WORKERS' COMPENSATION BOARD
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WRIST- Open Procedures
Post-op Rehabilitation Guidelines

These guidelines are intended for Compensation Services and Clinical Staff as general guides for the direction, timing and expected outcomes for post-surgical rehabilitation clients seen through the Visiting Specialists Clinic. Deviations from these guidelines may occur based on the specifics of individual cases and surgeon preference.

Procedures: Wrist Open Capsulo-Ligamentous Repair or Reconstruction, Limited Inter-carpal Arthodesis and / or Carpal Excision.

NOTE: For all these surgical procedures there is likely to be a period of post-operative immobilization prior to initiation of therapy. The duration of this immobilization (up to 6 weeks) will depend on the procedure done and surgeon preference.

Phases and Expected Time Lines	Therapy / Rehabilitation Guidelines	Expected Outcome At The Completion Of Phase	Notes / Comments
Phase 0: (Initial 3 to 8 Weeks Post-Surgery) Immobilization In Cast or Splint.	Use Hand / Upper extremity in cast or splint for painfree, clean, dry personal care and light household activities. Maintenance of Shoulder, Elbow, Forearm, Finger mobility through exercise and functional use - as needed. **R**est, **I**ce, **C**ompression, **E**levation – as needed for pain and edema control. Suture Removal at Cast Change / Removal.	**Clinical Goals:** • Full (or pre-op) Active/Passive ROM – Shoulder, elbows, forearm, digits. • Limited swelling and no pain at rest. Functional Goals: • Able to do most clean, dry, personal care and light household activities.	
Phase 1: (Weeks 1 - 2 of therapy) Initiation of Formal Therapy Post-Immobilization	Patient Education – Pathology, Recovery, Self-Management. Forearm based wrist Splint with wrist in neutral - to be used at night and as required during the day if needed for rest and pain control. Continue to Use Hand / Upper extremity for painfree personal care and light household functional activities.	**Clinical Goals:** • Flat, Red, Minimally Sensitive Scars. • ~ 1/3 of Contra-Lateral or Pre-op Wrist ROM.	**Caution with Radio-Ulnar Deviation exercises. No Passive Wrist Exercises.**

(Phase 1 Con't)	Scar - Hydration / Compression / De-sensitization / Mobilization - as needed. Therapy Program - (Note: Home exercises should be done ~ x3 / day): • Full Active/Passive ROM Exercises Shoulder, Elbow – if limited. • Forearm, Finger and Thumb Active/Passive ROM and Tendon Gliding exercises – as tolerated. • Active ROM wrist within Functional Limits. • Modalities for pain and swelling control – as needed during therapy.	**RTW / Functional Goals:** • Independent, painfree personal care and sedentary to light (< 10 lbs.) household tasks. • Tolerance to these functional tasks likely to be limited to less than 1 hour.	
Phase 2: (Weeks 3 – 4 of therapy) Controlled Mobilization and Re-Activation	Splint – at night (only if waking up at night with wrist pain or waking up in the morning with wrist pain). Continue Scar - Hydration / Compression / De-sensitization / Mobilization / Massage – as needed. Use Hand and Upper extremity for all painfree lifting (< 20 lbs.), gripping / pinching and carrying household functional activities - as tolerated. Therapy Program - (Note: Home exercises should be done ~ x3 / day): • Introduce Passive ROM gentle, painfree and client controlled – only if there is limited active functional mobility. • Active ROM Wrist progressing to past Functional Mobility - as tolerated. • Light Resisted – *Outer Range* Grip and Pinch Strengthening Exercises – as tolerated. • Progressive Resisted *Isometric* Wrist Strengthening Exercises within functional ROM.	**Clinical Goals:** • < 50% Contra-Lateral side or pre-op wrist ROM • < 50%L side Grip and Pinch Strength **RTW/ Functional Goals:** • Independent with Light to Moderate Level (< 25 lbs.) Lifting, Gripping and Carrying Activities within functional wrist ROM. • Tolerance to these functional tasks likely to be limited to less than 2 hours. • Likely ready for Graduated / Modified Workplace Re-integration if Sedentary to Light Level Job Demands.	**Caution with progressing mobility exercises past functional limits and introducing axial loading / gripping or pinching activities and passive wrist exercises.**

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Phase 3: (Weeks 5 - 8 of Therapy) Graduated Strengthening and Functional Reactivation And / Or Early Graduated / Modified Workplace Re-integration	Splint – Discontinue Use Hand and Upper extremity for all painfree lifting (up to 40 lbs.), gripping / pinching and carrying household functional activities - as tolerated. Therapy Program - (Note: Home exercises should be done ~ x3 / day): • Active/Passive ROM Wrist to Beyond Functional Mobility – only as tolerated. • Progressive Resisted – *Inner Range* Grip and Pinch Strengthening Exercises. • Progressive *Resisted Isotonic and Eccentric* Wrist Strengthening Exercises – within functional wrist ROM. • Progressive Workplace Specific Functional Re-activation Tasks (eg: lifting, carrying, material handling tasks).	**Clinical Goals:** • 50% Contra-Lateral side or pre-op wrist ROM • ~ 50 - 75% Contra-Lateral side Grip and Pinch Strength **RTW / Functional Goals:** • Independent with Moderate Level (< 40 lbs.) Lifting, Gripping and Carrying Activities within functional wrist ROM. • Tolerance to these functional tasks likely to be limited to less than 4 hours. • Likely ready for Graduated / Modified Workplace Re-integration if Moderate Level Job Demands. (If Heavy Job or workplace not able to accommodate consider **O**ccupational **R**ehabilitation or **A**ctivity-related **S**oft **T**issue **D**isorder treatment program)	**Caution with inner range gripping activities, vibration and impact activities, weight bearing through an extended wrist, and passive wrist mobilizations**
Phase 4: (Weeks 9 – 14 of Rehab) Graduated / Modified Workplace Reintegration Or	Ongoing local treatment in therapy for the hand / wrist / upper extremity is usually not indicated after 8 weeks of therapy. Client should be able to continue with a home therapy program for regional tissue strengthening, ROM, de-sensitization, sensory re-education and self-management of symptoms and / or integrate their exercise program into a **G**raduated/**M**odified **RTW** plan or **A**ctivity-related **S**oft **T**issue **D**isorder treatment program or an **O**ccupational	**Clinical Goals:** • 75% Contra-Lateral side or pre-op wrist ROM • > 60% Contra-Lateral side Grip and Pinch Strength **RTW / Functional Goals:** • Independent with Moderate or Heavy	

(Phase 4 Con't) Transfer to Other WCB of BC Sponsored Rehabilitation Program	**R**ehabilitation Program.	Level (> 40 lbs.) Lifting, Gripping and Carrying Activities within functional wrist ROM limits. • Tolerance to these functional tasks likely to be limited to less than 6 hours. • Likely able to meet most workplace critical job demands (as defined by **A**ctivity-related **S**oft **T**issue **D**isorder or **O**ccupational **R**ehabilitation treatment programs).	
Phase 5: (> 12 weeks - ~ 9 months) Maximal Medical Improvement (Further active rehabilitation is not usually indicated.)	Further improvements will be dependent on the client's ongoing compliance with home exercises and ongoing functional use of the affected upper extremity.	• If not already within normal limits or within functional limits, further limited improvements, in regional tissue functional tolerance, mobility and strength could be expected up until ~ 9 months post-surgery.	

Special Considerations:

Time frames for each phase will depend on:

- Specific surgical procedures performed
- Unforeseen Post-operative Complications (eg: Infection, Complex Regional Pain Syndrome)
- Surgeon Preference

Legend of Abbreviations / Definitions:

- Functional Wrist ROM = 40 degrees flexion, 40 degrees extension, 40 Radio-Ulnar Deviation arc.
- Axial Loading = Forces transmitted through the wrist with gripping / pinching activities.
- ROM = Range of Motion
- RTW = Return to Work

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Developed by:

The Visiting Specialist Clinic in Consultation with the WCB of BC Hand Therapy Program.