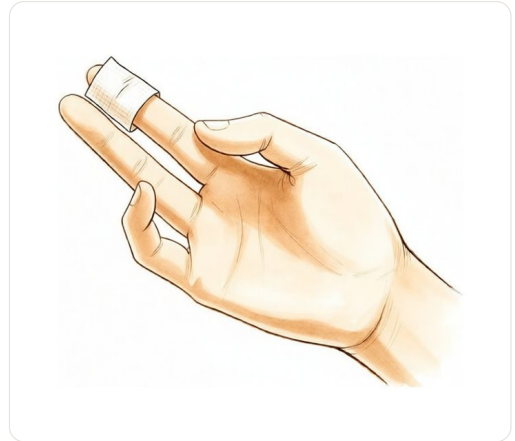


Fingertip Injuries

Mallet finger — the fingertip droops because the extensor tendon at the end of the finger has torn or pulled off a small bone fragment.

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What you're feeling

You may notice sharp or throbbing pain at the very tip of your finger. This is often worse when you move the finger or put pressure on it. Simple tasks like typing, buttoning a shirt, or holding a cup can become difficult and painful. If the injury involves the nail bed, you might feel intense sensitivity to touch or temperature changes.

In some cases, such as with a glomus tumour, you may experience sudden, severe pain that wakes you at night. This pain can be triggered by even slight contact with cold objects or light pressure on the fingertip. You might find yourself avoiding using that hand for daily activities to prevent these flare-ups.

If there is a cut or amputation, you will likely see bleeding and visible damage to the skin and nail. The area may feel numb or tingly if nerves are affected. Swelling around the tip can make the finger feel tight and stiff. You might also notice that the nail looks deformed or has grown in an unusual shape if the injury was not treated promptly.

We aim to restore both function and appearance to your fingertip. Our treatment plans focus on reducing your pain and helping you heal properly. Whether we use a flap to cover the wound or allow it to heal naturally, our goal is to preserve the length and sensation of your finger. This helps you return to your normal routine as quickly and comfortably as possible.

What's actually happening

Your fingertip is a complex area where skin, bone, and the nail root meet. The nail root, or matrix, sits just under the skin fold at the base of your nail. It is the factory that produces your nail plate. If this area is damaged, your nail may grow back misshapen or not at all.

When you injure your fingertip, you might lose some skin or even a small piece of bone. This exposes sensitive nerve endings, which causes sharp pain. The goal of treatment is to cover this exposed area to protect the nerves and allow the skin to heal. We aim to restore both function and appearance.

There is no single standard way to treat every injury. Your surgeon will choose the best option for you based on the size and location of the wound. Treatments range from simple dressings to more complex surgery. The aim is to minimise pain, help healing, and keep your finger feeling normal.

In many cases, simple non-surgical care works well. You can heal successfully without an operation. If surgery is needed, we have several techniques. These include using your own skin to cover the wound or using a graft from another source. Some methods restore the nail bed directly. Others use flaps of tissue to provide durable coverage.

We also consider preserving the length of your finger. A shortened fingertip can affect how you grip things. Some techniques, like the thenar flap, help prevent the finger from becoming too short or the nail from curling abnormally.

Infection is a risk with any open wound, but it is low in these injuries, affecting about 2.5% of cases. Because this rate is so low, we do not routinely prescribe antibiotics for everyone. Instead, we focus on clean wound care.

Healing speed can vary. Some treatments, like specific ultrasound therapies, can help wounds heal up to nine times faster than standard care alone. Others may take several weeks. On average, patients return to work about seven weeks after a revision amputation.

Your surgeon will discuss which approach offers the best balance of sensation, movement, and cosmetic result for your specific injury. The priority is always to give you a functional finger that feels normal again.

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. 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 (history, examination, and imaging where needed) establishes the diagnosis. For degenerative or long-standing problems we usually try non-operative care – activity change, physiotherapy or hand therapy, splinting, and injections – and consider surgery when that has not given enough improvement. For structural or acute problems, surgery may be recommended straight away, without a preceding non-operative trial.

You can often manage minor fingertip injuries at home. We may suggest noncontact low-frequency ultrasound treatment, which helps wounds heal nine times faster than local wound care alone. The risk of infection is low, at just 2.5%, so we do not routinely prescribe preventive antibiotics. If you need pain relief, we can discuss standard pain medication and anti-inflammatories. For some conditions, such as finger glomus tumours, we may use injections to reduce pain and improve function.

Surgery is considered when conservative care has reached its limit or when the injury is severe. We aim to minimise pain, preserve sensation and length, and restore a natural appearance. Options range from simple

grafts to complex flaps that move skin and tissue from nearby areas. We choose the method that best fits your specific injury to ensure you regain normal function.

What to expect

Your fingertip will heal with a functional and aesthetically pleasing result. Most patients regain a satisfying appearance and good use of the finger. The infection rate after injury or surgery is low at 2.5%. You can expect a smooth recovery with minimal risk of complications.

If you choose non-surgical care, healing is still possible. Conservative treatment works well even if bone is exposed. Using noncontact low-frequency ultrasound speeds up healing significantly. This method results in a time to healing nine times faster than local wound care alone. You avoid surgery and its associated risks while still achieving a good outcome.

If surgery is needed, your surgeon will choose the best method for your specific injury. Techniques such as flaps or grafts restore the nail and soft tissue. These procedures aim to prevent a shortened fingertip or abnormal nail shape. You will likely regain almost normal sensibility and satisfactory motion. For those requiring revision amputation, you can expect to return to work on average approximately 7 weeks after surgery.

Some treatments offer rapid results. Composite grafting provides excellent outcomes when performed within 5 hours of injury for cutting wounds in non-smokers. Artificial nail splints allow for significant joint movement during recovery. Patients using this splint can return to work with no evidence of recurrent infection after 18 months.

Your outlook depends on the injury type and your health. Older patients often benefit from primary flap reconstruction to optimize range of motion. Ring finger deformities can be corrected with specific reconstruction techniques. Regardless of the method, the goal is to restore function and appearance. You should feel confident that modern techniques provide reliable, durable coverage and sensation.

When to see someone

See your GP if you have a deep cut, crush injury, or amputation. You may need stitches or a flap to restore function and appearance. Some injuries heal without surgery. Ask for specialist review if you notice signs of infection, such as increasing redness, swelling, or pus. Although infection rates are low (2.5%), prompt care is vital. Go to an emergency department if you have severe pain that does not improve with rest, or if you cannot move your finger. Seek urgent care for bleeding that will not stop. Early treatment helps preserve sensation and length.

In more depth

This section goes further than you need for your own treatment decisions. Fingertip injuries are worth the extra reading because the treatment with the best combination of outcomes is the one that involves no operation at all – a finding that runs against the instinct to close a wound.

LETTING IT HEAL OPEN OUTPERFORMS CLOSING IT

When a fingertip is amputated, the reconstructive options are a flap, a graft, or dressings and time – allowing the wound to close by secondary intention, from the edges inwards.

Reviewing **1,592** cases of secondary healing, conservative wound management with dressings and protective splints allows patients to **avoid immobilisation and donor site morbidity**, achieves **near-normal sensibility and minimal cold intolerance**, and enables **early return to work** [1].

Four separate advantages, and each addresses a specific cost of the surgical alternatives. A flap requires taking tissue from somewhere else, which creates a second wound and often needs the finger immobilised while it heals. Flap tissue brings its own nerve supply, which is not the fingertip's, so sensation is different in quality. Cold intolerance – an underappreciated long-term complaint after fingertip injury – is reported as minimal with secondary healing.

The fingertip has a remarkable capacity to regenerate its own contour and sensation when given the conditions to do so, particularly where bone is not exposed. The main costs of the conservative route are the time involved and the dressing changes, which is a real burden but a temporary one.

WHERE A GRAFT IS USED, AGE PREDICTS SURVIVAL

Composite grafting – replacing the amputated part as a graft without reconnecting blood vessels – is described as feasible and effective for restoring an aesthetically functional digit across **720** patients, with the graft surviving in the majority and a **more significant survival pattern among younger populations** [2].

That age effect is worth knowing before the decision is made, because a composite graft that fails leaves a wound that then has to heal by the conservative route anyway, having lost time.

REPLANTATION: WHAT IT CAN AND CANNOT RESTORE

Where a whole digit is amputated, replantation reconnects the vessels. The honest summary of its results across **619** patients is that **digit replant does not restore premorbid hand function, but does result in adequate hand function** – and that this expectation should form part of the decision-making [3].

The survival factors are also better defined than commonly assumed. Across **2,641** replantations, **gender and ischaemia time had no significant influence** on survival, while **age, which hand, injury type, zone, and the method used to preserve the amputated part** all did [4].

Ischaemia time not reaching significance is the surprising one, given the urgency that surrounds these injuries. It should not be read as time being unimportant – it likely reflects that appropriately preserved digits tolerate longer delays than expected, which is precisely why the preservation method mattered. The practical

instruction that follows: wrap the amputated part in damp gauze, seal it in a bag, and place that on ice – never the part directly on ice.

THE NAIL BED IS THE PART THAT DETERMINES APPEARANCE

Much of the long-term appearance of a fingertip injury is decided by the nail bed beneath the nail plate. A nail bed laceration repaired accurately usually produces a normal nail; one left unrepaired, or healed over a fragment of bone that has shifted, produces a split, ridged or hooked nail permanently. This is why an apparently minor injury with a nail bed component is treated with more care than its size suggests.

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