CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

REHABILITATION PROTOCOL

Scaphoid Fixation

The scaphoid is a small boat-shaped bone deep in the wrist with a fragile blood supply; a scaphoid fixation holds the fracture together with a single buried headless compression screw so it can heal.

Kieran Hirpara 4.0

This protocol guides your recovery after surgical fixation of a **scaphoid fracture** – a break in the small boat-shaped bone deep in the wrist, held together with a buried **headless compression screw** – 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 hand therapist may adjust the plan depending on your fracture, your fixation and 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 scaphoid is a small bone in the floor of the wrist that links the two rows of wrist bones. It has an unusual and **fragile blood supply** that runs into it backwards, from one end to the other, which is why a scaphoid fracture heals **slowly** and, if left alone, can sometimes fail to join (a nonunion). A scaphoid fixation holds the two pieces of bone firmly together with a single **headless compression screw** that is buried completely inside the bone – there is nothing to feel or remove. The screw squeezes the fracture together, which both helps it heal and lets the wrist start moving sooner than a fracture treated in a plaster cast alone. If the fracture was old or had not joined, a small piece of **bone graft** (often taken from the nearby forearm bone) may be added to encourage healing; this can make the early plan a little more cautious.

The key idea of this recovery is that the screw does the holding while the bone slowly knits. Because the scaphoid heals slowly, **the milestones in this plan are paced by how the bone is healing – not by the calendar alone.** Your surgeon usually confirms that the fracture has joined ("union") with an X-ray, and often a CT scan, before clearing you for heavier loading and sport. How quickly you progress depends on the type and position of the fracture (a break near the slow-healing top, or "proximal pole", and a previous nonunion are more cautious) and on how stable the fixation is.

Movement is opened up in careful stages: finger and thumb movement straight away; gentle wrist movement once your hand therapist allows it; then grip and strengthening only **after the bone has united**; and return to

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loaded or contact sport last of all. Because the repair keeps maturing for months, heavier loading and sport are built back gradually rather than all at once.

Precautions and limitations

- Wear your **splint or cast** as directed and keep it dry. Dr Hirpara and your hand therapist will tell you when to come out of it for exercises and when it can be left off.
- Do **NOT** grip hard, lift, carry or push through the wrist until you are told the fracture has united — squeezing and loading strain the scaphoid and the screw while the bone is still healing.
- Avoid **forcing the wrist back into full backward bend (extension)** and avoid the extremes of movement early — ease into the range, do not push the end of it.
- Do **NOT** return to contact, collision or load-bearing sport (or to gym/weights, push-ups, racquet or stick sports) until your surgeon confirms the bone has joined and clears you — this is usually **months**, not weeks.
- Keep your fingers, thumb, elbow and shoulder moving from the start so they do not stiffen, and use the hand for light everyday tasks within comfort, as long as it does not involve gripping, lifting or forcing the wrist.
- If your fixation also used **bone graft** for a nonunion, expect a more cautious timeline — follow the specific plan your surgeon and hand therapist give you.

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

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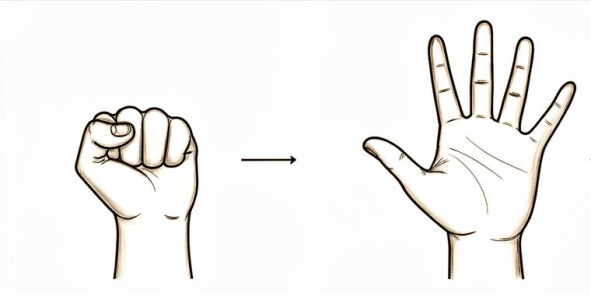
Your exercises



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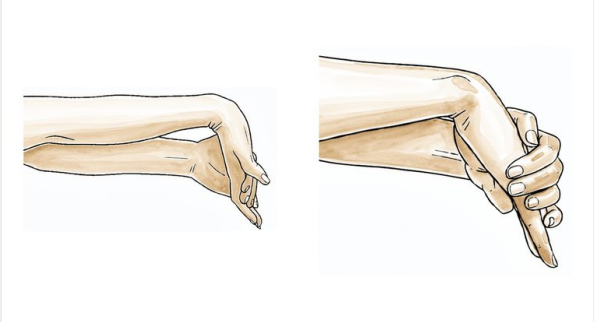
Finger and thumb movement

From the very first days, keep your fingers and thumb moving so they do not stiffen. Make a gentle full fist, then straighten the fingers right out, and touch your thumb to the tip of each finger in turn. Keep the wrist itself still inside its splint or cast while you do this. This is safe straight away — it keeps the hand supple without disturbing the healing scaphoid.

10 times each, several times a day, from day one



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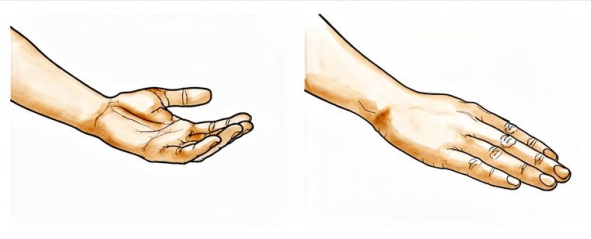
Wrist movement (when allowed)

Once your hand therapist clears it — often only a few weeks after surgery, depending on your fracture and fixation — begin gently moving the wrist: bend it up and down, then tilt it side to side, staying slow and within a comfortable, pain-free range. Do NOT force the end of the movement and do NOT push into full backward bend (extension) early. Your therapist will tell you when to start and how far to go.

10 times each direction, 2-3 times a day, only once cleared



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Forearm rotation (palm up / palm down)

With your elbow tucked at your side and bent to a right angle, gently turn your palm up towards the ceiling, then down towards the floor. Keep it slow and easy. This keeps the forearm supple and does not load the scaphoid, so it can usually begin early — follow your hand therapist's guidance.

10 times each direction, 2-3 times a day

Scar care

Once the wound is fully healed and there are no scabs, massage the scar for a minute or two with a little unscented moisturiser, using small firm circles. This keeps the scar soft and less sensitive. If your screw was placed through a small keyhole cut, the scar is tiny but the same care still helps.

1-2 minutes, twice a day, once the wound is healed

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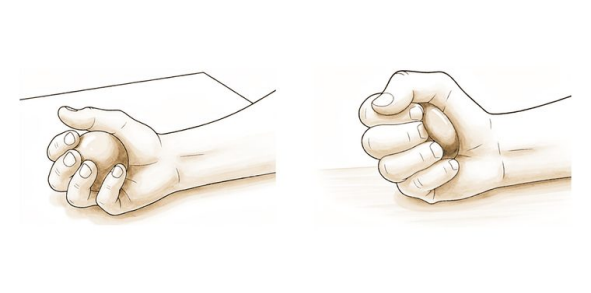

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Grip strengthening (after union)

A LATER exercise — only once your fracture has united and your hand therapist starts strengthening (commonly not before about 8 to 12 weeks, and confirmed on imaging). Squeeze a soft ball or therapy putty, hold briefly, then relax. Build up gradually. Grip is held back until the bone is solid because squeezing hard loads the scaphoid and the screw, and the scaphoid heals slowly.

As guided by your hand therapist (after union is confirmed 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. The early exercises keep the **fingers, thumb and forearm moving** without disturbing the healing scaphoid, and gentle wrist movement is added **only once your therapist allows it**. Grip strengthening belongs to a **later phase** and should not be started until you are told the bone has united. Stop anything that causes sharp pain in the wrist, and let your therapist know.

Your clinical protocol

The rest of this page is the staged clinical protocol for rehabilitation after scaphoid fixation with a headless compression screw. This section is to be provided to the patient's hand therapist, and each phase opens with a plain-English explanation of what is happening. The scaphoid heals slowly because of its tenuous retrograde blood supply, so progression is **union-gated** and **fixation- and fracture-dependent**: rigid screw fixation of a stable acute waist fracture permits earlier protected wrist motion, whereas proximal-pole fractures, nonunions and bone-grafted cases warrant a more conservative course.

Prior to treatment, check the operation report and past medical history, and liaise with the treating surgeon regarding the fracture pattern (waist vs proximal pole), whether the fracture was acute or a nonunion, whether bone graft was used, the stability of the fixation, and the planned imaging milestone for confirming union. The hand therapist follows the plan for the individual fracture and fixation. The timings below are typical guides for a stable, screw-fixed acute waist fracture; more cautious progression applies to proximal-pole, nonunion and bone-grafted fixations.

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PHASE I - PROTECTED EARLY MOTION (WEEKS 0 TO 2)

The first couple of weeks protect the wound and the fixation while keeping the hand mobile. The wrist rests in a splint or short cast; the fingers, thumb and forearm move freely from day one. Wound review is typically at around two weeks, when formal therapy begins.

For your hand therapist:

Education and precautions - Immobilise in a wrist splint or short cast as directed by the surgeon; keep dry; off only as cleared - Full, immediate active **finger, thumb, elbow and shoulder** ROM to prevent stiffness - **No gripping, lifting, weight-bearing or pushing** through the wrist - Avoid forced/end-range wrist extension

Management - Wound: surgical dressings as directed; monitor for infection; wound review ~2 weeks - Oedema: elevation, gentle hand pump, ice as needed - Exercises: active finger/thumb composite flexion-extension; thumb opposition; gentle forearm pronation-supination; shoulder and elbow ROM

Criteria to progress - Wound healed/healing; pain settling; surgeon clearance to begin wrist motion

PHASE II - PROTECTED WRIST MOBILISATION (WEEKS 2 TO 8, UNION-GATED)

From around two weeks (for a stable, screw-fixed acute waist fracture) gentle active wrist motion is introduced within a comfortable, pain-free range under the protection of the screw. Range is progressed gradually; end-range extension and any loading are still withheld. Proximal-pole, nonunion and bone-grafted fixations are kept in protective immobilisation longer and mobilised later, on surgeon guidance.

For your hand therapist:

Assessments - Active wrist ROM, pain, swelling; wound/scar review; liaise with surgeon on imaging and union status

Education and precautions - Begin **gentle active wrist flexion-extension and radial-ulnar deviation** in a pain-free range; progress range gradually - Avoid **end-range/forced wrist extension** and avoid loading - **No grip strengthening, no weight-bearing, no resisted work** until union is confirmed - Continue full digital and forearm ROM; commence scar management once healed

Management - Exercises: active and active-assisted wrist ROM within comfort; continue finger/thumb/forearm ROM; oedema and scar management - Splint between exercises early in this phase if advised; weaning of immobilisation is surgeon-directed

Criteria to progress - **Radiographic (often CT-confirmed) union** confirmed by the surgeon; comfortable, controlled wrist ROM; minimal pain — before any strengthening

PHASE III - STRENGTHENING AND RETURN (AFTER CONFIRMED UNION)

Once the surgeon confirms the fracture has united (commonly around 8 to 12 weeks for an acute waist fracture, and **later for proximal-pole fractures and nonunions**), strengthening begins and is built up gradually: grip and putty work first, then progressive resisted wrist and forearm strengthening, then loaded and sport-specific work. Return to contact, collision and load-bearing sport is criterion-based and union-gated, typically not before about three to four months and often later for higher-risk fractures.

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For your hand therapist:

Assessments - Grip and pinch strength versus the other side; wrist ROM; pain/swelling response to loading; functional and sport-/work-specific testing as appropriate

Education and precautions - Begin **grip and putty strengthening** only after surgeon-confirmed union; progress load gradually - Add **progressive resisted wrist and forearm strengthening**; then graded loaded and closed-chain work - Return to **contact/collision/load-bearing sport** is union-gated and criterion-based, typically **not before ~3-4 months** and later for proximal-pole/nonunion; a protective splint or cast may be used for early supervised return in athletes on surgeon direction

Management - Exercises: graded grip/putty → resisted wrist and forearm strengthening (band → light weights) → loaded and sport-specific drills; continue any residual mobility work - Consider discharge once strength is near-symmetrical and a suitable return of function is achieved - Refer back to the treating surgeon if recovery plateaus, pain persists, or union is in doubt (consider delayed union/nonunion or AVN)

Criteria for return to sport - Surgeon-confirmed union; full painless ROM; near-symmetrical grip strength; pain-free sport-specific loading and control

Getting back to work and activity

Light everyday hand use — eating, writing, dressing, light self-care — is encouraged from the start, within comfort, as long as it does not involve gripping, lifting or forcing the wrist. Office and other light, non-manual work is often possible early, sometimes within the first week or two on modified duties; heavier manual work that loads the wrist waits until the fracture has united and is then built up gradually.

Because you must be able to control the car safely, do **not** drive while you are in a cast or splint that prevents safe control of the wheel, or while the wrist cannot safely steer and grip. Driving resumes once you are out of the restrictive cast and can confidently and safely control the car, as confirmed at your review — plan for help with transport in the early weeks.

Loading through the wrist — gripping hard, lifting, pushing, pressing and pulling — waits until your surgeon confirms the **bone has united**, and is then built up gradually. **Return to contact, collision and load-bearing sport is union-gated** — typically not before around three to four months, and often later for proximal-pole fractures and nonunions — and is based on confirmed healing plus regaining full pain-free movement and adequate, symmetrical grip strength, 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. The phased plan above reflects published rehabilitation guidance after scaphoid fixation, and your ongoing recovery is guided individually by Dr Hirpara and your hand therapist according to your fracture, your fixation and how your wrist heals.

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