

Carpometacarpal and Intermetacarpal joints

Type of joint

Plane type synovial joints- EXCEPT the carpometacarpal joint of the thumb, which is a saddle type joint

Articulating surfaces

Distal surfaces of the carpal bones articulate with the bases of the metacarpals

The important thumb joint is the articulation between the trapezium and the base of the first metacarpal

The INTERMETACARPAL joints are adjacent metacarpals articulating with each other's bases

Articular capsule

The medial four carpometacarpal joints, and the three intermetacarpal joints, are all enclosed by the same articular capsule.

The thumb CMC joint has its own capsule

Ligaments

All these bones are united by the palmar and dorsal carpometacarpal ligaments, and by the intermetacarpal ligaments.

The DEEP TRANSVERSE METACARPAL LIGAMENT and the SUPERFICIAL TRANSVERSE METACARPAL LIGAMENT (which is part of the palmar aponeurosis) both work to prevent separation of the metacarpal bases

Stability factors

The above ligaments are the major stability factors

Movements

Almost no movement at the CMCs of the 2nd and 3rd fingers,
Slight movement at the 4th CMC
Moderate movement of the 5th CMC (flexion, extension and rotation)

Blood supply

Periarticular arterial anastomoses of the wrist and hand (basically, the arterial arches)

Nerve supply

Anterior interosseous branch of the median nerve, posterior interosseous branch of the radial nerve, and dorsal and deep branches of the ulnar nerve

The carpometacarpal joint of the thumb is independent – it has its own synovial capsule