



Dr. Klumb
Distal Radius Fracture ORIF

Phase 1- Early Protective Phase (0 - 5 weeks post-op)

Goals for phase 1

- Protect and immobilize fracture fixation.
- Edema and pain control
- Maintain motion of uninvolved joints

Other considerations

- Patient does not typically begin therapy until 5 weeks post-op. If patient is referred to therapy sooner, therapy should focus on uninvolved joint motion, pain, and edema management.
- When excessive edema is limiting digit ROM, the primary focus to increase digit ROM is to reduce edema (1).

Splint

- Patient is in a post-operative mold for 2 weeks post-op.
- At 2 weeks, patient transitions to a short arm cast until 5 weeks post-op.

Modalities

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

Manual Therapy

- Edema Management considerations:
 - Manual Edema Mobilization (MEM)
 - Compression garments (edema glove, elastic stockinette, dorsal hand chip bag, Coban®)
 - Kinesiotape® application for edema
 - Elevation and overhead tendon glides

ROM

- AROM of uninvolved joints: shoulder, elbow, digits/thumb
- PROM of uninvolved joints as needed to achieve end range motion.
- For stiff digits: tape digits into composite flexion 2-3x/day (1)



Phase 2 – Progressive Range of Motion (5-7 weeks post op)

Goals for phase 2

- Initiate forearm and wrist ROM.
- Pain and edema control
- Increase scar tissue mobility to decrease scar adherence.
- Maintain ROM of uninvolved joints

Criteria for progression to Phase 3

- AROM in pain free range

Other Considerations:

Interarticular fractures with multiple fragments tend to produce more pain and swelling and can progress slower than is typical.

Splint

- Patient transitions to a prefabricated wrist hand orthosis at the 5-week follow up appointment and is typically referred to therapy.

Modalities

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

Manual Therapy

- Continue edema management described in Phase 1
- Begin scar massage after incision is fully closed with no scabbing present. Begin with light massage using lotion. Apply scar remodeling products as needed. May try IASTM and cupping for particularly tight scars as tolerated.

ROM

- 5 weeks: begin forearm and wrist AROM in all planes of motion.
- 6-7 weeks: gradually progress to forearm and wrist AA/PROM to achieve end range motion.
- A/PROM shoulder, elbow and hand as needed.
 - Always assess shoulder ROM as onset of adhesive capsulitis is common between 3-6 weeks post-op (1).
 - Issue blocked thumb IP joint flexion (FPL) exercises if limited (1).



Phase 3 – Progressive Stretching & Strengthening (7-12+ weeks post op)

Goals for phase 3

- Maximize pain-free forearm and wrist ROM.
- Maximize functional strength.
- Return to full use of extremity by 3 months, depending on work demands or sports.

Criteria for return to work, function, sport.

- Return to heavy work or sports per MD orders.

Splint

- 8 weeks: discontinue wrist hand orthosis except for heavy lifting for 2-3 weeks.
- For patients with ulnar-sided or DRUJ pain, consider a Wrist Widget® or circumferential wrist support (obtain MD approval if patient has an associated distal ulna fracture)

Manual Therapy

- Continue edema and scar management described in phase 1 & 2 as needed
- Gentle joint mobilizations to promote maximal forearm and wrist motion.

ROM

- Wrist and forearm A/AA/PROM to promote maximum end range motion.

Strengthening (7-8 weeks post-op)

- Shoulder, elbow, forearm, wrist, and hand progressive strengthening:
 - Begin with isometrics and progress to isotonic strengthening.
 - Hand-held weights, bands, flexbar, and putty exercises as tolerated.
 - Isolated pronator quadratus strengthening (a dynamic stabilizer of the DRUJ) can help patients who have ulnar-sided wrist pain or pain along the DRUJ: forearm pronation/supination with elbow stabilized, isometrics or with hand-held weight, start with mid-range rotation if painful (1).
 - For patients with ulnar-sided wrist pain, always strengthen with forearm in position of no pain. For example, if pronated putty exercises are painful, have patient perform putty exercises in supinated position.
- Stabilization and proprioception activities:
 - Begin with closed chain and progress to open chain: patients hand on small ball with therapist providing perturbations, patient holding band therapist pulls wrist in varying planes while patient tries to stabilize wrist in fixed position, Flexbar® for wrist strength and oscillations, weighted alphabet, gyroball, smart phone games, tilt maze game, progress to rebounder ball-throwing, body blade.

Work Conditioning

- 12 weeks with MD orders: Initiate a comprehensive work conditioning program for patients with high-demand, heavy manual labor occupations.



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References

1. Cannon NM. *Diagnosis and Treatment Manual for Physicians & Therapists : Upper Extremity Treatment Guidelines*. Hand Rehabilitation Center of Indiana; 2020.

This protocol was approved by Dr. Klumb November 2023.