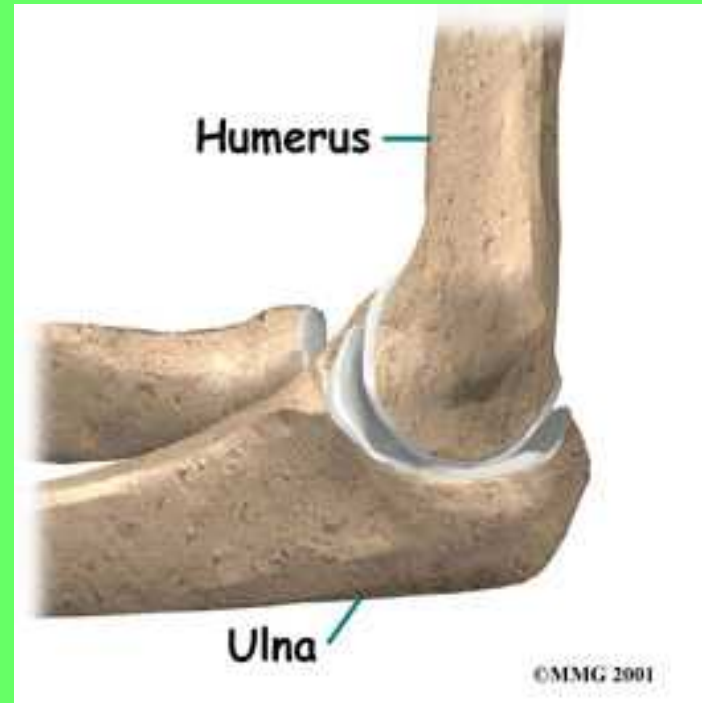
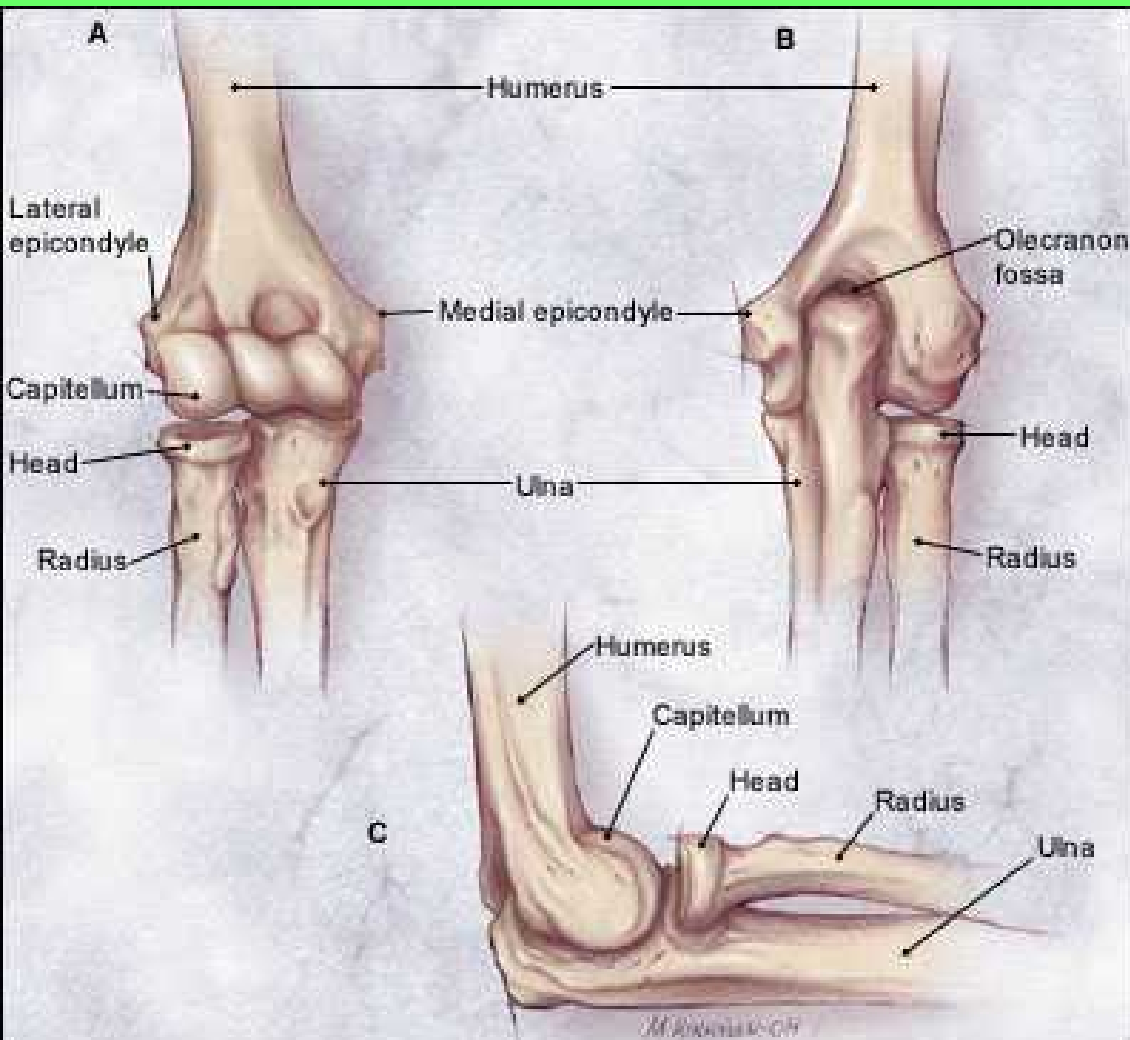


Elbow Anatomy



The Elbow Joint



Bones of the Elbow

Humerus

- medial epicondyle
- lateral epicondyle

Radius

Ulna

- olecranon process

Joints of the Elbow

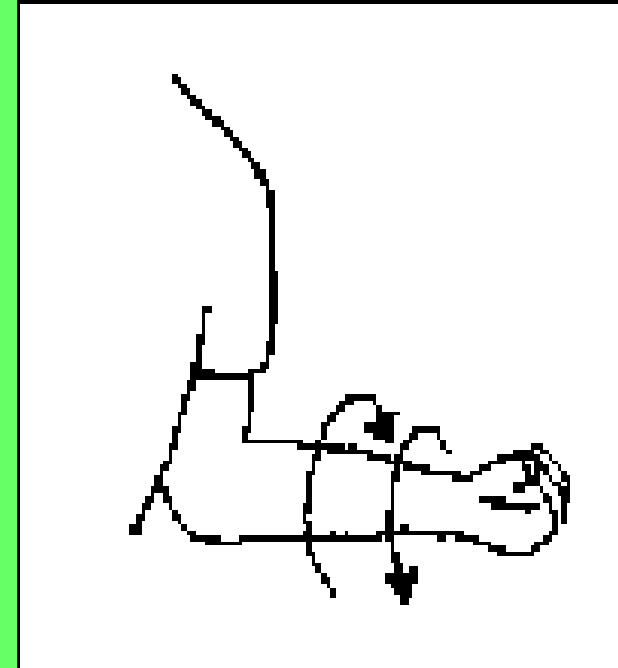
- Hinge joint
- Composed of 3 articulations:
 1. Humeroulnar joint
 2. Humeroradial joint
 3. Radioulnar joint

Motions

- Flexion/Extension
- Supination/Pronation

Supination – palm up

Pronation – palm down



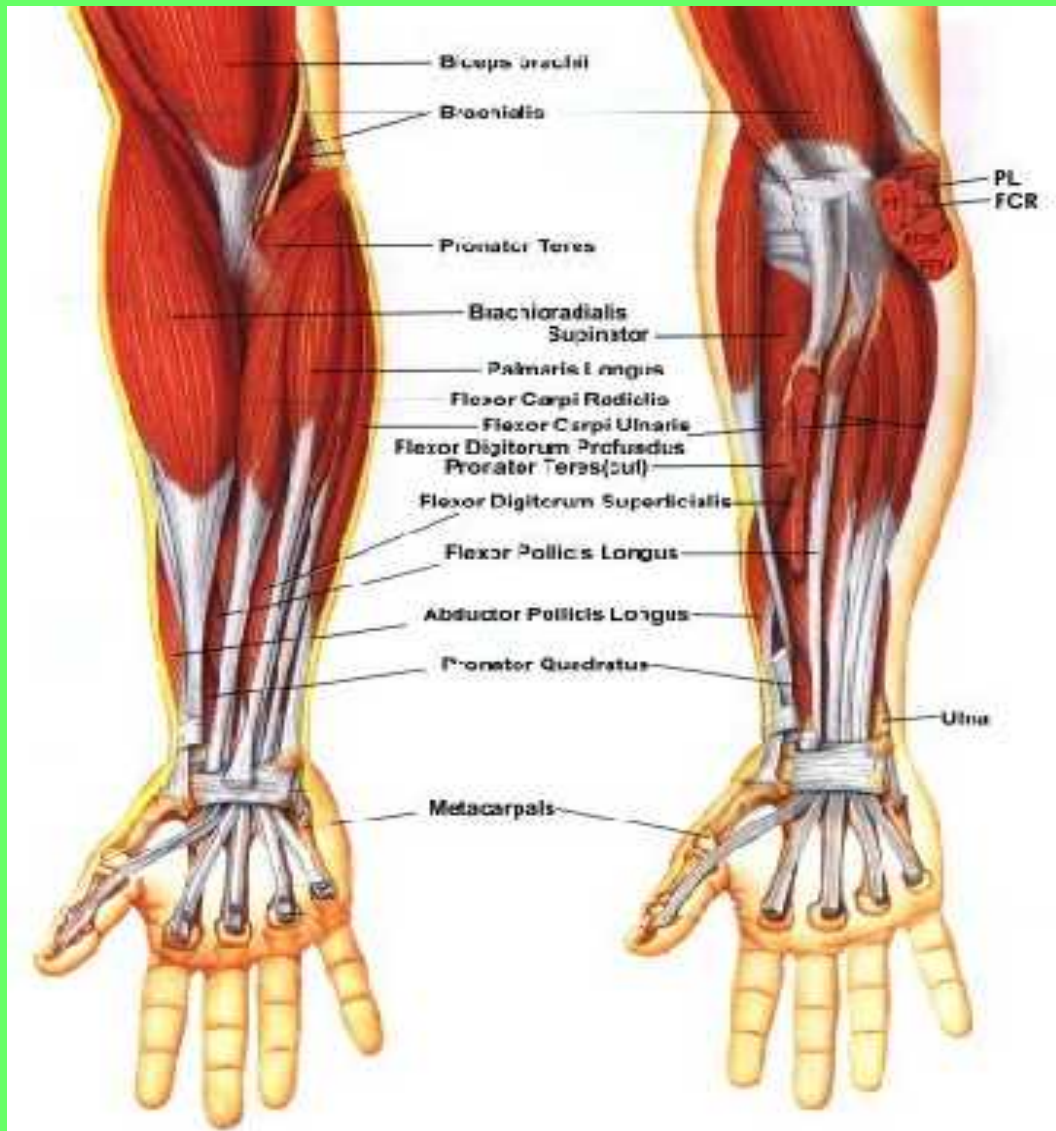
Muscles Affecting the Elbow

- Elbow Flexors
 1. Brachialis
 2. Biceps brachii
 3. Brachioradialis
- Elbow Extensors
 1. Triceps
 2. Anconeus

Muscles Affecting the Wrist Joint

- Wrist Flexor-Pronator group
 1. Pronator teres
 2. Flexor carpi radialis
 3. Palmaris Longus
 4. Flexor carpi ulnaris

These muscles originate on the medial epicondyle of the humerus as a single tendon





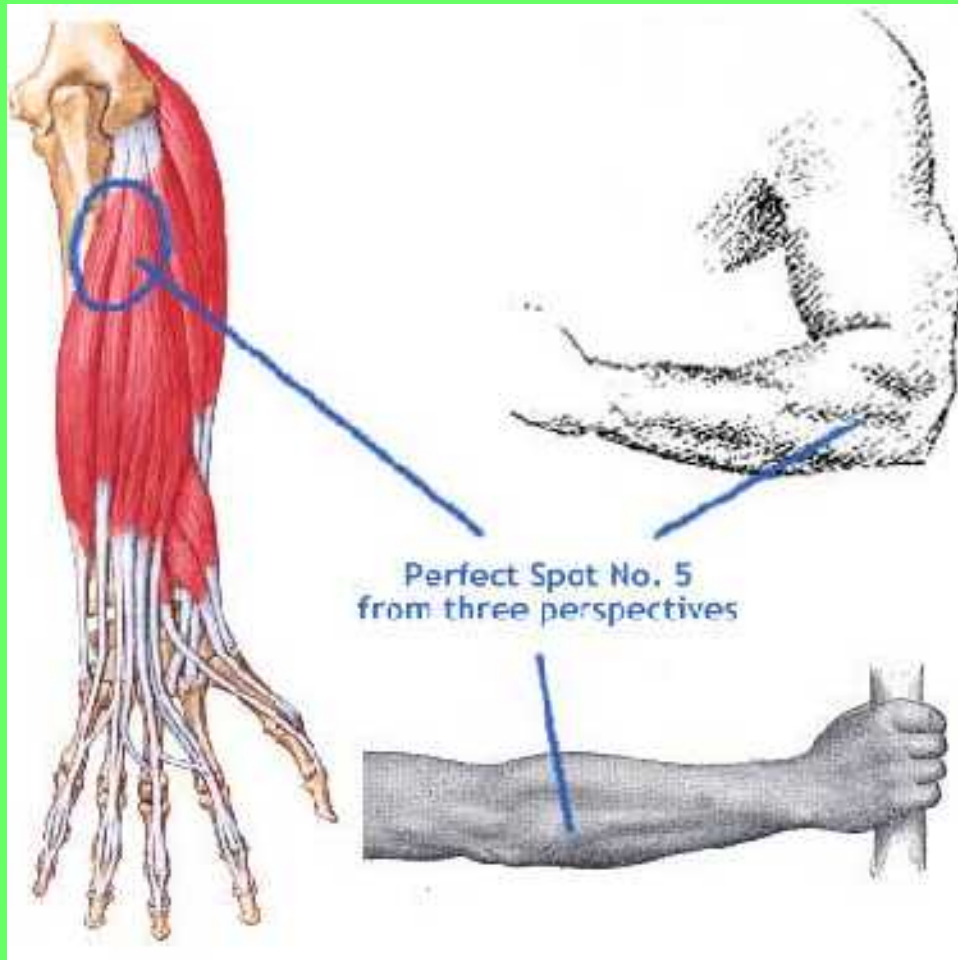
**palmaris
longus
tendon**

- Wrist Extensors

1. Brachioradialis – only muscle to extend from distal end of one bone to distal end of another
2. Extensor carpi radialis longus
3. Extensor carpi radialis brevis

These muscles originate on the lateral epicondyle

* The mobile wad of 3



Supination

1. Biceps
2. Supinator

Pronation

1. Pronator teres
2. Pronator Quadratus

Ligaments of the Elbow

Ulnar Collateral Ligament

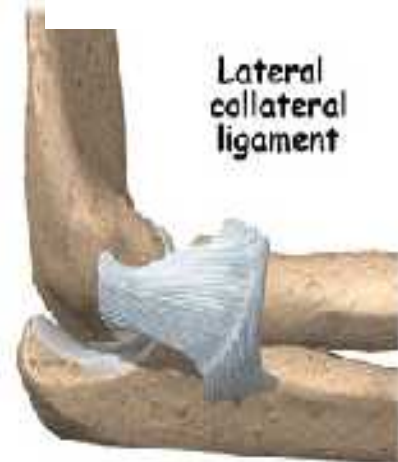
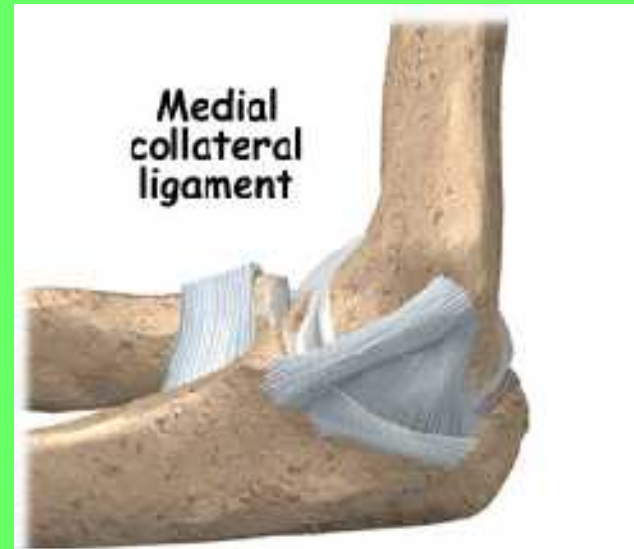
medial side – connects humerus to ulna

Radial Collateral Ligament

Lateral side – connects humerus to radius

Annular Ligament

Surrounds radial head/holds it tight to ulna



Injuries to the Elbow

Posterior Elbow Dislocation



Elbow Dislocation

- Usually occur as a result of a fall on an outstretched arm
- May be associated nerve or vascular injury
- Usually dislocates posteriorly
- Anterior Dislocations – very rare

Possible olecranon fracture

Medial and Lateral dislocations are rare





- Divergent Dislocation

the forearm bones are separated and the humerus slips between them



Wrong Way!

Dislocation of the Radius

- The radial head may be displaced forward, backward, or outward
- Children under 5 are prone to subluxation of the radial head due to a “pulling” on the forearm

Pulled elbow or Nursemaid’s arm

Nursemaid's Elbow Reduction



1. Apply pressure at the radial head.
2. Grasp wrist and apply slight traction.
3. Supinate wrist (palm up) while flexing elbow to 90 degrees.

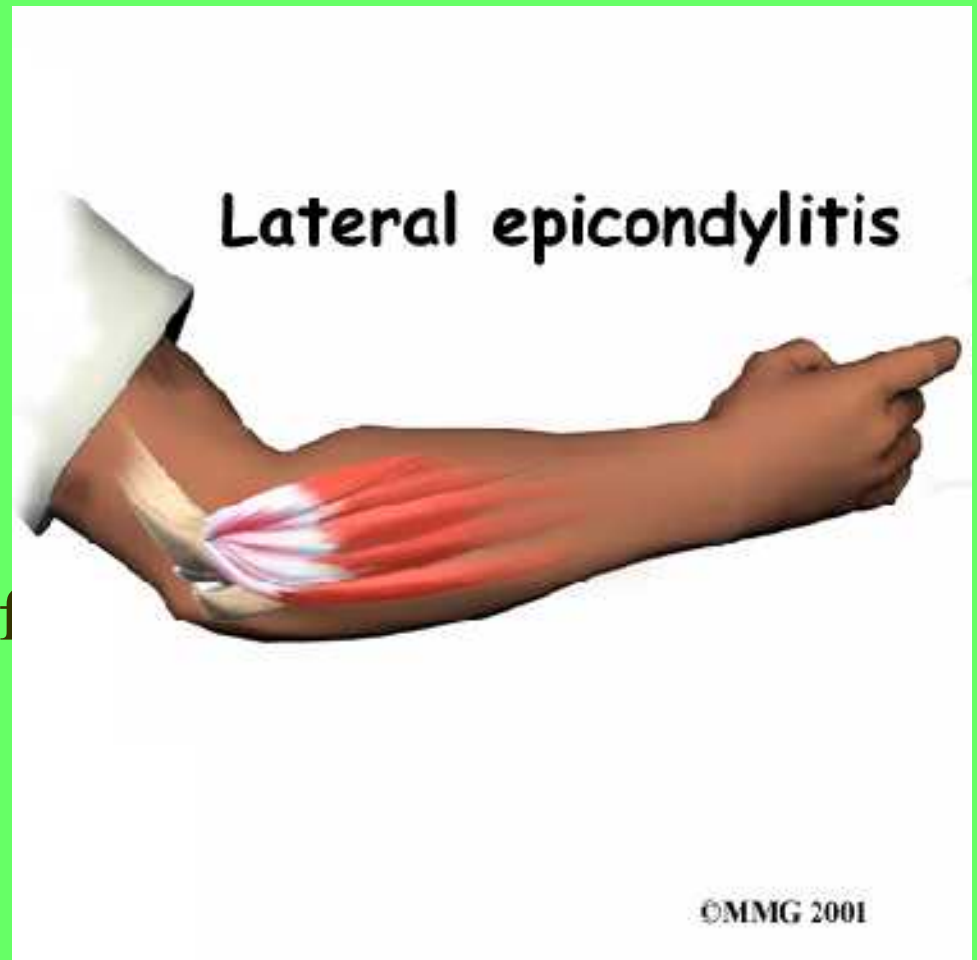
Medial Epicondylitis

- “Little League Elbow”
- Medial elbow pain and pain with flexion of the wrist flexor muscles
- May see an avulsion of the medial epicondyle



Lateral Epicondylitis

- “Tennis Elbow”
- Caused by excessive wrist extension, especially with a clenched fist
- Pain over outer part of the elbow





Olecranon Bursitis

- A collection of fluid in the olecranon bursa that covers the posterior tip of the elbow. Is the result of direct trauma to the elbow.¹

Olecranon Bursitis



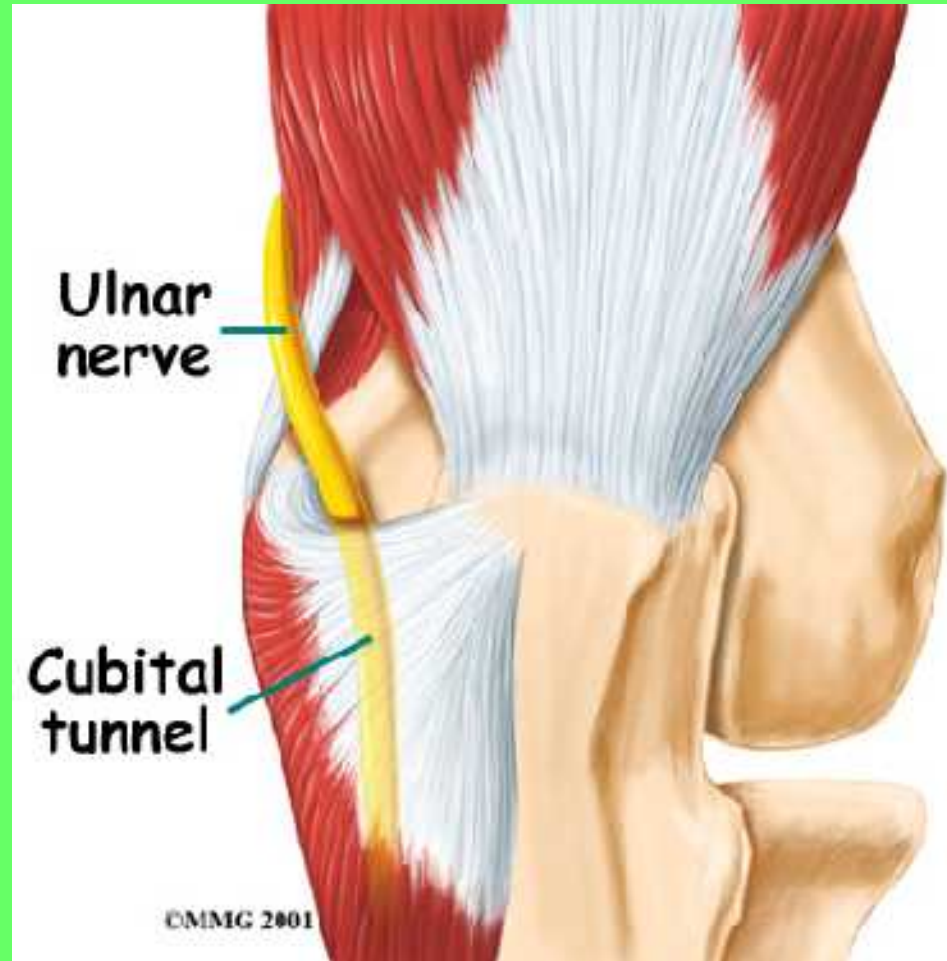
Tear of Medial Collateral Ligament

- Occurs when the inside of the elbow is stressed during the throwing motion.
- Pain and swelling over the medial portion of the elbow



Ulnar Nerve Injuries

- Occurs with throwing athletes and from direct trauma





- Ulnar nerve provides sensation to the little finger and the medial portion of the ring finger

Displaced Forearm Fractures

