



**Dr Klika & Dr. Kirkpatrick**  
**Distal Radius Fracture - Casting**

**Phase 1- Pre-Cast Removal Phase 0 – 6 weeks**

**Goals for phase 1**

- Protect healing fracture
- Edema and pain control
- Prevent stiffness and restore ROM in uninvolved joints

**Other Considerations**

Therapist should monitor cast to ensure it does not become too tight or restrict motion

**Cast / Splint**

- Patient casted for 4 weeks then placed in a wrist hand orthosis with wrist in neutral position until fracture is clinically healed
- Dynamic flexion components can be added to the cast to increase MP and IP joint flexion as needed
- Wrist hand orthosis fabricated to be worn between weeks 4-6 or until fracture is clinically healed

**Edema Management**

- Coban or finger socks may be issued to reduce edema in digits
- Manual Edema Mobilization (MEM) to promote edema reduction

**ROM**

- Active and passive ROM to uninvolved joints including shoulder, elbow, thumb, and digits 6x/day or as needed to reduce stiffness

**HEP**

- Edema control
- ROM to uninvolved joints as needed

**Modalities**

- Ice to reduce pain and swelling



## Phase 2 – Initiate ROM 6-8 weeks

### Goals for phase 2

- Protect healing fracture
- Edema and pain control
- A/ROM 80% of normal motion
- Improvement in functional abilities

### Splint

- Wrist Hand Orthosis if ordered by MD for activity

### Modalities

- Icing to reduce pain and swelling
- Heat modalities to promote flexibility of tissues

### Manual Therapy

- Manual Edema Mobilization (MEM) to promote edema reduction
- Grade 2 to 3 joint mobilizations if needed to promote joint mobility and increase motion

### A/AA/PROM

- Continue for uninvolved joints as needed
- Begin A/AAROM wrist and forearm unless referring MD orders or progress notes state otherwise
  - Include AROM wrist extension with simultaneous finger flexion to isolate wrist extensors & prevent substitution of finger extensors
  - Composite flexion exercises wrist & hand to prevent extrinsic extensor tightness

### HEP

- Continue edema control
- Continue ROM uninvolved joints as needed
- A/AA/PROM as appropriate



## Phase 3 – Maximize ROM and Restore Strength and Function 8+ weeks

### Goals for phase 3

- Edema & Pain Control
- AROM maximized
- Full use of extremity
- Regain strength
- Return to full duty work

### Criteria for return to work, function, sport

- Return to heavy work or sports as per physician approval

### Splint

- Discontinue except as needed for heavy activities & sports activities
- Static progressive splinting as needed
- May issue wrist widget for patients with ulnar sided wrist pain. If there is a distal ulna fracture get MD approval first.

### Modalities

- Icing to reduce pain & swelling
- Heat modalities to promote flexibility of tissues

### Manual Therapy

- Manual edema mobilization to promote edema reduction
- Grade 3 joint mobilizations if needed to promote joint mobility and increase motion

### A/AA/PROM

- A/AAROM wrist, forearm & uninvolved joints as needed
- PROM of wrist/forearm to promote maximum end range motion

### Strengthening

- Putty exercises – grip & pinch
- Isometrics wrist and forearm
- Advance to progressive strengthening wrist & forearm
- Progressive strengthening elbow, shoulder

### Plyometrics

- Emphasis placed on achieving rapid motion
- Increase velocity of motion
  - Such as baton twirl, swing a rope attached to a weighted ball, flex bar oscillations or gyrobball

### Work Conditioning (Initiate 12 weeks post)

Initiate a comprehensive work conditioning program for patients with high-demand heavy manual labor occupations

## 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.

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.