Edmonton Region Fractured Wrist Rehabilitation Guidelines

Available at: [https://www.ualberta.ca/rehabilitation/research/core/shoulder-and-upper-extremity-research-group-of-edmonton](https://email.albertahealthservices.ca/owa/redir.aspx?REF=uMfT19NSBr-LL9c-rsGen9ez6OX58KISxPYGzFO6dZWhR3kN4j3WCAFodHRwczovL3d3dy51YWxiZXJ0YS5jYS9yZWhhYmlsaXRhdGlvbi9yZXNlYXJjaC9jb3JlL3Nob3VsZGVyLWFuZC11cHBlci1leHRyZW1pdHktcmVzZWFyY2gtZ3JvdXAtb2YtZWRtb250b24.)

Surgery Date: \_\_\_\_\_\_\_\_\_\_\_\_ Surgeon: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Insert Patient Label Here

|  |  |  |
| --- | --- | --- |
| Fracture | Radius | * Intra-articular ⬜ comminuted ⬜ DRUJ ⬜ other \_\_\_\_\_\_\_\_\_\_\_ |
|  | Ulna | ⬜ ulnar ⬜ styloid ⬜ other \_\_\_\_\_\_\_\_\_\_\_ |
| Fixation | Radius | ⬜ volar ⬜ dorsal ⬜ previous external fixation |
|  | Ulna | ⬜ volar ⬜ dorsal ⬜ DRUJ ⬜ previous external fixation |
|  | DRUJ | ⬜ fixation removed |
| Contraindications/comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |

|  |
| --- |
| **PHASE Ia – Immediate/Immobilization**  **(Operative 0-2 weeks, Non-Operative 0-6 weeks)** |
| **Goals and Cautions** |
| * Education re: operative outcomes/ post-operative expectations | Immobilization of fracture to protect bone healing | Decrease pain and inflammation | Address upper extremity kinetic chain (shoulder, forearm, finger, thumb) | General health/well-being * No wrist range of motion; no lifting, pushing and/or pulling with affected arm * Monitor onset/progression of paresthesia and autonomic symptoms (signs and symptoms of nerve injury and CRPS) |
| **Treatment Intervention** |
| * Immobilization in splint/cast as directed by surgeon * Education   + Elevate wrist to minimize swelling and pain   + Advice on sleep/rest positions   + Ice as needed for pain relief * ROM for shoulder, elbow, finger and thumb * Recommendations for home exercise program and review unfamiliar exercises   **Dosage for all exercises are dictated by pain** |
| **Criteria for Progression** |
| * As directed by surgeon |

|  |
| --- |
| **PHASE Ib – Early Protected Mobilization**  **(Operative 3-4 weeks, Non-Operative 6-7 weeks)** |
| **Goals and Cautions** |
| * Optimize/protect bone healing | Education re: home exercise program | Initiate wrist and forearm ROM | Decrease swelling and pain | Address upper extremity and kinetic chain as needed | Wound care as appropriate * No wrist and forearm passive range of motion; no excessive stretching of fingers * No lifting, pushing and/or pulling with affected arm * Monitor onset/progression of paresthesia and autonomic symptoms (signs and symptoms of nerve injury and CRPS) |
| **Treatment Intervention** |
| * Operative: out of splint for washing and physiotherapy exercises * Non-operative: Cast removed. Splint use as ordered by surgeon * Wrist and forearm AROM (flx/ext, sup/pro, radio/ulnar deviations) * Gentle hand gripping exercises * Elevation and ice for swelling and pain control * Compression for swelling control * ROM of shoulder, elbow, finger, and thumb as needed * Light ADL with splint on * Scar massage and mental imagery as needed |
| **Criteria for Progression** |
| * Physician clearance | Bone healing | Improved forearm, wrist and hand ROM |

|  |
| --- |
| **PHASE II –Mobilization**  **(Operative 5-6 weeks; Non-operative 6-8 weeks)** |
| **Goals and Cautions** |
| * Optimize/ protect bone healing | Increase wrist AROM | Swelling and pain management | Introduce proprioception | Address upper extremity kinetic chain as needed | Increase light functional activities * No lifting, pushing and/or pulling with affected arm * Monitor onset/progression of paresthesia and autonomic symptoms (signs and symptoms of nerve injury and CRPS) |
| **Treatment Intervention** |
| * Weaning from splint/use of splint may be required when:   + Risk of arm being bumped   + Risk of falls due to uneven or slippery surfaces   + Sleeping * Wrist ROM exercises, can progress to gentle PROM stretching   + Specific joint mobilizations (as required and within tolerance) * Gripping exercises * Proprioception exercises in non-weight bearing * Ice, elevation, compression * ROM of shoulder, elbow, finger, and thumb as needed * Increase light ADL activity |
| **Criteria for Progression** |
| * Improved ROM of wrist * Patient able to perform prescribed dosage of exercises with good technique/control without increasing symptoms * Patient reports overall increase in the use of affected arm in ADL and overall decrease of pain including activity related pain |

|  |
| --- |
| **PHASE III – Restoration of ROM**  **(Operative and Non-Operative 7-8 weeks)** |
| **Goals and Cautions** |
| * Restore hand and wrist ROM | Start light strengthening of wrist | Swelling and pain management | Improved proprioception | Scar management * PROM and joint mobilization within tolerance * No lifting, pushing, and/or pulling with affected arm * Monitor onset/progression of paresthesia and autonomic symptoms (nerve injury or CRPS) |
| **Treatment Intervention** |
| * ROM and stretching, manual therapy * Strength exercise hand and wrist * Proprioceptive exercises in non-weight bearing * Compression, scar management, swelling management * Educate/advise on appropriate and safe return to ADL and work if appropriate * Weaning from splint/ education when to wear in vulnerable situations if required |
| **Criteria for Progression** |
| * Patient able to perform prescribed dosage of exercises with good technique/control without increasing symptoms * Improved ROM and strength of wrist * Patient reports overall increase in use of affected arm in ADL and overall decrease of pain |

|  |
| --- |
| **PHASE V – Strengthening & Functional**  **(Operative and Non-Operative 8+ weeks)** |
| **Goals and Cautions** |
| * Full ROM of arm and wrist | Increase strength of wrist/hand/upper extremity | Full return to ADL, work and recreational activities * **Confirm weight bearing status of wrist** * Monitor onset/progression of paresthesia and autonomic symptoms (signs and symptoms of nerve injury and CRPS) |
| **Treatment Intervention** |
| * ROM and stretching exercise, manual therapy * Wrist and hand strengthening–progress to weight bearing when appropriate * Strengthening entire upper extremity. Activity specific exercise to address functional goals for return to work and recreational activities * Proprioceptive exercises including weight bearing * Swelling and scar management * Wean from splint: advice as required to use splint for protection in specific vulnerable scenarios   *All exercise progressions based on patient being able to perform the prescribed dosage with good technique AND without increasing symptoms* |
| **Criteria for Progression** |
| * Functional pain-free wrist AROM | Improved strength and endurance || Patient able to use affected arm in most to all ADL activities | Return to work/sport as directed by surgeon & PT |