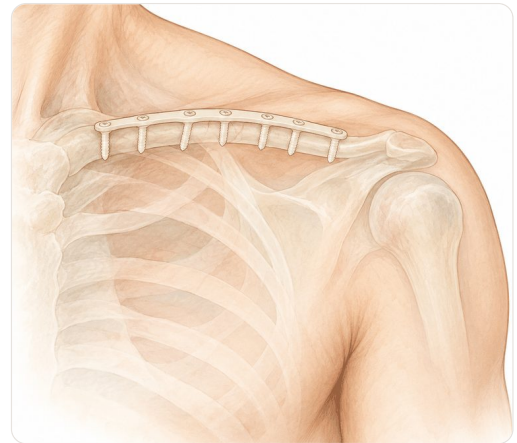


Clavicle Fracture Fixation

A break in the clavicle (collarbone). When the bone ends are out of line, fixation with a plate and screws restores normal shape.

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At-a-glance recovery. Pooled from 85 published studies — your own pace will vary.

LIGHT DUTIES desk work, driving, daily tasks	MOST EVERYDAY ACTIVITIES manual work, sport, gym	FINAL OUTCOME PLATEAU pain and strength
2-6 weeks	3-6 months	12 months
Return to desk work and light activities typically occurs within 2 to 6 weeks; driving resumes from 6 weeks, once cleared at review.	Return to manual work, full strength, and sport typically occurs between 3 and 6 months, with adolescents returning to sport significantly faster (approx. 38 days) with TEN fixation.	Functional outcomes and strength typically plateau by 12 months, with long-term follow-up showing equivalence between surgical and nonoperative groups.

Why this operation has been suggested

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, matches the treatment to your specific injury. 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 a clinic visit we take your history, examine you, and arrange imaging if it is needed. X-rays usually show where the collarbone is broken and how far the pieces have moved.

The collarbone (clavicle) can break in its middle third or nearer either end. Many of these fractures heal well without surgery, so we usually start with non-operative care such as rest in a sling and physiotherapy. For adults, we consider surgery when the break is significantly displaced, for example shortened by 2 cm, fully shifted out of place, or broken into several pieces. Surgery may also be suggested if a fracture has failed to heal, or has healed in a poor position. In adolescents, most collarbone fractures are treated without surgery. The operation aims to hold the bone steady so it can join together, ease pain, and restore shoulder strength and movement.

Before the operation

In the days before surgery, we will confirm the plan with you and answer any questions. You will need to stop eating and drinking for seven hours before your operation. We ask for a slightly longer fast than some hospitals so your surgery can be brought forward if the theatre list runs early. If you take regular medications, bring a written list of them and we will tell you which ones to pause. Most people do not need any special tests before this operation. If you have other medical conditions, you may need blood tests or a review with the anaesthetist. Arrange for someone to drive you home afterwards, as you will not be able to drive yourself. Wear loose, comfortable clothing that is easy to change out of.

On the day

You will come to the hospital's surgical admissions unit, where you are checked in and prepared for theatre. You will meet the anaesthetist, a doctor who looks after your sleep and pain control during the operation. This operation is done under general anaesthetic. You will be fully asleep for the operation. Some patients may also have a regional nerve block for post-operative pain relief; the anaesthetist decides on the day based on your individual circumstances. You are then taken into the operating theatre, where the operation is performed.

When the operation is finished, you will wake up in the recovery area. Nurses will stay with you and monitor you while the anaesthetic wears off. Once you are stable, you will either move to a ward or go home the same day, depending on the procedure and how your recovery is going. If you are going home, the person you arranged to drive you will take you there.

What the operation involves

This is an open operation done through a single cut over the area of the collarbone that is broken. You will be positioned in a semi-sitting, beach-chair style position on the operating table, with a small pad behind your shoulder to lift it slightly. This gives your surgeon a clear view and a free path to work on the bone.

Your surgeon will move the broken pieces back into their normal position and hold them there with a plate and screws. The plate is shaped to follow the natural S-shaped curve of the collarbone, so it sits snugly against the bone. Small screws pass through the plate and into the bone on each side of the break to keep everything steady while it heals. If the bone has broken into several pieces, a small screw may be used to pull a loose fragment back into line before the plate is fitted.

If the fracture is near the outer end of the collarbone, your surgeon may add strong stitched supports that run between the collarbone and a nearby bone of the shoulder. These help hold the outer fragment steady while it joins together. If the fracture has failed to heal in the past, your surgeon may also place some extra bone graft material around the break to encourage it to join.

Once the bone is held firmly, your surgeon will check that everything is stable and then close the cut with stitches. A dressing goes over the wound before you leave theatre. The whole operation is planned beforehand using X-rays of your collarbone, which show how far the pieces have moved and how many there are.

After the operation

Most patients stay one night in hospital after this operation, though some are able to go home the same day. You will wake up in the recovery area, then move to a ward when you are stable. Your arm will rest in a simple sling for comfort, which comes off for exercises and washing. Nurses will check your pain regularly and give you medication to keep it under control. Someone should stay with you for the first 24 hours after you go home. Keep the sling on when you are up and about, and move around the house in short spells rather than staying still. We leave the dressing on for about 10 days; please do not take it off before then unless we tell you to. We change or remove it when we see you.

Recovery

For the first few days your shoulder will be sore and the area over your collarbone will be swollen and may look bruised. This is a normal part of healing. Rest, keeping your arm in the sling, and taking your pain medication as directed will help settle it. Most people find the pain eases steadily over the first couple of weeks as the swelling goes down.

Your arm rests in a simple sling for comfort, which comes off for your exercises and for washing. Your physiotherapist will guide you through gentle movements early on, then build up your strength and range of motion as the bone joins. Around the house you can manage light tasks with your other hand, but avoid lifting with the sore arm, reaching overhead, or leaning on it until you are told it is safe. Sleeping propped up on some pillows is often more comfortable at first.

As the swelling settles and movement returns, everyday life gets easier. You will be able to dress yourself, write, and use a keyboard well before you can lift anything heavy. Once your surgeon clears you to drive, typically at the six-week review, you can get back behind the wheel; our guide on [driving after upper-limb surgery](#) explains what is involved. Return to work and sport depends on what your job or sport involves, and your surgeon will talk you through it as you heal.

Everyone heals at their own pace, so your timeline may differ. Your surgeon and physiotherapist will guide you at each review and adjust the plan to suit how you are going.

What can go wrong

Most patients do well, but problems can occasionally happen. Your surgeon and the team monitor you closely to spot any issue early.

Infection is the main thing we watch for after surgery. You might notice a deep, throbbing pain that does not ease with simple painkillers, redness that spreads out from the wound, or fluid leaking from it. Sometimes you feel hot and shivery. Tell us straight away if you see any of these signs, as infection needs prompt treatment.

The plate and screws sit close to the skin over the collarbone, so they can be felt through it. Some people find the metal rubs or catches, especially when lying on that side or carrying a bag strap across the shoulder. If this

irritation becomes bothersome, the hardware can be removed in a later operation. Bring it up at your review rather than putting up with it.

Numbness near the scar is common. The small skin nerves around the collarbone are often stretched during surgery, leaving a patch of numbness or tingling below the incision. This is usually something you notice rather than something that limits you, but mention it at your next appointment so it goes on record.

Rarely, surgery can affect the bigger nerves or blood vessels under the collarbone. Warning signs include sudden weakness or pins and needles down the whole arm, or the arm looking pale, cold or swollen. These need urgent attention, so go to the emergency department if they come on.

The bone itself can sometimes fail to join, or join in a poorer position than hoped. You would notice ongoing pain and weakness at the fracture site that does not improve as expected. Tell us at a review if the shoulder is not settling the way we discussed.

Wound problems such as gapping, thickened or tender scarring can occur, and a collection of blood under the wound can cause sudden swelling in the first days. Contact the clinic about any wound concern.

The complications table on this page lists typical rates if you want the specifics.

When to call us

Call us if you have a fever, or if the skin around your wound becomes more red, swollen or starts leaking fluid. Call us if your pain suddenly gets worse or does not ease with your pain medication. Go to emergency if you have calf pain or swelling, or shortness of breath, as these can be signs of a blood clot. Go to emergency if your arm goes numb, feels cold or pale, or you cannot move it. If you are worried about anything at all, call the clinic. We would rather hear about it early.

Where to read more about the condition

This page is about the operation itself. The condition it treats, including what the evidence shows about when surgery helps and when it does not, is covered in more detail on the [Clavicle Fracture](#) page.

Clavicle Fracture Fixation

Complication rates from published literature

Pooled from 85 published studies. These are population-level rates, not your individual risk — your surgeon will discuss what applies to you.

COMPLICATION	REPORTED RATE	NOTES
Overall reoperation rate	17.6-24.6%	Approximately one in four patients undergo reoperation within 2 years, most commonly for hardware removal, revision for nonunion, deep infection, or malunion.
Hardware removal	7.7-40%	Symptomatic hardware removal is the most common reoperation, with women nearly 3 times more likely to undergo removal than men (28.6% vs 11.5%).
Nonunion	2-15%	Failure to heal is much less common after modern plate fixation than after non-operative treatment, where about 14.5% of fractures do not heal; smoking, diabetes and other health problems raise the risk.
Refracture after plate removal	1.4-6.5%	Refracture occurs at an average of 25.6 days after hardware removal, typically requiring reoperation; patients must avoid impact activities for 6-8 weeks after removal.
Adhesive capsulitis or shoulder stiffness	1-43%	Shoulder stiffness occurs in approximately 20% in the early postoperative period, treated with physiotherapy and early mobilization.
Hardware failure or plate breakage	1-3%	Plate breakage or screw loosening can occur particularly with inadequate fixation or premature loading, typically requiring revision surgery.
Wound healing problems	1-2%	Delayed healing, dehiscence, or hypertrophic scarring can occur due to the clavicle's thin soft tissue coverage.
Delayed union	1-12%	Delayed union occurs in 1-12% of cases, often resolving without further intervention.
Malunion	0.4-37%	Healing in unacceptable position creates a step deformity and may alter shoulder mechanics, with symptomatic malunion requiring revision osteotomy.

COMPLICATION	REPORTED RATE	NOTES
Vascular injury	< 0.4%	Subclavian artery or vein injury is extremely rare as the vessels lie directly beneath the clavicle, requiring immediate vascular surgery consultation.
Paresthesia or numbness	0-38%	Altered sensation over the surgical site and anterior chest due to supraclavicular nerve injury during surgical approach, with most improving over 6-12 months.
Superficial infection	0-18%	Superficial wound infections respond to oral antibiotics and local wound care, with risk factors including diabetes, smoking, and obesity.
Deep infection	0-18%	Deep infection requiring irrigation and debridement typically occurs at median 5 months and may require surgical washout, prolonged antibiotics, and sometimes hardware removal.
Pneumothorax	0-4.8%	Lung injury causing air in the chest cavity; small pneumothoraces resolve spontaneously while large ones require chest tube insertion.
Nerve injury	0-38%	Brachial plexus injury is extremely rare, causing weakness, numbness, or altered sensation in the arm or hand, with most injuries being stretch injuries that recover over months.

I have read this information and have had the opportunity to ask Dr Hirpara questions about the procedure, its expected recovery, and the complications listed above.

PATIENT – PRINT NAME

SIGNATURE

DATE