



**Dr. Klika & Dr. Kirkpatrick**  
**Elbow Percutaneous Tenotomy**

A minimally invasive procedure using ultrasound guidance and a specialized needle which specifically breaks down and removes unhealthy and painful scar tissue without disturbing the surrounding healthy tendon tissue.

**Phase 1 – Immediate Post-Surgical 0-3 Weeks**

**Goals for phase 1**

- Protect weakened tendon
- Minimize pain and edema
- Educate patient in home program, importance of wearing splint at all times and avoiding all painful activities

**Other considerations:**

Ice and use of NSAID's may be contraindicated as the full desired effects of the procedure is to utilize and enhance the body's natural healing abilities through the inflammatory response

**Splint**

- Wrist Hand Orthosis (WHO) with wrist in neutral at all times except for hygiene
- An elbow pad may be fitted to protect the lateral elbow

**Edema Management**

- Light compressive dressing or sleeve may be applied to elbow, forearm, and wrist
- Elevation and Manual Edema Mobilization (MEM) as needed

**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.
- Apply scar remodeling products as needed

**AROM**

- Initiate gentle AROM to elbow, forearm, wrist, and hand in all planes of motion
- Begin with isolated single joint pain-free ROM for first 2 weeks and progress to composite elbow, forearm and wrist stretching as tolerated

**Strengthening**

- At 2 weeks, initiate sub-maximal pain-free elbow, forearm, and wrist isometric strengthening (patient should have full pain-free AROM prior to initiating isometrics)
- Patient may begin prone scapular strengthening if pain-free



## Phase 2 –Early Strengthening 3 - 6 weeks

### Goals for phase 2

- Continue pain and edema control
- Continue scar management
- Restore full AROM
- Initiate gentle pain-free isometric strengthening

### Other Considerations

Educate patient in importance of pain-free exercises and daily activities. Patient should stop any exercise or activity that produces pain immediately as flare-ups are common with this type of injury.

### Splint

- Gradually wean from wrist hand orthosis reducing orthosis 1-2 hours per day

### ROM

- Continue phase 1 ROM progressing to composite stretching
- Initiate PROM to elbow, forearm, and wrist if there are deficits

### Manual Therapy

- Continue phase 1 scar and edema management
- Desensitization if complaints of hypersensitivity in lateral elbow

### Modalities

- Fluidotherapy for heat, ROM, and desensitization
- Paraffin may be used for deep heat prior to ROM
- Ultrasound for scar management

### Strengthening

- Initiate eccentric strengthening for wrist extensors beginning with 1–2-pound free weight with elbow flexed at 90 degrees 10 reps, 2x/day; progressively work toward eccentrics with elbow fully extended
- Continue proximal scapular strengthening in prone position or prone on therapy ball
- At 4 weeks as long as patient has full AROM and tolerates isometric strengthening, initiate light weight isotonic shoulder, elbow, forearm, and wrist strengthening, and grip and pinch strengthening with putty

### Functional Activity

Gradually return to functional activity as tolerated



## Phase 3 –Strengthening and Return to Full Function 6+ weeks

### Goals for phase 3

- Return to all daily activities
- Return to sports and full duty work

### Other Consideration:

Educate patient in importance of pain-free exercises and daily activities. Patient should stop any exercise or activity that produces pain immediately as flare-ups are common.

### ROM

Continue ROM and composite stretching to shoulder, elbow, forearm, and wrist

### Manual Therapy

- Continue scar and edema management as needed
- Joint mobilizations as needed for pain-relief and to restore full ROM

### Modalities

Continue with heat modalities as needed for pain, scar management and resolve any ROM deficits

### Strengthening

- Continue pain-free eccentric strengthening for wrist extensors progressing up to 5# free weight or the amount of weight tolerated on uninvolved side
- Continue proximal to distal upper extremity isotonic strengthening
- Initiate functional strengthening and work simulation as tolerated

### Functional Activity

Gradually return to all activities of daily living including home management and work tasks as tolerated

### 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

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Peterson, M., Butler, S., Eriksson, M., & Svärdsudd, K. (2014). A randomized controlled trial of eccentric vs. concentric graded exercise in chronic tennis elbow (lateral elbow tendinopathy). *Clinical Rehabilitation*, 28(9), 862-872. doi:10.1177/0269215514527595

This protocol was reviewed and updated by Brian Klika, MD, Lacey Jandrin, PA, Andrew Kirkpatrick, MD, Tiffany Terp, PA, and the Hand Therapy Committee 8/9/2021.