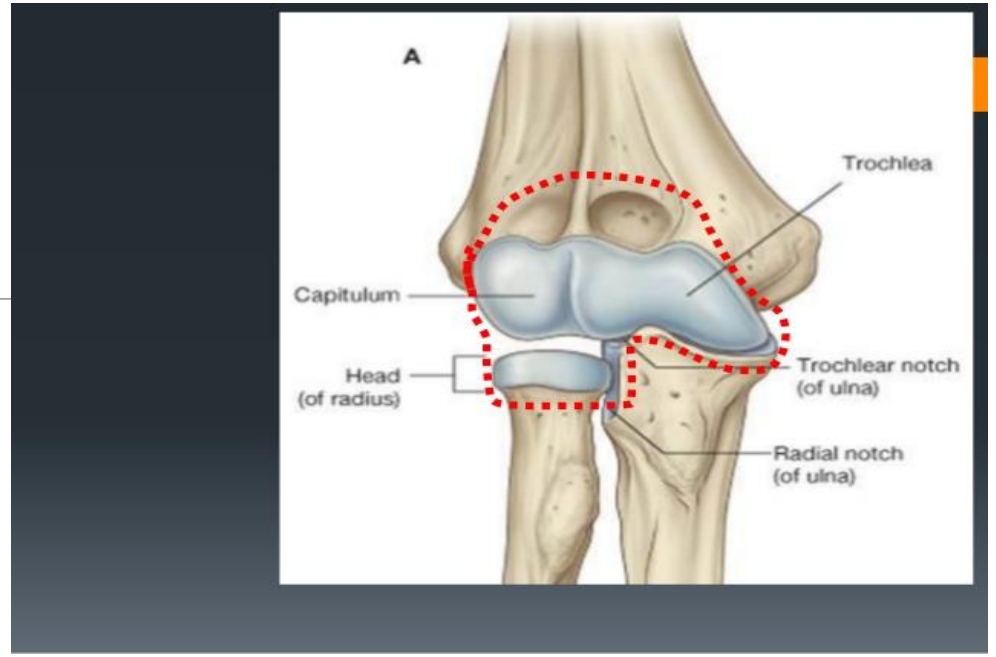
Elbow Joint (Ligaments)

- Capsular ligament
- Medial (Ulnar collateral)
- Lateral (Radial collateral)



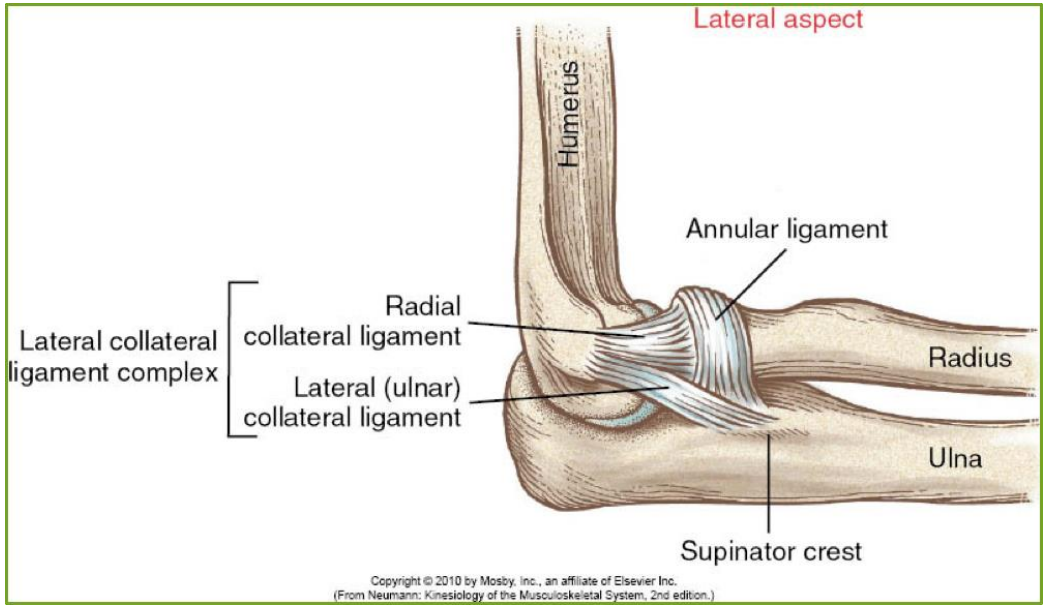
Elbow joint Capsule

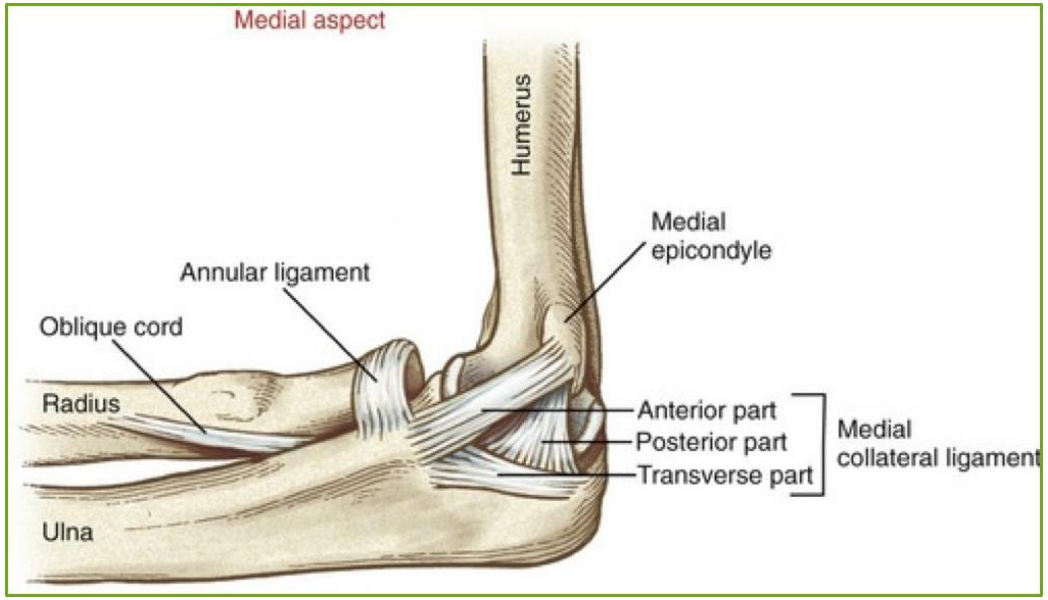




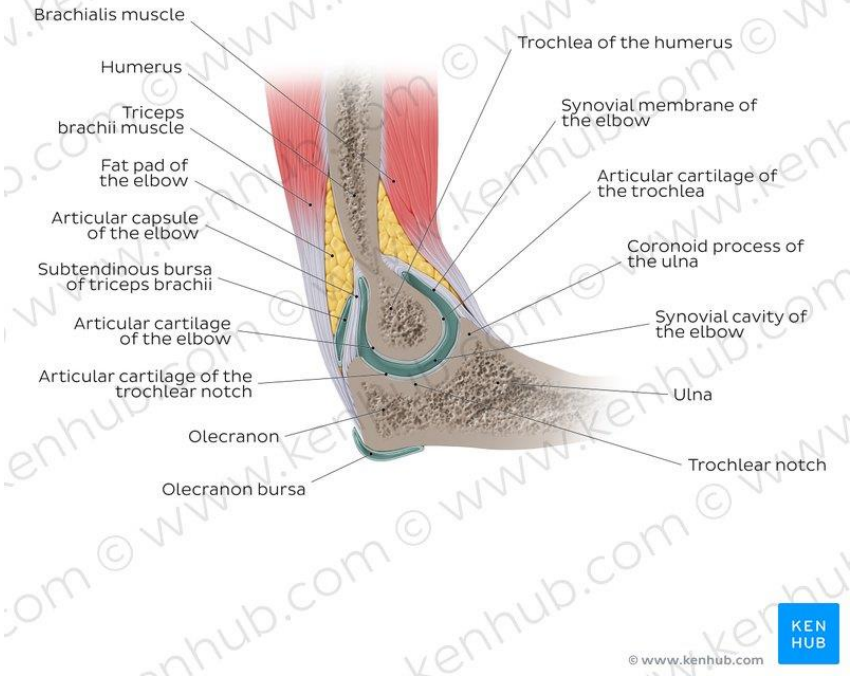
Attachment of Capsule of Elbow joint

Elbow Joint (Ligaments)





Elbow Joint (Relations)

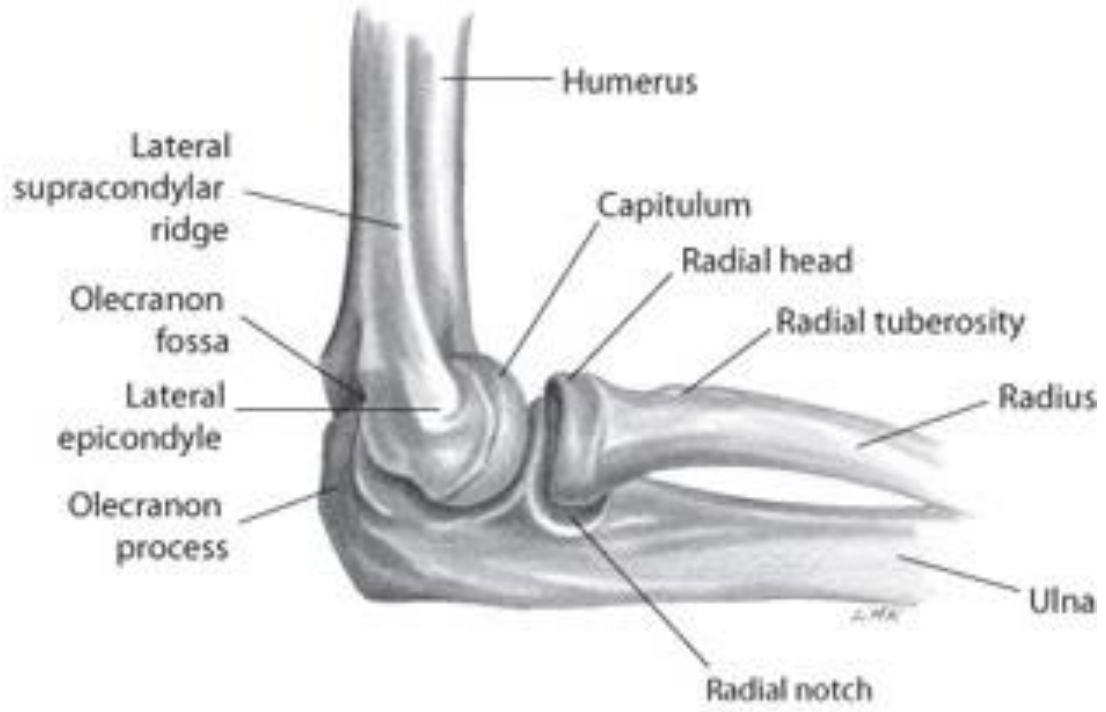


Elbow Anatomy

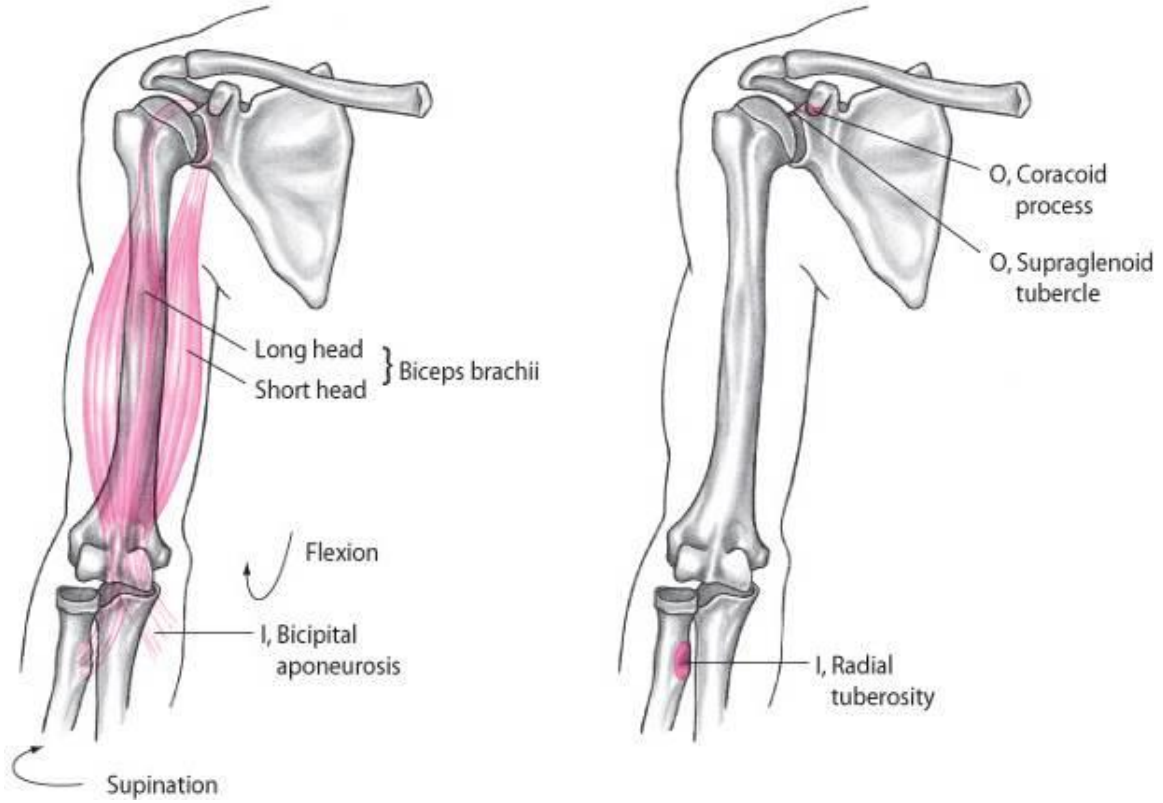
Elbow joint- where the radius and ulna

articulate with the humerus.

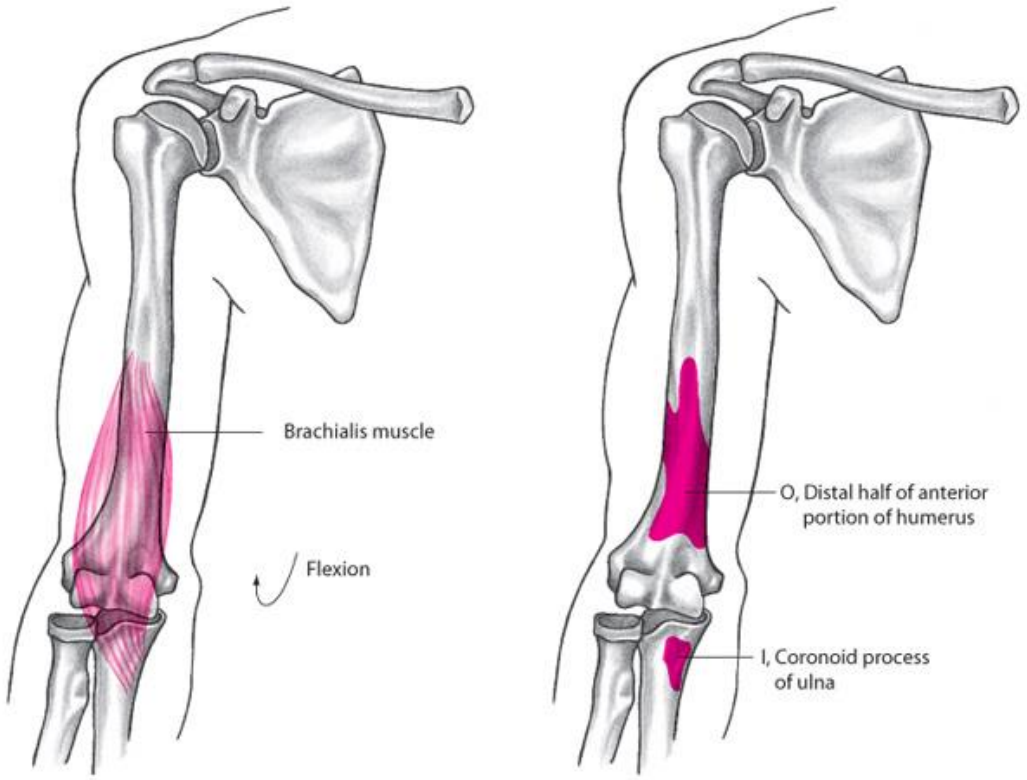
Flexion and extension-hinge joint



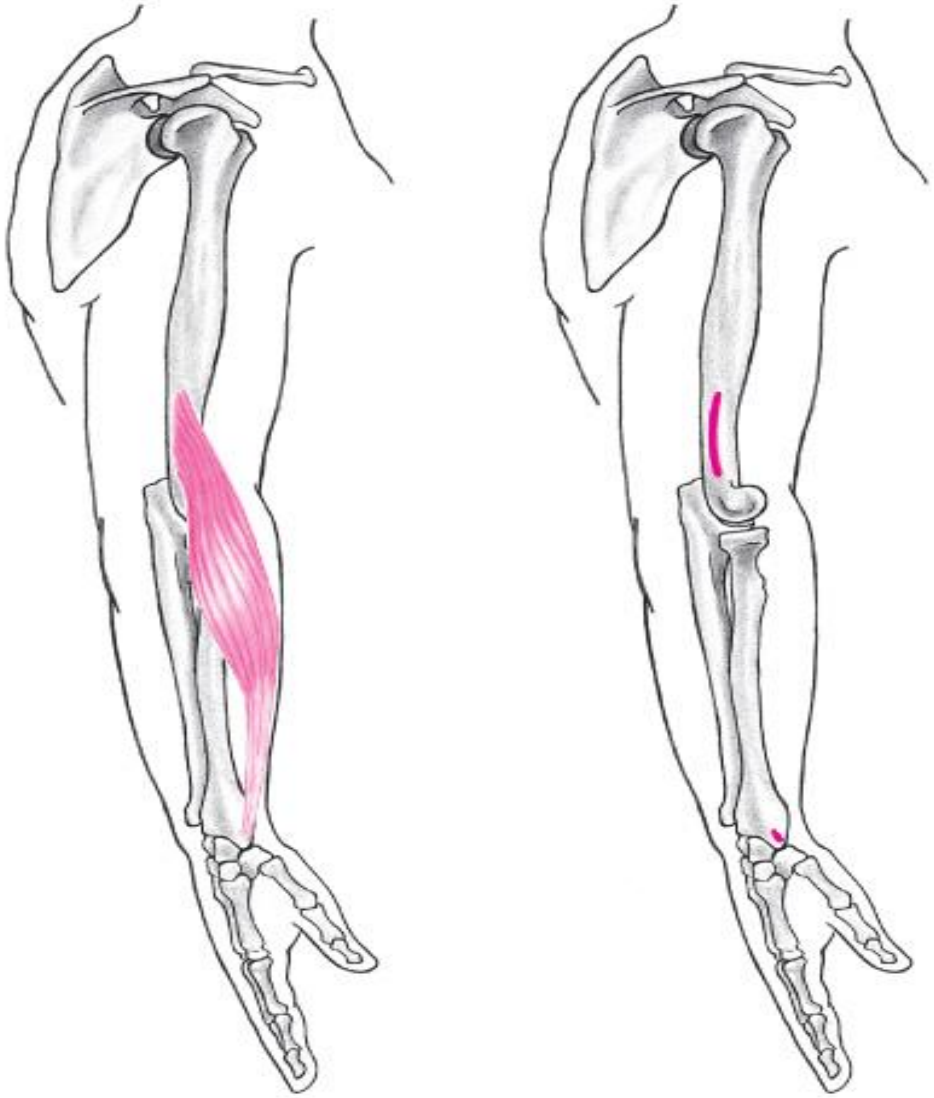
Biceps Brachii



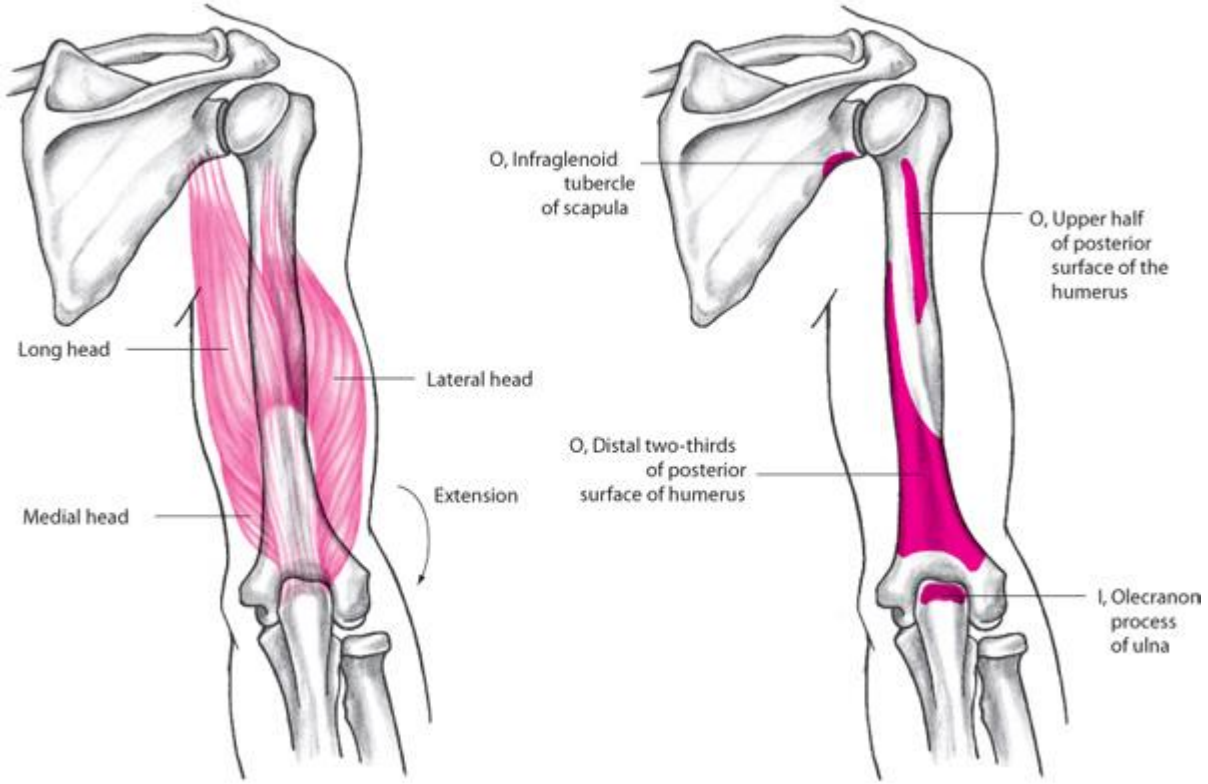
Brachialis


Brachialis muscle
Flexion
O, Distal half of anterior portion of humerus
I, Coronoid process of ulna

Brachioradialis



Triceps Brachii



Movements

Flexion:

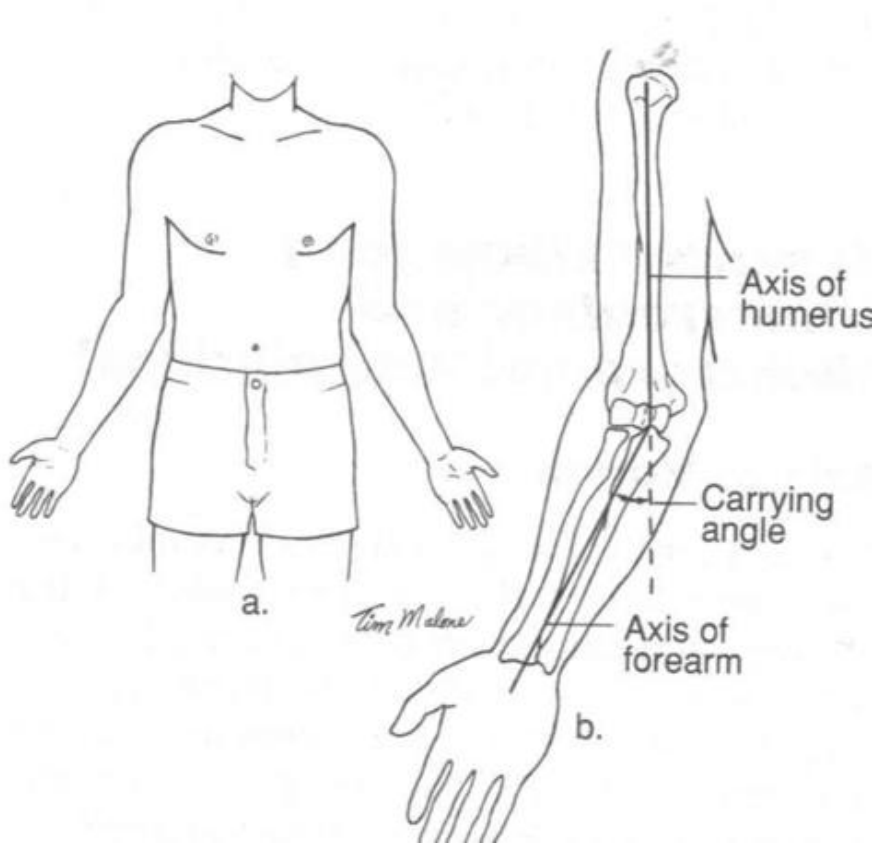
- Movement of forearm to shoulder by bending the elbow to decrease its angle Extension

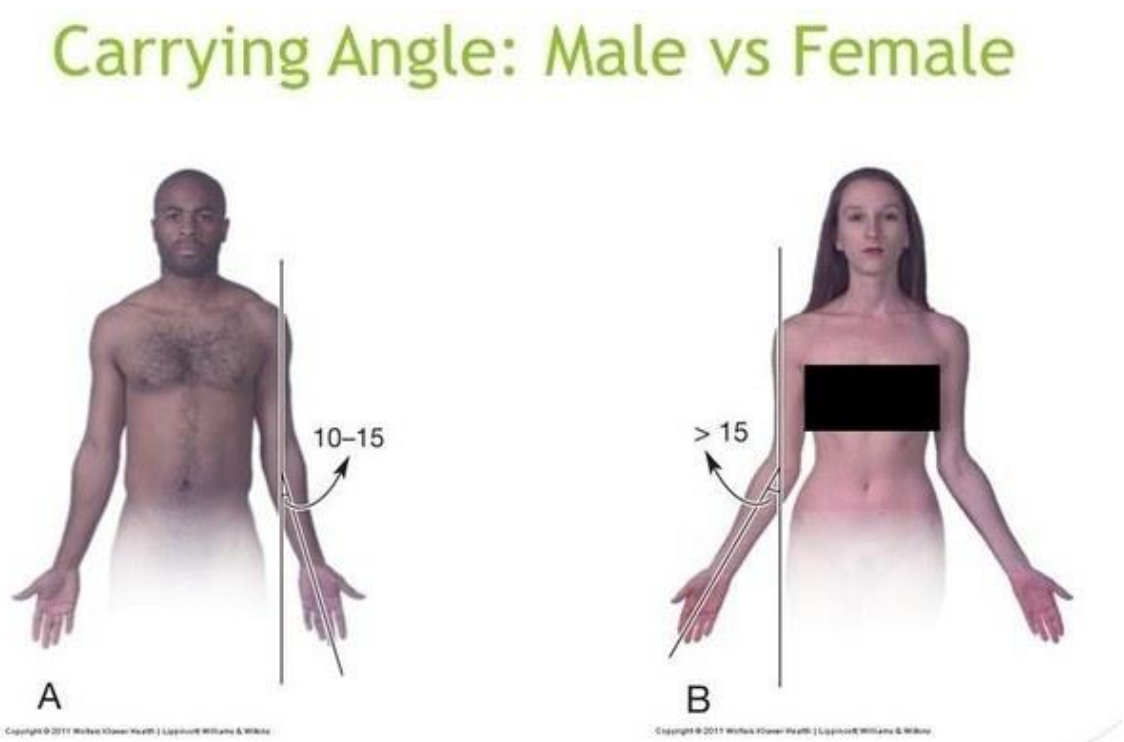
Extension:

- Movement of forearm away from shoulder by straightening the elbow to increase its angle

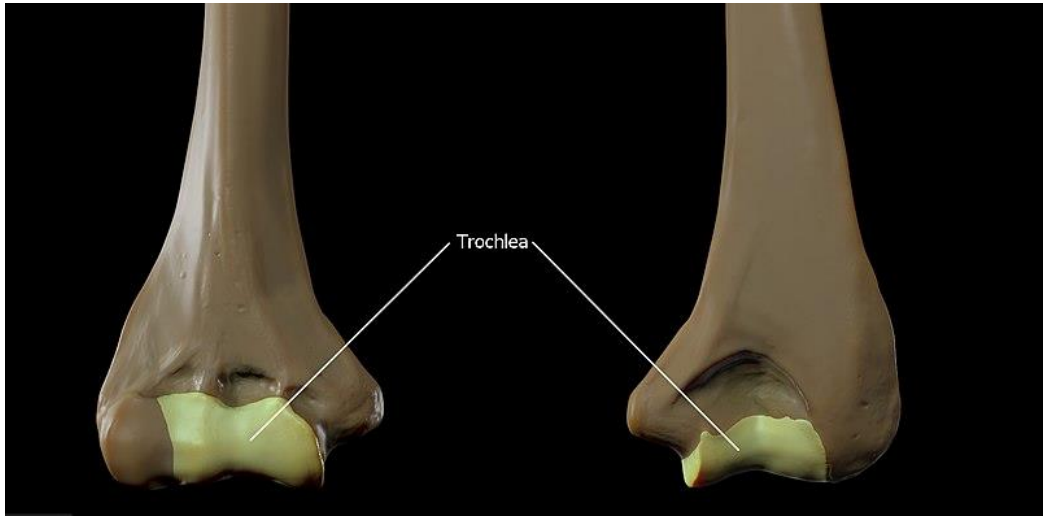
Flexion Extension B

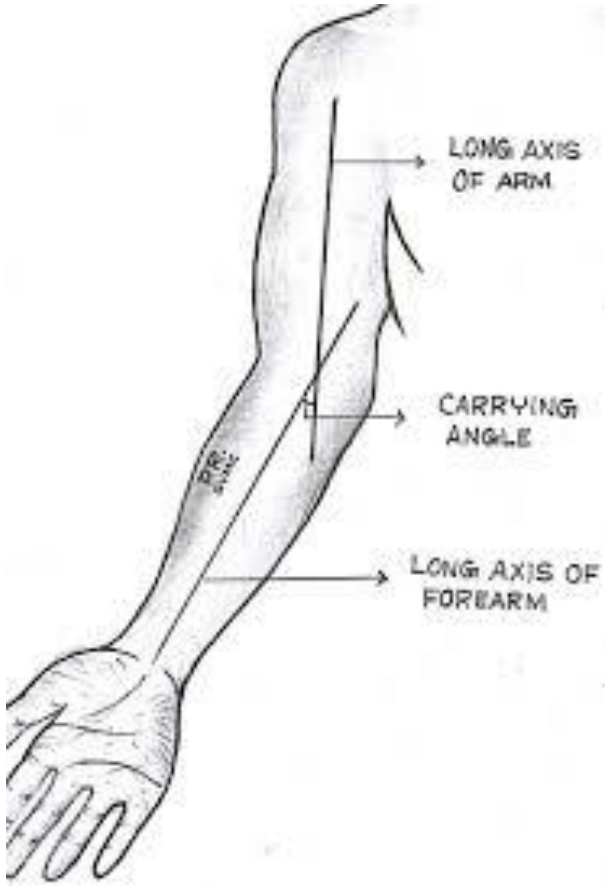
Carrying angle





Carrying angle

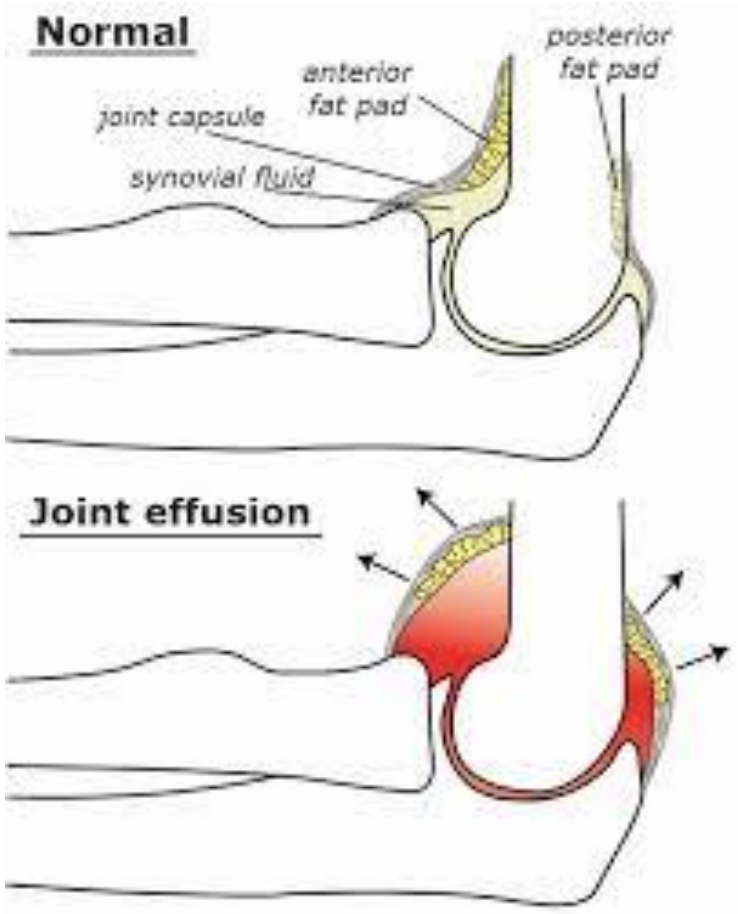




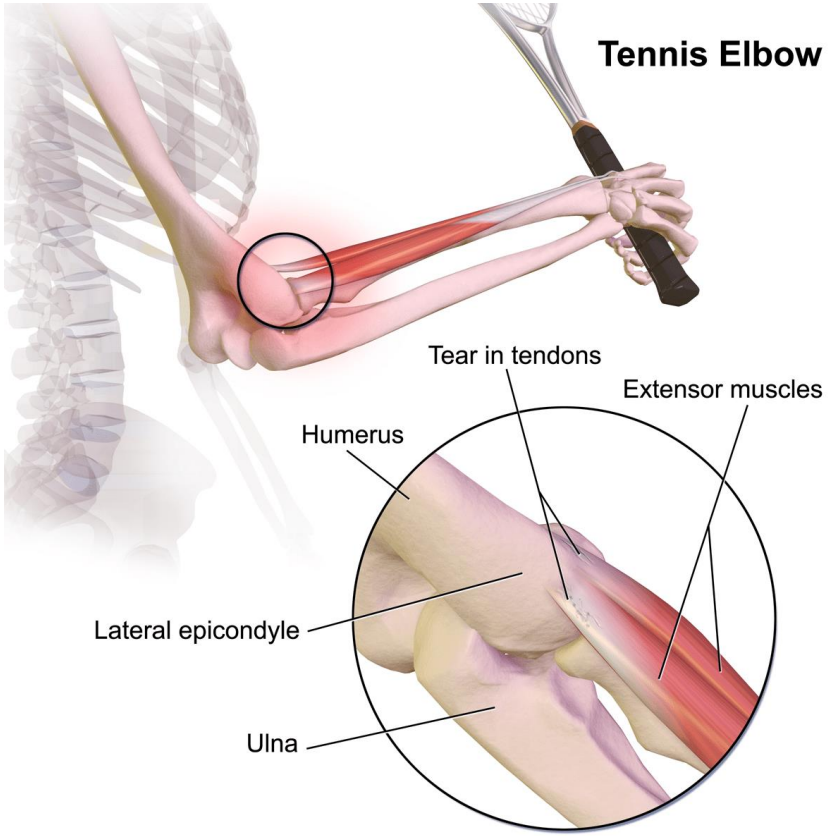
Clinical Anatomy

- Elbow Effusion
- Dislocation of Elbow
- Pulled Elbow / Nursemaids elbow
- Tennis Elbow (Lateral Epicondylitis)
- Golfer's Elbow (Medial Epicondylitis)
- Students Elbow (Miner's Elbow)

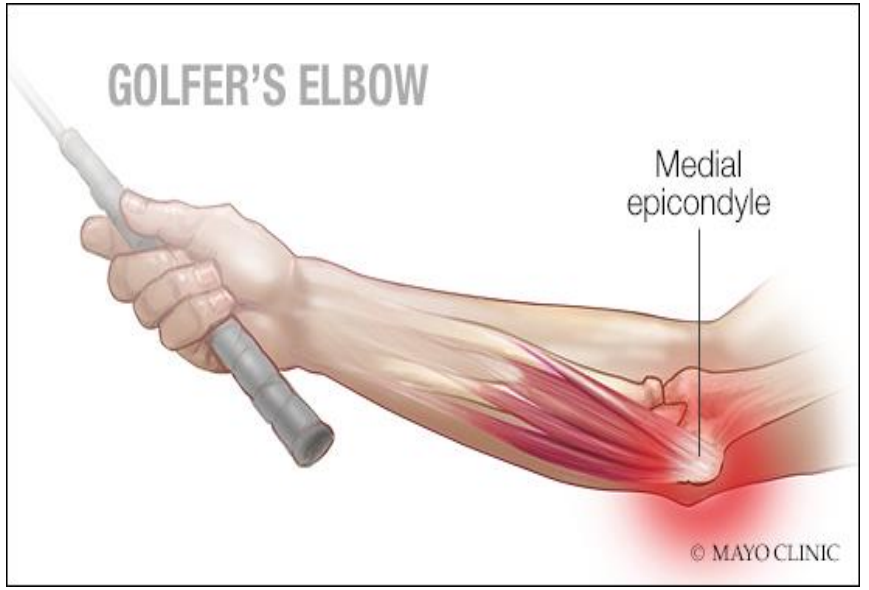
Elbow Effusion



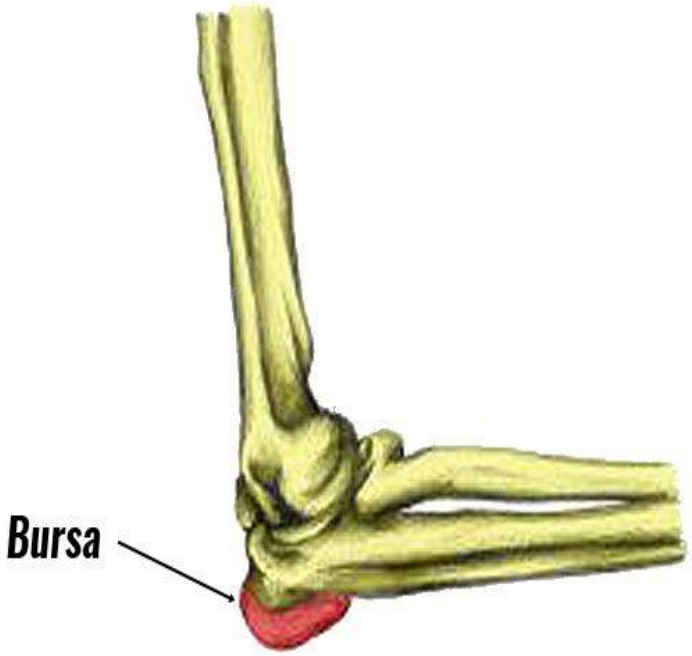
Tennis Elbow (Lateral Epicondylitis)



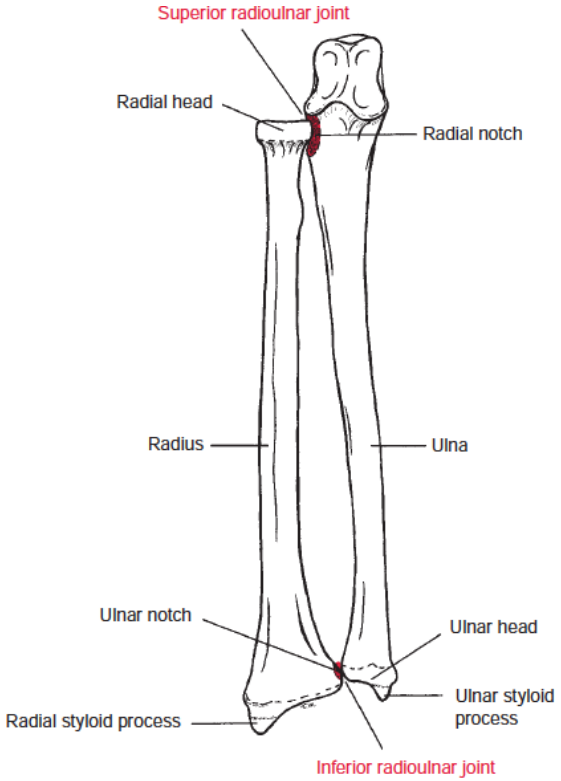
Golfer’s Elbow (Medial Epicondylitis)



Students Elbow (Miner's Elbow)

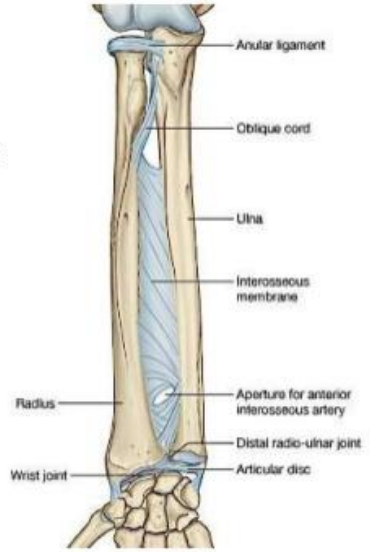


Radioulnar Joint



Intermediate Radioulnar Joint

- Interosseous membrane
- Type: Syndesmosis type of Fibrous joint

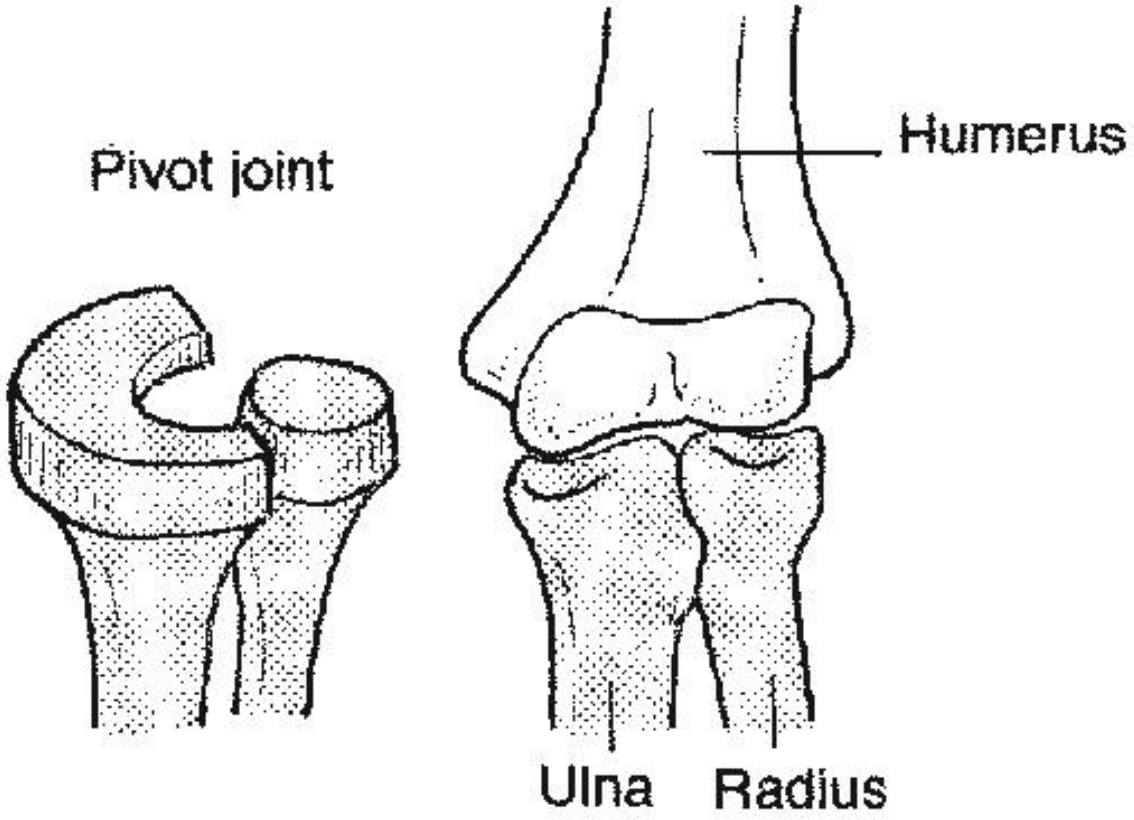


Superior Radioulnar joint

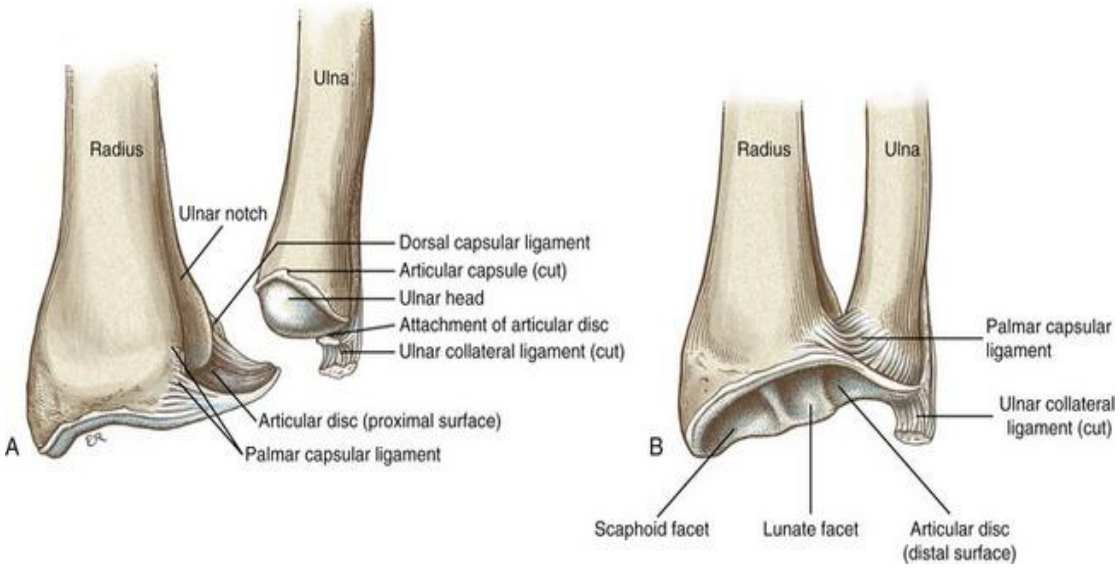
The ulna does not move.

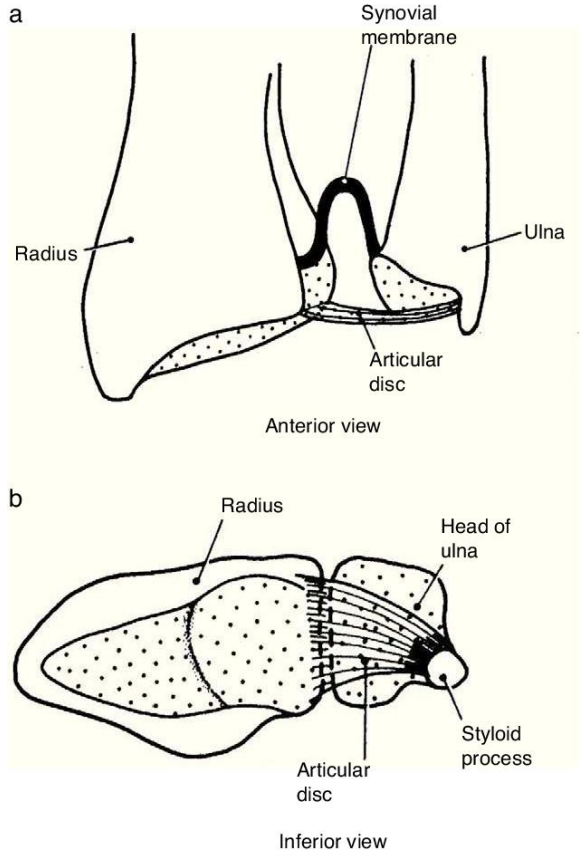
The radius moves around the ulna.

The ulna is locked in place by the proximal end at the olecranon process.



Inferior Radioulnar joint





Movements at radioulnar joint

Movements at radioulnar joint

Movements

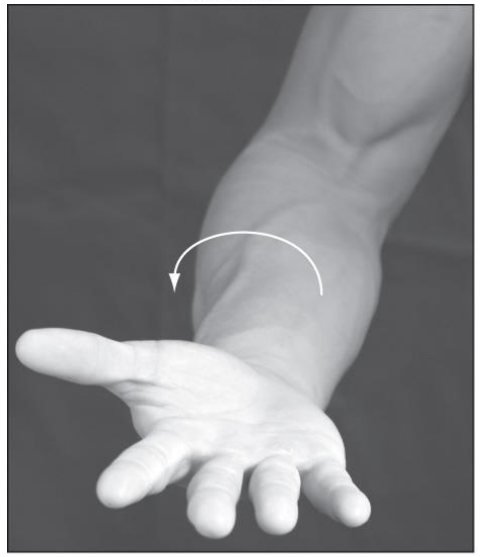
Pronation

- Internal rotary movement of radius on ulna that results in hand moving from palm-up to palm-down position

Supination

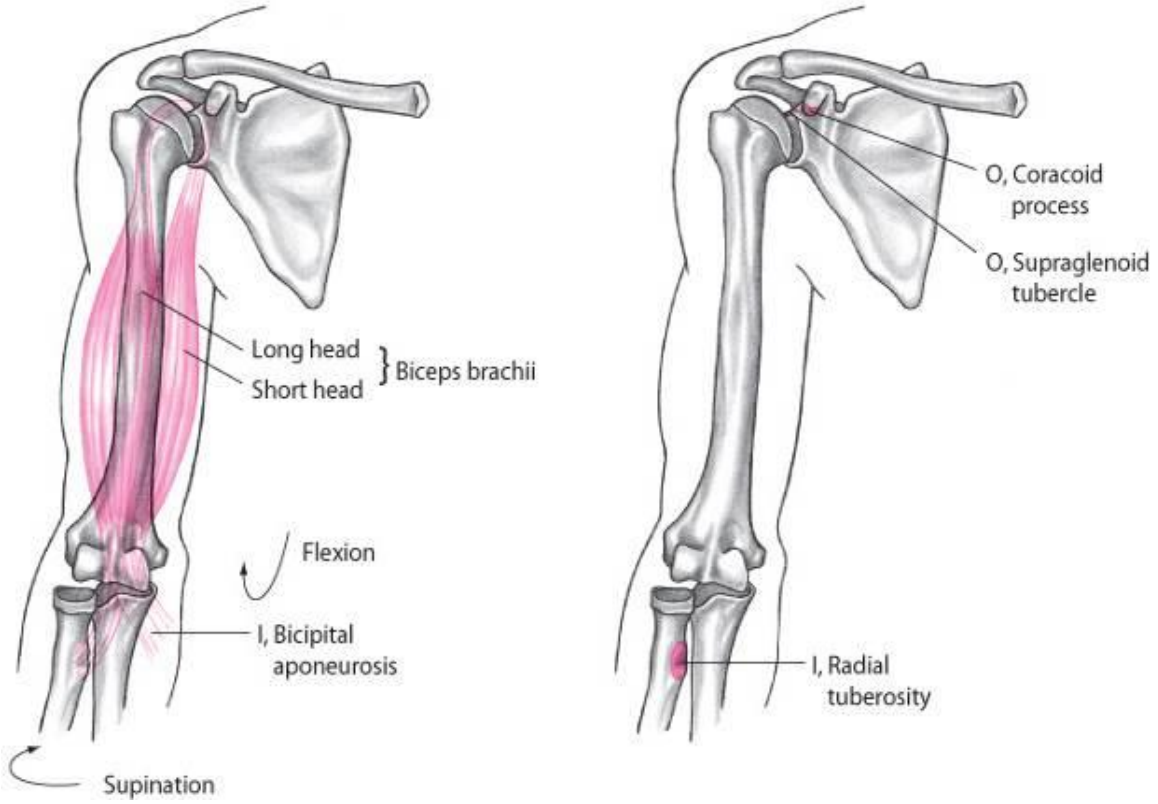
- External rotary movement of radius on ulna that results in hand moving from palm-down to palm-up position

Pronation C

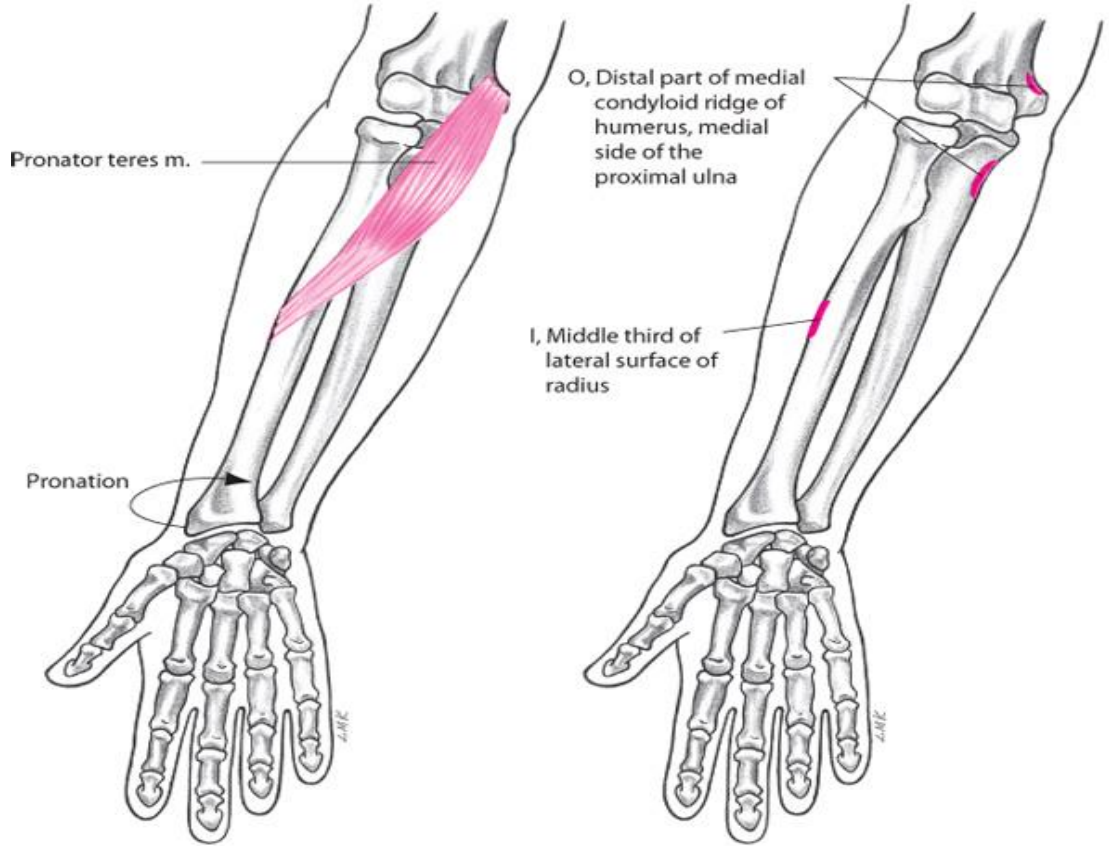


Supination D

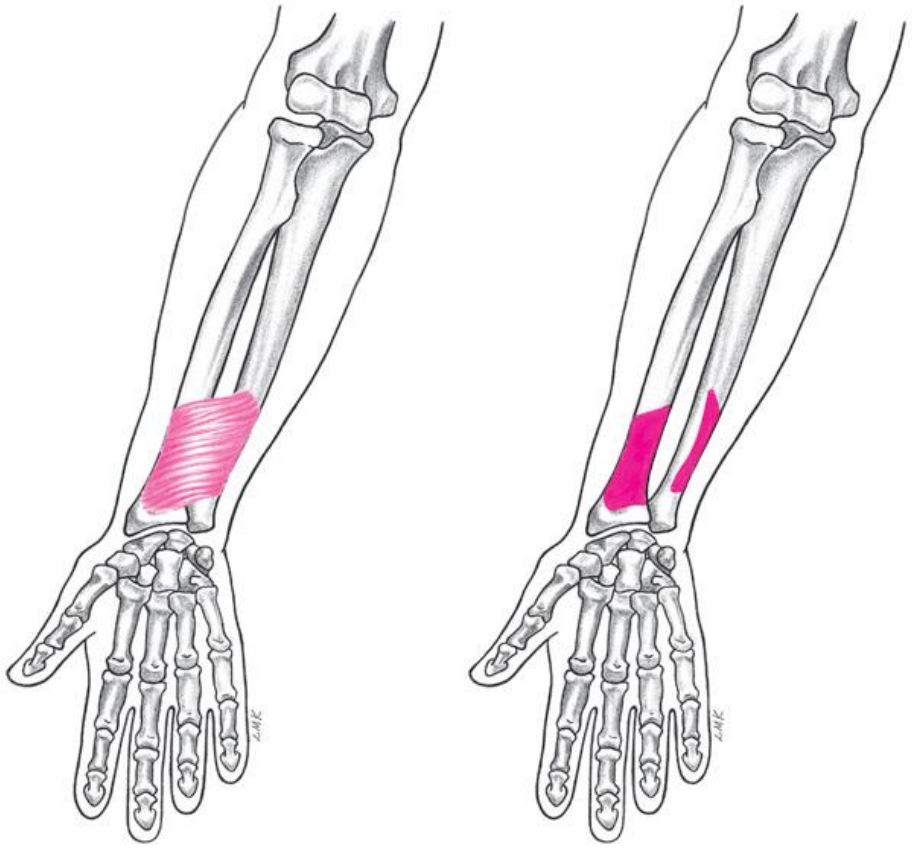
Biceps Brachii



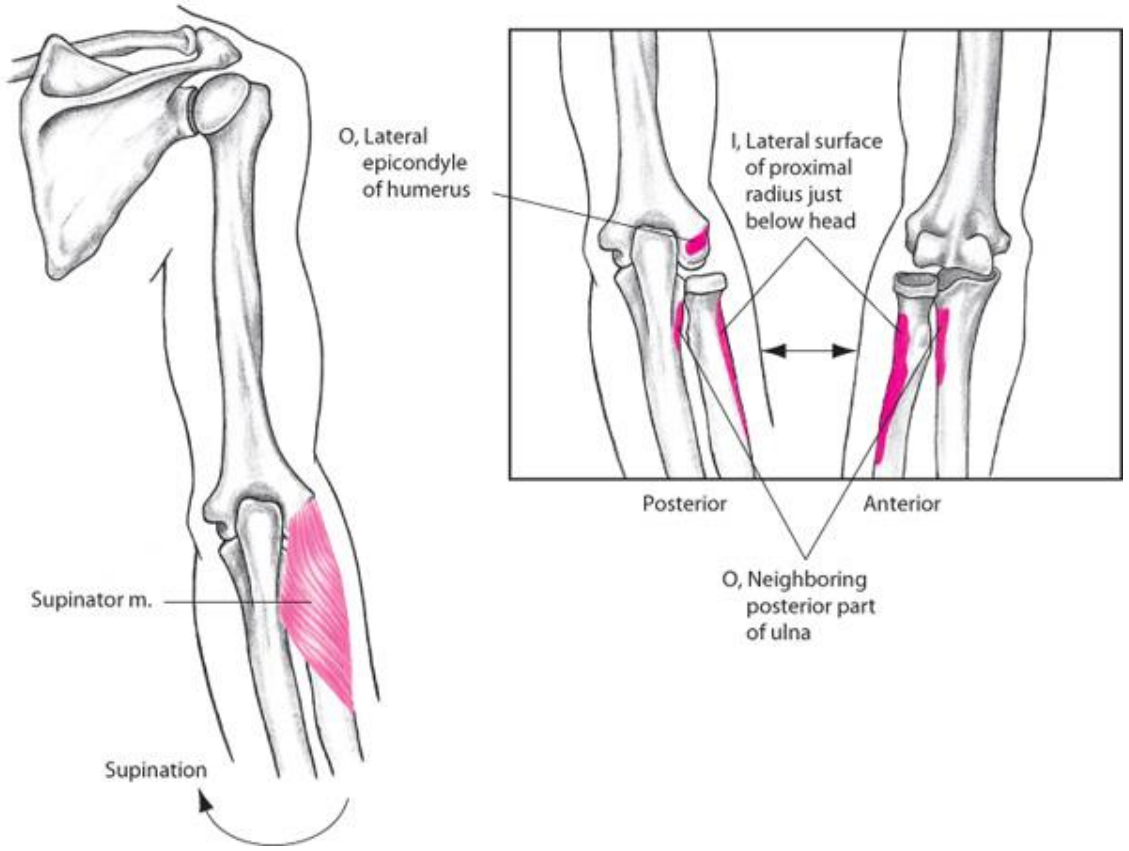
Pronator Teres



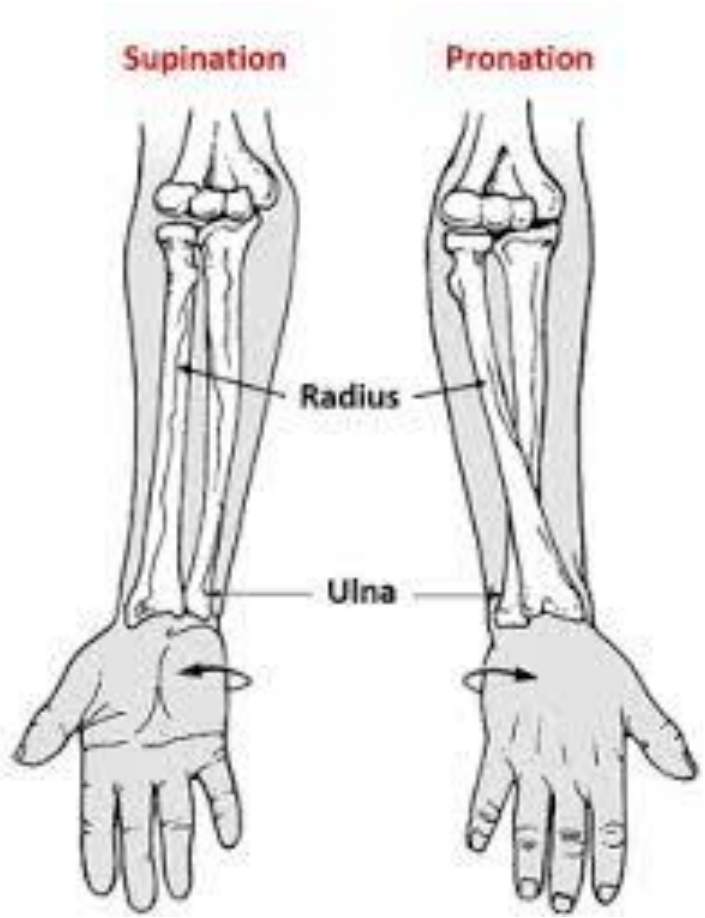
Pronator Quadratus

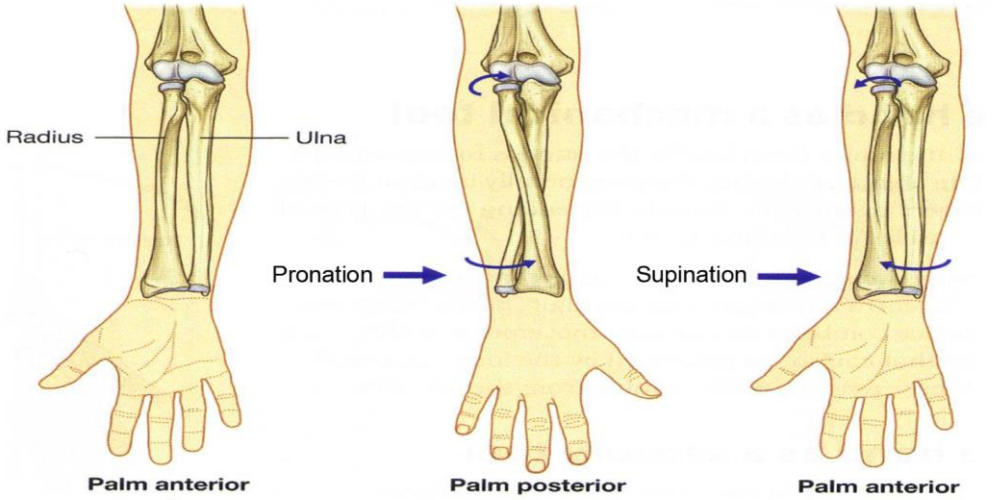


Supinator

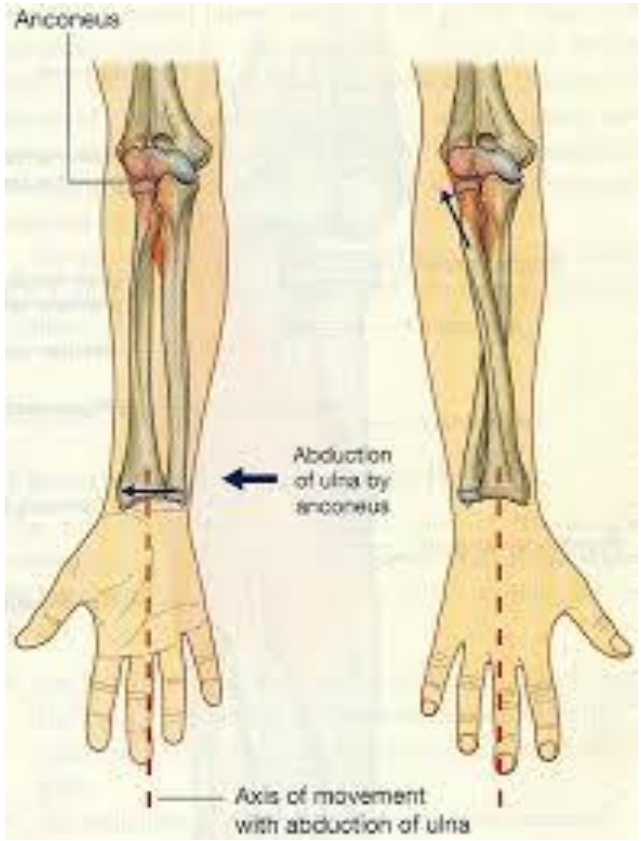

O, Lateral epicondyle of humerus
Supinator m.
Supination
I, Lateral surface of proximal radius just below head
Posterior
Anterior
O, Neighboring posterior part of ulna

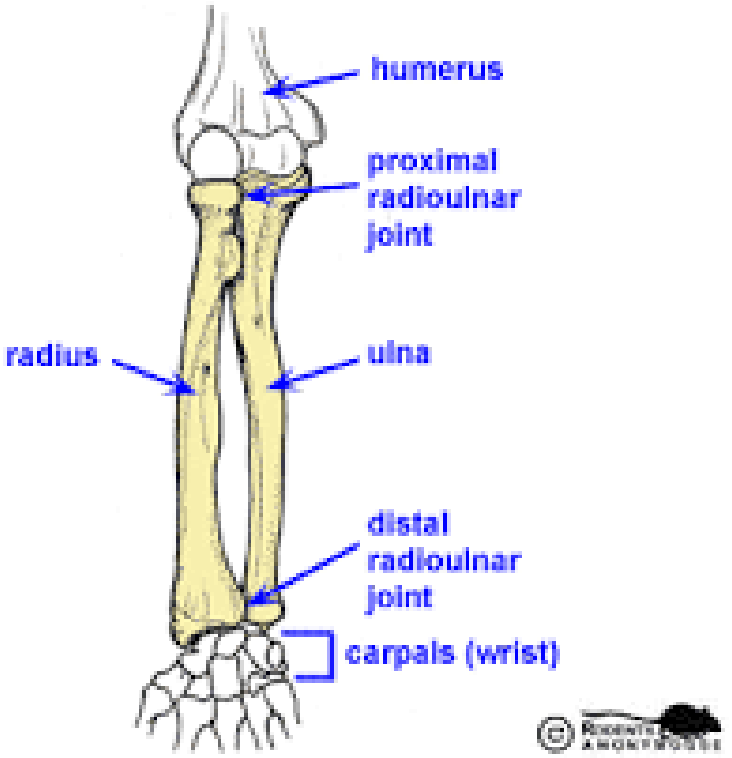
SUPINATION AND PRONATION



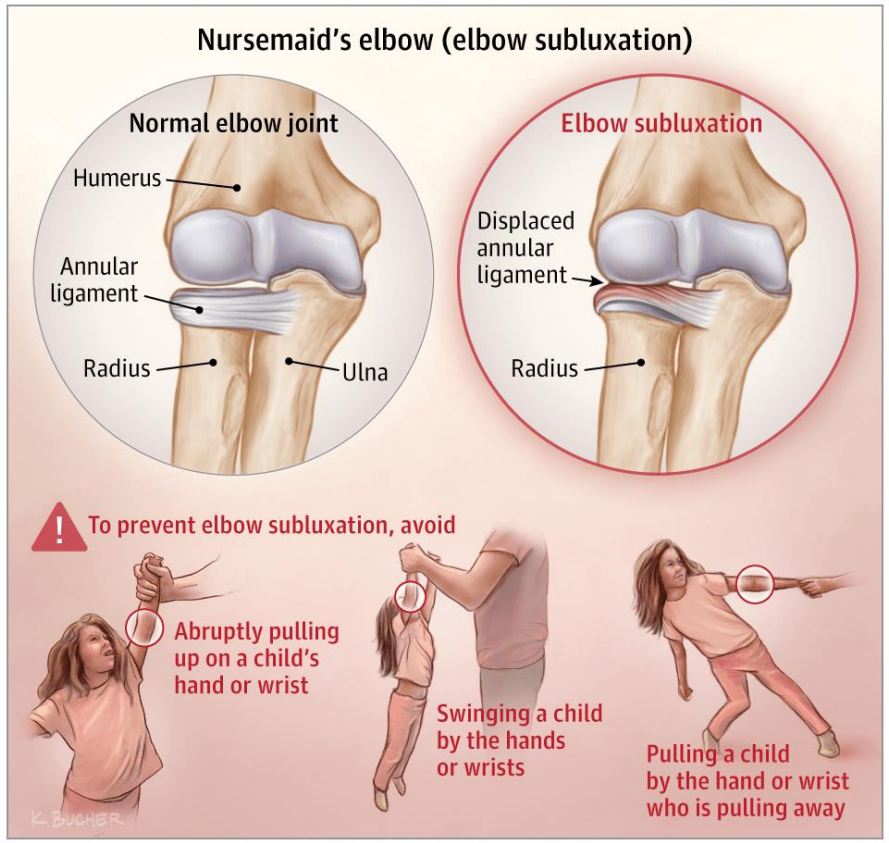


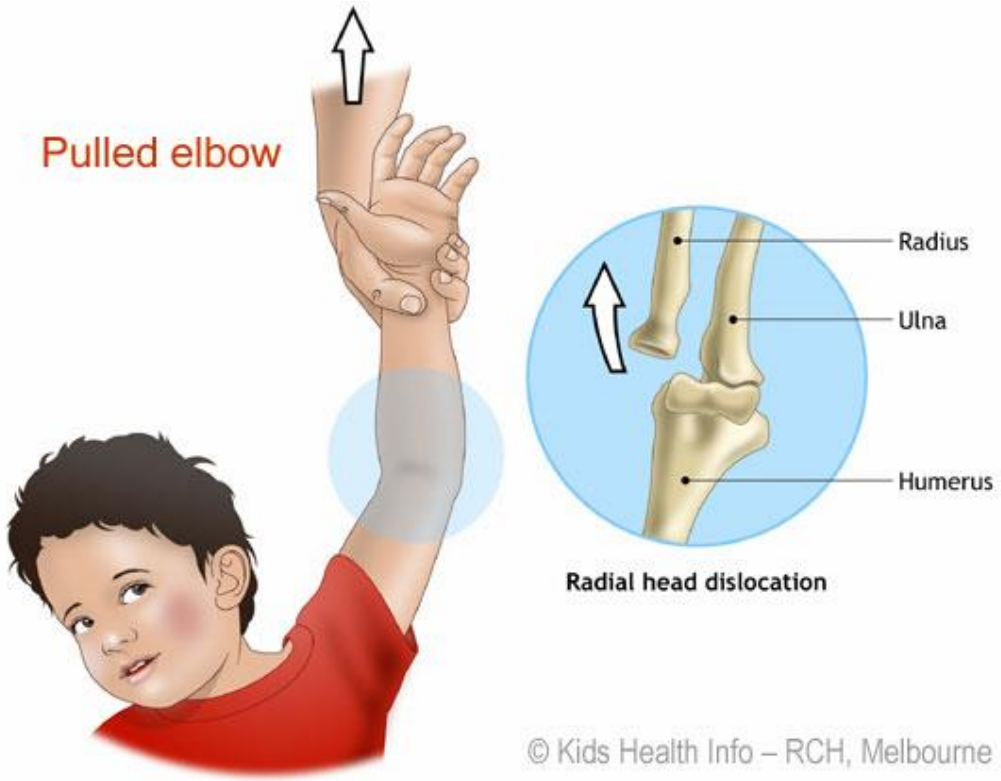
Axis of Radioulnar Joint





Pulled Elbow / Nursemaids elbow





THANK YOU