



ORTHOPEDICS & SPORTS MEDICINE

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Dr. Klika & Dr. Kirkpatrick Pulley Reconstruction and Repair

Goals for therapy

- Maximize hand ROM while protecting repair/reconstruction
- Minimize risk of scar adhesions
- Pain and edema control
- Return to functional activity by 8-10 weeks

Other considerations

- At 4-6 weeks, buddy loops work well for a light Velcro pulley ring support if wrapped around affected digit at the level of the repair
- Delay strengthening with excessive swelling and pain

Orthosis

- Pulley ring orthosis is fabricated to serve as external support for the reconstructed pulley and worn continuously for 4-6 weeks. Fabricate a circumferential thermoplastic ring or volar thermoplastic phalanx gutter secured with Velcro dorsally at the level of the pulley repair.
- After 4-6 weeks patient may be transitioned to circumferential Velcro or paper tape pulley support
- Pulley ring is discontinued completely after 1-2 weeks of strengthening and return to functional activities

Edema Management

- Edema control is initiated with edema glove or single finger compression with sleeve or coban as needed
- Manual Edema Mobilization (MEM) and elevation

Wound Care

- Educate patient in sterile dressing changes as needed
- Dry dressings preferable to prevent maceration under pulley ring orthosis

ROM

- Unrestricted A/PROM and place and hold exercises as needed with pulley ring orthosis on at all times to protect the repaired pulley

Scar Management

- Begin scar massage no sooner than 2 days after suture removal when scar is fully closed with scabbing present. Begin with light massage using lotion.
- Educate patient in scar management and apply scar remodeling products as needed

Strengthening

- 7-8 weeks post-op: Initiate strengthening with pulley ring orthosis in place for first 1-2 weeks of strengthening. Begin with light resistance putty emphasizing slow controlled grip and pinch and progressing to increased resistance and lifting activities to match required job tasks and daily activities



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References

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Skirven, T. M. (2011). *Rehabilitation of the hand and upper extremity*. Philadelphia, PA: Elsevier/Mosby.

This protocol was reviewed and updated by Brian Klika, MD, Lacey Jandrin, PA, Andrew Kirkpatrick, MD, Tiffany Terp, PA, and the Hand Therapy Committee 8/9/2021.