



**DR. BRIAN KLIKA & DR. ANDREW KIRKPATRICK
DISTAL RADIUS FRACTURE – CASTING THERAPY PROTOCOL**

Phase 1 – Pre-Cast Removal Phase (0-6 weeks)

Goals for Phase 1	Precautions for Phase 1
<ul style="list-style-type: none">• Protect healing fracture• Edema and pain control• Prevent stiffness and restore ROM in uninvolved joints	<ul style="list-style-type: none">• 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



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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 physician 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 physician 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



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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

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 physician approval first

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 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 gyroball

Work Conditioning (Initiate 12 weeks post)

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

Criteria for Return to Work, Function, Sport

- Return to heavy work or sports as per physician approval