



Ulnar Collateral Ligament Reconstruction
Gracilis Autograft

Ryan W. Hess, MD
Dr. Hess Care Coordinator Phone: 763-302-2223
Fax: 763-302-2401

- Phase I – Immediate Post-Op Phase (Week 0-3)
 - Goals
 - Protect healing tissue
 - Decrease pain/inflammation
 - Decrease muscular atrophy
 - Protect graft site, allow healing
 - Post-Op Week 1
 - Posterior splint at 90 degrees elbow flexion, applied at surgery
 - Removed at 5-7 days post surgery and begin early aggressive ROM
 - Cryotherapy after splint removal to elbow and hamstrings area (graft harvest site)
 - No hamstrings stretches for 2 weeks post op
 - Post-Op Week 2
 - Brace
 - Applied at splint removal visit
 - To prevent valgus stress at elbow
 - OK to remove for ROM therapy
 - ROM
 - Gradually increase to 15-105 degrees by end of week 2
 - OK to be more aggressive with motion if necessary in flexion/extension plane
 - Exercises
 - Gripping exercises
 - Wrist ROM
 - Shoulder isometrics (No shoulder IR- stress on medial elbow)
 - Biceps isometrics
 - Elbow extension isometrics
 - Light scar mobilization
 - Continue cryotherapy

- Post-Op Week 3
 - Brace
 - Continue until end of week 4
 - ROM
 - At least 10-115 degrees, full ROM if tolerated
 - Exercises
 - Continue above exercises
 - Initiate AROM wrist/elbow without resistance
 - Initiate AROM shoulder (No IR against resistance to avoid stress at medial elbow)
 - Initiate scapular strengthening exercises
 - May initiate hamstrings stretching, gentle strengthening

- Phase II – Intermediate Phase (Week 4-7)
 - Goals
 - Full ROM
 - Promote healing of tissue
 - Improve muscular strength
 - Restore full function of graft site
 - Week 4
 - Brace
 - Continue until end of week 4
 - ROM
 - Increase ROM as soft tissue allows
 - Goal 0-125 degrees minimum by end of week 4
 - Exercises
 - Begin light resistance (1 lb)
 - Wrist curls, extension, pronation, supination
 - Elbow flexion/extension
 - Progress shoulder program
 - Emphasis on cuff strengthening
 - No IR against resistance
 - Initiate shoulder strengthening with light dumbbells
 - May discontinue brace at end of week 4 (may continue in unique circumstances)
 - Week 5
 - ROM
 - 0-135 degrees
 - Exercises
 - Continue above and progress as tolerated

- Week 6
 - ROM
 - 0-145 degrees (full)
 - Exercises
 - Initiate Thrower's Ten Program
 - Progress elbow strengthening exercises
 - Initiate shoulder IR strengthening
 - Progress shoulder program
- Week 7
 - Progress Thrower's Ten Program
 - Initiate diagonal patterns (light)
- Phase III – Dynamic Strengthening Phase (Week 8-14)
 - Goals
 - Improve strength/power/endurance
 - Improve neuromuscular control
 - Maintain full elbow ROM
 - Gradual return to functional activities
 - Week 8-9
 - Exercises
 - Eccentric elbow flexion/extension
 - Continue isotonic program forearm/wrist
 - Continue shoulder program (Thrower's Ten)
 - Initiate plyometric program
 - Week 10-11
 - Exercises
 - Continue above exercises
 - Advance plyometrics
 - Week 12-14
 - Exercises
 - Continue above
 - Initiate isotonic machines strengthening
 - Bench Press (Seated)
 - Lat pull downs
 - May initiate golf/swimming
 - Initiate interval hitting program

- Phase IV – Return to Activity Phase (Week 14+)
 - Goals
 - Progressively increase activities to prepare for full functional return
 - Criteria to progress to throwing
 - Full non-painful ROM
 - No pain/tenderness
 - Satisfactory clinical exam
 - Week 14
 - Continue strengthening program
 - Emphasis on elbow/wrist flexibility and strength
 - One hand plyometric throwing, wall dribble, baseball throws into wall
 - Week 16
 - Initiate interval throwing program (Phase I)
 - Continue Thrower's Ten and Plyometrics
 - Stretch before and after throwing
 - Week 22-24
 - Progress to interval throwing program Phase II (with successful completion of Phase I)
 - Week 30-32
 - Continue to progress with full clearance per Dr. Hess, Physical Therapist

EXERCISES INCLUDED IN THE THROWERS TEN EXERCISE PROGRAM

- Diagonal-pattern D2 extension
- Diagonal-pattern D2 flexion
- Shoulder external rotation at 0° of abduction
- Shoulder internal rotation at 0° of abduction
- Shoulder abduction to 90°
- Shoulder scapular abduction, external rotation ("full cans")
- Sidelying shoulder external rotation
- Prone shoulder horizontal abduction
- Prone shoulder horizontal abduction (full external rotation, 100° of abduction)
- Prone rowing
- Prone rowing into external rotation
- Press-ups
- Push-ups
- Elbow flexion
- Elbow extension
- Wrist extension
- Wrist flexion
- Wrist supination
- Wrist pronation

All exercises are performed against resistance, with the goal to improve strength. Full description of the program is available.^{45,46}

EXERCISES INCLUDED IN THE ADVANCED THROWERS TEN EXERCISE PROGRAM

Elastic Tubing/Band Resistive Exercises

- Shoulder external rotation at 0° of abduction while seated on a stability ball*
- Shoulder internal rotation at 0° of abduction while seated on a stability ball*
- Shoulder extensions while seated on a stability ball†
- Lower trapezius isolation while seated on a stability ball†
- High row into shoulder external rotation while seated on a stability ball†
- Biceps curls/triceps extensions while seated on a stability ball†

Isotonic Dumbbell Resistive Exercises

- Full can while seated on a stability ball†
- Lateral raise to 90° while seated on a stability ball†
- Prone T's on stability ball†
- Prone Y's on stability ball†
- Prone row into external rotation on stability ball†
- Sidelying shoulder external rotation
- Wrist flexion/extension and supination/pronation

**Contralateral sustained hold performed during exercise.*

†*Exercises are performed in 3 distinct continuous movements per exercise: bilateral active exercise, alternating reciprocal movement, and a sustained contralateral hold.*

Ten to 15 repetitions are performed for each movement successively, without rest, to complete 1 set. The goal is the ability to perform 2 full cycles of the entire program without pain, using sound technique and no substitution. Full description of the program is available.⁵²