

Wrist Extension During Overhead Lifts

by Coach David Miller

Question:

During the overhead lifts (snatch & jerk) which is the most biomechanically advantageous position – Flexed, Extended or Neutral?

Answer:

Extended

Reasoning:

Much like the position we're in while performing a handstand on a flat surface our palms are flat hence, the wrist is Extended. Supporting weight overhead, our strongest option is to utilize our natural bone structure in conjunction with muscular strength. *"Stacking the bones."*

In the extended position the head of the ulna and ulnar notch of the radius articulate with carpal bones the scaphoid, lunate and pisiform. In extension, the lunate, scaphoid and pisiform bones seem to sit nicely into the distal concave notches of the ulna and radius. The extension of the wrist also helps us complete the extension at the elbow and external rotation at the Glenohumeral joint (show me your arm pits!)....":*Stacking the Bones.*"



Getting to complete extension, provided our structure allows these positions naturally, gives weightlifters that "effortless" look when standing out of a heavy snatch or recovery from the jerk. A fine example is Pyrros Dimas from Greece after completion of the snatch, typically looking left and right – pictured here while holding 170 kg over head as if it were the empty bar.

From Wikipedia:

"The [distal radioulnar joint](#) is a pivot joint located between the bones of the [forearm](#), the [radius](#) and [ulna](#). Formed by the [head of ulna](#) and the [ulnar notch of radius](#), this joint is separated from the radiocarpal joint by an articular disk lying between the radius and the [styloid process of ulna](#). The capsule of the joint is lax and extends from the [inferior sacciform recess](#) to the ulnar shaft.

Together with the [proximal radioulnar joint](#), the distal radioulnar joint permits [pronation](#) and [supination](#).^[8]

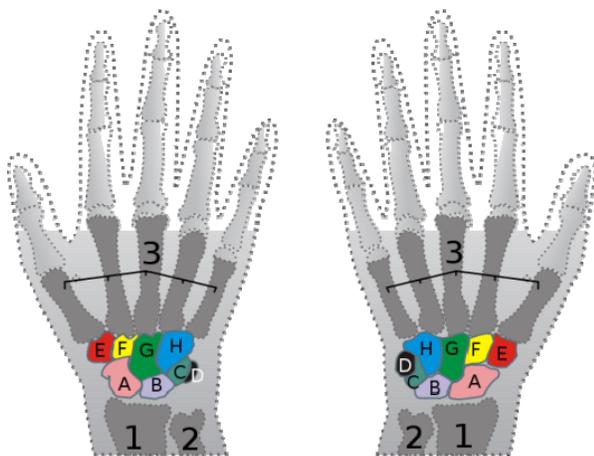
The radiocarpal joint or wrist joint is an ellipsoid joint formed by the radius and the [articular disc](#) proximally and the proximal row of carpal bones distally. The carpal bones on the ulnar side only make intermittent contact with the proximal side — the triquetrum only makes contact during ulnar abduction. The capsule, lax and un-branched, is thin on the dorsal side and can contain synovial folds. The capsule is continuous with the midcarpal joint and strengthened by numerous [ligaments](#), including the [palmar](#) and [dorsal radiocarpal ligaments](#), and the [ulnar](#) and [radial collateral ligaments](#).^[9]

The parts forming the radiocarpal joint are the lower end of the [radius](#) and under surface of the [articular disc](#) above; and the [scaphoid](#), [lunate](#), and [triquetral](#) bones below. The articular surface of the radius and the under surface of the [articular disc](#) form together a transversely elliptical concave surface, the receiving cavity. The superior articular surfaces of the scaphoid, lunate, and triquetrum form a smooth convex surface, the [condyle](#), which is received into the concavity.

Carpal bones highlighted, as seen in the **right** hand.

Proximal:

- A=[Scaphoid](#)
- B=[Lunate](#)

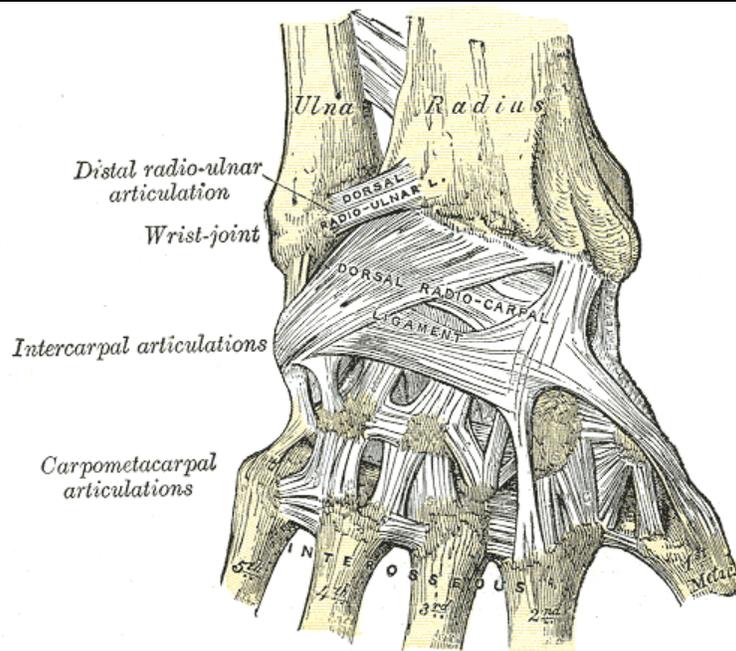


- C=[Triquetrum](#) (Triangular)
- D=[Pisiform](#)

Distal:

- E=[Trapezium](#)

- F=[Trapezoid](#)
- G=[Capitate](#)
- H=[Hamate](#)"



Disclaimer:

I'm a weightlifting coach with a background in design and engineering, neither a doctor nor medical professional of any kind. These images and definitions were grabbed from Wikipedia.