CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

REHABILITATION PROTOCOL

Carpal Tunnel Release — Rehabilitation Protocol

This protocol guides your recovery after carpal tunnel release with Dr Kieran Hirpara at Mater Private Hospital Rockhampton. It explains what to expect as your wound heals, the precautions for the first weeks, and the exercise program that keeps your nerve and tendons gliding freely while everything settles. Bring this page or its PDF to your physiotherapist or hand therapist so your rehabilitation stays coordinated.

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

Care of your wound is explained in the practice's wound care guidance. The nerve and tendons of the wrist are squeezed close together exactly where the scarring from your surgery will occur, so the exercises on this page are very important to prevent your nerve and tendons sticking together as your wound heals.

The healing edges of the released ligament are usually tender for at least four to six weeks. Temporary tenderness on each side of the palm — where the ligament attaches to the bones — is common, and is called "pillar pain"; it settles gradually. The released ligament itself does not re-join: scar tissue forms a "pseudo-ligament" that does the same job, which is why the release frees the nerve without destabilising the wrist.

Studies that have followed patients after carpal tunnel release show how predictably this tenderness settles: roughly four in ten people still notice pillar-type discomfort a month after surgery, about one in four at three months, and by twelve months it has resolved in nearly all hands (Povlsen & Tegnell, 1996). If the sides of your palm are still tender a few weeks after surgery, that is a normal part of healing rather than a sign that something has gone wrong.

Hand strength follows a well-described recovery curve. In a frequently cited study, grip strength measured about a quarter of its pre-operative level three weeks after surgery and about three-quarters by six weeks, returned to the pre-operative level by three months, and went on to exceed it by six months; pinch strength recovers sooner, approaching its pre-operative level by six weeks (Gellman et al., 1989). A temporary drop in grip strength in the early weeks is therefore expected — it reflects the healing ligament and palm, not a problem with the operation, and it recovers as the pillar tenderness settles.

Moving early is deliberate, and the evidence supports it. Current clinical practice guidance is that the wrist should not be routinely immobilised in a splint after carpal tunnel release (AAOS, 2024), and published hand-

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centre protocols start active movement of the fingers, thumb and wrist straight away to keep the tendons and median nerve gliding while the wound heals. A Cochrane review of rehabilitation after carpal tunnel release found that recovery is usually straightforward and that no single add-on treatment has strong supporting evidence — which is why this program is kept simple, and why your hand therapist tailors it to how your own hand is recovering (Peters et al., 2016).

For the first week, keep the hand elevated above heart level as much as possible — less swelling means less pain and a freer nerve. Your therapist may also apply compressive dressings or taping (Coban, Tubigrip or kinesiotape) to control swelling and support the arch of the palm.

Once your wound is healed, apply heat to your hand for 15 minutes before performing these exercises. After completing the exercises, ice may be applied to prevent inflammation.

Sometimes the hand or wound can become sensitive. This is normal, and can be prevented or minimised by commencing daily desensitisation — gently tapping and rubbing over the wound (or dressing) and palm — starting immediately following your surgery. This type of "sensory feedback" allows the nerve to normalise touch and texture. Short, frequent sessions work best — for example 2–3 minutes each hour — and your therapist may supply a silicone pad or glove to help settle the scar and sensitivity.

Once the wound is fully healed, commence scar massage: firm circles over the incision. The wound care page has more information on scar management.

Getting back to work and activity

Most people return to work within a few weeks of carpal tunnel release, and the timing depends mainly on what your job asks of your hand. A systematic review of 56 studies found that people in desk-based or non-manual roles returned to work a median of three weeks after surgery (reported range one to six weeks), while people in manual roles took a median of about five and a half weeks (reported range roughly three to fourteen weeks); many returned earlier on modified or lighter duties before resuming full duties (Newington et al., 2018). These figures are a guide, not a deadline — the right timing for you depends on your wound, your comfort and the precautions below.

As a practical guide, you are usually ready to return to a particular task when:

- your wound has healed and tolerates the pressure or contact the task involves;
- you can use the hand comfortably for what the task actually requires, within the precautions below; and
- any heavier gripping, lifting or vibration exposure in your role waits until the precautions are lifted.

If your work is heavy, repetitive or involves vibrating tools, raise it at your post-operative review so a return date — and any modified duties in the meantime — can be planned with your employer.

Precautions and limitations

Light functional use of your hand is encouraged for daily living tasks such as self-care, feeding, dressing, writing and typing. Beyond that, the limits for the early weeks are:

- No lifting, gripping, weight-bearing or use of vibration machinery (for example power tools or the lawn mower) for up to 6 weeks post-operatively.
- Driving is limited for the first 1–2 weeks, or until you can achieve a full fist.

For your physiotherapist:

Management

- Wound care as per the practice's wound care guidance
- Elevation above heart level as much as possible in the first week; compressive dressings/taping (Coban, Tubigrip, kinesiotape) for swelling control and carpal-arch support as indicated
- Tendon gliding and median nerve gliding program as per the exercise cards below, to prevent adhesion of the nerve and tendons during wound healing
- Once the wound is healed: heat to the hand for 15 minutes before exercises; ice after exercises to prevent inflammation
- Daily desensitisation from immediately post-surgery: gentle tapping / rubbing over the wound (dressing) and palm, to allow the nerve to normalise touch and texture
- Scar massage (firm circles over the incision) once the wound is fully healed

Precautions

- Light functional use of the hand is encouraged for activities of daily living (self-care, feeding, dressing, writing, typing)
- No lifting, gripping, weight-bearing or use of vibration machinery (e.g. power tools, lawn mower) for up to 6 weeks post-operatively
- Driving limited for the first 1–2 weeks, or until a full fist is achieved

Evidence notes

- Immobilisation: moderate evidence is against routine post-operative splinting after carpal tunnel release (AAOS CPG, 2024) — early active motion as per the exercise cards is the intended default
- Rehabilitation adjuncts: the Cochrane review found limited, low-certainty evidence for individual post-CTR rehabilitation treatments (Peters et al., 2016) — tailor the program to the patient rather than protocolise adjuncts
- Strength recovery: expect grip ≈ 28% of pre-operative level at 3 weeks and ≈ 73% at 6 weeks, returning to pre-operative level by 3 months and exceeding it by 6 months; pinch recovers faster (≈ 96% by 6 weeks) (Gellman et al., 1989)

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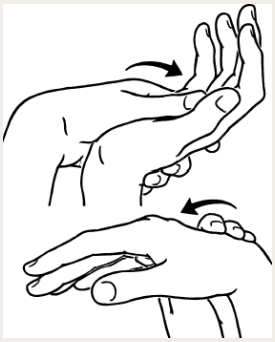
- Return to work: median 21 days for non-manual work (range 7–41) versus 39 days for manual work (range 18–101); modified duties earlier (Newington et al., 2018)
- Pillar pain: reported in ≈ 41% at 1 month, ≈ 25% at 3 months and ≈ 6% at 12 months after open release (Povlsen & Tegnell, 1996)

These are the exercises from your handout, performed as described on each card. This exercise program was written in association with Sarah Farrell, BOccThy AHT (occupational therapist and accredited hand therapist), with additional post-operative guidance from Ruby Doolan, Accredited Hand Therapist, Extend Rehabilitation.

Your exercises



Wrist flexion / extension stretch

Rest your elbow on a table (or your wrist over the edge of a table or armchair) and gently rock your wrist back and forth. Once more comfortable, grasp your palm with the other hand and push the wrist backwards (fingers loose, pointing to the ceiling) — hold 15 seconds; then the other way (fingers loose, pointing to the floor) — hold 15 seconds. Repeat 5 times in each direction.

10 reps (5 each direction, holding 15 seconds), 4–5 times daily

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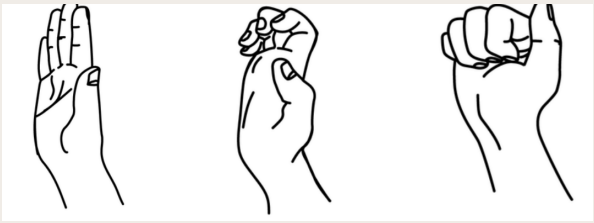

Tendon glides — Series A

With your hand in front of you and your wrist straight, fully straighten all of your fingers (1). Bend the tips of your fingers into the "hook" position with your knuckles pointing up (2). Make a tight fist with your thumb over your fingers (3).

5–10 repetitions, 2–3 times a day

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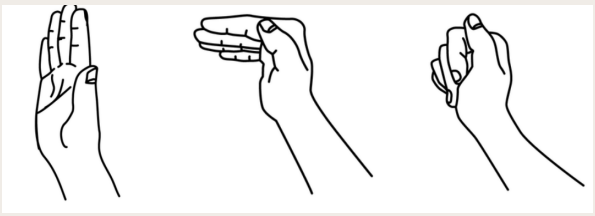

Tendon glides — Series B

With your hand in front of you and your wrist straight, fully straighten all of your fingers (1). Make a "tabletop" with your fingers by bending at your bottom knuckle and keeping the fingers straight — ensure your wrist does not drop forward (2). Bend your fingers at the middle joint, touching your fingers to your palm (3).

5–10 repetitions, 2–3 times a day

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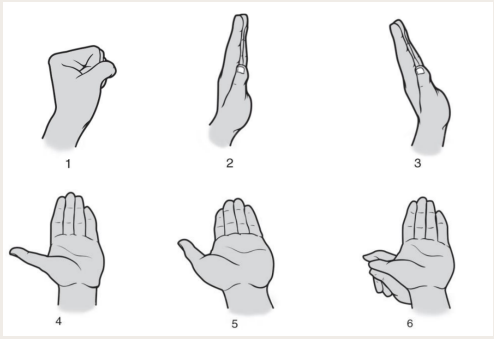

Median nerve glides

Move your hand through the six positions shown, holding each position for 3–7 seconds. Do not put too much pressure on your thumb in position 6. Then add the nerve stretch: straighten your arm with your palm facing down and bend your wrist so that your fingers point down. Gently pull your hand toward your body until you feel a stretch on the outside of your forearm. Hold the stretch for 15 seconds. Repeat 5 times, then perform this stretch on the other arm.

10–15 repetitions a day, holding each position 3–7 seconds

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Thumb opposition

Move your thumb across your palm toward the base of your little finger, then straighten it back out.

5–10 reps, 2–3 times a day, daily

After your protocol

This protocol works alongside the practice's general recovery advice — see managing post-operative pain, wound care and hand therapy basics. For the operation itself, see carpal tunnel release.

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