

# ValleyOrtho Rehabilitation Playbook Series

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**Diagnosis:** Distal Radius Fracture

*The intent of this information is to inform the treating clinician on the evidence-based considerations to be used as a guideline regarding the injury noted above. This is not a substitute for appropriate clinical decision making, but a supplement to that effect. If at any time a clinician feels uncertain about a given phase discrepancy or patient presentation they are strongly encouraged to discuss this with the referring physician and his/her team before alarming the patient. The goal of this rehabilitation guideline IS NOT to be used to motivate patients through fear and discouragement if they are not attaining goals in the described timeframes but to increase physician-therapist communication around established principles. It is the responsibility of the therapist to read the operative report before providing care to the patient to improve treatment communication.*

**Therapeutic Activity and Phase Progression Disclaimer:** Progression to the next phase should be strongly based on meeting clinical criteria and goals of the previous phase (not solely based on the post-operative timeframes) as appropriate and in collaboration with the referring surgeon. Exercise prescription should be clinically directed by pain and performance absent of detrimental compensation with respect to proper biomechanics of the entire upper extremity.

**Communication from Therapist to Surgical Team:** When a treating therapist feels the need to reach out to Dr. Liotta, or a member of his team, at any point for any reason, they are strongly encouraged to do so. All concerns are not explicitly written and clinical judgement is paramount. Below is a handful of reasons and suggested methods of contact to promote communication:

**Urgent Red Flag Communication: the patient is in clinic and an action is required as directed by referring staff office**

- Uncontrollable and unremitting pain
- Signs of infection at incision or treated limb
- Signs of Complex Regional Pain Syndrome
- Signs of compartment syndrome
- Severe palpation tenderness, swelling, tachycardia (UE or LE DVT)
- Labored breathing (PE)
- After a fall/trauma, or near fall/trauma, resulting in a clinical change

**Preferred Contact Method:** 1. Immediate call to MD or PA Cell.  
2. Office phone call to request consult with MD/PA/MA/ATC until answer.

## **Administrative Issues**

- Appointment needed with the physician office, or medication refill
- Preferred Contact Method:** Office phone call to MA/ATC.

## **Other Patient Concerns** During Clinic Hours M-TH 9am-5pm F 9-3pm

- Abnormal pain, comorbidities or complications that may prevent attainment of established discharge criteria
- Patient is noncompliant with rehabilitation process
- Excessive muscle guarding/motion phobia after 1-2 outpatient visits
- Adverse work or home practices negatively impacting recovery
- Patient expresses discontent or concerns with the current POC established by PT/OT and/or by MD/PA

**Preferred Contact Method:** Phone call to MD &/or PA

## **Preferred Updates before checkup visits with MD**

During Clinic Hours M-TH 9am-5pm F 9am-3pm

- Information regarding adherence/participation in rehabilitation process
- Comments on progress and trending nature of the patient's rehab course

**Preferred Contact Method:** Phone call MD and/or PA. Or Fax update.



## Phase 1: Initial Post-Stabilization Care (Weeks 0 to 3)

### Goals:

- Reduce swelling and pain
- Maintain or improve uninvolved UE joint mobility
- Prevent tendon adherence

### Precautions:

- NO pushing, pulling, lifting or bearing weight through the involved joint until week 8 or as directed by physician
- Incisions should not be submerged until full closure without scabbing

### Non-Operative and ORIF Splinting/Bracing:

- Assess fit of cast or brace to ensure it is not contributing to pressure points, edema, and/or restriction of allowed motion or numbness/tingling
- Call the physician to verify splinting position as necessary

### Phase 1 Therapeutic Activities:

- Edema control- may include gentle massage and compression glove or wrapping
- AROM initiated for the uninvolved joints (thumb, fingers, and shoulder)
  - Elbow and forearm included only with short arm casts
- PROM may also be initiated at the digits
- Pin and incisional care education
- Postural issues and guarding should also be assessed/addressed
- Additional ORIF Activities:
  - Gentle wrist/forearm AROM as tolerated
- Scar management as wound allows

### Criteria for Progression to Phase 2:

- Patient reports appropriate pain management
- Patient demonstrates adherence to HEP and initial precautions

## Phase 2: Wrist Protection & Healing (Weeks 3 to 6)

### Goals:

- Reduce swelling and pain
- Maintain or improve uninvolved UE joint mobility
- Prevent tendon adherence

### Precautions:

- Continue with Phase 1 precautions

### Phase 2 Therapeutic Activities:

- Continue edema control
- Continue scar management as wound allows
- Continue splint use
- Continue uninvolved UE joint A/PROM
- Additional Non-Operative, External Fixator or Percutaneous Pins

### Activities:

- Fit for custom splint for use between exercise sessions after cast / fixator / pin removal
- AROM to wrist/forearm after cast / fixator / pin removal
- Additional ORIF Activities:
  - Begin gentle PROM to wrist/forearm as directed by MD
  - Can begin weaning patient from splint after 5 weeks as patient tolerates

### Physician Alert at 2-4 Weeks

- If the patient is still unable to make a full fist at 4 weeks call the physician to discuss treatment options then immediately communicate proposed plan of care to the patient.

### Criteria for Progression to Phase 3:

- Minimal to no swelling present



### Phase 3: Wrist Mobility & Early Strengthening (Wk 6 to 8)

#### Goals:

- Gradually improve functional use of injured hand/wrist
- Progress appropriate wrist ROM and activities when fracture is clinically stable as directed by physician

#### Precautions:

- X-ray clearance for progression of activity and stretching as directed by MD

#### Phase 3 Therapeutic Activities:

- Continue edema control as needed
- Continue scar management as needed
- Continue splint weaning as tolerated
- Continue uninvolved UE joint A/PROM as needed
- Additional Non-Operative, External Fixator or Percutaneous Pins

#### Activities:

- Fit for custom splint for use between exercise sessions after cast / fixator / pin removal
- AROM to wrist/forearm after cast / fixator / pin removal
- Additional ORIF Activities:
  - Progress A/PROM exercises as tolerated

#### Physician Alert at 8 Weeks

- If the patient has not regained 50% of their wrist/forearm motion, call the physician to discuss treatment options then immediately communicate proposed plan of care to the patient

#### Criteria for Progression to Phase 4:

- Patient is tolerating ROM and activity progressions without undue soreness

### Phase 4: Advanced Strength and Final HEP (Weeks 8 to 12+)

#### Goals:

- Gradual return to prior level of strength and function
- Return to full wrist and hand ROM

#### Precautions:

- X-ray clearance for progression of A/PROM and strengthening activity as directed by MD

#### Phase 4 Therapeutic Activities:

- Progress A/PROM as necessary for patient's goals
- Progressive hand and wrist strengthening **at Week 10**
- Initiate dynamic/static progressive splinting if necessary
- Wean completely from splint as tolerated
- Prepare and educate final HEP

#### Minimum D/C Criteria:

- Grip strength  $\geq$  50% of uninvolved hand
- A/PROM  $\geq$  80% of uninvolved UE
- 0-2/10 Pain level with return to normal activity



## Abbreviation List:

**ADL:** Activity of daily Living  
**AROM:** Active range of motion  
**BW:** Body Weight  
**CKC:** Closed kinetic chain  
**DVT:** Deep vein thrombosis  
**D/C:** Discharge  
**FWB:** Full weight bearing  
**F/U:** Follow up  
**HEP:** Home exercise program  
**LE:** Lower extremity  
**MA:** Medical assistant  
**MD:** Medical doctor  
**NWB:** Non weight bearing  
**OKC:** Open kinetic chain  
**PA:** Physician assistant  
**PE:** Pulmonary embolism  
**PROM:** Passive range of motion  
**ROM:** Range of motion  
**RROM:** Resisted range of motion  
**UE:** Upper extremity  
**WB:** Weight bearing  
**YO:** Years old  
**≈:** Approximate  
**#:** Pounds  
**≥:** Equal to or greater than

## References

1. Skirven T, Osterman L, Fedorczyk J, Amadio P. REHABILITATION OF THE HAND AND UPPER EXTREMITY. 6th EDITION. Philadelphia, PA : Elsevier/Mosby. 2011.
2. Indiana Hand to Shoulder Center. DIAGNOSIS & TREATMENT MANUAL FOR PHYSICIANS AND THERAPISTS: UPPER EXTREMITY REHABILITATION.

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 VALLEY VIEW