



**Lahey Hospital  
& Medical Center**

**Rehabilitation Protocol:  
Ligament Reconstruction Tendon Interposition**

**Department of Orthopaedic Surgery**

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## ◀ Overview

- Indications for surgical intervention include CMC joint arthritis, degenerative joint disease, pain and/or instability with rest and/or with daily activities, and patients who have failed conservative management for  $\geq$  2-3 months
- Each variable should be considered when formulating a post-operative therapy plan, and it is important for surgeons and therapists to recognize that surgical and patient specific factors can vary substantially. Considerations such as extent of disease, extent of surgical procedure, MCP joint stability post operatively, and any other complications. Ongoing communication and coordination of care between the orthopaedic surgeon and occupational hand therapist should enable optimal functional outcomes.
- Initially, the repair is protected until the healing tissue is strong enough to begin active ROM. A post operative dressing is placed until the MD follow-up appointment, usually within 1 week of surgery. A cast is then placed with first MC in palmar abduction, MP in  $\sim$ 10-20 degrees flexion, wrist neutral, IP free. (Thumb must NOT be positioned in radial ABD, this would risk stretching the reconstruction).
- Depending on the type of surgery and the surgeon preference, the cast is removed between 4 to 6 weeks following repair. At this time an orthoplast splint is fabricated by the hand therapist, and Phase I of rehabilitation is initiated.
- Patient-related factors, such as prior surgery, smoking, patient age, activity level, duration of symptoms, extent of the arthritis, and co-morbidities, influence healing, rehabilitation, and ultimate clinical outcomes.

## ◀ Phase I Early Mobilization Four to Seven weeks

### *Goals*

- Protection of surgical site
- Gradual increase of active range of motion of thumb CMC, MP, IP, ABD, opposition  
\*Performed gently and slowly every 1-2 hours while awake, repeat each exercise 10 times, holding in each direction for 3-5 seconds
- Decrease pain and inflammation
- Maintain full elbow, wrist and hand motions
- Gradual increase participation in ADL's while protecting repair
- Scar massage when stitches removed, and/or pin site healed
- Desensitization

### *Precautions*

- Splint on at all times except exercises and hygiene
- Avoid full thumb ADD
- Assess for thumb laxity. If laxity is present and can obtain opposition thumb to the base of the little finger, limit exercise and increase splint use for increased stability and scar formation at the base of the thumb.
- Do not support body weight on hands
- Avoid excessive gripping, squeezing, and pinching
- Avoid excessive stretching
- Avoid sudden movements
- Do not drive until authorized by surgeon

## ◀ Phase II Mobilization Seven to Nine weeks

### *Goals*

- Continue Splint at night, but may remove for exercises and light daily activities
- Decrease pain and inflammation
- Initiation of light resistive exercises such as therapy putty, clothespins, pinch, foam blocks, etc.
- Increase thumb opposition, thumb ABD (palmar and radial), flexion and extension, and active thumb ADD (not resistive/forceful)
- Gradual increase in function and strength

### *Precautions*

- Avoid sudden, jerking motions
- Resume light functional activities
- Avoid heavy housework/yard work – No vacuuming/shoveling

### ◀ Phase III Nine to Twelve weeks

#### *Goals*

- Splint used only at night (may use a short opponens splint during the day, if needed)
- Obtain full ROM for all thumb and wrist motions
- Strengthening as tolerated (pinch, grip, etc.)

#### *Precautions*

- Respect pain and avoid motions and exercises that produce pain
- Joint protection and ergonomics

### ◀ Phase IV Ten to Fourteen weeks

#### *Goals*

- Discontinue use of splint (short opponens splint may be used during the day, if needed)
- Progression towards moderate resistive exercises (lifting, tool use, BTE,
- Return to work and leisure activities

#### *Precautions*

- Six month plus recovery period for restored functional use of thumb