Carpal Tunnel Release

GUIDELINE REAHB SERVICES

Purpose:
This guideline is intended for use following Carpal Tunnel surgery. It is designed to progress the individual through rehab to activity participation, taking into consideration specific patient needs and issues.

This guideline is intended to provide the treating clinician a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post-operative care based on exam/treatment findings, individual progress, and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

General Guidelines/Precautions:
- The goal of the surgery is to divide the transverse ligament or resect scar tissue to decompress the circulation and sensory deficits present within the median nerve distribution of the hand and wrist
- Considerations:
  - TENS is not recommended for pain management as it may irritate the median nerve and increase pain
  - Pillar pain may develop during the first 3 months following surgery
    - ⇒ Pillar pain includes aching pain and tenderness along thenar or hypothenar area which is aggravated by gripping and firm pressure along the palm (this should subside as post-op edema decreases)

PHASE	SUGGESTED INTERVENTIONS	MILESTONES FOR PROGRESSION
Phase I Early Intervention	**Therapy:** <u>Days 2-4:</u> • Remove surgical dressing, clean wound with saline and apply dry dressing • Begin finger, thumb and wrist AROM • In 7 to 10 days, they can initiate PROM of the wrist and digits including: — Composite flexion and extension — Isolated blocking of FPL, FDS and FDP — Active hook-fist exercise — Intrinsic stretches — Wrist ROM: ⇒ Flexion/extension ⇒ RD & UD as tolerated ⇒ Tendon gliding ⇒ Active joint blocking	**Criteria to Advance:** • Suture/wound remains closed and absent of infection • Improve motion • Pain is decreased • Swelling is reduced • Paresthesia reduced • Strengthening is not initiated at the next phase if significant pain or moderate amounts of edema exist • Decreased sleep disturbance with static wrist and hand angles It is common to provide a written home program at this phase and not be scheduled for follow-up therapy beyond this time if the patient is not having any

	• HEP 3-4x/day up to 4-6x per day for 5-10 min sessions, up to 25 repetitions for each exercise • Apply compressive garment/products as needed for edema control • Instruct pt to ice/elevate surgical extremity, keep hand clean and dry, use the hand for very light activity only • Educate/review infection control and incision care <u>Day 10:</u> • Scar management: — Assess need for scar compression materials (silicone gel sheet, elastomer, etc. — Use of dry mobilization, followed by lotion/cream or wait to week 3 per MD preference and healing rate ⇒ 3-4 times per day for 3-5 minute sessions • Recheck or assess ROM • Initiate AROM and PROM (if pt has not already started): — Composite flexion and extension of the wrist, thumb and digits, isolated blocking of FPL, FDS and FDP, wrist ROM (flex /ext. /RD & UD), tendon gliding, active hook fist exercise, intrinsic stretching and active joint blocking • HEP 3-4x/day up to 4-6x per day for 5-10 min sessions, up to 25 reps of each exercise — Begin manual desensitization beginning with light, soft fabrics, progressing to deeper pressure with coarse textures — Post-op edema management — Sleep positioning for post-surgical wrist/hand — Gentle median nerve gliding exercises may be initiated	concerns with pain, edema or scar management areas. You may be able to provide the instruction and timeline to progress for the 3-6 post-op phases, hand-based ergonomics, long term stretching and if needed, strengthening.
Phase II	**Therapy:** <u>Week 3:</u> • Measure and instruct to begin gentle strengthening with Nerf/foam-type ball or soft Therapy putty, if pain and edema is controlled and weakness or strength is a concern • HEP 2-4x per day for 5 min sessions • Dr. Dean: initiate scar mobilization at 3 weeks to allow healing of incision	**Goals:** • Begin light ADLs within lift/carry/grasp restrictions • Knows conservative measures to address pain or edema with re-entry into activity (contrast bath, ice, heat, self- soft tissue mobilizations)

	— If scar tissue remains to be painful or a motion limitation, consider ultrasound as a modality • Provide soft tissue mobilization, desensitization and consider Fluidotherapy modality	
Phase III	**Precautions:** • 2-5 lb. restriction • Avoid heavy grip/pinch • If doing well at 2 week phase, may educate on strengthening to start at 4 week post-op phase and discharge **Therapy:** <u>Weeks 4-6:</u> • Progressive strengthening for the intrinsic and extrinsic muscles — Address if strength or weakness concerns are reported by the patient • For wrist, thumb and digits 2-5 with hand exerciser — Hand exerciser may need to be padded to avoid palmar discomfort • 1-3 lb. weights to the wrist and forearm • Avoid compression into the palm to allow optimal healing of the soft tissue structures • If scar tissue remains painful or a motion limitation exists, consider ultrasound as a modality • Provide soft tissue mobilization, desensitization and consider if a modality would therapeutically benefit: — Fluidotherapy, ultrasound or paraffin	**Goals:** • Return to light to moderate ADL demands WFL with improved motion, strength and pain levels • Integration of body mechanics and joint protection
Phase IV	**Therapy:** <u>Week 6:</u> • Prepare for returning to work with instruction in: — Body mechanics and ergonomics — Avoiding repetitive overuse or wrist — Avoiding high frequency vibration tools — Ergonomically designed tools or work station for computer work	**Goals:** • Return to full activity with work pacing and positioning principles • Patient will be provided with education to perform hand-related body mechanics (anti-vibration gloves/materials, ergonomically designed hand-tools, work stations)

	— If scar tissue remains to be painful or a motion limitation, consider ultrasound or paraffin as a modality — Provide soft tissue mobilization, desensitization and consider Fluidotherapy modality	
Phase V Return to Activity	• If scar tissue remains to be painful or a motion limitation, consider ultrasound or paraffin as a modality • Provide soft tissue mobilization, desensitization and consider Fluidotherapy as a modality	**Goals:** • Full return to work status: continue flexibility stretching and exercises at least a couple times a day, especially if working in an office type setting