



# ORTHOPEDICS & SPORTS MEDICINE

BAYCARE CLINIC®

## Dr Klika & Dr. Kirkpatrick

### ECU Stabilization

#### Phase 1- Maximum Protective Phase- Weeks 0-6

##### Goals for phase 1

- Immobilize and protect reconstruction
- Pain and edema control
- Educate patient in home program and importance of wearing splint at all times
- Educate patient to return to clinic for splint adjustments as needed to ensure comfort and compliance with splint use.

##### Other considerations

Patient will most often be referred to therapy for initial therapy visit after his/her 2-week follow-up with surgeon. Patient is usually only seen for one appointment during this initial immobilization phase. This appointment consists of splint fabrication and patient education in ROM of uninvolved joints, edema management, scar management, and physical activity restrictions.

##### Splint

- Muenster splint- elbow at 90 degrees, wrist in neutral, forearm in neutral
- To be worn at all times

##### ROM

- 2 weeks post-op: AROM to uninvolved joints (shoulder, elbow, digits)
- 4 weeks post-op ROM check:
  - Begin therapy if patient has increased swelling and <50% range of motion. Therapy should begin with instruction in home program for ROM in gravity-eliminated positions 2x/day for 10-minute sessions with emphasis on slow and controlled pain-free movement.
  - If the patient has no issues with swelling and greater than 50% of normal range of motion, the patient is instructed to continue with splinting at all times and ROM is deferred to 6 weeks post-op.

##### 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

##### Edema Management

- Light compression with coban or compression sleeves to digits, hand, and forearm
- Elevation
- Manual Edema Mobilization (MEM)

##### Functional Activity

- Splint on at all times
- Use involved UE with non-resistive, light ADL/IADL only within limits of the splint.
- Wear splint for showering, but may remove for hand hygiene



## Phase 2 – Initiate Motion- Weeks 6-8

### Goals for phase 2

- Continue to protect healing repair while restoring pain-free AROM
- Continue pain, edema control, and scar management

### Splint

Transition to wrist immobilization splint/brace

- patient may begin weaning from brace immediately from orthopedic visit
- therapist may recommend weaning schedule variations as appropriate

### ROM

- Initiate gentle active range of motion to wrist and forearm AROM 6x/day for 10-minute sessions
- Continue with active and passive shoulder, elbow, digit ROM as appropriate

### Strengthening

Initiate submaximal pain-free isometrics for wrist and forearm after 1 week of AROM

### Manual Therapy

- Continue phase 1 scar and edema management
- Desensitization

### Modalities

- Fluidotherapy for heat, ROM, and desensitization
- Paraffin may be used for deep heat

### Functional Activity

- Encouraged participation of involved UE in non-resistive ADL
- Wrist support/splint provided by MD to be worn with heavier ADL/IADL within physical activity restrictions



## Phase 3 – Maximize ROM and Initiate Strengthening- Weeks 8-10

### Goals for phase 3

- Restore functional pain-free range of motion
- Initiate isotonic strengthening
- Continue to control edema and minimize scar adhesions

### Other considerations

- PROM to forearm should be performed by securing at the forearm and not distal to the wrist to avoid torsional load on the TFCC
- Although PROM is indicated for joint and soft tissue restrictions, avoid painful ROM and stretching beyond a functional range of motion. The end goal of surgery is to stabilize the wrist for pain-free function.

### Splint

- continue splint with heavy activities

### ROM

- Continue active ROM to wrist and forearm
- Initiate pain-free PROM to wrist and forearm to restore functional motion

### Strengthening

- Initiate hand, wrist, and forearm strengthening
- Initiate isotonic strengthening including weighted wrist and forearm exercises and gentle grip and pinch strengthening with putty
- Proprioceptive/stabilization- wrist alphabet with 1# hand weight, oscillation with flex bar, gyroball
- Scapula stabilization and proximal upper extremity strengthening

### Manual Therapy

- Continue phase 1 scar and edema management
- Desensitization, as needed

### Modalities

- Fluidotherapy for heat, ROM, and desensitization, as needed
- Paraffin may be used for deep heat, as needed

### Functional Activity

- Continued use of involved UE with ADL/IADL within physical activity restrictions
- Splint with heavier activities



## Phase 4 – Progress Strengthening and Return to Function- Weeks 10+

### Goals for phase 4

- Restore functional strength
- Return to work full duty

### Other considerations

- patients returning to heavy labor jobs may benefit from continued wrist support use to prevent re-injury

### Splint

Continue splint with heavy activities

### ROM

Maximize wrist and forearm ROM

### Manual Therapy

Continue scar and edema management as needed

### Strengthening

- Progress hand, wrist, forearm strengthening
- progress scapula stabilization and proximal UE strengthening

### Functional Activity

- Continued use of involved UE with ADL/IADL within physical activity restrictions
- Splint with heavier activities

### Work Conditioning

After 10-12 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.

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.