

TFCC Injury

The triangular fibrocartilage complex stabilizes the wrist at the distal radioulnar joint. It also acts as a focal point for force transmitted across the wrist to the ulnar side (shock absorber)

TFCC injury can happen as a result of a fall on an outstretch hand, or a twisting motion of the wrist.

High-demand athletes such as tennis players or gymnasts (including children and teens) are at greatest risk for TFCC injuries. Batting a baseball, subjects the TFC to heavy loads due to marked ulnar deviation. Power drill injuries can also cause TFCC rupture when the drill binds and the wrist rotates instead of the drill bit. TFCC tears can also occur with degenerative changes. Repetitive pronation (palm down position) and gripping with load or force through the wrist are risk factors for tissue degeneration.

It can be ruled out as a wrist sprain or can be missed due to an associated injury, e.g. wrist fracture

The injury cannot be seen with naked eye, but it causes pain on the ulnar side of the wrist, i.e. near the pinky side of the wrist.

Saba Kamal has over 18+ years of experience as a clinician. She has worked as an Occupational Therapist and a Certified Hand Therapist. In addition, she did her Fellowship in Hand Therapy from Texas Woman's University, in Houston with Baylor alliance.

o She has presented several talks at Local and National level conferences (ASHT: American Society of Hand Therapists and IFSHT: International Federation of Societies of Hand Therapists).

o She has contributed to a book on Arthritis, presented to support groups etc.

o She was the President of the California Chapter of ASHT & has won the best chapter award for her term in 2010 & 2011.

o She is a partner/principal in Advanced Rehab Seminars & provides continuing education seminars to other hand & upper extremity therapists nationwide.

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Specializing in Shoulder, Elbow, Wrist and Hand Therapy



Triangular Fibro- Cartilage Complex (TFCC Tears)

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TFCC Tears

Symptoms: The pain increases with rotational movements of the forearm, especially if the person attempts to turn the palm up.

Holding a plate, even a cell phone can become painful. Patients may experience

- Crepitus/ clicking
- Pain, and
- Tenderness on the ulnar side of the wrist
- Catching inside the joint

Types of TFCC tears

- **Central** perforations are usually due to degenerative process (most common) - these occur in a minority of cases; Central portion does not have a good blood supply and thus is excised.
- Substance tears of the **peripheral** rim - peripheral radial attachments are common, and since the peripheral portion of the TFC has good blood supply, these are amenable to repair;
- Avulsion of TFC from ulnar styloid - least common, associated with trauma like wrist fracture, its most amenable to surgical repair/ re-attachment;

Diagnosis

Radiographs:

- Your physician will look for avulsion of ulnar styloid, which can damage the TFCC or
- variable length of the ulna as a wrist w/ more positive ulnar variance tends to be associated with relatively thinner TFC articular disc;

MRI: MRI will often reveal the extent of injury and determine the treatment process.

Non operative treatment:

Early **splinting:** Ulnar gutter splint provided to decrease inflammation, and reduce repetitive motion thus prevent re-injury.



Iontophoresis

may be used at the area of pain to decrease inflammation. This is usually coupled with splinting.



Ice may be used to decrease inflammation. Ice pack is applied to the ulnar border of the wrist for 10 mins.

Ultrasound, Electric Stimulation, Myofascial release, flexibility exercises are used in conjunction with the above treatment.

As the patient is weaned off of the splint, **ergonomic assessment** is done to prevent loading of the wrist in ulnar deviation with typing / mousing.

To wean the patient off the splint **Leuko or Kinesio taping** may



be used.

Once pain has subsided, strengthening may begin.

Operative treatment:

Wrist arthroscopy is really the best way to accurately assess the severity of damage. At the same time, the surgeon looks for other associated injuries of ligaments and cartilage.

The surgeon performs the test by inserting a long thin needle into the joint. A tiny TV camera on the end of the instrument allows the surgeon to look directly at the ligaments.

Using a probe, the surgeon tests the integrity of the soft tissues. A special **trampoline test** can be done to see if the fibrocartilage disk is okay. The surgeon presses the center of the disk with the probe. Good tension and an ability to bounce back show that the disk is attached normally and is not torn or damaged. If the probe sinks as if on a feather bed, the test is positive (indicates a tear).

One advantage of an arthroscopic exam is that treatment can be done at the same time

Post Op: Surgeon may leave you in a cast for 4-6 weeks depending on the repair, if debridement is the only thing that was done, the cast may be removed in 2 weeks and patient is sent to therapy for ROM, swelling and pain management thus improving function.

