

Carpal Fractures Other Than the Scaphoid

What you're feeling

These injuries usually happen in a fall onto an outstretched hand, a direct blow to the wrist, or a sudden heavy load through the hand. Some people feel or hear a snap or click at the moment of injury. High-energy impacts, like a fall from height or a road crash, can break more than one of the small wrist bones at once.

Straight away, the wrist hurts. There is usually swelling and bruising around the injured area. The pain tends to sit in one spot you can point to, and pressing on that spot is the most reliable sign something is wrong. Moving the wrist, gripping, or pushing through the hand makes it worse. If the injury is more severe, the wrist may look obviously out of shape, and you may not want to use the hand at all.

In the first days to weeks, the pain is often there at rest and can wake you at night. Everyday tasks that load the wrist, like pushing up from a chair, carrying shopping, or turning a door handle, hurt. The pain usually settles gradually as the bone heals, though it can stay sore with gripping or twisting for some time.

One thing worth knowing: these breaks are easy to miss. They are uncommon, and the small bones overlap each other on plain X-rays, so a normal X-ray does not always rule one out. Some of these fractures, like those of the trapezium or trapezoid, are hard to see on standard images at all. If your wrist is still painful after an injury, your surgeon may arrange a scan such as an MRI or CT to look more closely.

Some warning signs need urgent care. Go to the emergency department the same day if your hand or arm becomes hot, red, swollen and painful, especially with a fever, or if fingers or the hand turn pale, cold, white or blue, or if you suddenly lose feeling or movement after the injury. If symptoms are not settling, are getting worse over weeks, wake you at night, or stop you working or using the hand, see your GP or ask for a specialist review.

What's actually happening

Your wrist is not one joint. It is a small cluster of eight bones sitting in two rows between your forearm and your hand. The bones in each row are tied together by strong straps of tissue called ligaments, and the whole cluster moves as a linked system when you bend, straighten or turn your wrist. When one of these bones breaks, or the ligaments holding the rows together tear, that linked system stops working smoothly. The wrist loses its normal rhythm, so loading it hurts and gripping feels weak or unreliable.

Most of these breaks happen in a fall onto an outstretched hand. The force funnels down through the hand into one small bone, and that bone cracks. Sometimes the force tears ligaments instead of, or as well as, breaking bone. The triquetrum, on the little-finger side of the wrist, is the one that breaks most often. The others, the lunate, capitate, trapezium, trapezoid and pisiform, break far less often.

Think of the wrist like a stack of building blocks held together with rubber bands. If one block cracks but stays in place, the stack can still hold weight while the crack knits back together. Bone heals this way: the two edges grow new bone across the gap, slowly firming up over weeks. But if a block shifts out of line, or the rubber bands holding the stack together are torn, the stack can no longer line itself up. The bones may slide in ways they were never designed to, and that is what causes lasting trouble if it is not corrected.

This is why the pattern of the break matters. A clean break that has not shifted can often settle in a cast while it heals. A break that has moved out of place, or one with torn ligaments beside it, may need surgery to hold the pieces still while they knit. Getting the picture early matters too, because some of these injuries are easy to miss at first and cause more trouble later if they go untreated.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, matches the treatment to your specific injury. Some of these breaks heal without an operation, and others need surgery soon after the injury, so prompt assessment matters. 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. At the clinic we take a history, examine your wrist, and arrange imaging where it is needed to work out which bone is broken and whether it has shifted.

If the break is stable and the pieces have not moved out of place, we will usually treat it without surgery. That means a splint or cast to hold the wrist still while the bone knits, often for about 4 weeks for some of these injuries. We may check healing with repeat imaging along the way. As comfort allows, you start gentle stretches and movement to keep the wrist from stiffening up. A hand therapist guides this staged return to movement and makes any splint you need.

Surgery is recommended from the outset when the broken pieces have shifted, when the wrist bones or ligaments are unstable, or when the injury pattern needs the bones held precisely while they heal. High-energy injuries that break several bones or tear ligaments often fall into this group. The aim is to realign the bones and hold them still so they can heal in the right position. Sometimes there is a genuine choice: a break can heal in a cast, but the pain or the final position of the bone may not suit your work or sport, and we will talk that through with you.

Whichever path you take, the first weeks are about comfort and protection. Pain relief keeps you comfortable while the swelling settles. You keep to the splint or cast and the plan until we confirm on X-ray that the bone has healed, even if the wrist starts to feel better before that. Hand therapy at the right stage helps you regain movement and strength without loading the injury too soon.

What to expect

Healing is measured in weeks and months, not days. For some of these breaks, the wrist can feel better and work well long before an X-ray shows the bone has fully knitted. Keep to the splint or cast and the plan until we confirm on X-ray that the bone has healed, even if your wrist feels fine.

If your break is healing in a cast or splint, the bone usually knits over several weeks. One reported case of a scaphoid and trapezium break together showed the bones united after six weeks, with full wrist and thumb movement and normal grip by sixteen weeks. As the weeks pass, the pain settles first, then movement and strength return with hand therapy. Most people get back to daily tasks as comfort allows, and heavier work or sport comes later once the bone is solid.

If you have surgery, the bone still needs time to knit, but the pieces are held still while they do. Recovery stretches over months. In one case of a combined scaphoid and lunate fracture, both bones healed with wrist movement and grip strength preserved at 10 months after surgery. Another complex injury around several wrist bones left a fair result, scoring 75 out of 100 on a wrist function scale at four years, while a similar injury scored 85 out of 100 at two years. A trapezoid fracture treated without surgery left the patient pain-free with full wrist motion at 12 months.

Most isolated breaks like these heal well. Things that can go wrong include the bone failing to knit, knitting in a poor position, or the wrist going on to stiffen. These risks rise when several bones or ligaments are injured at once, which is why the pattern of your break shapes the plan. If a break is missed or treatment is delayed, the bone may fail to heal, lose its blood supply, or the wrist bones may become unstable. That is why we check healing along the way and ask you to come back if symptoms are not settling, are getting worse over weeks, wake you at night, or stop you working or using the hand.

When to see someone

Seek urgent care if your wrist looks obviously out of shape, if there is broken skin over the injury, or if you suddenly lose feeling or movement in your hand after an injury. These injuries can also come with nerve or blood vessel trouble, so numbness, tingling, or a hand that turns pale or cold needs same-day assessment.

See your GP or ask for a specialist review if the pain is not settling, or if swelling, movement or grip are not improving week on week as the bone heals. Because these breaks are easy to miss on a first X-ray, a wrist that stays sore after an injury deserves a closer look. Early scans can pick up what plain images miss, and prompt review helps avoid the slower-healing and instability problems that come with a delayed diagnosis.