

TFCC Injury

The triangular fibrocartilage complex (TFCC), on the little-finger side of the wrist.

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What you're feeling

You are likely noticing pain on the outside of your wrist, near the little finger side. This area contains the triangular fibrocartilage complex, a group of tissues that stabilise your wrist joint. When these structures are injured, the pain can feel deep and aching. You may also experience clicking or catching sensations when you turn your hand, such as when opening a jar or turning a key.

The discomfort often worsens with activities that require gripping or twisting. Simple daily tasks can become difficult. You might find it hard to push yourself up from a chair, lift a kettle, or use a screwdriver. Rotating your forearm, like when turning a doorknob or using a corkscrew, can trigger sharp pain. You may also feel weak when trying to bear weight on your hand, such as when doing a push-up or leaning on a table.

Some people notice the pain flares up after periods of heavy use. Others find it hurts more in the morning or at night, especially if you sleep on that side. The pain may not be constant; it often comes and goes depending on how much stress you put on your wrist. If you have had a recent fall or injury, the pain might have started suddenly. If it has been building up over time, it is likely due to wear and tear or repetitive strain.

It is common to feel some swelling around the joint, though this may not always be visible. You might also notice that your wrist does not move as smoothly as it used to. Stiffness can make it challenging to perform fine motor tasks, like buttoning a shirt or typing. While rest may provide temporary relief, the pain often returns when you resume normal activities. Understanding these symptoms helps your surgeon identify the source of your discomfort and plan the most appropriate treatment for you.

What's actually happening

Your wrist is a complex hinge made of small bones and soft tissues that work together to let you turn your hand and bear weight. At the edge of your wrist, near the little finger side, sits the triangular fibrocartilage complex.

Think of this structure as a shock absorber or a gasket. It sits between your forearm bones and your wrist bones, helping to distribute the load across the joint when you push against surfaces or lift things.

When this cartilage is injured, that cushioning effect is lost. The bones may rub against each other with more force than they should. This can cause pain, especially when you twist your wrist or push down with your hand. The injury often happens after a fall onto an outstretched hand or from repetitive twisting motions. Sometimes, the damage extends beyond just the cartilage to include nearby stabilising ligaments. These ligaments act like ropes holding the wrist bones in place. If they are also torn, the wrist may feel unstable or weak.

Diagnosing this area can be tricky because the structures are small and deep. Standard scans without a dedicated wrist coil might miss these injuries. This is why your surgeon may recommend wrist arthroscopy. This is a keyhole procedure where a tiny camera is inserted into the joint. It allows for a direct look at the damage. It helps to confirm if the cartilage is torn, if there are loose fragments, or if other soft tissues are involved. It is a safe procedure with minor and transient complications.

The goal is to clear up the confusion about what is hurting. By seeing the inside of the joint, your surgeon can plan the right treatment. This might involve cleaning up torn tissue or repairing the stabilisers. For many people, this investigation leads to significant improvement in pain and function over the next year. However, it is important to know that most participants continued to have some pain and disability at one year. The procedure aims to reduce symptoms and improve movement, but it does not always return the wrist to its pre-injury state completely.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, starts with the least invasive options that suit your condition. We begin by helping you protect the wrist while it heals. You might need to change how you use your hand for daily tasks. Physiotherapy or hand therapy can strengthen the muscles around the joint. This support helps reduce strain on the injured ligament. We often recommend a splint to keep the wrist still and allow the tissue to settle. Most patients try these non-operative measures for several weeks to see if symptoms improve.

If simple rest and therapy do not give enough relief, we may discuss medical management. Pain medication and anti-inflammatory drugs can help manage discomfort. In some cases, we might suggest an injection into the wrist joint. Cortisone injections can reduce inflammation and pain for a period of time. Hyaluronic acid or platelet-rich plasma (PRP) injections are other options that aim to support joint health. These treatments do not fix the structural tear, but they can help you manage symptoms while your body heals or while you prepare for further steps.

Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. A clinic assessment, including a history, examination, and imaging where needed, establishes the diagnosis. For degenerative or long-standing problems we usually try non-operative care – activity change, physiotherapy or hand therapy, splinting, and injections – and consider surgery when that has not given enough improvement. For structural or acute problems, surgery may be recommended straight away, without a preceding non-operative trial. Wrist

arthroscopy is a key tool for diagnosing and treating TFCC injuries. It allows us to see inside the joint clearly and repair damage directly. If conservative care has reached its limit and your pain persists, we will discuss whether this surgical option is right for you.

What to expect

Wrist arthroscopy is a key tool for diagnosing and treating TFCC injuries. It allows your surgeon to look inside the joint and address issues directly. You can expect an average improvement of approximately 50% in pain and disability within one year. This means your symptoms should become noticeably more manageable.

However, it is important to have realistic expectations. Most patients with persistent wrist pain continue to experience some level of pain and disability after one year. While the procedure helps significantly, it does not always return the wrist to its pre-injury state. You may need to adapt your activities to protect the joint long-term.

The procedure is generally safe and associated with minor and transient complications. Transient means the side effects are temporary and resolve on their own. Despite this, the true rate of complications may be higher than previously reported. There is a risk of trauma to the posterior interosseous nerve, which supplies sensation and movement to parts of the hand. Detailed knowledge of wrist anatomy is essential to minimise these risks.

If left untreated, persistent wrist pain often does not resolve completely on its own. Arthroscopic investigation offers a path to improvement, but it is not a guarantee of full recovery. You should expect a gradual process rather than an immediate fix. The goal is to reduce pain and improve function enough for you to carry out daily tasks with greater comfort.

When to see someone

Ask for a specialist review if you have persistent wrist pain that does not improve with rest. Seek help if you notice weakness, instability, or a feeling of locking or giving way. Symptoms that interfere with sleep or work also warrant attention. Sudden worsening of pain is another reason to book an appointment. Your surgeon can use wrist arthroscopy to diagnose the cause. This keyhole surgery helps treat conditions like triangular fibrocartilage complex tears. It allows for accurate assessment of joint surfaces and soft tissues. Early evaluation helps manage symptoms effectively.

In more depth

This section goes further than you need for your own treatment decisions. Triangular fibrocartilage complex injury is worth the extra reading because the technique debates that dominate discussion have not separated – while one detail of the post-operative regime, which attracts far less attention, appears to matter.

WHAT THE STRUCTURE ACTUALLY DOES

The TFCC is a disc of cartilage with a surrounding sling of ligaments, sitting between the end of the ulna and the carpal bones. It performs two jobs at once: it cushions load transmitted across the ulnar side of the wrist, and it stabilises the joint between the two forearm bones at the wrist – the distal radioulnar joint.

That dual role explains why injuries here present in two distinct ways. A tear affecting mainly the disc produces pain on load – pushing up from a chair, gripping and twisting. A tear detaching the deep fibres from their attachment on the ulna, the **foveal** insertion, produces instability, with the sense that the wrist gives way or clunks when the forearm rotates. The second matters more, because the ligamentous attachment is what holds the joint together.

MRI IS ACCURATE, WITH A QUALIFICATION WORTH KNOWING

Diagnosis rests substantially on imaging. Across **1,298** patients, the overall accuracy of MRI was acceptable, and for **peripheral tears the pooled accuracy was relatively high** – with MRI using appropriate parameters described as an ideal method for diagnosing the different tear types [1].

The qualification is in the word “peripheral”. MRI performs best at the outer, better-vascularised part of the complex, which is where repairable tears sit. Central and degenerate tears, and the precise state of the foveal attachment, are harder to characterise, which is why examination findings and sometimes arthroscopy carry weight alongside the scan.

THE TECHNIQUE COMPARISONS DO NOT SEPARATE

Two operative debates recur, and neither has resolved.

For the common peripheral, ulnar-sided tear, a systematic review of **240** patients found a **lack of high-quality evidence** to draw firm conclusions on arthroscopic versus open repair, and **no scientific evidence to suggest superiority of one technique over the other** [2].

For foveal repair, comparing suture anchor with transosseous suture across **904** patients, both achieved improvement in functional outcomes, pain and grip strength with a low reoperation rate – though the range-of-motion comparison remained **inconclusive** [3].

The consistent message is that the repair needs to restore the attachment; the hardware used to achieve it has not been shown to change the result.

THE POST-OPERATIVE DETAIL THAT DOES APPEAR TO MATTER

Here the evidence is more discriminating, and it is practically useful. Comparing immobilisation regimes after foveal TFCC repair across **288** patients, post-operative immobilisation **may benefit more from restricting forearm rotation than from restricting elbow motion**, and the additional restriction of elbow flexion and extension **has not shown a consistent advantage** [4].

This follows directly from the anatomy. The repaired structure is loaded by rotation of the forearm, not by bending the elbow – so the splint needs to control the palm turning up and down. An above-elbow cast is often used to enforce that indirectly by preventing the elbow rotating, and this evidence suggests the elbow

component is not the part doing the work. For a patient, six weeks in a brace that leaves the elbow free is a substantially different experience from six weeks in a cast above it.

REFERENCES

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