
Elbow Anatomy and Physical Examination

Alexis Williams, MD and Daniel E. Davis, MD

GROSS ANATOMY

- Osteology: The 3 bones that comprise the elbow joint (distal humerus, proximal ulna, and proximal radius) allow it to function as a trochoginglymus joint, providing both flexion/extension as well as pronation-supination.
 - Distal humerus: transitions from the shaft to the medial and lateral columns, which support the articular surface (Figure 1-1)
 - Lateral column
 - Lateral supracondylar ridge: attachment of brachioradialis (BR) and extensor carpi radialis longus anteriorly and triceps posteriorly (Figure 1-2)
 - ◆ Avascular zone between BR and triceps marks the lateral column for surgical exposure
 - Lateral epicondyle: attachment of common extensor-supinator tendon and lateral ulnar collateral ligament (LUCL) posteriorly
 - ◆ Tendinitis of extensor carpi brachialis brevis (deep in common extensor mass) is cause of lateral epicondylitis¹ (Figure 1-3)
 - ◆ Lateral epicondyle debridement: must stay anterior to LUCL to avoid creating posterior rotatory instability
 - Medial column
 - The medial supracondylar ridge is more narrow than lateral, thus more prone to fracture
 - The medial epicondyle is more prominent than the lateral, serves as attachment of medial ulnar collateral ligament and flexor-pronator mass