CARPAL INSTABILITY - CLASSIFICATION

DEFINITION

- *Stability = ability to maintain normal relationships between articulating bones under physiological loads throughout range of motion.*
- Instability
  - Kinetic (abnormal load)
  - Kinematic (abnormal movement)

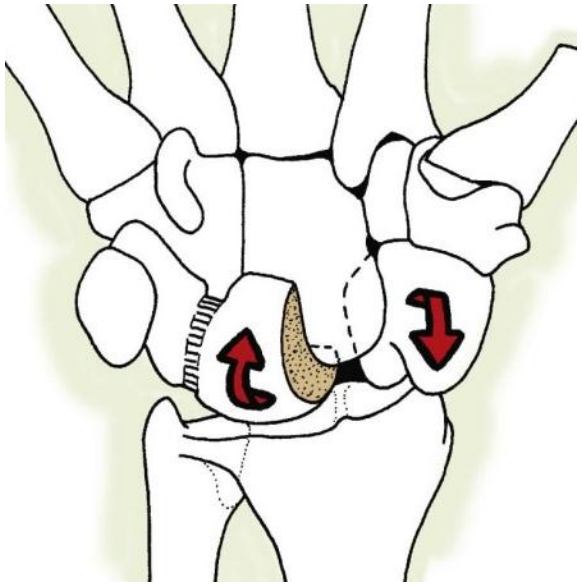
Patterns (*Mayo classification)*

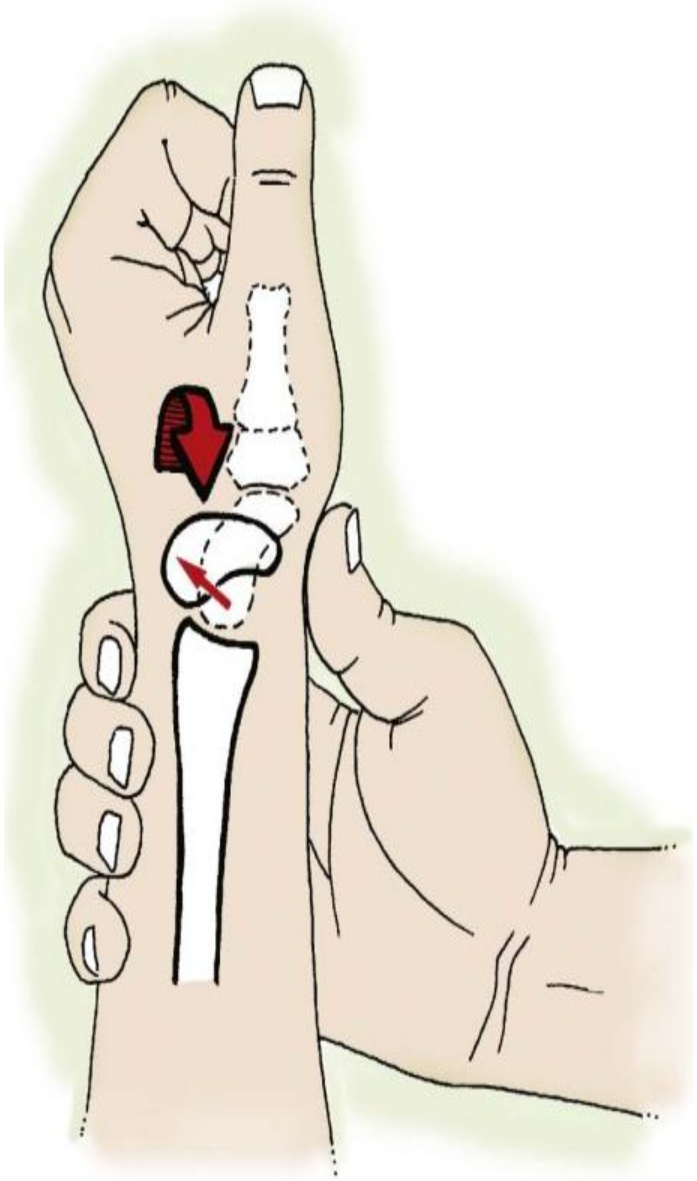
- Carpal Instability Dissociative (CID)
- Carpal Instability Non-dissociative (CIND)
- Carpal Instability Complex (CIC)
- Carpal Instability Adaptive (CIA)

Carpal Instability Dissociative (CID)

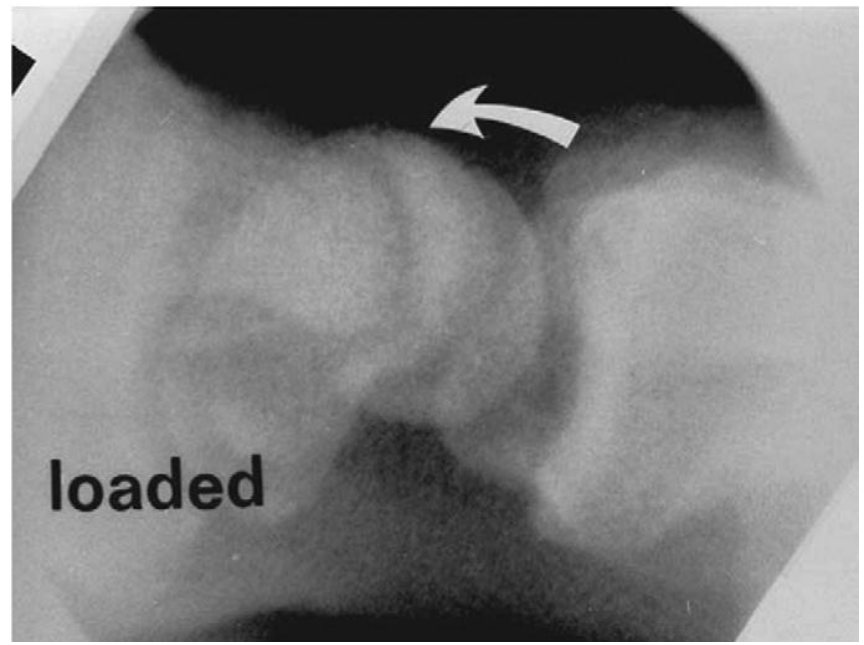
Instability within a carpal row

- SLL
- Dynamic/Static
- DISI





- Kirk Watson’s Test
- Pressure over scaphoid tubercle
- Move wrist from Ulnar to Radial
- Prox pole subluxes dorsally
- Reduces with a clunk
- Sensitivity 48%
- Specificity 67%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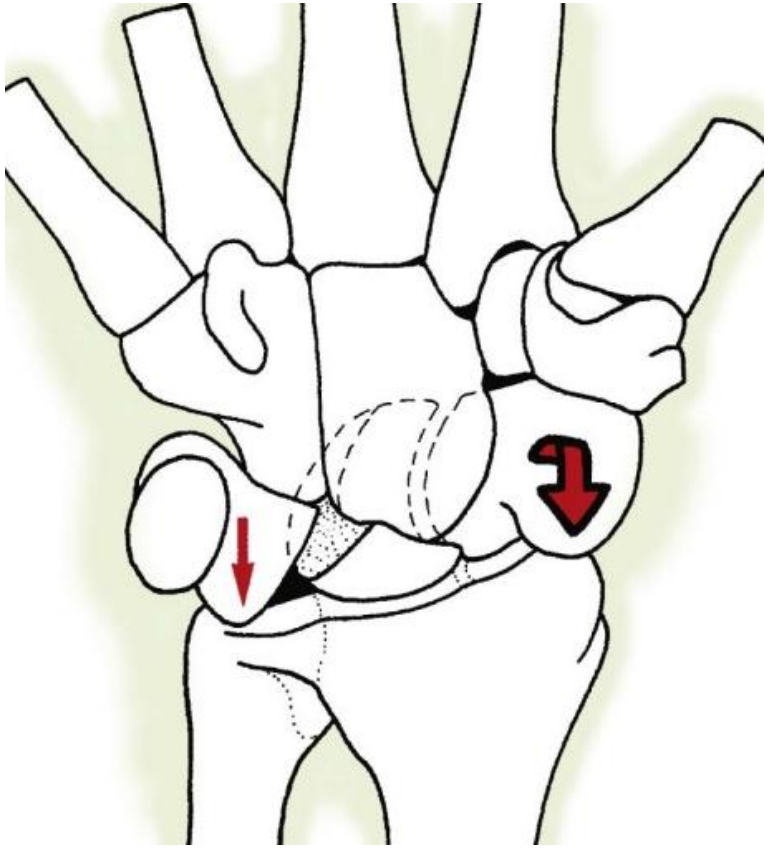
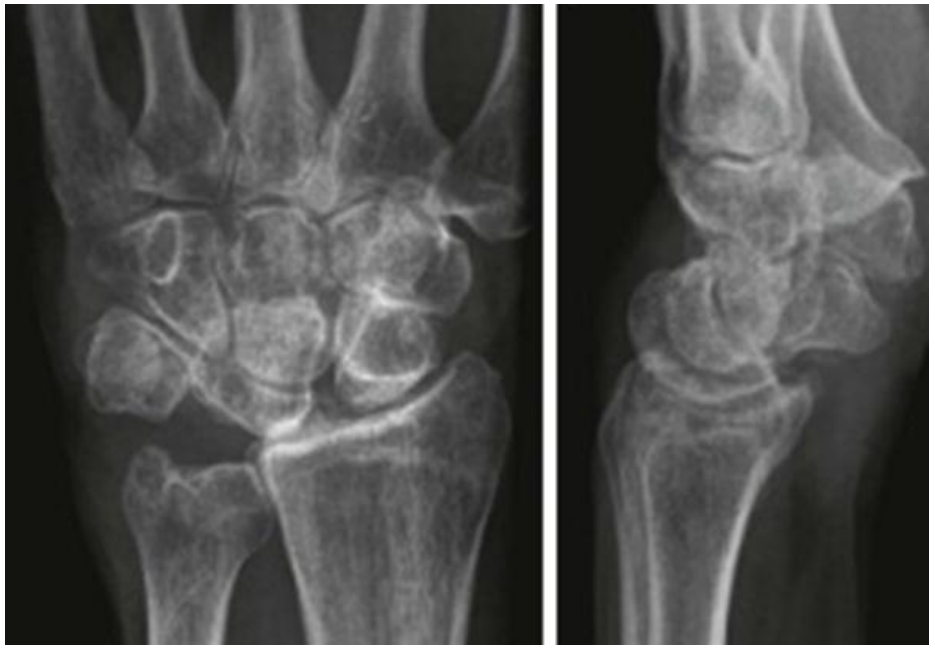
Carpal Instability Dissociative (CID)

Instability within a carpal row

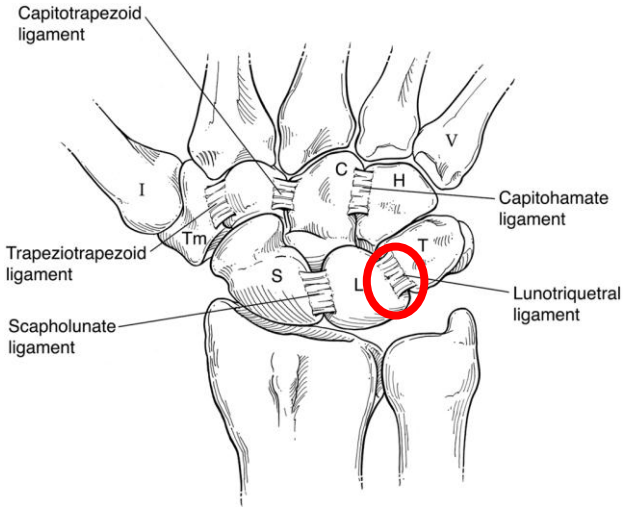
- LTL
- VISI





Provocative tests – LT Instability

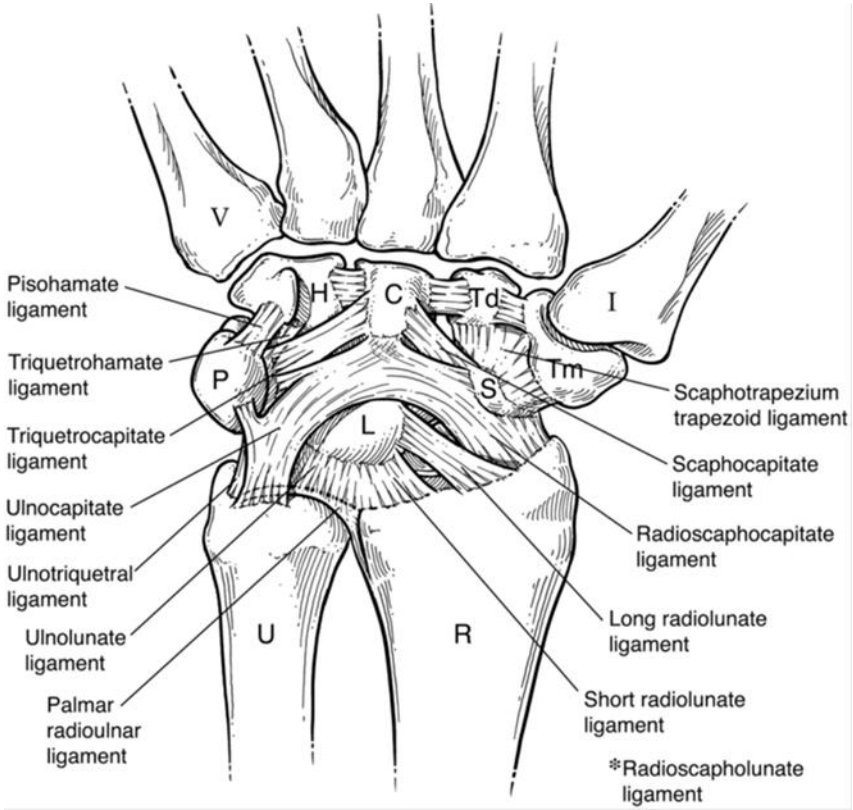
- LT Ballotment/Regan “Shuck” test
- Kleinman “shear” test



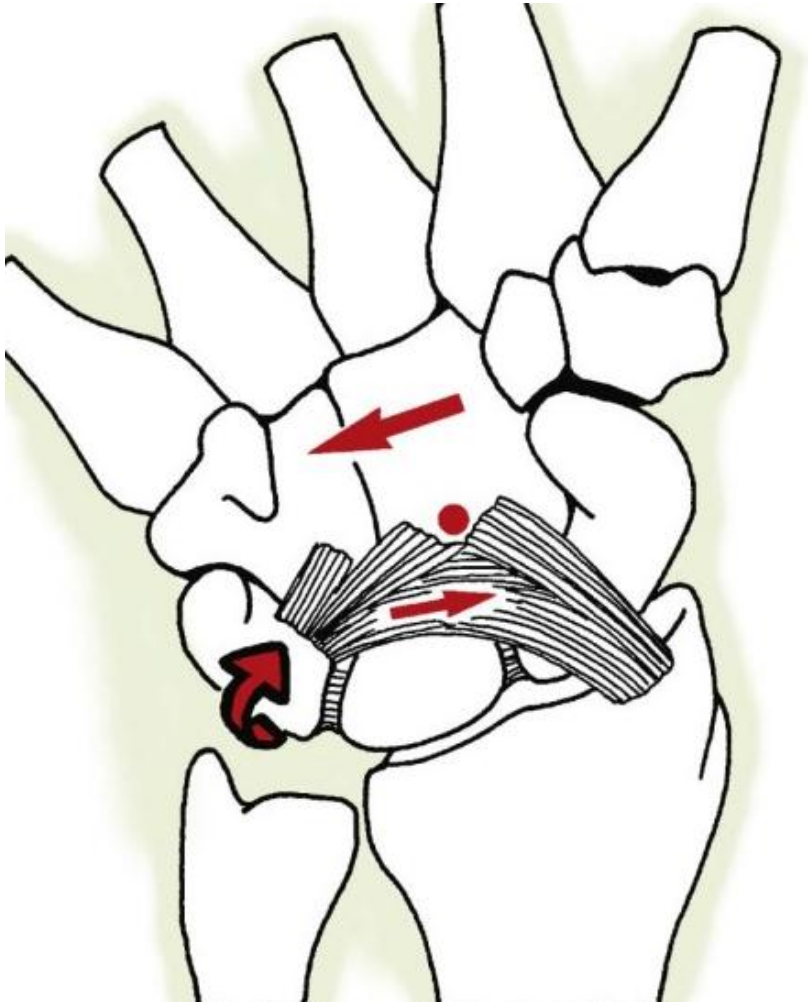
Carpal Instability Non-dissociative (CIND)

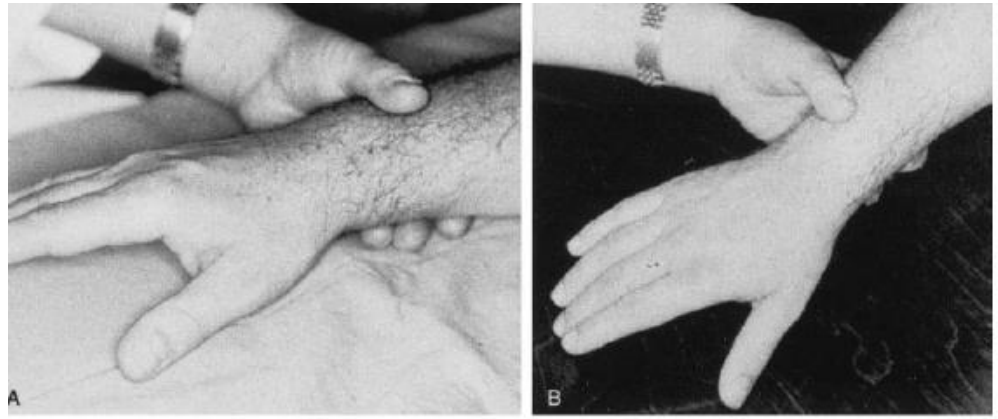
- Instability between carpal rows/radiocarpal joint
- Extrinsic ligaments deficient
- Midcarpal Instability
- Ulnar Translocation (I)
- Radial Translocation
- Radiocarpal Dislocation

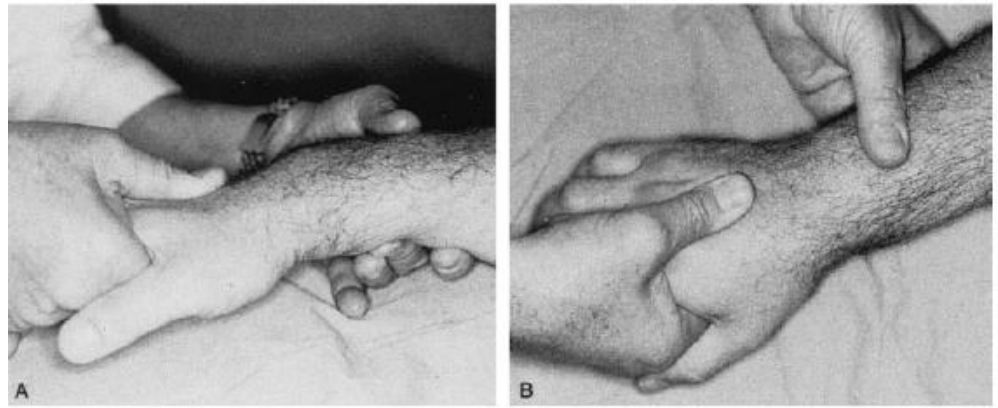
- Midcarpal Instability
- Extrinsic ligaments
- TrH/TrC (ulnar)
- STT/SC (radial)
- Palmar/Dorsal/Combined *(Lichtman et al 1993)*
- PMCI Ulnar



Lichtman Test (Catch-up Clunk)




A
B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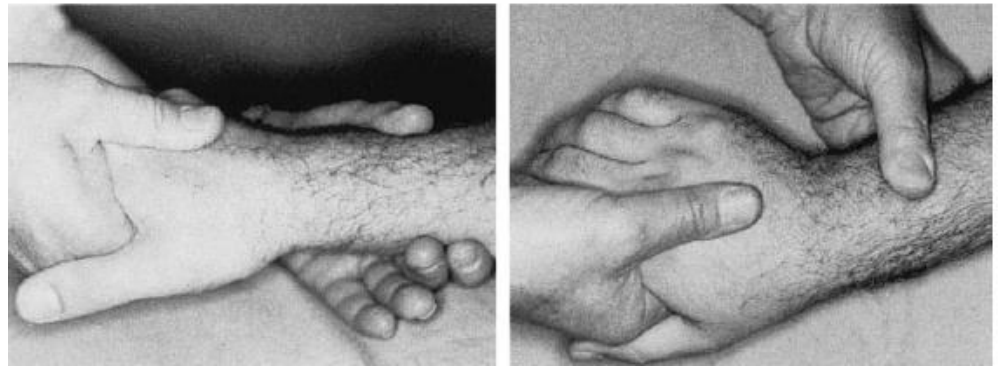


Carpal Instability Complex

- Instability ***within*** and ***between*** rows
- Ulnar translocation Type II

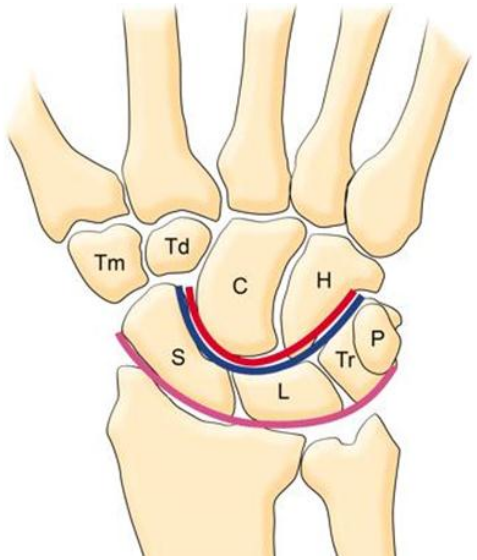
- Perilunate dislocations

Type II

Type I

Perilunate Dislocations

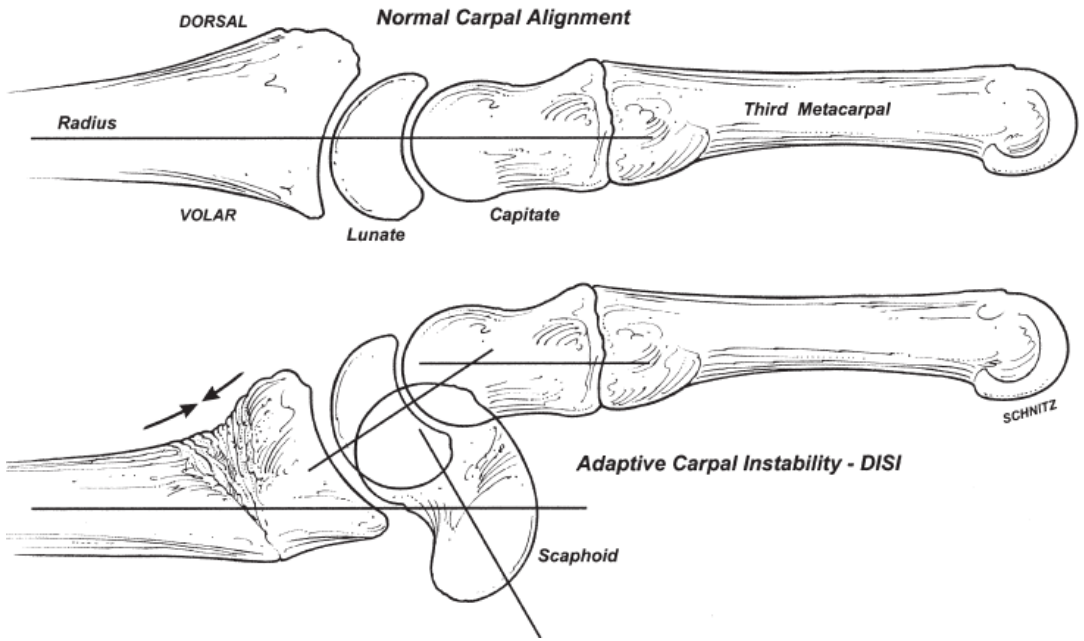
- Mayfield stages I to IV
- Herzberg I, IIA, IIB



- Lesser Arc (Ligament injury only)
- Greater Arc (Fracture and ligament injury)

Carpal Instability Adaptive (CIA)

- Mal-united Distal Radius Fractures



Scaphoid Fractures
(Humpback Deformity)