

Distal Radius ORIF Post-Operative Rehabilitation Protocol

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Purpose & Philosophy

This protocol outlines a structured rehabilitation program following open reduction and internal fixation (ORIF) of distal radius fractures. The goals are protection of fixation, restoration of wrist and hand motion, recovery of strength, and safe return to functional activity. Progression is guided by fracture healing, fixation stability, and patient tolerance.

Immediate Post-Operative Phase (Weeks 0–2)

Goals include protection of the surgical repair, pain control, and edema management. The wrist is immobilized in a splint or cast per surgeon preference. Active range of motion of the fingers, thumb, elbow, and shoulder is encouraged. Edema control with elevation and gentle finger motion is emphasized. No lifting, pushing, or pulling with the operative hand.

Early Motion Phase (Weeks 2–6)

Goals include restoration of wrist range of motion while maintaining fixation integrity. Transition to a removable wrist brace as directed. Initiate gentle, pain-free wrist and forearm range of motion exercises. Continue finger and thumb motion. Light activities of daily living are allowed; lifting remains restricted.

Strengthening Phase (Weeks 6–10)

Once radiographic healing is confirmed, strengthening is initiated. Progressive wrist and forearm strengthening exercises are introduced. Grip strengthening is emphasized. Brace use is gradually weaned as tolerated.

Advanced Strength & Functional Use (Weeks 10–16)

Goals include restoration of strength, endurance, and functional use of the wrist and hand. Progress resistance and incorporate functional and work- or sport-specific tasks. Weight-bearing through the wrist is progressed gradually.

Return to Full Activity (Weeks 16+)

Return to unrestricted activity is based on radiographic healing, restoration of strength and motion, and ability to tolerate functional demands. High-impact or contact activities may require additional time.

Post-Operative Precautions

Avoid forceful gripping, lifting, or weight-bearing until cleared. Monitor for increasing pain, swelling, numbness, or signs of infection. Smoking cessation and optimization of bone health are encouraged.

Failure to Progress

Persistent stiffness, pain, or functional limitation should prompt reassessment for complications such as hardware irritation, tendon dysfunction, or delayed union.

Key Principles

Stable fixation allows early motion, but progression must respect fracture biology. Hand therapy plays a critical role in optimizing outcomes following distal radius ORIF.

Key References

Chung KC et al. Outcomes of volar plate fixation for distal radius fractures. *J Bone Joint Surg Am.* 2006.

Orbay JL, Fernandez DL. Volar fixation for dorsally displaced distal radius fractures. *J Hand Surg Am.* 2002.

Handoll HHG, Madhok R. Conservative and operative treatment of distal radius fractures. *Cochrane Database Syst Rev.* 2003.

Arora R et al. Complications following volar locking plate fixation. *J Orthop Trauma.* 2007.