

Knuckle Joint Replacement (MCPJ)

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
2-6 weeks	3-6 months	12-24 months
Return to desk work and light activities of daily living typically occurs within 2 to 6 weeks, with early mobilization often initiated postoperatively.	Return to manual work and full strength activities is generally achieved between 3 and 6 months, depending on the extent of soft tissue balancing and rehabilitation.	Functional plateau and final correction of deformity are typically reached within 12 to 24 months, with some loss of motion or correction potentially occurring over the long term.

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 hand, and arrange imaging if it is needed. That tells us what is going on in the joint.

This operation replaces the knuckle joint, the joint where your finger or thumb meets your hand, with an artificial implant. It is usually offered when the joint surface is badly worn by arthritis and other treatments have not given enough relief. For long-standing wear-and-tear problems we usually try non-operative care first: activity change, physiotherapy or hand therapy, and splinting. Surgery is considered when those steps have not helped enough. The aim is pain relief, better function, and protection of the joints next door. For some people it also restores stability to a joint that has become loose or bent out of shape.

Before the operation

In the weeks before surgery we confirm the plan with fresh images of your hand, such as an X-ray, MRI or ultrasound. These show us the worn joint and help us choose the right implant. You will get clear instructions about fasting: no food or drink for seven hours before your operation. We ask for seven hours rather than a shorter time so your surgery can be brought forward if the theatre list runs early. Some medicines need to be paused before surgery, and your surgeon will tell you which ones and when. If you have other medical conditions, you may need blood tests or a review with the anaesthetist. On the day, bring a list of your current medications, arrange a lift home, and wear comfortable clothing with loose sleeves.

On the day

You arrive at the hospital's surgical admissions unit, where you are checked in and prepared for theatre. You meet the anaesthetist, the doctor who looks after your anaesthetic and pain control during surgery. 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.

When the operation is finished, you wake up in the recovery area. Nurses watch over you while the anaesthetic wears off. Once you are stable, you either move to a ward or go home the same day, depending on the procedure and how your recovery is going.

What the operation involves

Your surgeon makes a small cut over the back of your knuckle joint to reach the worn joint surfaces. The damaged bone ends are removed and shaped to make room for the implant. The most common implant is a flexible spacer that sits between the two bones, letting the joint bend again while easing pain. The aim is pain relief, better movement, and protection of the joints next door.

Different implants suit different joints and different problems. For some people a soft silicone spacer is used. For others, especially where the surrounding ligaments are strong and the neighbouring fingers give support, a harder implant shaped like the natural joint surface is chosen. Your surgeon picks the implant that fits your joint and your condition.

Once the implant is in place, your surgeon checks that the finger lines up and moves smoothly, and balances the soft tissues around the joint so it stays stable. The cut is closed with stitches and covered with a dressing. The dressing stays on for about 10 days, which the 'After the operation' section explains.

For some thumb knuckle joints, joining the bones together (a fusion) is an alternative to an implant. This removes the painful joint but means that part of the thumb no longer bends. Your surgeon will talk through which option suits your joint before you sign the consent form.

After the operation

You will wake up in the recovery ward, where nurses keep a close eye on you as the anaesthetic wears off. Your hand will be in a bulky dressing, and we will give you pain relief to keep you comfortable. Someone should stay with you for the first 24 hours after you get home. You can move around as normal, but take it easy and rest your hand raised on a pillow when you sit. 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 hand will be sore and swollen, and the knuckle may feel stiff and tender. Resting your hand raised on a pillow eases the swelling, and the pain relief we give you keeps you comfortable. The discomfort settles gradually as the joint heals.

Your hand will be in a bulky dressing at first, which stays on for about 10 days. When we see you, we change or remove it and check the healing skin. Rehabilitation after this surgery is hand therapy with Ruby Doolan at Extend Rehabilitation. She will guide your exercises and make a splint if you need one. The exercises protect the new joint while your finger or thumb regains movement, and you will be shown how to use your hand for everyday tasks without straining it.

As the swelling settles, bending and straightening usually feel easier. Once you can grip and pinch without pain, you will find daily activities such as dressing, eating and writing become more natural. Many people notice the main gain is relief from the pain they had before surgery, along with better use of the hand for daily tasks.

You should not drive while your hand is in a splint or while you are taking strong pain medication, and you need to be able to hold the wheel with both hands and react in an emergency stop. Our separate guide on driving after upper-limb surgery explains when it is safe to return.

Recovery varies from person to person, and your timeline may differ. We will guide you at each review, along with your hand therapist.

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 uncommon after this type of joint replacement. Watch the skin around your wound. If you notice redness spreading out from the wound, warmth, oozing, or a deep throbbing pain that does not ease with simple painkillers, contact the clinic without delay. If you feel feverish or unwell, go to the emergency department.

The new joint can sometimes come out of place. This is called dislocation. You might feel a sudden shift in the joint, with the finger or thumb sitting at an odd angle and refusing to move normally. Call the clinic straight away if this happens.

The implant itself can wear, loosen, crack or bend over time. Signs include a return of pain that had settled, new clicking or grinding, or the finger drifting out of line. Bring these changes up at your next review, or call earlier if they come on suddenly.

The bones around the implant can also break during the operation. Your surgeon checks for this before you leave theatre, and it usually heals with a shorter period of protection in the splint.

If a problem does develop, further surgery is sometimes needed to fix it. This might mean replacing the implant again, or, if replacement is not suitable, joining the bones of that joint together so they heal as one solid piece. That second option removes pain but stops the joint bending. Your surgeon will explain what fits your situation if it ever comes to that.

Some people notice ongoing stiffness or weakness in the finger or thumb after surgery. Hand therapy helps with this, so mention it at your review appointments rather than waiting.

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

When to call us

Most problems show up in the first few weeks, so it pays to know what to watch for. Call us if you notice redness spreading from the wound, oozing, fever, or pain that keeps getting worse. Go to emergency if you feel feverish and unwell, or if your calf becomes swollen and tender. Sudden shortness of breath needs emergency care too. Call us straight away if your finger or thumb suddenly shifts out of place, sits at an odd angle, or you cannot move it. Numbness or tingling that does not settle also needs a prompt check. If in doubt, call us.

In more depth

This section goes further than you need for your own treatment decisions. Knuckle joint replacement is worth the extra reading because of a curiosity: the implant most used today is essentially the design introduced in the 1960s, and it has outlasted every material brought in to replace it. Understanding why explains what this operation is actually for.

SILICONE HAS NOT BEEN DISPLACED

A 2026 review of metacarpophalangeal joint arthroplasty in rheumatoid arthritis concludes that the operation continues to play a central role in managing the rheumatoid hand, and that **despite advances in implant technology, flexible silicone arthroplasty provides reliable functional and cosmetic improvement** in appropriately selected patients [1].

Sixty years of materials science has produced metal-plastic and pyrocarbon alternatives, and the silicone spacer is still the reference standard. That is unusual in joint replacement, where hip and knee implants have been iterated continuously over the same period.

The reason is that this implant is not doing the job its name implies. It is not resurfacing a joint to restore a bearing. It is a flexible spacer that maintains a gap and acts as an internal splint while scar tissue forms around it into a new capsule. The result is delivered by the healing, not by the device, which is why a better bearing surface has never translated into a better outcome.

THE HONEST SUMMARY OF RESULTS

A review of implant arthroplasty across the finger and thumb joints puts it well: implant arthroplasty **predictably produces pain relief and high satisfaction**, but has **historically suffered from high rates of complications**, and while metal-plastic and pyrocarbon materials have evolved, **survivorship and reoperation rates remain a concern** [2].

Both halves matter. People are reliably pleased with these operations, pain goes, appearance improves, the hand works better for daily tasks, and the implants have a finite life with a real reoperation rate. Satisfaction and durability are different questions, and this operation scores much better on the first.

FOR OSTEOARTHRITIS, THE EVIDENCE IS THIN

Most of the literature concerns rheumatoid arthritis, because that is where the deformity being corrected is most dramatic. For **osteoarthritis** the picture is weaker: the available evidence consists of retrospective cohorts with small sample sizes and relatively short follow-up [3].

Notably, where authors express a preference for pyrocarbon over silicone in osteoarthritis, it is on the basis of **potential** for improved stability and alignment, with the data described as preliminary [3]. That is a reasonable position to hold, but it should be recognised as reasoning from mechanism rather than from demonstrated superiority.

DURABILITY IS BECOMING A BIGGER QUESTION

A concern raised nearly two decades ago has grown rather than resolved: implant durability matters more as life expectancy increases, and as these operations are done in younger, more active patients who will load them for longer [4]. An implant with acceptable ten-year performance is a different proposition at 75 than at 55.

Practically, this is a reason to be clear about what you want the operation to achieve. For pain relief, correction of deformity and improved function in a hand with modest mechanical demands, this is a well-supported operation with a long record. As a durable reconstruction for heavy use over decades, it is not.

CQ HAND + UPPER LIMB

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Knuckle Joint Replacement (MCPJ)

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
implant fracture	2-13.8%	Rates vary by implant type and follow-up duration; often asymptomatic and may not require revision.
dislocation	0.4-8%	More common in revision cases or patients with preoperative instability; may require soft tissue balancing.
infection	0.4-2%	Periprosthetic joint infection is uncommon; risk may be increased by preoperative steroid injections in some studies.
revision surgery	6.7-16%	Indications include recurrent deformity, pain, or instability; rates are higher in revision arthroplasty than primary.
intraoperative fracture	2-3%	Periprosthetic fractures of the phalanx or metacarpal can occur during implant insertion or reaming.
recurrent ulnar deviation	4-12%	Deformity recurrence is a common indication for revision, particularly in rheumatoid arthritis patients.
stiffness	0.4-20%	Limited motion or stiffness may occur, particularly in patients with preoperative contractures or soft tissue issues.
ligament/tendon rupture	1.6-6.8%	Soft tissue complications including extensor or flexor tendon rupture may require repair.
subsidence	64%	Radiographic subsidence is common but often asymptomatic; clinical significance is debated.
complex regional pain syndrome	1.96%	Rare but reported complication, particularly in pyrocarbon arthroplasty for noninflammatory arthritis.

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