Brigham and Women's Hospital
Founding Member, Mass General Brigham

Department of Rehabilitation Services
Hand Therapy Guidelines

Distal Radius Fracture/Post Operative

The intent of this guideline is to provide the clinician with a guideline of the post-operative rehabilitation course of a patient that has undergone an open reduction internal fixation (ORIF) at Brigham and Women's Hospital. It is not intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their evaluation findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient, they should consult with the referring Surgeon.

Progression to the next phase based on Clinical Criteria and/or Time Frames as Appropriate.

Phase I – Immediate Post Surgical Phase (Day 1-10):

Therapy Goals:

- Initiate early range of motion (ROM) digits, elbow and shoulder
- Minimize edema

Precautions:
Non-weight bearing (NWB) to involved upper extremity
No lifting, pushing, pulling or forceful gripping

DAY 3-4 THROUGH DAY 10-14:

- Fabricate a custom volar wrist orthotic or issue a prefabricated wrist cock up as indicated by surgeon.
- Educate patient on ROM to digits/thumb/elbow/shoulder
- Educate patient on edema management: arm elevated above heart when resting or sitting. Frequent AROM of digits throughout the day as tolerated. A sling is avoided to prevent shoulder stiffness.

Phase II – Protection Phase (day 11-week 5):

Therapy Goals:

- Focus therapeutic exercise on increasing ROM to wrist and forearm
- Initiate light functional use of extremity with splint on.
- Set schedule to wean use of splint at end of phase II: begin coming out of splint for 1-2 hours/day as tolerated, starting week 4-5 until out of splint completely during the day; continue to wear for heavier activities as needed (e.g. vacuuming, heavier lifting)
- Increase grip strength through therapeutic exercise and functional tasks.

Precautions:
NWB to involved upper extremity

Criteria for progression to the next phase:
Improving wrist/forearm ROM with minimal to no pain: ROM measurements taken weekly to assess progression of ROM without increase in pain

THERAPY FOCUS DAYS 11-14:

- Active ROM (AROM) initiated to wrist and forearm: ROM as tolerated for patient level of comfort. Mild discomfort is expected.
- Edema management: ongoing use of elevation, ice, Coban, compression garments, Kinesiotape
- Orthotic should be worn at all times except hygiene and exercises
- Initiate light functional use of involved extremity with orthotic in place.

THERAPY FOCUS WEEKS 3-6:

- A, A/AROM to wrist/forearm
- Start to wean from splint at week 4-5, continue to wear for heavier activities
- Initiate scar management after sutures removed and incision well healed: massage, scar pad as indicated
- Assess grip/pinch strength and start strengthening of grip/pinch as indicated
- Progress with functional activities as tolerated: patient to start with lighter tasks such as dressing, grooming, and self feeding; progressing to laundry, dishes, light housework as tolerated according to comfort level with task.

Phase III – Intermediate phase (Week 6-12):

Therapy Goals:

- Regain ROM wrist/forearm
- Regain functional strength of extremity as evidenced by ability to return to previous level of function; Functional Outcome measurement (e.g. QuickDASH)
- Return to previous level of function and independence in basic/instrumental activities of daily living (I/ADLs).

Precautions:

- Patient can start gentle weight bearing on involved extremity: Begin with weightbearing on tabletop or counter top then progress to wall and quadruped as tolerated.

THERAPY FOCUS WEEKS 6-12:

- Wean use of orthotic to at night and in crowds (as needed) until week 8; discontinue static orthotic by week 8.
- Initiate use of static progressive orthotic (if indicated) per surgeon orders.

- Progress integration of involved extremity into functional activities without orthotic.
- Initiate joint mobilization to increase wrist/forearm ROM if indicated: Radiocarpal and ulnocarpal joint: Dorsal glides to increase wrist flexion; volar glides to increase wrist extension; ulnar glide to increase radial deviation and radial glide ot increase ulnar deviation
  Distal Radio-Ulnar Joint (DRUJ): dorsal glide of radius on ulnar to increase supination; anterior glide of radius on ulna to restore pronation
- Begin progressive resistive exercises to wrist at week 6-8.
- Progress with weight bearing activities: wall pushups, quadruped, modified push ups

Phase IV – Advanced strengthening phase (week 12-20):
Typically, formal outpatient therapy is completed by week 8-12 and patient continues to work on strengthening exercises independently or in a work conditioning program or with a trainer.

Therapy Goals:

- Return to work for patients whose jobs require heavier lifting/activities such as laborers.
- Return to sport for athletes.

WEEK 12-15:

- Continued progression of strengthening and weightbearing to prepare patient for return to work or sport. Patient is typically doing this on their own, with a trainer, or at a work hardening/conditioning program.

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REFERENCES

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