



# ORTHOPEDICS & SPORTS MEDICINE

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## Dr. Klika & Dr. Kirkpatrick Cubital Tunnel Release

Cubital tunnel release is a procedure in which the ulnar nerve is decompressed through the process of incising the cubital tunnel and resected to relieve restriction or pressure at the elbow.

### Phase 1- Early Protective Phase (3 days – 2 weeks post-op)

#### Goals for phase 1

- Promote hygiene and reduce risk of infection.
- Reduce presence of edema.
- Promote return of motion while ensuring patient stays asymptomatic.

#### Other considerations

- During movement, ensure that no paresthesia symptoms occur. Doing so will exacerbate symptoms and delay recovery.
- It is important to take moving two-point discrimination measurements at initial evaluation and at regular intervals to document sensory return.

#### ROM

- Gentle active and passive ROM initiated for the elbow, forearm, wrist, and digits 4-5 times per day.
- Special care should be taken to reduce presence of paresthesia while completing exercises. Begin with isolated single joint range of motion and avoid composite stretching during this phase.

#### Edema Management

- Manual edema mobilization as needed.
- Kinesiotape for swelling as needed.

#### Wound Care

- Sterile dressing changes as needed.
- An elbow pad may be helpful to provide protection to the surgical area.

#### Scar Management

- Begin scar massage no sooner than 2 days after suture removal after scar is fully closed with no scabbing present. Begin with light massage using lotion.
- Educate patient in scar management
- Apply scar remodeling products as needed

#### Manual Therapy

Desensitization may be utilized if needed to reduce hypersensitivity of incision site.



## Phase 2 – Restore Full Pain-Free Range of Motion (2 - 6 weeks post-op)

### Goals for phase 3

- Increase patient to full strength.
- Maximize overall function for full return to ADLs and IADLs.
- Prepare patient for return to full-duty labor if necessary.

### Other considerations

- Therapist should monitor for onset of hypersensitivity and dense scar formation, as these may lead to continued paresthesia symptoms. Modalities and manual therapy may help alleviate these symptoms.

### ROM

- Continue to work on achieving end-range motion if not fully achieved by this time.
- Slowly progress from isolated single joint exercises to pain-free composite shoulder, elbow, forearm and wrist and hand range of motion.

### Continue phase 2 Scar & Edema Management as needed

#### Manual Therapy

- Continue with soft tissue massage, scar massage, and elastomer/silicon pad use to reduce density of scar and overall pain.
- Continue desensitization as needed progressing from light to heavier pressure and

#### Modalities

- Ultrasound may be used for dense scar tissue formation, typically in tandem with soft tissue massage and elastomer/silicone pad use.
- Fluidotherapy may be used to reduce intensity of hypersensitivity if present. May be used in tandem with desensitization bins.



## Phase 3 – Strengthen and Return to Function (6+ weeks post-op)

### References:

#### Goals for phase 3

- Restore strength and return to full functional use of involved extremity
- Return to all activities of daily living including work activities

#### Other considerations

- Progress slowly with strengthening as tolerated by the patient. Resistance should not increase if patient experiences an increase in symptoms.

#### ROM

- Restore full shoulder, elbow, wrist, and hand composite pain-free range of motion

#### Manual Therapy

- Continue scar management and desensitization as needed

#### Strengthening

- Initiate progressive strengthening to shoulder, elbow, forearm, wrist, and hand
- Strengthening to elbow should progress slowly beginning with 1# free weights and avoiding all exercises that increase pain or paresthesia symptoms.

#### Functional Activity

- **6 weeks** – gradually return to functional use of the involved arm for higher level work and home management tasks.
- **8 weeks** – patient may return to unrestricted use of the arm with MD permission.

#### Work Conditioning

After 8-10 weeks and with MD consent a comprehensive work conditioning program for patients with high demand / heavy manual labor occupations may be appropriate

### References

Cannon, Nancy M. et. al. Diagnosis and Treatment Manual for Physicians and Therapists, 5<sup>th</sup> Ed. The Hand Rehabilitation Center of Indiana. Indianapolis, Indiana. 2021.

Skirven, T. M., Ostermans, A. L., Fedorczyk, J. M., & Amadio, P. C. (2011). *Rehabilitation of the Hand and Upper Extremity* (Vol. 1). Philadelphia, PA: Elsevier.

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