CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

REHABILITATION PROTOCOL

DRUJ Hemiresection Arthroplasty

The distal radioulnar joint lets the forearm rotate, turning the palm up and down as when pouring a kettle. Hemiresection eases a painful, worn joint while keeping that rotation.

Kieran Hirpara 4.0

This protocol guides your recovery after **hemiresection-interposition arthroplasty of the distal radioulnar joint (DRUJ)** – an operation that reshapes the worn end of the forearm to restore comfortable, pain-free rotation of the forearm – with Dr Kieran Hirpara at Mater Private Hospital Rockhampton. It begins with your home exercise program, followed by the structured clinical protocol written **for your hand therapist** – bring this page or its PDF to your first therapy visit so your rehabilitation stays coordinated. Your therapist may adjust the plan depending on how your recovery progresses.

If you have any concerns about your wound after surgery, get in touch with the rooms. It is often helpful to take a photo of the wound and email it for review.

What to expect

The distal radioulnar joint (DRUJ) is the small joint near your wrist on the little-finger side where the two forearm bones – the radius and the ulna – meet. It is the joint that lets you **turn your forearm over**, palm up (supination) and palm down (pronation). When this joint wears out and becomes arthritic, turning the forearm becomes painful.

In a **hemiresection arthroplasty**, only the worn, arthritic part of the head of the ulna is shaved away (a *partial* removal – "hemi" means half), and a small cushion of your own soft tissue is tucked into the gap to keep the surfaces from rubbing. Importantly, this operation **preserves the key stabilising structures** – the TFCC (the cartilage and ligament hammock that supports the wrist on that side), the ulnar styloid, and the soft-tissue attachments – so the end of the ulna stays supported. This is what makes it different from a complete removal of the ulnar head (a Darrach procedure).

Because the joint surfaces are reshaped rather than repaired or reconstructed, **there is no tendon or ligament that has to heal under protection for months.** The single goal of this operation is **pain-free forearm rotation**, and so the single most important part of your rehabilitation is **getting that rotation moving early.** After a brief period of protection in a splint to let the soft tissues settle, restoring the turn of the forearm –

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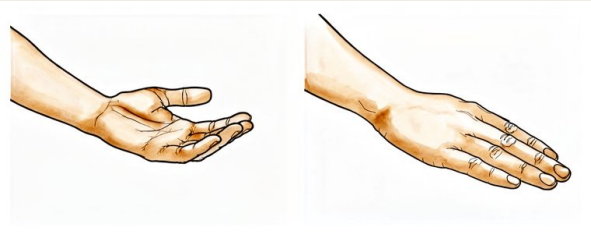
palm up and palm down — becomes the headline of your recovery. Strength and heavier loading are added gradually afterwards.

Precautions and limitations

- For about the **first two to three weeks**, wear your splint as directed — it gently limits forearm rotation while the interposition tissue settles. Keep your fingers, and (when allowed) your wrist, moving throughout.
- Once cleared out of the splint, make **gentle forearm rotation your priority** — but keep it **pain-free** and **unloaded**. Early rotation should be done with an empty hand, not against weight.
- Do **NOT** load the forearm in rotation early — no twisting open jars, wringing cloths, using a screwdriver, or carrying heavy bags on that side until strengthening is cleared (commonly around six to eight weeks).
- Be alert to pain or a sense of instability on the **little-finger side of the wrist when you push or load through the forearm** — this is the area the operation works on. Mention it to your hand therapist; do not push through it.
- Keep your **fingers, thumb, elbow and shoulder** moving freely from the start, and use the hand for light everyday tasks within comfort, as long as it does not involve forced or loaded twisting.

For wound, swelling and scar management, see the practice's wound care guidance.

Your exercises



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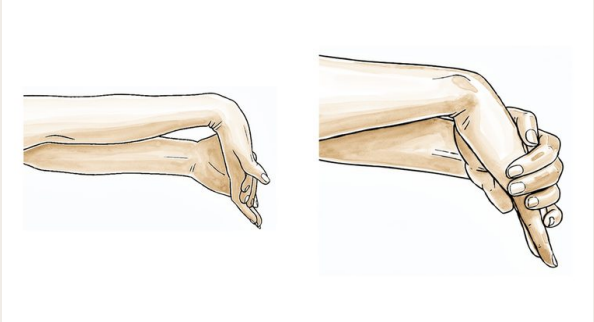
Forearm rotation (palm up / palm down)

This is the headline exercise — it is the movement the operation is designed to restore. With your elbow tucked in at your side and bent to a right angle (so your shoulder cannot cheat the movement), gently turn your palm up towards the ceiling, then slowly down towards the floor. Move only as far as is comfortable. Begin it when Dr Hirpara and your hand therapist clear you to come out of the splint for exercises — usually around two to three weeks — and make it your main focus from then on.

10 times each direction, 3-4 times a day, pain-free range



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Wrist movement (bend and straighten)

Gently bend your wrist forwards (palm towards forearm) and backwards (back of hand towards forearm), keeping the movement slow and within comfort. This keeps the wrist from stiffening while the distal ulna settles. Keep it gentle early on and do not force the end of the range.

10 times each direction, 2-3 times a day

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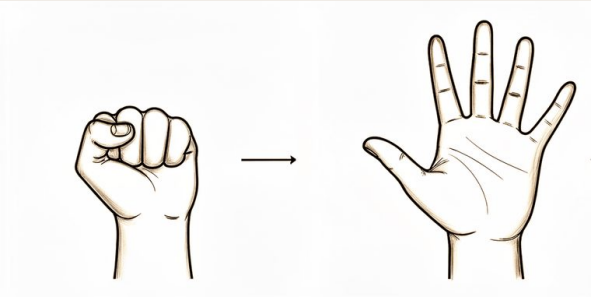

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Finger movement (full fist and stretch)

Start this from day one. Make a full, firm fist, then open the hand and stretch your fingers out straight. Keeping the fingers moving early prevents stiffness and helps any swelling drain. Do it often through the day, even while your forearm is still in the splint.

10 times, every couple of hours while awake

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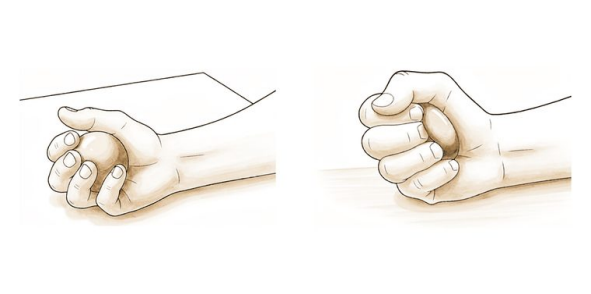
Scar massage

Once the wound is fully healed and there are no scabs (usually from around three to four weeks), rub a small amount of plain moisturiser into the scar with firm little circles for a couple of minutes. This softens the scar and helps the skin and tendons over the distal ulna move freely. Stop if the wound is not yet fully closed.

2-3 minutes, twice a day, once the wound is healed



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Grip and rotation strengthening (later)

A LATER exercise — only once Dr Hirpara and your hand therapist clear strengthening, commonly from around six to eight weeks. Squeeze a soft ball or putty to rebuild grip, and turn the forearm palm-up and palm-down against a light resistance (for example a light hand weight held like a hammer). Build the resistance up slowly over several weeks. Stop if turning the forearm under load is painful on the little-finger side of the wrist.

As guided by your hand therapist (from ~6-8 weeks only)

These are the exercises from your handout. Start them only as guided by Dr Hirpara and your hand therapist, staying within whatever range and limits you have been given. **Finger movement** starts straight away. **Forearm rotation** — the exercise this whole operation is built around — and **wrist movement** begin once you are cleared out of the splint, usually around two to three weeks, and rotation then becomes your main focus. **Scar massage** starts once the wound is fully healed. **Grip and rotation strengthening** belongs to a later phase and should

not be started until you are specifically cleared. Stop anything that causes sharp pain on the little-finger side of the wrist.

Your clinical protocol

The rest of this page is the staged clinical protocol for rehabilitation after hemiresection-interposition arthroplasty of the distal radioulnar joint. This section is to be provided to your hand therapist, and each phase opens with a plain-English explanation of what is happening. This is a **joint-reshaping (arthroplasty) procedure, not a repair** — there is no construct under tension to protect for months. The deliberate restraint is short: a brief splinted period to let the soft-tissue interposition and capsule settle, after which **early restoration of forearm rotation is the explicit priority** because rotation is the function the operation exists to restore. The principal load to respect throughout is **rotational loading of the distal ulna**, which is what provokes painful ulnar-stump instability and radioulnar convergence.

Prior to treatment, check the patient's operation report and past medical history, and liaise with the treating surgeon regarding any concurrent procedures (TFCC repair, distal radius osteotomy, PIN neurectomy, extensor reconstruction), the stability of the distal ulnar stump assessed intra-operatively, and the prescribed splint and rotation ceiling. A concurrent TFCC repair or distal radius osteotomy lengthens the protected phase; an isolated hemiresection for degenerative or post-traumatic arthritis follows the shorter pathway below. Dr Hirpara preserves the TFCC, ulnar styloid and ulnar soft-tissue attachments, so the distal ulna remains supported — the rehab can therefore prioritise early rotation.

PHASE I — PROTECTED SETTLING IN A SPLINT (WEEKS 0 TO 2-3)

The first two to three weeks protect the soft-tissue interposition and capsule while keeping the rest of the limb mobile. The forearm rests in a splint (commonly an above-elbow / Muenster-type splint or cast that limits forearm rotation), removed only for hygiene and, towards the end of the phase, for the first gentle rotation. Fingers move from day one.

For your hand therapist:

Education and precautions - Immobilise in the prescribed splint (above-elbow / Muenster-type, or per surgeon) limiting **forearm rotation**; off only for hygiene and cleared exercises - **No loaded forearm rotation**; no weight-bearing or twisting through the operated forearm - Reassure that early grip weakness and swelling on the ulnar side are expected

Management - Wound: surgical dressings as directed; monitor for infection - Oedema: elevation, gentle hand pump, ice as needed - Exercises: **active finger, thumb and (if not blocked by the splint) shoulder ROM from day one**; gentle elbow ROM as the splint allows; introduce **gentle pain-free active forearm rotation** in the last few days of this phase if the surgeon permits early removal

Criteria to progress - Wound settling; splint period (≈ 2-3 weeks for isolated hemiresection) complete; cleared by surgeon for active rotation

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PHASE II — EARLY FOREARM ROTATION (THE PRIORITY) (WEEKS 2-3 TO 6)

This is the defining phase. Out of the splint, **active pronation and supination become the headline of rehabilitation** — gentle, frequent, pain-free, and unloaded. Wrist motion is added. Rotation is the function the operation restores, so it is pursued actively here while loading is still withheld.

For your hand therapist:

Assessments - Active and passive forearm pronation/supination (target restoration toward the ~80° each direction reported in outcome series); wrist and finger ROM; pain on the ulnar wrist; swelling; wound/scar review

Education and precautions - **Forearm rotation is the priority** — frequent, pain-free, **unloaded** active pronation/supination, elbow tucked at the side to isolate the forearm - **No resisted or loaded rotation, no heavy gripping, no twisting tasks until ~6-8 weeks** - Some splints further limit end-range rotation for a few weeks after cast removal — respect any prescribed ceiling

Management - Exercises: active and active-assisted **pronation/supination** as the main focus; active wrist flexion/extension and radial/ulnar deviation; continue finger and grip ROM (no resisted grip yet); begin scar management once the wound is fully healed - Modalities for oedema and scar as needed

Criteria to progress - Comfortable, controlled, near-full **pain-free** active forearm rotation; wound healed; pain ≤ 3/10; no provocative ulnar-side pain on gentle rotation

PHASE III — STRENGTHENING AND RETURN (WEEKS 6-8 AND BEYOND)

Once rotation is restored and pain-free, strengthening begins and is built up gradually: grip first, then **loaded forearm rotation**, watching specifically for painful ulnar-stump instability or radioulnar convergence under load. Return to heavier work and sport is criterion-based.

For your hand therapist:

Assessments - Grip strength versus the other side (outcome series report recovery toward ~85-90% of the contralateral side); forearm-rotation strength and any pain or instability on **loaded** rotation; functional and work-/sport-specific testing as appropriate

Education and precautions - Introduce **resisted grip** first, then **graded loaded forearm rotation** (e.g. hammer turns with a light weight) from around six to eight weeks; build load slowly - Watch for **painful ulnar-stump instability / radioulnar convergence under axial or rotational load** — if provoked, reduce load and liaise with the surgeon

Management - Exercises: progressive grip/putty work; graded resisted pronation/supination (light → moderate); task-specific loading; continue any residual ROM work - Consider discharge once rotation and grip are functional and near-symmetrical and a suitable return of function is achieved - Consider referral back to the treating doctor if recovery plateaus, or if there is persistent ulnar-side load pain suggesting stump instability or convergence

Criteria for return to load/sport - Near-symmetrical grip and rotation strength; pain-free loaded rotation; no instability on functional testing

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Getting back to work and activity

Light everyday hand use — eating, writing, light self-care — is encouraged from the start, within comfort, as long as it does not involve forced or loaded twisting of the forearm. Because your forearm is splinted early and you must be able to safely control the wheel (including turning it), plan for help with transport in the first few weeks; driving resumes once you are out of the splint and can comfortably and safely rotate the forearm to steer, as confirmed at your review.

Loaded twisting tasks — opening stiff jars, wringing, using a screwdriver, carrying heavy bags on that side — wait until strengthening is cleared (commonly around **six to eight weeks**) and are then built up gradually. **Return to heavier manual work and sport** follows the same criterion-based progression and depends on regaining pain-free, near-symmetrical forearm rotation and grip — judged by Dr Hirpara and your hand therapist, not by the calendar alone.

After your protocol

This protocol works alongside the practice's general recovery advice — see managing post-operative pain, wound care and scar management. If your DRUJ problem followed a wrist fracture, the distal radius fracture fixation protocol is a useful companion. The phased plan above reflects published rehabilitation guidance after distal radioulnar joint hemiresection arthroplasty, and your ongoing recovery is guided individually by Dr Hirpara and your hand therapist according to how your forearm progresses.

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