

# Knuckle Joint Replacement (MCPJ)

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## Why this operation has been suggested

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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. A clinic assessment establishes the diagnosis. For degenerative or long-standing problems we usually try non-operative care – activity change, physiotherapy or hand therapy, splinting, and injections – and consider surgery when that has not given enough improvement. For structural or acute problems, surgery may be recommended straight away.

We offer this procedure to relieve pain and improve function in your knuckle joint. It is typically recommended for wear-and-tear arthritis, non-inflammatory arthritis, or rheumatoid arthritis that affects the joint. It may also be used for complex trauma or deformity. The main benefit is predictable pain relief and improved hand appearance. While some patients may need a revision procedure at 5 years, the operation aims to restore stability and ease daily tasks.

## Before the operation

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Please fast for seven hours before your surgery. We ask for this extra time so your operation can start earlier if the list runs ahead. You must arrange a lift home and wear comfortable clothing. Bring a list of all your current medications to help your surgeon plan safely. We will review X-rays or other scans to prepare for your procedure. If you have other medical conditions, you may need blood tests or a review with the anaesthetist. Otherwise, these are not routine. Your surgeon will give you specific instructions on which medications to stop. Please follow their guidance closely to ensure your safety and comfort on the day of your operation.

## On the day

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You present to the hospital's surgical admissions unit. Here you are checked in and prepared for theatre. You meet the anaesthetist to discuss your care. 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. You wake up in the recovery area, where nurses monitor you while the anaesthetic wears off. Once you are stable you either go to the ward or go home, depending on the procedure and your recovery.

## What the operation involves

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Your surgeon makes a cut over the back of your knuckle to access the joint. The worn-out surfaces of your bone are removed. This creates space for the new implant. Your surgeon places a metal and plastic device into your hand to replace the damaged joint. This helps restore movement and reduce pain.

In some cases, your surgeon may use a silicone spacer instead of a rigid implant. This soft material sits between the bones to cushion the joint. If you have severe deformity, your surgeon might remove a small amount of bone from one side to straighten the finger. This is called an osteotomy. It helps the new joint sit in the correct position.

Your surgeon closes the cut with stitches or glue. A dressing is applied to protect the area. The operation is performed safely, even if you have complex trauma to the hand. Your surgeon will ensure the joint is stable before closing.

We understand this can feel like a big step. Our team is here to guide you through every part of the process. We aim to give you a functional hand that feels natural. You will have a clear plan for your recovery once the operation is complete.

## After the operation

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You will wake up in the recovery ward. We manage your pain with standard medication. Your hand will be wrapped in a clean dressing and supported in a soft sling or splint to protect the joint. Someone should stay with you for the first 24 hours to help you rest. Your team will tell you whether you go home the same day or stay one night in hospital. We advise gentle movement of your fingers as soon as it is comfortable to prevent stiffness. Avoid heavy lifting or gripping for now. Keep the dressing dry and clean. If you have questions about when you can drive, please refer to our guide on driving after upper-limb surgery.

## Recovery

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Your hand will feel stiff and swollen at first. This is normal. We manage this with elevation and gentle movement. Pain usually eases as the swelling settles. You will wear a protective dressing or splint to keep the joint safe while it heals.

Our hand therapist, Ruby Doolan at Extend Rehabilitation, guides your exercises. She directs your therapy and makes any splint you need. You will practice moving your fingers to regain flexibility. We focus on simple tasks you can do at home. Avoid heavy gripping until your surgeon clears you.

Your timeline may differ. Your surgeon and therapist will guide you based on how your hand responds. We aim for good pain relief and improved movement. You will know you are progressing when daily tasks become easier. Your surgeon will advise when it is safe to drive, based on your ability to control the vehicle safely.

## What can go wrong

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

**Joint Dislocation** You might notice your finger suddenly shifts out of place. It may look crooked or feel unstable. You could experience a sharp pain or a clicking sensation when you try to move it. If this happens, do not try to force it back yourself. Contact our clinic immediately for advice on how to manage the joint safely until you can be seen.

**Infection** Deep joint infections are uncommon after this type of surgery. However, you should watch for signs of trouble. Look for redness that spreads away from your wound. You might feel warmth around the finger or notice swelling that does not improve. A deep, throbbing pain that does not ease with simple painkillers is also a warning sign. If you see these changes, call us right away. Early treatment is key to keeping the joint healthy.

**Need for Further Surgery** In some cases, the implant may wear out or fail, requiring another operation. This is more likely if you have inflammatory arthritis, such as rheumatoid arthritis. You might notice a return of pain or a loss of movement that you previously regained. If your symptoms worsen or do not improve as expected, bring this up at your next review. We will assess whether further intervention is needed to restore stability and function.

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

## When to call us

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Call us if you have fever, increasing wound redness or discharge, or sudden severe pain. Go to emergency for calf swelling or shortness of breath. Seek urgent care for loss of sensation or inability to move your hand. These signs need immediate assessment to protect your recovery and safety.

## In more depth

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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.

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## REFERENCES

1. Herren DB. Balancing metacarpophalangeal joint arthroplasty in rheumatoid arthritis. J Hand Surg Eur Vol. 2026;51(6):778-84.
2. Srnec JJ, Wagner ER, Rizzo M. Implant arthroplasty for proximal interphalangeal, metacarpophalangeal, and trapeziometacarpal joint degeneration. J Hand Surg Am. 2017;42(10):817-25.
3. Martin AS, Awan HM. Metacarpophalangeal arthroplasty for osteoarthritis. J Hand Surg Am. 2015;40(9):1871-2.
4. Goldfarb CA, Dovan TT. Rheumatoid arthritis: silicone metacarpophalangeal joint arthroplasty indications, technique, and outcomes. Hand Clin. 2006;22(2):177-82.