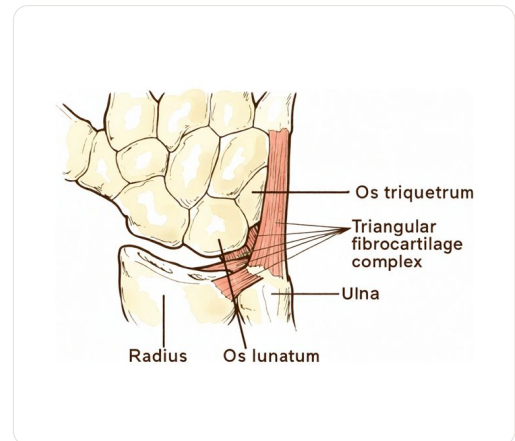


Ulnar-Sided Wrist Pain and Ulnar Impaction

The TFCC and the ulnar (little-finger) side of the wrist — a common source of ulnar-sided wrist pain.

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What you're feeling

Pain on the **little-finger side of the wrist** (the ulnar side) is very common, and it has several possible causes. This page is about the most important mechanical one: a condition called **ulnar impaction** (also known as ulnocarpal abutment).

The pain tends to sit deep on the outer edge of the wrist, towards the back of the hand. It is often worse when you grip firmly, twist your forearm, or bend the wrist towards the little finger, so everyday actions like opening a jar, turning a key, using a screwdriver, wringing out a cloth, or leaning on the hand to push up out of a chair can all set it off. Many people also notice a **click or a clunk** in the wrist with certain movements, and the wrist can ache after a day of heavy use. Putting weight through the wrist (in a plank, a push-up, or pushing a heavy door) is a classic aggravator.

It usually builds up gradually rather than starting with a single injury, though it can follow a wrist fracture.

What's actually happening

Two forearm bones run up to the wrist: the **radius** (thumb side) and the **ulna** (little-finger side). For the wrist to work smoothly, the ends of these two bones should sit at roughly the same level. In ulnar impaction, the ulna is relatively too long compared with the radius, a condition doctors call **positive ulnar variance**.

Some people are simply born with a slightly long ulna. In others it develops later: most often when a broken wrist heals slightly shortened, leaving the radius a touch shorter than it was and the ulna effectively standing proud.

Whatever the cause, that little bit of extra length means the end of the ulna grinds against the small wrist bones it sits next to (the lunate and the triquetrum) every time you load the wrist. In between those bones sits a cushion of cartilage called the **TFCC** (the triangular fibrocartilage complex), which acts as a shock-absorber.

Repeated abutment slowly wears this cushion down, can tear the TFCC, and over time bruises and even forms small cysts in the bone underneath. That wear-and-tear process is what produces the pain, the clicking, and the loss of comfort with gripping and twisting. (We have a separate page on [TFCC injuries](#), which often go hand-in-hand with this condition.)

What we can do about it

Dr Kieran Hirpara leads our upper-limb service at Mater Private Hospital Rockhampton, where we manage ulnar-sided wrist pain through a clear pathway. 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. We begin with a thorough assessment to confirm the diagnosis, and for long-standing issues, we always try non-operative care first before considering surgery.

The good news is that most people settle with non-operative treatment, and that is always where we start.

Calming it down. The first steps are simple: modify the activities that load the ulnar wrist (especially heavy gripping, twisting and weight-bearing) for a while, wear a **wrist splint** to rest the joint, and use anti-inflammatory medication to settle the pain and swelling. Sometimes a **steroid injection** into the joint helps break the cycle of inflammation.

Confirming the diagnosis. Alongside treatment we usually take **X-rays** to measure exactly how the two bones line up (sometimes with a special “grip” view that exaggerates the impaction), and often an **MRI** to look at the cartilage, the TFCC and the bone underneath. Occasionally a keyhole look inside the joint (**arthroscopy**) is used to confirm what is going on and treat it at the same time.

If it persists. When good non-operative treatment hasn’t settled things, the aim of surgery is to take the pressure off the ulnar side of the wrist. The most established option is an **ulnar-shortening osteotomy**, where the surgeon removes a small slice of the ulna to bring it back to the right length and holds it with a small plate while it heals. A less invasive alternative in selected cases is an arthroscopic “**wafer**” **procedure**, which shaves a small amount off the very end of the ulna through keyhole surgery. Both work by stopping the bone from grinding against the wrist.

What to expect

For most people, ulnar impaction is a problem we can get on top of. Non-operative measures settle a large proportion of cases, and the symptoms ease once the joint is no longer being repeatedly overloaded.

When surgery is needed, **shortening the ulna is a reliable operation**, and studies that have followed patients for many years report good, lasting pain relief and high satisfaction. The bone needs time to heal, so there is a recovery period of some weeks in a splint or cast while the osteotomy unites, followed by a gradual return to gripping and loading. The main things to be aware of are that the bone occasionally takes longer than expected to knit, and that the small plate can sometimes be felt under the skin and is occasionally removed once

everything has healed. Overall, the great majority of people return to their everyday activities with the pain resolved.

When to see someone

- **Ulnar-sided wrist pain that won't settle** over a few weeks, or that keeps coming back with gripping and twisting, and is worth having assessed.
- Pain that follows a previous wrist fracture, especially if the wrist has never felt quite right since.
- A persistent click, clunk or catching on the little-finger side of the wrist, particularly with weight-bearing.
- Pain that is stopping you doing your job or your daily activities. This is the point at which it is worth looking into what is driving it and what can be done.

In more depth

This section goes further than you need for your own treatment decisions. Ulnar-sided wrist pain is worth the extra reading because it is a location rather than a diagnosis – several distinct problems share the same small area – and because for the commonest of them, the newer and smaller operation now has better complication figures than the established one.

WHY THIS CORNER OF THE WRIST IS DIFFICULT

Within a few centimetres sit the TFCC, the distal radioulnar joint, the extensor carpi ulnaris tendon and its sheath, the pisotriquetral joint, the lunotriquetral ligament, and the point where the ulna meets the carpal bones. Each can generate pain in the same place, several commonly show abnormalities on imaging in people without symptoms, and more than one can be involved at once.

That is why assessment here leans harder on precise localisation and provocation testing than elsewhere in the wrist, and why a scan reported as showing several abnormal structures is a common and unhelpful outcome. It is also why less common causes – midcarpal impaction, for instance – are periodically described as overlooked contributors [1].

ULNAR IMPACTION: THE MECHANICAL PROBLEM WITH A MECHANICAL FIX

The commonest structural cause is ulnar impaction – the ulna sitting slightly long relative to the radius, so the carpal bones are driven against its end with grip and with the forearm turned palm down. Over time this wears the TFCC and the cartilage of the bones it abuts.

The treatment shortens the ulna, either by cutting and shortening the shaft, or by removing a wafer of bone from its end, which can be done arthroscopically. Pooling **956** patients, the arthroscopic and open wafer procedures **may be viable alternatives to the more popular ulnar shortening osteotomy**, though clinical superiority had not been established at that point [2].

More recent data have moved further. Comparing the arthroscopic wafer procedure with ulnar shortening osteotomy across **311** patients, both were effective – but the **wafer group showed fewer complications and a lower reoperation rate**, leading the authors to describe it as potentially the superior alternative [3].

WHY THE OSTEOTOMY ACCUMULATES COMPLICATIONS

The reason is not that the operation is poorly done. Shortening the shaft requires cutting a bone, holding it with a plate while it heals, and accepting that it may not heal. A pooled review of **1,423** patients specifically examined nonunion, finding **no difference between transverse and oblique osteotomies** – and concluding the choice between the two should therefore not be made on nonunion risk [4].

The wafer procedure avoids that category of problem entirely by removing bone from the end rather than dividing the shaft. There is no fracture to unite and usually no plate to remove later, which is where the difference in reoperation rates comes from.

The trade-off is that the wafer procedure removes a limited amount of bone and requires the distal radioulnar joint to be sound, so shortening the shaft remains necessary where more correction is needed or that joint is also involved.

THE PRACTICAL CONSEQUENCE FOR A PATIENT

Because several structures can be responsible, a treatment aimed at the wrong one will not work regardless of how well it is performed. This is the region where a diagnostic injection, targeted imaging, and occasionally arthroscopy earn their place before a decision – and where a specific diagnosis, rather than “ulnar-sided wrist pain”, is what should be reached before an operation is planned.

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