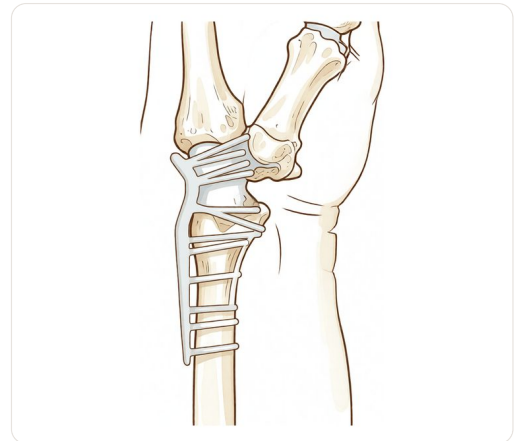


INFORMATION & CONSENT

Total Wrist Fusion

Total wrist fusion: a plate holds the wrist bones solid while they knit into a single unit. This removes the painful arthritic motion at the cost of wrist bending, while forearm rotation — which drives most daily tasks — is preserved.

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At-a-glance recovery. Pooled from 156 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	6-12 months	12-24 months
Light one-handed tasks resume early, and the fingers, thumb and forearm are kept moving from the start; the wrist itself stays in the splint until union.	Patients typically achieve stable implants and significant pain relief within 6 to 12 months, with grip strength restoring to around 80% of the unaffected side.	Long-term follow-up shows good functional results and patient satisfaction, with radiographic fusion achieved in most cases by 12 months.

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. A clinic assessment, including your history, an examination and imaging where needed, establishes the diagnosis.

Wrist arthritis causes pain, weakness of grip and sometimes a wrist that will not stay steady. For many people, non-operative care comes first: activity change, hand therapy, splinting or injections. We suggest a total wrist fusion when those steps have not given you enough improvement. The operation joins the wrist bones together so they heal as one solid piece. This stops the painful rubbing between worn joint surfaces. It is usually offered for severe wear-and-tear arthritis after injury, or for a wrist damaged by rheumatoid arthritis that has become unstable or deformed. It may also be considered if a previous wrist replacement has failed. The aim is a stable, strong wrist with much less pain, so you can use your hand with confidence.

Before the operation

Your surgeon will plan the operation using imaging of your wrist, such as X-rays or an MRI scan. MRI uses a strong magnet to take detailed pictures and can show problems that plain X-rays miss. You will get clear instructions about your medicines before surgery. Some medicines may need to be paused for a short time, and your surgeon will tell you which ones and for how long. Stop eating and drinking seven hours before your operation time. We ask for seven hours rather than six so you can be brought forward if the theatre list runs early. Arrange for someone to drive you home afterwards. Bring a list of your current medicines with you. Wear loose, comfortable clothing. If you have other medical conditions, you may need blood tests or a review with the anaesthetist.

On the day

You arrive at the hospital's surgical admissions unit, where you are checked in and prepared for theatre. You will meet the anaesthetist there. 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.

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

Your surgeon makes a single cut over the back of your wrist. Through this opening, they reach the worn joint surfaces between the small wrist bones and the end of the forearm bone. They remove the remaining smooth cartilage from these surfaces, along with any hardened bone, so that fresh, bleeding bone is exposed on both sides of each joint to be joined. This raw-on-raw contact is what allows the bones to heal together as one solid piece.

Your surgeon then lines the bones up in a functional position and holds them still while they heal. A shaped metal plate is fitted across the back of the wrist and fixed to the bones with screws. The plate holds everything in place so the bones cannot shift while they knit together. In some cases, your surgeon may add a small amount of extra bone graft to help the healing.

Once the bones are secure, your surgeon closes the cut with stitches and applies a dressing.

After the operation

You will wake up in the recovery area with nurses watching over you while the anaesthetic wears off. Your wrist will be supported in a splint or cast, with a dressing over the wound. 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. Pain relief is planned for you before you leave hospital, and the nurses can adjust it if you are uncomfortable. You will be able to get up and walk around on the day of surgery, using your other hand for support. Most patients stay one night in hospital after this operation, though some are able to go home the same day. Please arrange for someone to stay with you for the first 24 hours after you get home.

Recovery

For the first few days your wrist will be sore and swollen. This settles gradually. Keeping your hand raised on pillows, even at night, helps ease the swelling and discomfort. Take the pain relief that has been planned for you rather than waiting for the pain to build.

Your wrist will be in a splint or cast while the bones heal together. You will use your other hand for everyday tasks such as dressing, eating and washing. You can move around the house and do light activities, but you must not drive while your wrist is immobilised. Once the cast or splint is removed and your surgeon clears you, driving can begin; our page on [driving after upper-limb surgery](#) explains this in more detail.

Hand therapy starts soon after surgery and helps prevent stiffness in your fingers, wrist and forearm. Your hand therapist, Ruby Doolan at Extend Rehabilitation, will guide your exercises and make any splint you need. Starting gentle movement early helps you regain useful motion sooner and often means fewer therapy visits overall.

Because the wrist bones are joined, that part of your wrist will no longer bend. Most people adapt well and manage their daily activities with some new habits. Your forearm can still turn, so many tasks remain comfortable. Once the bones have healed and your grip feels strong, you can build back up to work and other activities.

Everyone heals at their own pace, so 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.

The metal plate and screws hold the bones still while they heal. Sometimes this hardware causes discomfort or shifts slightly. You might feel a sharp edge under the skin, or a nagging ache over the plate that simple painkillers do not settle. If this bothers you, mention it at your next review. The hardware can be removed once the bones have healed.

Occasionally the wrist bones do not knit together as planned. This is called a nonunion. Many people with this problem feel nothing at all, and it causes no symptoms. If the gap does cause pain that will not settle, your surgeon will discuss the options with you at review.

The nerve that runs through the middle of the wrist can become compressed by swelling after surgery. This is called carpal tunnel syndrome. You would notice tingling, pins and needles or numbness in your thumb, index and middle fingers, often worse at night. Tell your surgeon if this happens. It can usually be treated with a small operation to release pressure on the nerve.

Problems with wound healing can happen. Watch the skin around your dressing for spreading redness, increasing warmth, oozing or an unpleasant smell. A wound that is not settling may need treatment. If you notice these signs, contact the clinic promptly rather than waiting for your next appointment.

Tendons, the cords that connect muscle to bone, can occasionally be irritated or torn near the wrist. You might notice sudden weakness, for example a finger that will not straighten properly, along with swelling or tenderness on the back of the hand. Bring this to your surgeon's attention early.

If you have had a previous wrist replacement that failed, a fusion done afterwards can still settle things down, though recovery may be a little slower than after a first-time fusion.

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. Call us if you have a fever, or the skin around your wound becomes more red, warm or oozing. Call us if your pain suddenly gets worse, or if you notice tingling or numbness that was not there before. Go to emergency if your calf is swollen and painful, or if you become short of breath. Go to emergency if you cannot feel or move your hand or fingers at all.

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 [Wrist Osteoarthritis](#) page.

Total Wrist Fusion

Complication rates from published literature

Pooled from 156 published studies. These are population-level rates, not your individual risk — your surgeon will discuss what applies to you.

COMPLICATION	REPORTED RATE	NOTES
Reduced grip strength	20-30%	Expected reduction in grip strength after wrist fusion.
Reoperation rate	16%	Approximately 19% of patients require reoperation within 6-7 years, typically for symptomatic hardware (27%), implant failure (20%), infection (17%), or nonunion (15%).
Implant failure	14%	The plate or screws may break or loosen particularly if bones fail to join or after a fall; accounts for 20% of reoperations.
Symptomatic hardware	11%	The plate may be tender or sore requiring plate removal once bones have joined; this is the most common reason for reoperation (27% of reoperations).
Persistent pain	10-15%	Some residual wrist pain despite solid fusion.
Soft tissue complications	9.3%	Swelling in the hand is common; includes hematoma formation (3.7%), wound blistering (2.3%), and wound dehiscence (1.9%); smoking significantly increases risk.
Nonunion	8.9%	The wrist bones may fail to join together, with rate higher (17.5%) following failed wrist arthroplasty; smoking increases nonunion risk.
Extensor tendon complications	8.3%	Tendons on the back of the hand may stick to the plate resulting in stiffness, tenosynovitis, or rarely tendon rupture; modern low-profile plates have reduced this risk.
Infection	7.69%	Wound infection may require washout, antibiotics, or in severe cases implant removal; risk is higher in smokers and immunocompromised patients.
Carpal tunnel syndrome	5-10%	Carpal tunnel syndrome may develop from plate position or swelling.

COMPLICATION	REPORTED RATE	NOTES
Distal radioulnar joint problems	5-10%	DRUJ pain or instability after fusion.
Periprosthetic fracture	Rare	Bones may break around the plate or screws particularly after a fall or before complete healing, potentially requiring additional surgery.
Nerve injury	Rare	Sensory nerve injury may cause numbness, altered sensation, or painful neuromas; injury to the posterior interosseous nerve may affect sensation over the dorsum of the wrist.

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