

POST-OPERATIVE REHABILITATION PROTOCOL FOLLOWING CHRONIC ULNAR COLLATERAL LIGAMENT (UCL) RECONSTRUCTION USING AUTOGENOUS GRAFT

IMMEDIATE POST-OPERATIVE PHASE (0-3 WEEKS)

A. Post-Operative Week 1 (Day 1-7)

Evaluate ulnar nerve function:

- *Patients sensation 4th and 5th fingers and ability to actively move fingers (4th and 5th) into abd/adduction, flexion and extension, and opposition*
- *If the patient has a deficit in above, please make MD aware! (If sensory loss is accompanied by motor loss, if sensation is absent, or sensation does not improve daily, the surgeon needs to be informed ASAP)*
- Posterior Splint or Brace is to be worn at 90 degrees elbow flexion
- ROM- wrist AROM as tolerated
- Do not change dressing unless soiled or otherwise instructed by MD.

- Exercises: Gripping
 - Finger flexion/extension, thumb to finger opposition, finger abd/adduction, intrinsics
 - Wrist and forearm AROM
 - Shoulder isometrics (light IR)
 - Bicep isometrics
 - Shoulder shrugs and retractions

- NO PROM until after the first MD visit or 7 days postop.
- Cryotherapy/Electrical Stimulation PRN

B. Post-Operative Week 2 (Day 8-14)

- Brace set at 30-105 degrees
- Exercises: Initiate wrist and forearm isometrics (FLEX, EXT, RD, UD, SUP, and PRON)
Initiate elbow FLEX/EXT isometrics throughout comfortable ROM
- PROM/AROM 20-110 – (again a guideline – may progress further if no pain or pinch – do not push through a posterior pinch sensation in extension, or fullness in flexion, as this is due to edema)
- Remove stitches at 12-14 days

C. Post-operative Week 3 (Day 15-21)

- Brace set at 15-120 degrees
 - PROM - to tolerance

 - Exercises: Initiate scapular PNF elevation/depression and protraction/retraction
Light Rhythmic Stabilization at end range.
Progress hand intrinsic exercises: putty, rubber band etc.
 - Initiate cardiovascular conditioning (stationary bike, EFX, stairmaster) - NO running or impact work
- ****Scar massage if incision is healed appropriately****

INTERMEDIATE PHASE (WEEK 4-8)

Goals: Gradual increase in range of motion
Promote Healing of repaired tissue
Regain and improve muscular strength
Regain function of graft site

A. Week 4-5 (Day 22-35)

- Brace open full range week 4, discharge brace when 4 weeks post-op are complete

 - PROM: progress to 0 degrees ext., 125-130 degrees flexion

 - Exercises:
 - Begin light resistance exercises for arm (1 lb)
 - Wrist curls, extension, pronation, supination
 - Elbow FLEX/EXT *Use overpressure and R/S for end range extension strength*
 - Initiate shoulder program emphasizing rotator cuff
 - TB: IR (from neutral to full IR)/ ER (from IR to 30 degrees ER)
 - Prone scapular weights: Row at 30° and 70°, Horizontal ABD, FLEX, EXT
 - Standing RC PRE's: flexion, scaption, abduction
 - Sidelying ER (weights and manual)
 - R/S 90° flexion with proximal lever arm
 - Serratus Punch (weights and manual with proximal lever)
 - TBand bicep curl, tricep extension (start with yellow TBand)
 - UBE
 - Increase intensity of gripping exercises – may use gripper
- **SCAR MASSAGE PRN
- **Begin light low load long duration stretching if extension is a problem (forearm
Pronated and neutral) – (sandbag to stabilize anterior shoulder, towel above elbow, light weight on
loop over wrist – can use hot pack to bicep if needed – approx 5 minutes)

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B. Week 6 (Day 36-42)

- Full AROM/PROM
- Joint mobilizations as needed- begin grade 3-4 at end range with distraction
 - Initiate shoulder IR stretches if needed
- Exercises:
 - Progress elbow strengthening exercises (concentric manuals/increase weight with dumbbells)
 - Progress IR/ER through full ROM
 - Add Manual D2 PNF with proximal lever arm (hold at elbow), with RS various angles
 - Horizontal ABD with TBand
 - Prone manuals- c/e- row, horizontal ABD in neutral, ER, and IR, and prone FLEX at 105 with thumb up
 - Push up plus on plyoballs (elbows stay straight)
- Week 6-7: manual forearm supination/pronation, wrist FLEX/EXT and RD/UD
- May initiate running

Week 7 (Day 43-49)

- Body blade: 0° ER/IR, 90° flexion/scaption
- Impulse: ER/IR at 0°

Week 8 (Day 50-56)

- Exercises:
 - Prone row with ER – weights and manual
 - 90/90 ER/IR with TBand (slow- watch valgus stress)
 - Rows and Lat Pull downs
 - RS 90/90, multi-D2

ADVANCED STRENGTHING PHASE (Week 9-16)

Goals: Increase strength, endurance, and power
Maintain Full elbow ROM
Gradually initiate sporting activities

Week 9-10 (Day 57-70)

- Assess shoulder ER ROM – progress toward functional ROM – if tight, provide pressure to stretch above elbow – turn humerus – do not press on wrist (avoid valgus stress)

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•Exercises:

- Initiate eccentric elbow flexion/ extension
- Continue isotonic program
- Seated press up
- Progress manual resistance on diagonal patterns – proximal hold at elbow for D2 ext
- Progress weight lifting program week 10 (avoid fly's and pushups)
- Rhythmic stabilization – multi D2, ABD/ER – can move more distally with lever arm, use TBand
- Body blade: add 90/90 ER/IR and D2 through throwing motion
- Impulse: add 90/90 ER and horizontal abduction if weak

Plyometrics

*Begin based on strength assessment

Wk 10:

- Chest pass
- Rotations L/R
- Woodchop L/R
- Triceps standing Slam

Wk 11:

- Soccer style
- Wall dribble - semicircle

Wk 12:

- Kneeling D2 pattern

Wk 13:

- 90/90: wall dribble, TBand ER/IR plyos

Wk 14:

- 15 ft baseball style throws into wall for mechanics

RETURN TO ACTIVITY PHASE (Week 16-26)

Goals: Continue to increase strength, power, and endurance of upper extremity

Week 16-18 (Day 106-126)

- Initiate interval throwing program/light golf swings if MD clears and Microfet/Biodex criteria are met
- Continue strength program
- Emphasis on elbow and wrist strengthening and flexibility exercises
- **ITP 4 ½ months
- No throwing > 120 ft. to avoid medial elbow stress