CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION — IN DEPTH

Olecranon Fracture

X-ray showing a fracture of the olecranon — the bony tip of the elbow.

What you're feeling

You may feel a sudden, sharp pain at the back of your elbow if you fall onto it or take a heavy blow. Some people hear or feel a snap or pop at that moment. The pain is often intense and immediate. You might notice swelling and bruising appear quickly around the joint. The area can look deformed or feel tender to the touch.

Moving your arm becomes difficult right away. You may find it hard to straighten your arm against gravity because the triceps muscle, which helps you extend your elbow, is affected. Simple tasks like lifting a cup or pushing yourself up from a chair can feel impossible or very painful. You might keep your arm close to your body to avoid moving it.

In the first few days, the pain may be worse at night or when you try to shift positions. Swelling can make the elbow feel tight and stiff. As healing begins over the first few weeks, the sharp pain usually settles into a duller ache. You may still feel discomfort when you bend or straighten your elbow, especially if you try to use it too soon.

It is common to feel frustrated by the loss of function. You might worry about how long it will take to return to normal activities. For some patients, particularly those over 70, non-operative management can lead to satisfactory outcomes with good range of motion. However, the risk of post-traumatic osteoarthritis, or wear-and-tear arthritis, is about 19% at a median follow-up of 41 months. This means some people may experience long-term stiffness or aching in the joint.

Your surgeon will guide you on the best path for your specific injury. Whether you need surgery or rest, the goal is to reduce pain and restore movement. Be patient with your body as it heals. Avoid forcing the elbow to move if it causes sharp pain. Follow the advice given to you to ensure the best possible recovery.

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What's actually happening

The olecranon is the bony tip of your elbow. It forms the pointy part you rest on a table. This bone is the anchor for your triceps tendon. This tendon is the strong cable that lets you straighten your arm. When this area breaks, that anchoring system is disrupted.

Think of your elbow like a gate hinge. The olecranon is the latch that keeps the gate closed and stable. If the latch cracks or shifts out of place, the hinge becomes wobbly. You lose the ability to push against resistance. Your arm may feel weak or unstable when you try to lift things.

In many cases, the break is displaced. This means the bone fragments have moved apart. The triceps tendon pulls one piece up, away from the rest of the upper arm bone. This gap prevents the bone from healing in the correct position. Without treatment, the joint surface may become uneven. This can lead to wear-and-tear arthritis over time. The median incidence of post-traumatic osteoarthritis following isolated olecranon fractures is 19% at a median follow-up of 41 months.

Your surgeon aims to restore a smooth, congruent joint surface. This allows your arm to move freely again. The goal is to allow early motion to avoid significant stiffness of the elbow joint. If the break is simple, we often use strong sutures to hold the pieces together. This technique is the mainstay of treatment for all simple olecranon fractures. In some cases, we may remove the broken fragment and reattach the tendon. This approach can result in significantly less morbidity compared with internal fixation.

For older patients with lower physical demands, non-operative management is often supported. You may wear a splint to let the bone heal naturally. Evidence shows this yields satisfactory short-term and long-term outcomes for isolated displaced fractures in older, lower-demand patients. Even if the bone does not fully knit together (non-union), many patients retain reasonable elbow function. Requests for further operative treatment are uncommon in these scenarios.

Complex injuries involving multiple fragments or dislocation require more careful planning. These cases involve complex elbow instability. We must ensure the extensor mechanism remains continuous with the ulnar shaft to maintain overhead elbow extension. The medial and lateral forearm fascia also contribute to this stability. Restoring this alignment is the guiding principle of olecranon fracture treatment. It allows for the restoration of upper extremity function.

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. We choose treatment based on how much the bone has moved, whether the joint is stable, and your personal needs. For isolated fractures where the bone pieces have not shifted significantly, or for older patients with lower physical demands, non-operative care is often the right choice. This approach involves wearing a sling, splint, or cast to keep the elbow still while it heals. We monitor your progress with repeat X-rays to ensure the bone stays in the correct position. As the pain settles, we guide you through a staged return to movement with physiotherapy to restore function.

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Surgery is recommended from the outset if the fracture is displaced, unstable, or if you have high functional demands that require a reliable elbow. We also consider operative treatment if non-operative care would leave you with unacceptable pain or limited movement. The goal of surgery is to secure the bone fragments firmly so you can start moving your elbow early and avoid stiffness. We discuss these options with you to ensure the plan matches your specific injury and lifestyle. Patients undergoing operative fixation can be counselled that most keep their implants, with only 3% experiencing implant migration.

Both paths share common priorities in the early weeks. We focus on effective pain control to help you rest and sleep. You must protect the injury while it heals, avoiding heavy lifting or forceful pushing. Physiotherapy begins at the right stage to regain strength and range of motion without stressing the healing bone. 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, including history, examination, and imaging where needed, establishes the diagnosis and confirms the best path forward.

What to expect

Your recovery depends on whether you have surgery or rest. If you choose non-operative management, you will likely wear a splint or cast. This path is often suitable for older patients with lower activity levels. You can expect satisfactory function in the short and long term. Some patients who do not have surgery still heal well enough that they do not need an operation later.

If you have surgery, the bone and tendon need time to knit back together. Most patients keep their implants in place, with only 3% experiencing implant migration. The timing of your operation does not significantly increase early complications or the need for reoperation. You will likely notice gradual improvement over weeks to months. Most active patients with simple fractures have similar outcomes at one year regardless of the specific surgical method used.

You should plan for a period of limited elbow use. Daily tasks may feel restricted initially. Return to work and sport varies by your job demands and healing speed. For older patients, displaced fractures can be managed without surgery to achieve high satisfaction and good movement. However, be aware that olecranon fractures in the elderly are associated with higher than expected 1-year mortality rates.

There are risks to both paths. The median incidence of post-traumatic osteoarthritis (wear-and-tear arthritis) following isolated fractures is 19% at a median follow-up of 41 months. This means some stiffness or ache may persist long-term. Non-operative management carries a risk of the bone failing to heal (non-union), though many patients still retain reasonable elbow function. Surgical fixation aims to restore the joint surface, but technical factors are less important than your personal health in determining if you might want the hardware removed later. We focus on getting you back to your daily life safely, monitoring your progress closely throughout this process.

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When to see someone

Seek urgent care if you have a visible deformity, an open wound, numbness or tingling, or cannot use your arm. These signs need immediate attention. If pain is not settling, or if swelling and movement are not improving week on week as healing progresses, see your GP or ask for a specialist review. This ensures your recovery stays on track. While most fractures heal well, some people may develop wear-and-tear arthritis in the elbow later on. Your surgeon will monitor your progress closely to manage any changes. Early assessment helps prevent complications and supports a smoother return to daily activities. Trust your instincts about your healing journey.

In more depth

This section goes further than you need for your own treatment decisions. Olecranon fracture is worth the extra reading because of one finding that inverts the usual logic of fracture surgery: in older patients, a displaced fracture of the olecranon can be left unfixed, and the elbow still works.

THE DISPLACED FRACTURE THAT DOES NOT NEED FIXING

A fracture through the olecranon separates the triceps from the forearm, so the standard reasoning is that it must be reattached or the elbow cannot be straightened against resistance. In patients **older than 70**, that reasoning does not hold up. A systematic review found displaced olecranon fractures in this group **may be effectively managed non-operatively, producing high satisfaction and a functional range of motion** [1].

What is traded is measurable: an extension lag — an inability to fully straighten the elbow — and reduced extension strength. What is avoided is a wound over a subcutaneous bone in thin, often fragile skin, and metalwork under that skin. Since prominent hardware is the commonest reason for a second operation after olecranon fixation, avoiding it removes the commonest complication entirely.

For an older person whose arm is used for daily tasks rather than forceful pushing, an elbow that lacks the last few degrees of extension is a smaller imposition than a wound complication. For a younger or higher-demand patient it is not, which is why the finding is specific to age rather than general.

WHERE FIXATION IS USED, THE IMPLANT CHOICE HAS SEPARATED

For the common displaced-but-simple pattern, two implants compete: a tension band construct of wires and a plate. Across **827** patients with Mayo type II fractures, **plate fixation showed better efficacy and safety** than tension band wiring — with the authors noting that few studies were included and that higher-quality randomised trials are still needed [2]. A 2025 review of **472** patients comparing modern fixation techniques against traditional tension band wiring points the same way [3].

This is one of the few places on this site where a technique comparison produces a direction rather than a shrug. It is worth holding lightly given the evidence base the authors themselves flag.

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ARTHRITIS DEVELOPS, AND MOSTLY DOES NOT MATTER

Long-term imaging findings can be alarming when reported without context. Following isolated olecranon fractures, the **median incidence of post-traumatic osteoarthritis was 19% at a median follow-up of 41 months** – and **final patient-reported outcomes ranged from good to excellent regardless of fracture type or the presence of arthritis** [4].

Both halves of that sentence are load-bearing. Arthritis on a follow-up X-ray after this injury is common. It is also, at this timescale, largely disconnected from how people report their elbow functioning. A radiological finding is not automatically a clinical problem, and it should not be the trigger for further intervention on its own.

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