WRIST LIGAMENT INJURIES

The wrist is a joint between the forearm bones (radius and ulna) and the eight carpal bones, which are arranged in two rows. Movement occurs at two levels:

- Radio-carpal joint
- Midcarpal joint

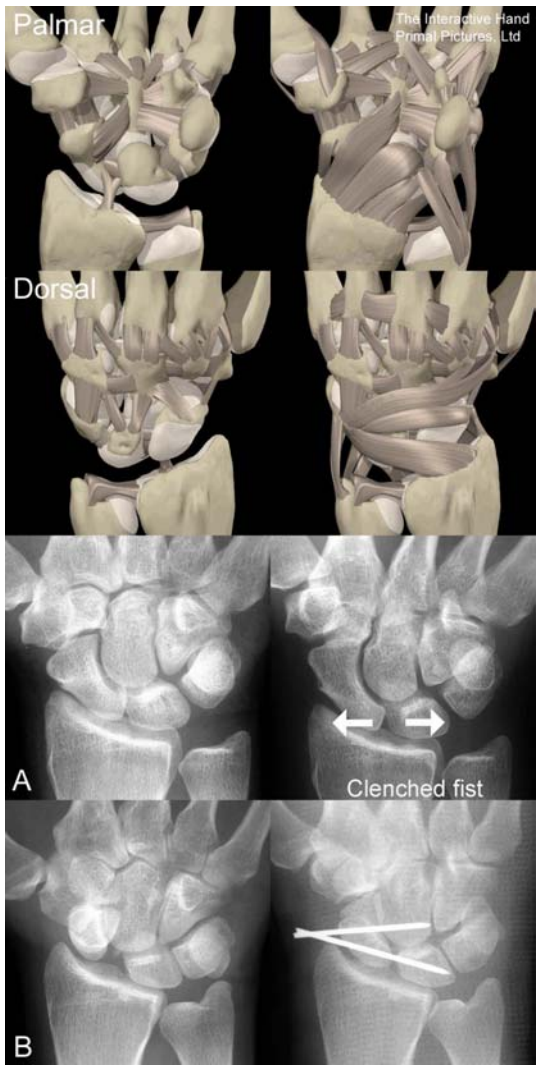
Movement occurs by changes in alignment between the bones and is controlled by a complex arrangement of ligaments. These comprise two groups

- Intrinsic ligaments (deep and short)
- Extrinsic ligaments (superficial and long)

Damage to these ligaments causes changes in alignment of the bones and altered patterns of movement. This places abnormal strains on the joints and may cause pain when the wrist is stressed. Eventually, the abnormal strains placed on the joints causes arthritis, which may cause further pain and stiffness.

Ligament damage can be very difficult to diagnose. X-rays can look normal because the ligaments are not visible and special tests are often needed to make the diagnosis.

- Examination including some special manoeuvres can reveal instability.
- Stressed X-Rays & Fluoroscopy involve X-rays of the wrist in different positions, moving or with force applied, any of which can cause unstable joints to widen (Case A).
- CAT or MRI Scans are occasionally helpful in revealing torn ligaments.
- Arthroscopy means looking inside the joint with a telescope. This is an important part of the assessment to identify and/or verify the injured ligament(s), to check there is no damage or wear of the joints and to exclude other problems such as a torn cartilage.



Treatment of wrist ligament injuries is very difficult and very often the wrist will not recover completely. The treatments depend on the precise injury and its timing. Once six weeks has passed, ligaments tend to be irreparable and it can be very difficult to restore the bones back into position.

- Splint or Plaster for six to eight weeks can be used in partial ligament tears when the bones are in a normal position when unstressed.
- Wiring through the skin to both correct and hold the bones may be possible early after injury if the bones have shifted position only a little (Case A). The wrist requires further protection in splint or plaster.
- Ligament repair is indicated if the bones have become significantly displaced (Case B). This involves an incision on the back of the wrist (usually), suture of the ligament, wiring of the bones into position and further protection in splint or plaster.
- Stabilisation is required if the ligament cannot be repaired, presentation delayed or if the injury was very severe with marked displacement of the bones. This involves use of adjacent ligaments and/or nearby tendons to reinforce the repair and/or mimic the effect of the damaged ligament. These are never as good as the original ligament and therefore total stability is often not achieved.
- Salvage procedures are required if treatment is delayed, previous treatment is unsuccessful or if there are signs of arthritis. This involves either removal of misaligned or damaged bones and/or fusion of unstable joints.