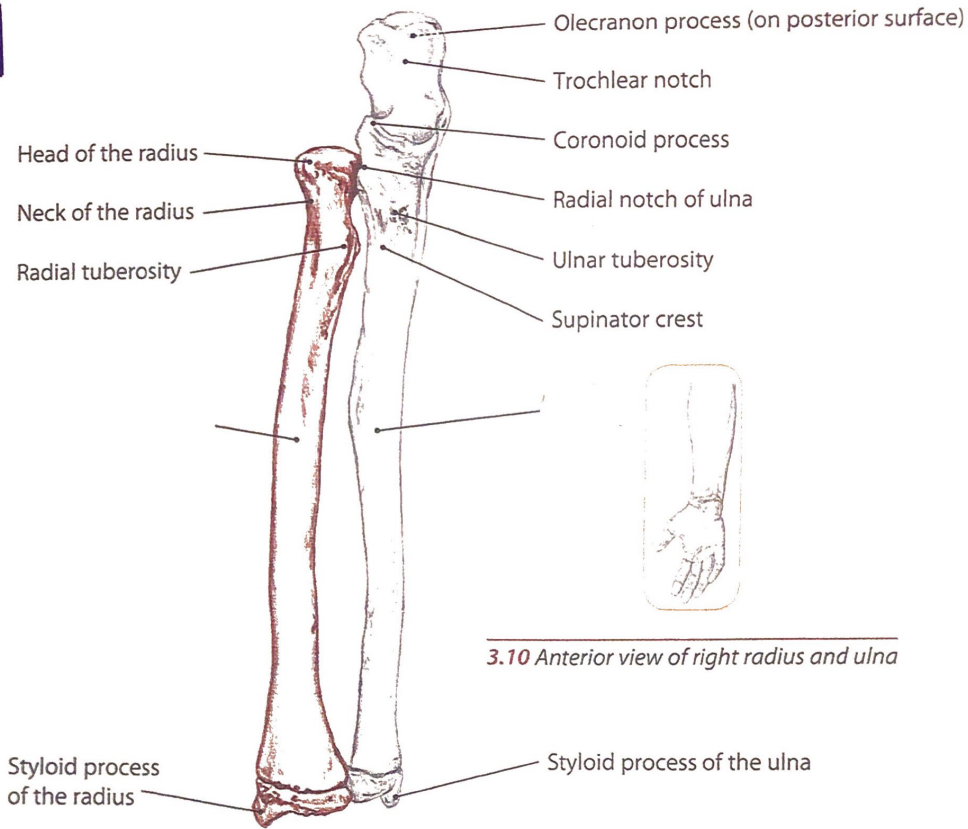


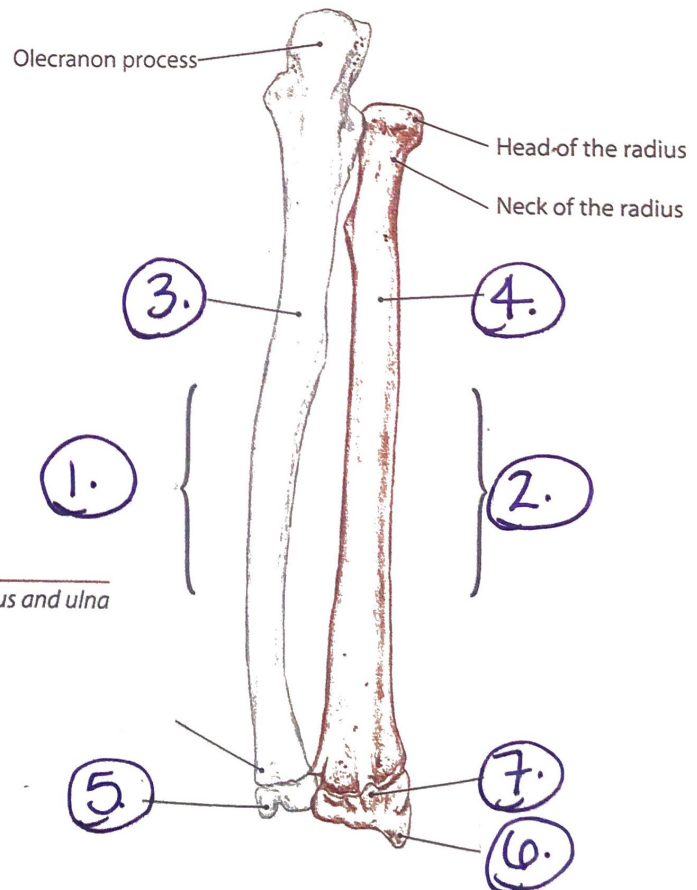
The Ulna and Radius

A.

Forearm & Hand



3.10 Anterior view of right radius and ulna



3.11 Posterior view of right radius and ulna



Bones of the Forearm and Hand

The **humerus** is the bone of the arm. Its proximal end articulates with the scapula to form the glenohumeral joint. Its distal end joins with the ulna and radius at the elbow. The elbow has two joints: the humeroulnar and humeroradial.

The **radius** and **ulna** make up the bones of the forearm (3.6). The ulna is superficial and has a palpable edge that extends from the elbow to the wrist. The radius ("on the thumb side") is lateral to the ulna and is partially buried in muscle. Pronation and supination of the forearm are created by the radius pivoting around the ulna at the proximal and distal radioulnar joints.

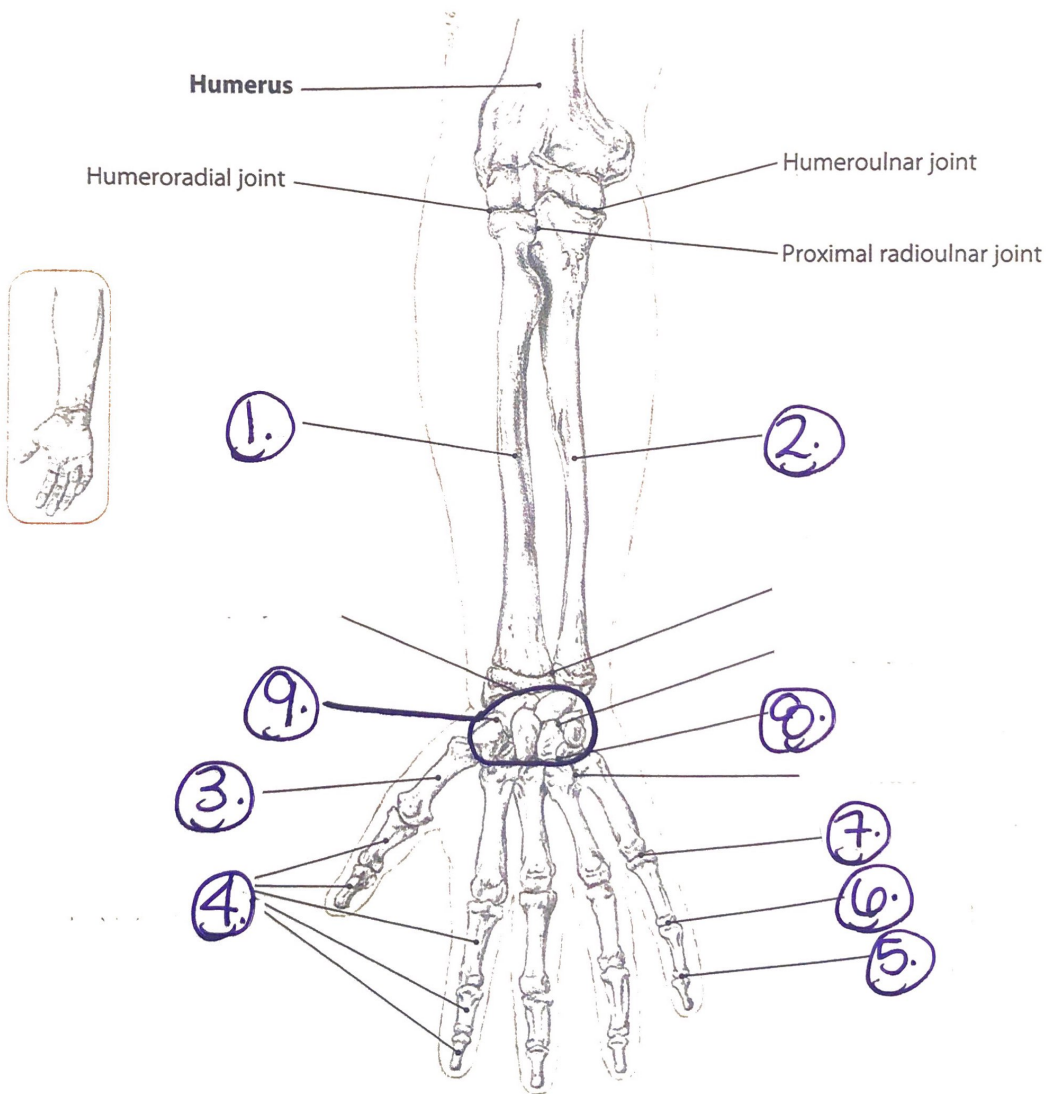
The three groups of bones in the wrist and hand are the carpals, metacarpals and phalanges. The **carpals** are eight

pebble-sized bones that form two rows (proximal and distal), each containing four carpal bones (3.9). Located distal to the "flexor crease" of the wrist, the carpals are accessible from all sides—the palmar, dorsal, radial and ulnar surfaces of the hand.

The **metacarpals** are five long bones spanning the palm of the hand. The metacarpals' proximal end is the base, the long midsection is the shaft and the distal end is the head (3.7). The metacarpals are easily palpable along the hand's dorsal surface. They are deep to the muscles on the palmar side.

The **phalanges** are the bones of the fingers. The thumb has two phalanx bones and the fingers have three. All sides of the phalanges are accessible (3.8).

| B. |



3.6 Anterior (palmar) view of right forearm and hand

Let's talk joints! The **radiocarpal** joint (wrist), formed by the radius and proximal carpals, is an ellipsoid joint. The gliding joints at the **midcarpal** and second to fifth **carpometacarpal** joints allow for only small, shifting movements.

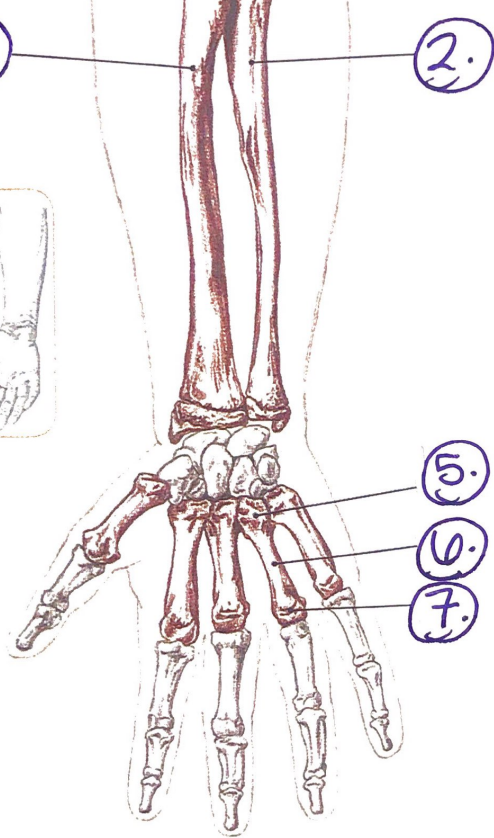
The first **carpometacarpal** joint of the thumb is an ellipsoid-shaped saddle joint. The **metacarpophalangeal** joints, the large "knuckles" of the hand, are also ellipsoid joints. The **interphalangeal** joints of the fingers are hinge joints.

Bony Landmarks

1 C.1

Lateral supracondylar ridge
 Lateral condyle
 Lateral epicondyle
 Radial fossa
 Capitulum
 Medial supracondylar ridge
 Medial condyle
 Medial epicondyle
 Coronoid fossa
 Trochlea

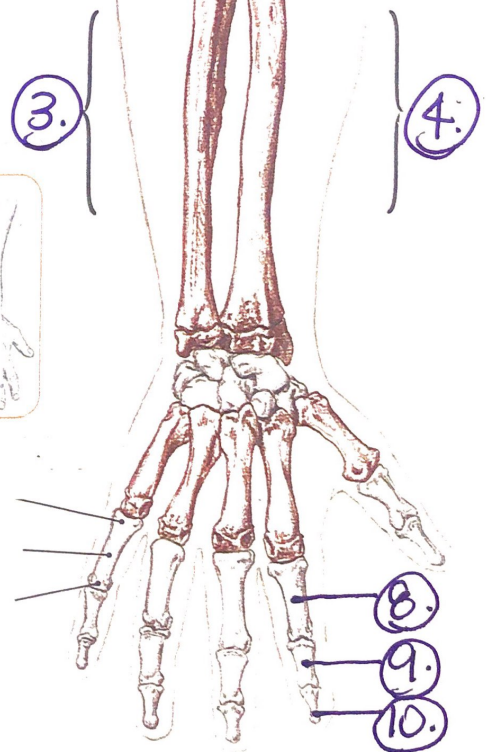
①
 ②



3.7 Anterior (palmar) view of right forearm and hand

Humerus
 Medial supracondylar ridge
 Medial epicondyle
 Groove for ulnar nerve
 Lateral supracondylar ridge
 Olecranon fossa (deep)
 Lateral epicondyle
 Olecranon process

③
 ④



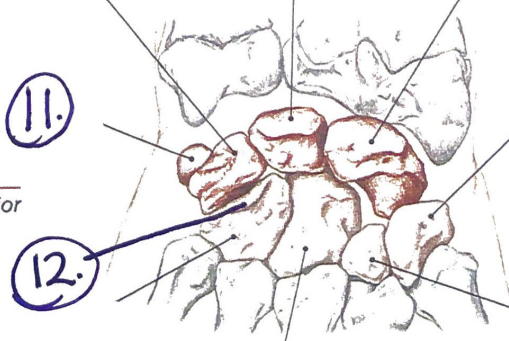
3.8 Posterior (dorsal) view of right forearm and hand

Triquetrum
 Lunate
 Scaphoid
 Trapezium
 Trapezoid
 Capitate



⑪
 ⑫

3.9 The eight carpals, posterior (dorsal) view of right wrist



carpal
 metacarpal
kar-pul
met-a-kar-pul

Grk. pertaining to the wrist
 Grk. meta, after, beyond