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." \t "_blank)

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

Insert Patient Label Here

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| --- | --- | --- |
| 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: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **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
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| **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
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| **Criteria for Progression** |
| * Physician clearance | Bone healing | Improved forearm, wrist and hand ROM
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| **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
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| **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
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| **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
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