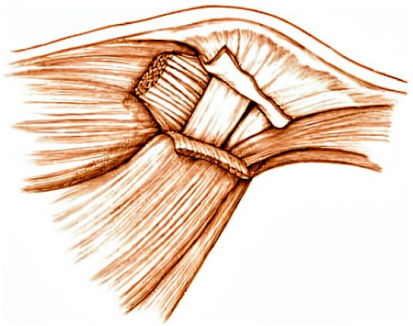
CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION — IN DEPTH

Thumb UCL injury



A torn ulnar collateral ligament of the thumb (skier's thumb).

What you're feeling

You will likely feel pain on the inner side of your thumb, right at the base where it meets your hand. This pain often comes from a tear in the ulnar collateral ligament, a key stabilizer for your thumb joint. As this ligament tears, the joint becomes progressively unstable. You may notice that your thumb feels loose or weak when you try to grip things.

The pain tends to flare up during activities that push your thumb outward or require a firm pinch. Simple daily tasks can become difficult. You might struggle to hold a coffee mug steady, turn a doorknob, or open a jar lid. Twisting motions or pushing against resistance with your thumb often trigger sharp discomfort. You may also feel a sense of instability, as if your thumb is giving way when you need it most.

Some people notice the pain is worse at night or upon waking, especially if they have been using their hands extensively the day before. Swelling and bruising around the base of the thumb are common in the early stages. You might find it hard to type on a keyboard or scroll on a phone because even slight pressure on that inner joint causes pain.

If you have a displaced bone fragment visible on an X-ray, known as a fleck sign, your surgeon will discuss whether surgery is needed. This specific finding often indicates a Stener lesion, where the torn ligament has shifted out of place. Without proper alignment, the joint may not heal correctly, leading to ongoing weakness or pain. Your surgeon will assess your history and examine the thumb to determine the best path forward.

For many patients, outcomes improve significantly within three months and continue to get better at one year after treatment. Whether you choose non-surgical care or surgery, the goal is to restore stability so you can return to your normal activities. We aim to protect the joint while it heals, ensuring you regain strength and function without long-term limitations.

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What's actually happening

Your thumb has a small ligament on the inner side called the ulnar collateral ligament. Think of this ligament as a strong rope that holds your thumb joint together. It stops your thumb from bending too far outward when you grip or push. When you injure this area, that rope can stretch or tear.

This damage does not happen all at once. The tearing happens in stages. As the ligament weakens, your thumb joint becomes less stable. You might feel your thumb giving way or feeling loose when you try to use it. This progressive instability is why simple pain can turn into functional problems.

Sometimes, the tear is severe enough that the ligament snaps completely. In these cases, a small piece of bone may break off with the ligament. This is known as a fleck sign on an X-ray. If this piece of bone gets stuck in the joint, it is called a Stener lesion. This blockage prevents the ligament from healing back to its original spot on its own. It usually requires surgery to fix.

Your thumb joint shape also matters. Some people have a flatter bone surface at the base of their thumb. Research shows that having this flat shape does not cause these tears. The injury is usually due to force, not bone structure.

Your body tries to help by using nearby muscles to stabilize the joint. Muscles in your index and middle fingers can tighten to support the thumb. However, if these muscles are weak or tired, they cannot fully protect the ligament. This is why rest is important. It gives your tissues time to recover and reduces stress on the healing area.

If the tear is complete, your surgeon may recommend repair. We use techniques to bring the ligament back to its bone attachment. We may use a strong suture tape to hold it in place while it heals. This helps restore normal movement without making the joint too stiff. In some cases, we may use a tendon graft from another part of your body to rebuild the ligament. These methods aim to restore stability and reduce pain, allowing you to return to your daily activities.

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. For acute injuries, we begin with a thorough assessment including history, examination, and X-rays to check for bone fragments that might require different care. If the tear is not displaced, we usually start with conservative treatment. This involves resting the thumb in a splint or cast to protect the ligament while it heals. We also prescribe specific exercises to strengthen the muscles around your thumb joint, particularly those that stabilize it against side-to-side stress. You should give this non-surgical approach several weeks to show improvement.

If pain persists, we may discuss medical management to help you stay active during recovery. Over-the-counter pain relievers and anti-inflammatory medications can reduce swelling and discomfort. In some cases, we consider injections into the joint. Cortisone injections can calm significant inflammation, while hyaluronic acid may help lubricate the joint. Platelet-rich plasma (PRP) injections use your own blood components to

potentially support healing. The duration of relief from these injections varies by individual, but they are often used to bridge the gap between injury and full recovery or to delay surgery if it is not immediately necessary.

Surgery is considered when conservative care does not restore enough stability, or if imaging shows a displaced bone fragment known as a Stener lesion. This condition occurs when the torn ligament gets trapped in a way that prevents it from healing naturally. In our clinic, we recommend surgery for structural problems that will not heal with rest alone. Surgical options include repairing the torn ligament or reconstructing it using tissue from your own body. These procedures aim to restore the stability of your thumb joint. Patient-reported outcomes, including pain and function, typically improve significantly at three and 12 months after open surgical repair. We discuss these options with you as a shared decision, ensuring you understand the benefits and the recovery process before moving forward.

What to expect

Your thumb's ulnar collateral ligament (the UCL) stabilises the main joint at the base of your thumb. If this ligament tears, the joint can become progressively unstable. Without proper care, this instability often persists rather than settling on its own. You may notice your thumb giving way during gripping or pinching tasks.

If you choose not to have surgery, the ligament may heal in a stretched position. This can leave the joint loose and weak. Many people continue to experience pain and difficulty with daily activities like opening jars or holding a phone. The injury does not typically resolve completely without intervention if the tear is significant.

When your surgeon recommends repair or reconstruction, the goal is to restore stability and reduce pain. Most patients report significant improvements in pain and function at three months after surgery. These benefits continue to grow, with further improvements noted at twelve months. You should expect a gradual return of strength and confidence in your thumb over this period.

Recovery involves protecting the repaired ligament while you heal. Your surgeon may use a thumb spica cast to keep the joint stable. This protection allows the tissue to knit together. While this approach supports healing, it can place extra stress on nearby joints, so your team will monitor your progress closely.

For athletes or those who need high-level hand function, returning to sport or work is a key goal. Evidence shows that players who undergo thumb UCL surgery can return to play and maintain similar career lengths and game participation as those who do not have this injury. Your rehabilitation will focus on balancing early movement with long-term joint health.

Outcomes depend on the severity of the tear and your specific anatomy. In some cases, a small bone fragment may be present, which can influence the decision to operate. Your surgeon will assess this to determine the best path for you. Whether managed with casting or surgery, the focus is on restoring your thumb's ability to grip and pinch effectively. With appropriate care, most people regain a functional, pain-free thumb.

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When to see someone

See your GP if you have persistent pain in your thumb that does not improve with rest. Ask for a specialist review if you notice weakness or instability. Symptoms such as locking or your thumb giving way are also reasons to seek help. Contact us if your pain interferes with sleep or work, or if you experience a sudden worsening of symptoms. Our team will assess your history and examine your thumb. We may order radiographs to check for underlying issues. Early assessment helps determine if you need surgery or conservative care. We aim to restore stability and function to your thumb joint.

In more depth

This section goes further than you need for your own treatment decisions. Thumb ulnar collateral ligament injury is worth the extra reading because the whole decision turns on a single anatomical question — whether the torn ligament has flipped out of reach — and because there is now a clear answer about which scan to use to settle it.

THE STENER LESION, AND WHY IT CHANGES EVERYTHING

The ulnar collateral ligament stabilises the thumb against the sideways force of every pinch and grip. When it tears from its attachment, it usually stays where it can heal.

Sometimes it does not. A sheet of tendon called the adductor aponeurosis lies superficial to the ligament, and if the torn end retracts back over the top of that sheet, the aponeurosis interposes between ligament and bone. That is a **Stener lesion**, and it is the reason this injury is treated differently from most sprains: the ligament is no longer in contact with the bone it needs to heal to, so no amount of splinting will reattach it.

Everything about management follows from whether that has happened.

ULTRASOUND IS ENOUGH TO ANSWER IT

Because the decision is binary and consequential, the imaging question is unusually well defined — and it has been answered. Across **422** patients, **both ultrasound and MRI demonstrate high diagnostic accuracy in detecting Stener lesions**, and **ultrasound is an appropriate first-line imaging modality** [1].

That is a useful piece of practical information. Ultrasound is quicker, cheaper and more accessible than MRI, and where an experienced operator is available it does not need to be followed by an MRI to confirm what it has already shown. It is also dynamic — the thumb can be stressed during the scan.

WHERE THERE IS NO STENER LESION, LAXITY DRIVES THE DECISION

The British Society for Surgery of the Hand guideline sets out the pathway plainly. Patients with acute injuries should be assessed with **history, clinical examination and radiographs**. Those **without significant joint laxity can be treated non-surgically**, while those **with significant laxity may be treated with either non-surgical immobilisation or surgical repair, after a shared decision** [2].

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Two things are worth drawing out. The first is that radiographs come before advanced imaging — partly to exclude an avulsion fracture, which changes the treatment again. The second is that even significant laxity does not mandate surgery: the guideline explicitly frames it as a shared decision between immobilisation and repair, which is a more honest position than presenting operation as the only route.

WHY THE CONSEQUENCES OF GETTING IT WRONG ARE SPECIFIC

An incompetent ulnar collateral ligament does not produce pain at rest or difficulty with most activities. It produces a thumb that gives way under sideways load — turning a key, opening a jar, holding a heavy pan by the rim — because pinch depends on a stable post to press against.

Left untreated, chronic instability leads to arthritis of that joint over years. This is the reason an injury that feels like a simple sprain warrants a definite assessment: the cost of missing it is not felt in the weeks afterwards, when the thumb settles and seems fine, but much later.

REFERENCES

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2. Dean B, Rodrigues J, Riley N, Rabey N, Donnison E, Challen K, et al. Guideline on managing thumb ulnar collateral ligament injuries: the British Society for Surgery of the Hand. J Hand Surg Eur Vol. 2024;49(10):1195-201.

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