

Distal Radioulnar Joint Surgery

At-a-glance recovery. Pooled from 80 published studies — your own pace will vary.

LIGHT DUTIES	MOST EVERYDAY ACTIVITIES	FINAL OUTCOME PLATEAU
desk work, driving, daily tasks	manual work, sport, gym	pain and strength
—	—	—

Why this operation has been suggested

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. At your appointment we take a history, examine your wrist, and arrange imaging where it is needed to work out what is causing your pain.

The distal radioulnar joint is the joint between the two bones of your forearm, just above the wrist. Surgery on it is suggested when that joint is worn, unstable, or damaged after an injury, and it is causing pain on the little-finger side of your wrist, trouble turning your forearm, or weaker grip. For long-standing problems we usually try non-operative care first: activity change, physiotherapy or hand therapy, and splinting. Surgery comes into the picture when those steps have not given you enough improvement. Some injuries to this joint are unstable from the start, and for those we may recommend surgery straight away. The aim of the operation is to ease your pain and let you turn your forearm and use your hand with more comfort and confidence.

Before the operation

Once your surgery is booked, we will give you clear instructions to prepare. You will need to stop eating and drinking seven hours before your operation. We ask for seven hours rather than a shorter time so your place on the theatre list can be brought forward if the day runs early. If you take regular medicines, bring a written list of them to hospital, and we will tell you which ones to pause and when. Most people do not need any extra tests

beforehand. If you have other medical conditions, you may need blood tests or a review with the anaesthetist, the doctor who gives your anaesthetic. Please arrange for someone to drive you home afterwards, and wear loose, comfortable clothing on the day.

On the day

On the day of your operation you come to the hospital's surgical admissions unit. There you are checked in and prepared for theatre. You will meet the anaesthetist, the doctor who looks after your anaesthetic. This operation is done under general anaesthetic. A regional nerve block is sometimes added for post-operative pain relief; the anaesthetist will discuss this with you on the day.

You are then taken into the operating theatre, where the operation is performed. Afterwards you wake up in the recovery area, where nurses watch over you while the anaesthetic wears off. Once you are stable you either go to a ward or go home, depending on the procedure and how your recovery is going.

What the operation involves

There is more than one way to operate on this joint, and the right one for you depends on what is wrong with it. If the joint has come out of place after a wrist fracture, your surgeon will put the bones back into their correct position and hold them there while they heal, sometimes with a cast. If the joint is worn and painful, your surgeon may remove part of the bone at the end of the forearm bone on the little-finger side of your wrist. This is done through a cut over the back of the wrist, on the little-finger side. Removing that worn bone surface stops the two forearm bones grinding on each other when you turn your forearm.

If the joint is loose rather than worn, your surgeon can rebuild the ligaments that hold it together. Ligaments are the strong bands of tissue that connect one bone to another. This is done using a piece of tendon, the tissue that joins muscle to bone, woven through small holes in the bones to act like a new strap holding the joint in place. This is only possible when the joint surfaces themselves are still healthy.

If the whole joint is badly worn, your surgeon may replace it. The damaged bone at the end of the forearm bone is removed and replaced with an artificial joint made of metal, and sometimes plastic parts as well, so the two forearm bones can move smoothly against each other again.

At the end of the operation your surgeon closes the cut with stitches and covers it with a dressing. You will wake up with your hand and wrist bandaged, and the dressing stays on for about 10 days.

After the operation

When you wake up you will be in the recovery area, and nurses will check on you as the anaesthetic wears off. Your hand and wrist will be bandaged, and you may have a sling to rest your arm. We will give you pain relief to keep you comfortable; tell the nurses if your pain is not settling. You can get up and move around as soon as you feel able, and someone should stay with you for the first 24 hours. Your team will tell you whether you go home

the same day or stay one night in hospital. 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 wrist will be sore and swollen, and the little-finger side may throb, especially at night. Keeping your hand raised on pillows, even while you sleep, helps the swelling settle. The pain relief we give you works best when you take it regularly rather than waiting for the pain to build.

You will leave hospital with your arm bandaged and resting in a sling. The dressing stays on for about 10 days, and we will change or remove it when we see you. Your rehabilitation after surgery is with Ruby Doolan at Extend Rehabilitation. Ruby is a hand therapist: she will guide your exercises and make any splint you need. Early on, the exercises are gentle and focus on keeping your fingers, elbow and shoulder moving. As healing progresses, the exercises work on turning your forearm and building your grip back up.

Day to day, you will need help at first with tasks that need two hands, like dressing, cooking and carrying things. Once the swelling settles and movement returns, everyday activities get easier. When you can grip without pain and turn your forearm comfortably, you will find you can do more with your hand. If driving is part of your recovery, you must not drive while in a sling or splint, while on strong pain medication, or unless you can hold the wheel with both hands and react in an emergency stop. See our guide on [driving after upper-limb surgery](#).

Everyone heals at their own pace, and your timeline may differ. Your surgeon and your hand therapist will guide you at each step.

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.

If part of the end of your forearm bone has been removed, the remaining stump can sometimes shift or press against nearby structures. You might feel a sharp or grinding pain on the little-finger side of your wrist when you turn your forearm, or a sense that something is catching. Bring this up at your next review.

Some people notice the wrist is less painful but stiffer afterwards, with less bending forwards. If turning your forearm feels limited, your shoulder often takes over without you realising, so the difference in daily life may be small. Mention any movement you are unhappy with at review.

If this joint was injured along with a wrist fracture, the joint can slip out of place early on, sometimes within the first two weeks. This is easy to miss. Watch for new pain, swelling or a change in the shape of your wrist, and tell the clinic if you notice these.

A tear in the cartilage cushion on that side of the wrist, left untreated, can leave the joint feeling loose. You might notice clicking, a shift or clunk when you load the wrist, or weaker grip. If the joint stays loose and painful despite other treatment, further surgery is sometimes needed, but many people improve with time and

do not need another operation. Ulnar-sided wrist symptoms often keep improving for up to a year after fracture surgery.

For a long-standing wrist deformity present since youth, the joint can gradually become worn or unstable over time. In severe cases, the tendons that straighten the fingers can wear through from rubbing over a prominent bone, causing sudden loss of the ability to straighten one or more fingers. If a finger will not straighten, contact the clinic promptly.

As with any wrist operation, bones can be slow to heal or fail to join, and the area where bone was removed can become unstable and painful. Persistent pain at the back of the wrist should be raised at review.

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 the skin around your wound becomes more red, swollen or weepy. Call us if your pain suddenly gets worse, or new pain or swelling appears in your wrist in the first two weeks. Tell us if a finger will not straighten, or your wrist feels loose, clicks or gives way. Go to emergency if you have calf swelling or pain, shortness of breath, chest pain, numbness in your hand, or you cannot move your arm or fingers.

In more depth

This section goes further than you need for your own treatment decisions. The distal radioulnar joint is worth the extra reading because it is the joint in the wrist we are worst at measuring, the one most often blamed prematurely, and the one where waiting is most often the right answer.

WE CANNOT RELIABLY MEASURE THE PROBLEM

Instability of this joint is diagnosed largely by feel, the examiner shifts the ulna against the radius and forms an impression. A 2025 review of assessment strategies concluded plainly that reliable, quantifiable methods for analysing distal radioulnar joint instability remain an unmet need, and that developing them is essential to improving management [1].

That has a direct consequence for you. When the diagnosis rests on a subjective test, the threshold for calling a joint unstable varies between examiners, and so does the threshold for operating on it. A second opinion here is not distrust; it is a reasonable response to a test with known limits.

MOST ULNAR-SIDED PAIN AFTER A WRIST FRACTURE SETTLES

This is the single most useful finding for anyone with a painful wrist after a distal radius fracture. A comprehensive review concluded that **most** ulnar-sided wrist problems following distal radial fractures can be treated **non-operatively initially, typically for over a year**, in anticipation of substantial improvement with time [2].

A year is longer than most people expect to be told to wait, and the temptation to intervene earlier is strong on both sides of the consultation. The exception named in the same review is important and specific: early marked subluxation of the joint that physically blocks forearm rotation does need addressing rather than observing [2].

So the default is patience, with a defined reason to abandon it.

WHEN SALVAGE IS NEEDED, THE CHOICE IS FINER THAN IT LOOKS

If the joint is destroyed and non-operative management has genuinely failed, the classic options are the Darrach procedure, removing the end of the ulna, and the Sauvé-Kapandji, which fuses the joint and creates a gap more proximally to allow rotation.

A systematic review comparing them found **comparable satisfaction** regardless of the underlying pathology, with similar improvement in range of motion, strength and overall function [3]. The difference was in the **reoperation rate, which was higher with the Sauvé-Kapandji** [3].

That is a clean discriminator. Where two operations produce the same result, the one requiring fewer further operations has the advantage, though the Sauvé-Kapandji retains a role where preserving the ulnar support of the carpus matters, which is precisely why it was devised.

ULNAR IMPACTION IS A DIFFERENT PROBLEM WITH ITS OWN ANSWER

Ulnar-sided pain from the ulna being relatively too long, ulnar impaction syndrome, is treated by shortening the load path, either by cutting and shortening the ulnar shaft or by arthroscopically removing the dome of the ulnar head. A meta-analysis of **311** patients found both effective, with the **arthroscopic wafer procedure showing fewer complications and a lower reoperation rate** [4].

The shaft osteotomy involves a plate, a healing bone and the possibility of the osteotomy failing to unite; the arthroscopic procedure avoids all three. Where the anatomy suits it, that is a meaningful difference.

CQ HAND + UPPER LIMB

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Distal Radioulnar Joint Surgery

Complication rates from published literature

Pooled from 80 published studies. These are population-level rates, not your individual risk — your surgeon will discuss what applies to you.

COMPLICATION	REPORTED RATE	NOTES
reoperation	25.0%	Reported in a systematic review of prosthetic arthroplasty for the distal radioulnar joint (n=1525).
mechanical symptoms	12.5%	Reported in a systematic review of Darrach and Sauvé-Kapandji procedures.
nonunion	2.3%	Reported in a systematic review of Darrach and Sauvé-Kapandji procedures.
recurrent instability	4.4%	Reported in a prospective cohort of 88 patients undergoing extensor retinaculum capsulorrhaphy and suture repair.
heterotopic ossification	10.0%	Reported in a prospective cohort of 10 patients with long-term follow-up of the Aptis total distal radioulnar joint prosthesis.
periprosthetic fracture	10.0%	Reported in a prospective cohort of 10 patients with long-term follow-up of the Aptis total distal radioulnar joint prosthesis.
recurrent DRUJ instability after arthroscopic repair	3.7%	Reported in a retrospective study of 225 patients undergoing arthroscopic TFCC repair with dorsal capsular imbrication.
recurrent volar dislocation of the ulnar head	1.2%	Reported in a retrospective study of 173 elderly patients with distal radius fractures and DRUJ dislocation.
recurrent DRUJ instability in people with loose joints	17.7%	Reported in a retrospective study of 120 patients with generalized joint laxity undergoing arthroscopic foveal repair.
radiological signs of DRUJ osteoarthritis	20.0%	Reported in a retrospective study of 66 patients undergoing ulnar shortening osteotomy.

COMPLICATION	REPORTED RATE	NOTES
proximal ulnar stump instability	13.8%	Reported in a retrospective study of 30 patients undergoing the Sauvé-Kapandji procedure.
osteomyelitis of the ulnar stump	3.4%	Reported in a retrospective study of 30 patients undergoing the Sauvé-Kapandji procedure.
any postoperative complication	20.7%	Reported in a retrospective study of 30 patients undergoing the Sauvé-Kapandji procedure.
resorption of grafted bone	9.1%	Reported in a case series of 56 patients with rheumatoid arthritis undergoing modified Sauvé-Kapandji procedure.
osseous ankylosis between lunate and ulnar graft	10.6%	Reported in a case series of 56 patients with rheumatoid arthritis undergoing modified Sauvé-Kapandji procedure.
periprosthetic ulna fracture	1.7%	Reported in a case series of 4 patients with periprosthetic ulna fractures following Aptis DRUJ arthroplasty.
graft resorption and failure	—	Reported as a potential complication in a case report of tendon interposition arthroplasty for chronic volar dislocation.
residual pain and stiffness	—	Reported as a potential complication in a case report of tendon interposition arthroplasty for chronic volar dislocation.
progression of degenerative arthritis	—	Reported as a potential complication in a case report of tendon interposition arthroplasty for chronic volar dislocation.
ulnar impingement syndrome	—	Reported as a complication of failed ulnar head resection.
ulnar neck resorption	—	Reported as a complication of non-constrained implant arthroplasty for the distal radioulnar joint.
sigmoid notch erosion	—	Reported as a complication of non-constrained implant arthroplasty for the distal radioulnar joint.
implant loosening	—	Reported as a complication of non-constrained implant arthroplasty for the distal radioulnar joint.
graft rupture	—	Reported as a complication of anatomic reconstruction of palmar and dorsal radioulnar ligaments.
transient dysesthesia	—	Reported as a complication of anatomic reconstruction of palmar and dorsal radioulnar ligaments.

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