# Zone VII-VIII Extensor Tendon Repair

This protocol is intended to provide the clinician with a guideline for the postoperative rehabilitation course of a patient who has undergone Zone VII-VIII (within compartments of extensor reticulum and/or proximal to retinaculum) extensor tendon repair. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, comorbidities, pre-surgical range of motion, strength, health/functional status, rehabilitation compliance, learning barriers and complications. Specific time frames, restrictions and precautions are given to protect healing tissues and surgical reconstruction.

## Postoperative Guidelines

### Surgical Indication

This protocol is intended to provide the clinician with a guideline for the postoperative rehabilitation course of a patient who has undergone laceration and repair of Extensor tendons in Zones VII-VIII

Therapist Considerations:

- Which tendons are involved EDC only?
- Are other wrist extensors involved?
- Consideration for any laceration/ repair over the synovium may increase the likelihood of adhesion formation.

If patient is diabetic, a smoker or has other underlying medical conditions to have slow healing, they may need extended orthotic time to achieve a satisfactory outcome.

### Return to Work

The timeline for returning to work can vary depending on the type of work performed, various accommodations that may be available within your work environment, and any postoperative complications. Your surgeon will discuss the timeline for returning to work after consideration of these factors.

# Zone VII-VIII Extensor Tendon Repair

Phase I (3- 5 days to 3 weeks after surgery)

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| Rehabilitation appointments | • Weekly |
| Rehabilitation goals and priorities | • Post op dressings removed, and orthosis fabricated<br>• Activities of daily living (ADLs) per restrictions<br>• Edema management<br>• Wound management<br>• Initiation of exercises |
| Orthotic | • Fabricate wrist cock up orthosis in 30- 40 degrees of extension, volar or dorsal. Dorsal orthotic can be used to allow for synergistic motion within the orthosis. (Strapping placement/ length can be used to allow for limited synergistic motion within the orthosis.)<br>• Wear all time except exercises. |
| Suggested therapeutic exercises | • Wrist synergistic motion (tenodesis) to approximately 10 -20° of wrist flexion for EDC involvement and **less if any wrist extensors** are involved.<br>• Finger AROM to prevent adhesion of the extensors at the retinaculum. |
| Precautions | • No Passive flexion of the digits<br>• No composite wrist and finger flexion<br>• Monitor for extension lag<br>• No lifting, pushing, or pulling more than 2 pounds with involved upper extremity<br>• No weightbearing of involved upper extremity |

# Zone VII-VIII Extensor Tendon Repair

Phase II (3 - 5 weeks post op)

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| Rehabilitation appointments | • Per therapist discretion |
| Rehabilitation goals and priorities | • Activities of daily living (ADLs) per restrictions<br>• Edema management<br>• Scar management<br>• |
| Orthotic | • Continue orthotic between exercise sessions and at night. Can remove for bathing within wrist in protected position (extension) |
| Suggested therapeutic exercises | • Synergistic wrist motion in mid-range of motion<br>• PROM of fingers as needed<br>• PROM of wrist within mid-range synergistic motion<br>• Gravity resisted wrist extension starting the wrist in neutral<br>• Consider light isometric strengthening for extensors at 5 weeks if good tendon excursion is present. |
| Precautions | • No composite passive flexion of the fingers and wrist<br>• Monitor for extension lag<br>• No lifting, pushing, or pulling more than 2 pounds with involved upper extremity<br>• No weightbearing of involved upper extremity |
| Progression criteria | • Full AROM of the wrist and fingers with minimal to no extension lag. |

# Zone VII-VIII Extensor Tendon Repair

## Phase III (5 – 8 weeks)

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| Rehabilitation appointments | • Per therapist discretion |
| Rehabilitation goals and priorities | • Activities of daily living (ADLs) per restrictions<br>• Edema management<br>• Scar management<br>• Full composite AROM digits |
| Orthotic | • May discontinue orthosis during the daytime at 5 weeks except for heavy work<br>• Static progressive splinting may be indicated if long extensor tightness is present. |
| Suggested therapeutic exercises | • Unrestricted wrist ROM<br>• Progressive strengthening |
| Precautions | • Avoid forceful composite flexion of wrist and fingers until 6 weeks.<br>• Monitor for extension lag<br>• No lifting, pushing, or pulling more than 2 pounds with involved upper extremity<br>• No weightbearing of involved upper extremity |
| Progression criteria | • Full composite ROM and functional grip strength without extensor lag = discharge from therapy.<br>• Restrictions are lifted at 12 weeks |

## References


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3. Chye Yew Ng,[1] Joelle Chalmer,[2] Duncan J. M. Macdonald,[3] Saurabh S. Mehta,[4] David Nuttall,[1] and Adam C. Watts[1], (2019) Rehabilitation Regimens Following Surgical Repair of Extensor Tendon Injuries of the Hand—A Systematic Review of Controlled Trials: J Hand Microsurg. 2012 Dec; 4(2): 65–73.
4. Russell RC, Jones M, Grobbelaar A. Extensor tendon repair: mobilise or splint? Chir Main. 2003;22(1):19–23. doi: 10.1016/S1297-3203(02)00004-5.


*These rehabilitation guidelines were developed collaboratively between UW Health and UnityPoint Health - Meriter Rehabilitation and the UW Health Orthopedic Surgeons.*

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