

Hook of Hamate Fracture

What you're feeling

This fracture almost always happens during sport. It comes from gripping a bat, a club or a racquet. The force travels through the handle into the small hook-shaped bone deep in your wrist, on the same side as your little finger. Some people feel a sharp sting or a snap in the palm at the moment it happens. Others barely notice anything at first.

Straight away, you may feel a deep ache in the heel of your hand, near the base of your little finger. Pressing on that spot hurts. So does gripping, swinging a club or racquet, or pushing up from a chair. Your wrist may look normal from the outside. There may be little or no swelling and no bruising. That is part of why this injury is easy to miss, both by you and at first presentation.

Over the first days, the pain often settles into something vague. You might notice it when you turn a doorknob, hold a coffee mug, type, or carry shopping bags. Pulling on something with your hand, like opening a stubborn jar, can be especially sore. The ache sits on the palm side of the wrist, not the back of it.

One thing worth knowing: this bone is hard to see on plain x-rays. A normal x-ray does not rule out this fracture. If your symptoms fit, your surgeon may arrange a CT scan, which shows the bone clearly.

In the first weeks, the pain tends to ease but not disappear. It returns whenever you load the hand, especially with twisting or gripping. If the bone does not knit, that sore spot can keep grumbling. This is a small bone with a poor blood supply, so it can struggle to heal on its own. Getting the right diagnosis early matters, because treating it in time helps prevent long-term problems.

What's actually happening

Deep in your wrist, on the little-finger side, sits a small bone called the hamate. It has a hook-shaped spur that points into your palm. That hook anchors some of the ligaments and small muscles that move your little finger, and two tendons that bend your ring and little fingers run right beside it. When you grip a bat, club or racquet, the end of the handle presses hard against that hook.

The break itself can happen two ways. One hard hit, like a ball striking the bat, can snap the hook straight away. Or the hook can weaken slowly from repeated tight gripping, as the tendons pressing against it wear down its

blood supply. Either way, you end up with a crack in a small bone that already has very little blood flowing to it. That is why this bone often struggles to knit back together.

Think of the hook like a small anchor post in your palm. The tendons that curl your fingers slide past it with every grip. If the broken piece stays in place, the bone can knit like any other fracture. If the piece shifts, or if it never joins, that loose fragment can rub on the tendons or on the nerve that runs through the same narrow channel in your wrist. That rubbing can fray the tendons over time, and in some cases a tendon can tear.

A CT scan can show where the break sits and how far apart the pieces are. When the gap is small, the tendons are usually safe. When the pieces have separated more than 2 mm, the risk of tendon damage goes up, and that shapes what your surgeon recommends. Because this bone heals poorly on its own, surgery is often needed to remove the loose piece or hold the break still while it knits.

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. We look at where the break sits, whether the pieces have moved apart, and what your hand needs to do. 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, with a CT scan where needed, settles the diagnosis.

Some breaks qualify for treatment without surgery. If the pieces sit close together and the break is stable, we may hold your wrist still in a splint or cast while it heals. We monitor the bone with repeat imaging, and hand therapy guides your return to movement at the right stage. For some athletes, going back to play early is an option, with the plan to remove the unhealed piece later if it keeps causing trouble.

Surgery is often recommended from the outset for this injury. If the pieces have separated, or if the break is unstable, or if your sport or work puts heavy demands on your grip, operating straight away protects the tendons and nerve beside the hook. The operation removes the loose piece of bone, or holds the break still while it knits. Because this bone has a poor blood supply, removing the piece is often the surer path to a comfortable hand. Baseball players who had the piece removed were back at play between 5 and 7 weeks after surgery, and 91.2% performed at the same level or better afterwards. Where both paths are possible, we weigh the choice together, because the healing time and the final feel of your hand matter to you.

Whichever path you take, the first weeks are similar. We keep your pain under control and protect the hand while the bone heals. Once it is safe to move, your hand therapist, Ruby Doolan at Extend Rehabilitation, directs your exercises and makes any splint you need.

What to expect

Healing depends on which path you take. If your break is held still in a splint or cast, the bone knits slowly, and this small bone with its poor blood supply can take longer than most. Some breaks never fully join. If that happens, the loose piece can usually be removed later, and most people get back to their sport after that.

If you have surgery to remove the piece, recovery is often quicker. The sore spot in your palm settles over the first weeks. Your hand therapist, Ruby Doolan at Extend Rehabilitation, guides your return to movement and grip once it is safe. Baseball players who had the piece removed were back at play between 5 and 7 weeks after surgery. Early and late operations both allow a return to your pre-injury level of activity.

Daily tasks come back in stages. Light hand use returns first, then gripping and carrying. Swinging a bat, club or racquet takes the longest, because that loads the exact spot that was injured. Most people are back at work within the same weeks that sport returns, though heavy gripping work may need longer.

Surgery to remove the piece is generally safe and lets you return to play relatively quickly. The main things to know: some people notice a small loss of grip strength afterwards, and some residual symptoms are not uncommon even after the right treatment. Minor complications after surgery are uncommon. If the break is held still rather than removed, the risks include slow or failed healing, and stiffness from the time spent still.

One more thing worth knowing: the bone can sometimes grow back after the piece is removed. This is rare and usually causes no trouble, but it is part of the healing picture your surgeon will watch for at review.

When to see someone

Seek urgent care if your hand is visibly out of shape, if there is an open wound, if you feel numbness or tingling, or if you cannot use the hand at all. This fracture often settles into a vague ache on the palm side of the wrist, so it can be easy to dismiss. See your GP if the pain is not settling, or if swelling, movement or grip are not improving week on week as the bone heals. Ask for a specialist review if a sore spot in the palm keeps grumbling after weeks of rest. Because this bone is hard to see on plain x-rays, a normal x-ray does not rule it out, and a delayed diagnosis can lead to lasting problems with the tendons or nerve nearby.