
Carpal Tunnel Release Rehabilitation Protocol

In the carpal tunnel release procedure, the transverse retinacular ligament is divided in order to decompress the median nerve at the wrist.

In our technique, a longitudinal 2 cm incision is made, centered over the distal aspect of the transverse retinacular ligament. The distal aspect of the ligament is exposed under direct vision and is divided. The proximal portion of the ligament is divided by means of the Indiana Carpatome system or under direct vision by means of the scissors. The nerve is then bluntly dissected from the radial wing of the transverse retinacular ligament, then inspected to make sure adequate decompression has been achieved. The skin is then closed with 3 or 4-0 Prolene interrupted sutures.

A compression dressing and short arm splint are applied. The patient returns for his first post op visit in 2-3 days to begin ROM exercises. The sutures are removed approximately 10 days post-op.

Post-Operative Treatment for Carpal Tunnel Release

Phase I: 0-2 weeks

Clinical Goals:

- Achieve 80% of wrist ROM, full ROM of thumb \square small in 2 weeks

Testing:

- Thumb, fingers and wrist ROM

Exercises:

- At 2 days, a wrist immobilization splint is applied and should be worn over tubigrip between exercises and at night.
- AROM and PROM exercises for hand and wrist are performed, 6 times per day, 10 repetitions each
 - Wrist flexion and extension, radial and ulnar deviation
 - Finger and thumb flexion and extension
 - Thumb circumduction, abduction, and adduction, if needed
- Nerve gliding exercises, 3 times per day
 - Median nerve gliding exercise: Move the extremity through the following 5 positions. Hold each position for 5 seconds and repeat 5 times.

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1. Make a fist with the palm down
 2. Straighten fingers
 3. Extend (lift) wrist
 4. Straighten elbow and turn palm up
 5. Use other hand to stretch thumb into further extension
- Ice 3-4 times per day after exercise
 - Grip and thenar strengthening using putty, 3 times per day for 10 minutes is begun at 7-10 days post-op
 - Putty exercises

Phase II: 2-3 weeks

Clinical Goals:

- Full wrist and hand ROM by 3 weeks
- Decrease splint wear during the day as symptoms improve
- Perform ADLs and may return to work if it is a one-handed job or only requires light use of upper extremity.

Testing:

- Hand and wrist ROM
- Grip strength

Exercises:

- Begin wrist strengthening exercises at 2 weeks
- Continue strengthening with putty and ROM exercises as needed
- Scar massage when wound is healed, 4 times per day
 - An elastomer or silicone pad can be worn over scar at night as needed

Clinical follow-up:

- The patient normally is seen only with doctor appointments, 1-2 times per month, at this time and only if needed.

Phase III: 3 weeks to 3 months

Clinical Goals:

- Return to work with a soft wrist brace, if needed, or, if applicable, an anti-vibration glove

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- Return to heavy labor by 3 months
 - Decrease splint wear during the day
 - Continue to wear splint at night for 2-3 months

Testing:

- Hand and wrist ROM
- Grip strength

Exercises:

- Wrist ROM exercises are performed until full motion is achieved
- Hand and wrist strengthening

Clinical follow-up:

- Patient is seen in therapy only with doctor appointments, 1-2 times per month, at this time and only if needed.