CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

INFORMATION & CONSENT

Total Wrist Fusion

3D CT after a total wrist fusion: the wrist bones have knit into a single solid unit. This removes the painful, arthritic motion at the cost of wrist bending — but the forearm rotation that drives most daily tasks is preserved.

Kieran Hirpara 4.0

At-a-glance recovery. Pooled from 156 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	**6-12 months**	**12-24 months**
Early range of motion can be started soon after surgery to regain functional wrist and forearm range of motion earlier with fewer therapy visits.	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

Your surgeon has suggested a total wrist fusion, also known as wrist arthrodesis, to join the bones in your wrist so they grow together into one solid piece. This procedure is typically offered when you have severe wear-and-tear arthritis or an unstable joint that has not improved enough with non-surgical treatments like rest, splints, or medication. While a joint replacement is an option, fusion is performed nearly five times more frequently and remains the gold standard for certain complex cases, such as unstable rheumatoid wrists.

Your surgeon may have recommended this specific operation because it provides reliable pain relief and a stable wrist, which is often the primary goal for patients with end-stage arthritis. Although this surgery limits wrist motion, it allows you to use your hand with more strength and less pain. It is a proven way to improve your overall hand function when other treatments have failed to give you the relief you need.

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Before the operation

You will need to fast before your surgery and stop certain medications as your surgeon advises. Please arrange for someone to drive you home and wear comfortable clothing. You may need X-rays, an MRI, blood tests, or an anaesthetic review. These checks help your surgeon see your bone and joint condition clearly. Your surgeon will perform the operation through a single open cut over your wrist. This approach allows direct access to the joint for fusion. Bring a list of all your current medicines to your appointment. Your team will guide you on exactly what to do before the day of surgery.

On the day

You will arrive at the hospital and meet your surgeon and the anaesthetist. They will review your health and answer any final questions before you go to the operating theatre. 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.

Your surgeon will make a single cut over your wrist to perform the procedure. Once the work is finished, you will wake up in the recovery area. A nurse will monitor you closely while the effects of the anaesthetic wear off. You will stay there until you are stable and comfortable before moving to your room.

What the operation involves

Your surgeon will make a single cut over the front of your wrist to access the joint. This open approach allows direct access to the bones and tissues. The surgeon removes the worn-out joint surfaces that are causing your pain. To hold your wrist bones together while they heal, small metal wires or screws are used to fix the bones in place. This process joins the bones into one solid piece, a step known as fusion.

Once the bones are secured, your surgeon closes the cut with stitches. A dressing is placed over the wound to protect it as you heal. This procedure is often chosen when other treatments have not worked or when the joint is severely damaged. It is a reliable way to stop pain and provide a stable wrist, though it means your wrist will no longer bend. Your surgeon selects this method based on your specific needs and the condition of your joint.

After the operation

You will wake up in the recovery ward. Your surgeon will manage your pain using standard methods. You will have a bandage, sling, or brace on your wrist. You can start moving your fingers and forearm early to help recovery. Most patients go home the same day or stay overnight. You must have someone stay with you for the first 24 hours to help you.

Recovery

You will have a single incision over your wrist to complete this surgery. In the first few days, swelling and pain are normal. Your surgeon may use pain relief methods like nerve blocks and oral medicines to help you feel comfortable. Resting your hand on pillows while you sleep can also ease discomfort.

You will wear a cast or brace to protect the joint while it heals. Your surgeon will guide you on when to start gentle movement exercises. Starting these early helps you regain motion sooner with fewer therapy visits. You will focus on moving your fingers and forearm while keeping the wrist still.

As the swelling settles, you will gradually return to daily tasks. You can drive once your surgeon clears you, and you can return to work when your grip feels strong enough. Your timeline may differ; your surgeon and physiotherapist will guide you through each step of your recovery.

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.

Sometimes the bones do not heal together completely. You might feel a deep ache or notice that your wrist still feels unstable. If this happens, you may need another surgery to fix the bone connection.

Hardware problems can also occur. You might feel sharp pain or notice that a screw or plate is moving under your skin. Tell your surgeon if you feel anything poking at the skin or if the pain does not go away with simple painkillers.

If you have had a joint replacement before and it fails, you might experience sudden pain or a loss of movement. Your surgeon can often fix this by performing a wrist fusion. This procedure usually improves how your wrist works compared to the failed replacement.

In some cases, the bones may not join as expected after a specific type of fusion. You might notice persistent pain or swelling that does not settle down. Your surgeon will check your progress at your follow-up visits to see if further treatment is needed.

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, increasing redness, or discharge from your wound. Go to emergency if you feel sudden severe pain, swelling in your calf, or trouble breathing. Contact us immediately if you lose sensation in your hand or cannot move your fingers. These signs need urgent assessment to keep your recovery safe.

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COMPLICATIONS & CONSENT

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.

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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

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