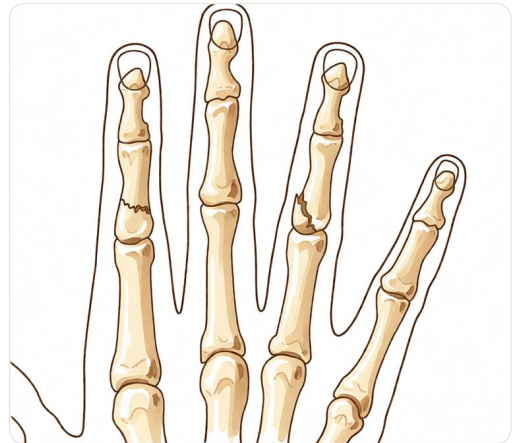


Finger Fractures

X-ray showing a fracture pattern through a finger phalanx.

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What you're feeling

You might hear a snap or feel a sudden pop when the injury happens. This often occurs during a fall, a direct impact, or a sudden load on your hand. In that moment, sharp pain hits the affected finger or palm. Your hand may swell up quickly. You might see bruising develop within hours. The area can look deformed or bent in an unusual way.

Moving the injured finger feels difficult and painful. You may find yourself reluctant to use it at all. Simple tasks like gripping a cup or typing become hard. If the fracture involves the thumb or index finger, you might feel extra concern because these digits are crucial for daily function. For most metacarpal fractures (the bones in your palm), the injury is simple and stable. You will likely feel discomfort rather than severe instability.

In the first few days, pain is often worse at night or when you move the finger. Swelling peaks during this time. If you have an open fracture where the skin is broken, the pain may be more intense due to tissue damage. About one in four open fractures requires more than one procedure because of the severity of the crush or blood vessel injury. However, for most closed fractures, the acute pain begins to settle as healing starts.

Over the next few weeks, you will notice a gradual change. The sharp pain fades into a dull ache. Swelling goes down. You might start to regain some movement, though stiffness is common. For children, buddy taping (taping the injured finger to the healthy one next to it) helps support the bone while you heal. Most patients find that their well-being is minimally affected by the fracture itself once the initial shock passes. You will likely feel a sense of relief as the worst of the pain subsides and you can begin gentle care under our guidance.

What's actually happening

Your finger bones are small rods that give your hand its shape and strength. When you break one, the bone splits or cracks. This disrupts the smooth surface where bones meet at the joint. It also affects the tendons that

pull your finger to bend and straighten it. Right now, your hand does not work normally because the broken pieces are unstable. They cannot support force or move smoothly together.

Think of your finger like a tent pole. If the pole is straight, it holds the tent up firmly. If the pole snaps or bends, the tent collapses or sags. Similarly, a broken finger bone loses its ability to support movement. The surrounding soft tissue becomes swollen and tight. This stiffness makes it hard to grip or pinch.

Healing requires the bone to knit back together. Your body builds new bone tissue to bridge the gap. For most simple breaks, this happens naturally. However, if the bone is displaced or unstable, it may heal in the wrong position. This can limit your movement later. In these cases, your surgeon may need to realign the pieces and hold them in place with pins or plates. This ensures the bone heals straight and strong.

Some injuries are more complex. Open fractures, where the skin is broken, carry a higher risk of infection and often require more than one surgery. A quarter of open finger fractures will likely need more than one surgical procedure. Injuries to the thumb and index finger are also more likely to undergo unplanned reoperation. These fingers are used constantly for fine tasks, so precise healing is critical.

Postoperative stiffness is a common challenge. After surgery for unstable fractures, 43% of patients experience some finger stiffness. This is why early, controlled movement is often part of the plan. Gentle motion helps prevent the joint from freezing up. It allows you to regain function while the bone continues to heal. Your surgeon will guide you through this process to balance stability with mobility.

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. Most hand fractures are stable and heal well without surgery. We often treat these with simple measures like buddy taping or a splint. Children make up a large group of patients with these injuries, and most recover fully with non-surgical care. For adults, we may use a cast or splint if the bone pieces are aligned correctly. We monitor your progress with repeat X-rays to ensure the bones stay in place while they heal.

Surgery is recommended from the outset if your fracture is unstable, severely displaced, or involves the joint surface. We also consider surgery if you have an open wound or if the injury affects blood flow. In some cases, you might choose surgery even if non-operative care is possible, because you prefer to avoid pain or potential misalignment. Our goal is to restore your hand's function and strength. For example, evidence shows that 92% of patients return to full function without complications at 10 weeks following injury with an evidence-based pathway for metacarpal fractures. We discuss these options with you so you can make an informed choice.

Both paths share the same priorities in the early weeks. We focus on controlling your pain and protecting the injury while it heals. You will need to keep the hand elevated and avoid using it for heavy tasks. As the bone begins to knit, we guide you through physiotherapy to restore movement. This staged return to activity helps prevent stiffness and ensures you regain full use of your hand. We tailor the therapy to your specific fracture type and healing progress.

What to expect

Most finger fractures heal well without surgery. Your surgeon will likely recommend buddy taping, where you tape the injured finger to the healthy one next to it. This keeps the bones aligned while they mend. For children, this non-surgical approach usually leads to good results. Even if the bone is displaced, taping often works well.

If your fracture is unstable or involves the thumb or index finger, you may need an operation. Your surgeon might use small screws or pins to hold the bone in place. This helps you regain normal grip strength and motion. Most people return to full function within 10 weeks. However, recovery is not always smooth. Stiffness is common, affecting about 43% of patients with unstable fractures treated with plates. You may also need a second surgery to remove hardware if it causes discomfort. This typically happens around two months after the first operation.

Open fractures, where the skin is broken, are more serious. About one in four of these cases requires more than one surgical procedure. This is especially true if the injury involves crushing or damage to blood vessels. Injuries to the thumb and index finger also carry a higher risk of needing unplanned reoperation compared to other fingers.

Healing takes time. You should expect some swelling and pain for the first few weeks. Gentle movement is key to preventing stiffness, but you must follow your surgeon's advice on when to start. Most people can return to daily tasks and light work within a few weeks. Return to sports or heavy labor may take longer, depending on the finger involved. Thumb fractures often require operative intervention to ensure a quicker return to play.

While most outcomes are positive, be aware of the risks. Slow healing or healing in a poor position can occur. In rare cases, you might develop a new fracture at the original site if you had a previous injury there. Attend all follow-up appointments so your surgeon can monitor your progress with X-rays. Most fifth metacarpal fractures do not need repeated X-rays, but your surgeon will decide based on your specific case.

When to see someone

Seek urgent care if you have an open wound, visible deformity, numbness, tingling, or cannot move your finger. These signs need immediate assessment. Most finger breaks heal well without surgery. However, some complex injuries require prompt treatment to prevent stiffness or further damage. About one in four open fractures needs more than one operation. You should also see your GP or ask for a specialist review if your pain is not settling. Watch your progress week on week. If swelling, movement, or function are not improving as healing progresses, let your surgeon know. Early follow-up helps ensure you return to full function safely.

In more depth

This section goes further than you need for your own treatment decisions. Finger fractures are worth the extra reading for two findings that cut against standard practice: prophylactic antibiotics do not appear to help an open fingertip fracture, and for the difficult joint fracture at the middle knuckle, no fixation method has proved better than the others.

ANTIBIOTICS FOR AN OPEN FINGERTIP FRACTURE DO NOT REDUCE INFECTION

An open fracture of the distal phalanx – bone exposed through a wound, typically after a crush – is routinely given prophylactic antibiotics on the general principle that open fractures need them.

The evidence does not support it here. Across **353** patients, the results **fail to show any effect of prophylactic antibiotics on the rate of superficial infections** following open distal phalanx fractures, and the authors conclude the focus should be on **prompt irrigation and debridement rather than administration of prophylactic antibiotics** [1].

The distinction is between cleaning the wound and medicating it. Removing contamination mechanically is what reduces infection; antibiotics were not shown to add to that in this setting. Given the costs of unnecessary antibiotic use, it is worth knowing that their omission after thorough wound care reflects evidence rather than oversight.

FOR THE MIDDLE-JOINT FRACTURE-DISLOCATION, NO TECHNIQUE WINS

Fracture-dislocations at the proximal interphalangeal joint are among the more difficult injuries in the hand – a small joint with a fractured surface that must be both reduced and kept reduced while moving.

Across **735** patients, the comparison is instructive precisely because it fails to separate the options: **percutaneous fixation yielded the highest post-operative range of motion, extension-block pinning resulted in the greatest grip strength**, and **no treatment method or fracture type yielded consistently better outcomes than another** [2].

Where more than half the joint surface is involved, one reconstructive option is to rebuild it with a graft from the hamate bone. Across **235** patients, hemi-hamate arthroplasty was found reliable and effective, affording symptomatic relief and functional restoration [3].

WHY STIFFNESS IS THE REAL ENEMY

The reason these injuries are difficult is not that the bone fails to heal – finger fractures unite readily. It is that the finger stiffens.

The flexor and extensor tendons run immediately against the bone with minimal soft tissue between them, so blood and swelling around a fracture organise into scar that binds the tendons to it. That process is well advanced within weeks, and once established it is difficult to reverse.

This is why finger fractures are moved early wherever the fracture is stable enough to allow it, and why fixation is chosen partly for whether it permits movement rather than solely for how rigidly it holds bone. It also explains the apparently paradoxical situation of a perfectly healed fracture on X-ray and a finger that will not bend – the bone was never the problem.

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