

Carpal Tunnel Release Rehabilitation Protocol



Carpal tunnel release is a surgical procedure used to relieve pressure on the median nerve by cutting the transverse carpal ligament. This procedure is commonly performed to alleviate symptoms such as numbness, tingling, pain, and weakness in the hand due to carpal tunnel syndrome. Recovery involves a gradual return to normal hand function through guided rehabilitation.

Rehabilitation Goals

- Manage pain and swelling
- Restore full range of motion and strength
- Promote tissue healing and nerve recovery
- Facilitate return to daily activities and work
- Prevent complications and re-injury



Expected Recovery Time

Milestone	Timeframe
Pain and swelling reduction	1–2 weeks
Return to light activities	2–4 weeks
Return to office/desk work	2–4 weeks
Start strengthening exercises	4–6 weeks
Return to manual labour or sports	6–12 weeks
Full recovery	3–6 months

Phase 1: Early Post-op (0-2 weeks)

Goals

- Control pain and swelling
- Protect the surgical site
- Begin gentle hand mobility

Instructions

- Keep your hand elevated as much as possible
- Use cold packs (15–20 minutes, 2–3 times daily) for swelling
- Keep the wound clean and dry
- Follow your surgeon's advice regarding dressing changes and activity

Exercises

- Finger tendon glides (5 reps, 3–5 times/day)
- Gentle wrist range of motion (flexion/extension only if cleared by your surgeon)
- Shoulder and elbow mobility to prevent stiffness



Phase 2: Intermediate Recovery (2-4 weeks)

Goals

- Restore wrist range of motion
- Begin light functional use of the hand
- Continue controlling swelling

Instructions

- You may begin using your hand for light daily tasks
- Avoid forceful gripping or lifting
- Scar massage may be started once the incision is fully closed
- Continue to monitor for signs of infection or increased pain

Exercises

- Wrist flexion and extension (active ROM, 10 reps, 3 times/day)
- Supination and pronation
- Thumb opposition and finger abduction/adduction
- Nerve gliding exercises as instructed by your physiotherapist

Phase 3: Strengthening and Functional Use (4-8 weeks)

Goals

- Regain strength and coordination
- Resume most daily activities
- Improve endurance

Instructions

- Begin light strengthening as tolerated
- Avoid heavy lifting or repetitive wrist motion until cleared by your provider
- Resume computer use or writing with breaks and ergonomic support

Exercises

- Isometric grip exercises using a soft ball
- Light resistance with putty or therapy bands
- Fine motor tasks (e.g., buttoning, writing)
- Continue previous ROM and nerve glides



Phase 4: Advanced Strengthening and Return to Work (8+ weeks)

Goals

- Achieve full functional recovery
- Return to manual labor, sport, or high-demand tasks
- Prevent recurrence

Instructions

- Follow a graded return-to-work plan if your job involves heavy use of the hands
- Modify workstation ergonomics as needed
- Discuss job-specific tasks with your physiotherapist

Exercises

- Full grip strengthening with therapy putty or hand exercisers
- Weight-bearing through the wrist (e.g., wall push-ups, progressing to floorbased if tolerated)
- Sport-specific or job-related functional training
- Continue maintenance exercises

When to Contact Your Surgeon

Contact your surgeon if you experience:

- Increased redness, swelling, or warmth around the incision
- Fever over 38°C
- Drainage or foul smell from the wound
- Persistent numbness or worsening symptoms
- Difficulty moving the fingers or wrist not improving with therapy

Disclaimer

Note: This is a general guideline. Your physiotherapist or surgeon may adjust the protocol based on your specific condition and progress.