

Hook of Hamate Fracture

What you're feeling

A hook of hamate fracture happens in a moment. The usual cause is a direct blow to the palm side of your hand, near the base of your little finger. This injury is common in baseball players and golfers, where a bat, club or racquet presses hard into that spot. A sudden force through the ligaments and tendons of the palm can also cause it.

Straight away, you feel pain on the palm side of your hand, at the base near your little finger. The spot is tender to touch. In most acute fractures, this tenderness is present every time. Pushing or pulling with your hand hurts, so gripping a doorknob, holding a coffee mug or twisting a jar lid becomes difficult. You may notice swelling. The pain is sharp at first, then settles to a deep ache.

The first days and weeks can be frustrating. Your hand hurts when you use it, and the ache can disturb your sleep early on. This injury is rare, and it often does not show up on standard wrist x-rays. That means it can be missed at first, especially when the x-rays look normal. If your symptoms match this pattern, a special x-ray view or a CT scan can find the fracture. A CT scan is very accurate for this injury.

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. Go the same day if you have broken skin over the injury, bone showing, or an obvious deformity. Go the same day if your fingers or hand turn pale, cold, white or blue, or if you suddenly lose feeling or movement.

See your GP or ask for a specialist review if your symptoms are not settling, are getting worse over weeks, wake you at night, or stop you working or using your hand. If you cannot reach the clinic after hours or on a weekend, go to your nearest emergency department.

What's actually happening

Deep inside your wrist, on the palm side, sits a small curved bone called the hamate. It has a little hook of bone pointing forward into your palm. That hook is an anchor point for some of the ligaments and muscles that move your little finger, and your finger tendons glide right against it when you grip.

When you fall onto your hand or swing a bat, club or racquet, that hook takes the strain. A single hard hit can crack it. Repeating the same swing thousands of times can also wear it down until it breaks, the way a paperclip snaps after being bent back and forth. This bone is small, and only about 2% of wrist bone fractures happen here.

The hook has a poor blood supply, and that matters. Bone needs blood to knit back together, like any other tissue. The hook also moves when you grip, because the tendons pressing on it keep the broken ends shifting. A fracture that keeps moving, with little blood flow, often struggles to heal. Doctors call this a nonunion, meaning the bone never knits.

If the broken pieces sit in their normal position, the bone can still knit if the hand is kept still early on. If the pieces have shifted apart, or the fracture is found late, simple healing becomes less likely. In that case, treatment usually means either holding the bone together with a small screw, or removing the hook altogether. Removing it sounds drastic, but the hand copes well without this small hook, and many people return to their sport at their previous level.

One more thing worth knowing. The rough, unhealed edge of a broken hook sits right against your finger tendons. Over time it can fray them, like a rope rubbing on a sharp rock. If a tendon snaps, the broken hook is removed and smoothed so the tendon can work again.

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 hook of hamate fractures heal without an operation, and others need surgery soon, 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 hand, and arrange imaging where it is needed. Because this fracture often hides on standard x-rays, we may use a special x-ray view or a CT scan to see it clearly.

If the broken pieces sit in their normal position and the fracture is found early, we may hold your hand still in a splint or cast so the bone can knit. We keep an eye on healing with repeat imaging, and your hand therapist, Ruby Doolan at Extend Rehabilitation, makes any splint you need and guides your return to movement at the right stage. Athletes sometimes choose to keep playing with the fracture and deal with the unhealed piece later, and we will talk through what that means for you.

If the pieces have shifted apart, or the fracture is unstable, we may recommend surgery from the start. One option is removing the hook of bone, which lets you return to your sport relatively quickly. Another is holding the bone together with a small screw, which we may suggest for younger patients to preserve grip strength. We aim to protect the nearby nerve and blood supply during any of these operations. The choice between these paths is genuinely shared: sometimes a splint could work, but the pain or the final position of the bone may not suit your hand or your sport.

Whichever path you take, the early weeks look similar. We will help you manage the pain, and you protect your hand while it heals. Hand therapy with Ruby starts at the right stage, so your grip and movement come back

safely. If your symptoms are not settling, are getting worse over weeks, wake you at night, or stop you working or using your hand, see your GP or ask for a specialist review.

What to expect

Healing depends on where you are in the story. If your fracture is found early and the pieces sit in their normal position, keeping your hand still in a splint or cast gives the bone its chance to knit. If the fracture is found late, or the pieces have shifted, the bone may never knit on its own. In that case, surgery usually means either a small screw to hold the bone together or removing the hook altogether.

If you have surgery to remove the hook, most people are back to their sport relatively quickly. For high-level amateur athletes, surgery allows return to sport at their preinjury performance level, with normal hand function on testing, less pain, and satisfaction with the result. One professional bowler had satisfactory hand function 2.5 months after the hook was removed. Early and late surgery both lead to return to preinjury levels of activity. Holding the bone together with a screw can also work well, with few problems afterwards, and repair of an unhealed fracture can preserve grip strength and relieve pain completely.

Recovery is a gradual return, not a switch. Your hand will ache at first, and the ache settles over weeks. Grip strength comes back as the hand is used again, guided by your hand therapist. Daily tasks like holding a mug or turning a key get easier as the tendons stop being irritated by the broken piece.

There are honest risks worth knowing. The hook has a poor blood supply, so slow or failed healing is the main concern. If the bone does not knit, the rough edge can rub on your finger tendons. Tendon rupture in the little finger has happened anywhere from 6 months to 25 years after the original injury, and grip strength afterwards averaged 83% of the other hand. If a tendon does snap, the broken hook is removed and smoothed so the tendon can work again. Surgery itself carries a low risk of minor complications. If your symptoms are not settling, are getting worse over weeks, wake you at night, or stop you working or using your hand, see your GP or ask for a specialist review.

When to see someone

Seek urgent care if you have an open wound over the injury, bone showing, or an obvious deformity. Go the same day if your fingers or hand turn pale, cold, white or blue, or if you suddenly lose feeling or movement. These signs need an emergency department, not a waiting room.

For everything else, start with your GP. 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. This injury hides on standard x-rays, so a normal first result does not rule it out. A CT scan finds it 95% of the time, and getting the diagnosis early protects your grip and your tendons later on.