



ANDREW'S PROTOCOL

POST-OPERATIVE REHABILITATION PROTOCOL FOLLOWING ULNAR COLLATERAL LIGAMENT RECONSTRUCTION USING AUTOGENOUS GRACILIS GRAFT

I. IMMEDIATE POST-OPERATIVE PHASE (0-3 WEEKS)

A. GOALS:

- i. Protect healing tissue
- ii. Decrease pain/inflammation
- iii. Retard muscular atrophy
- iv. Protect graft site – allow healing

B. POST-OPERATIVE WEEK 1: Days 1 – 7

- i. Range of Motion:
 1. Wrist AROM ext/flexion immediately postoperative.
 2. Knee AROM can be started postoperative day 1.
- ii. Posterior splint at 90 degrees elbow flexion for first 5-7 days
- iii. Do not change dressing unless dressing is soiled.
- iv. Posterior splint is removed at 5-7 days post operative.
- v. Put gauze over Incision sites and rewrap with ace bandage.
- vi. Start Range of motion:
 1. The day the posterior splint is removed.
 2. After therapy session put in UNLOCKED Hinged ROM Brace.
- vii. Note: Elbow Brace is to be unlocked at all times for full ROM as tolerated.
- viii. Calf (graft site) compression dressing can be changed on postoperative day 1.
 1. Put gauze over graft site and rewrap with ace
 2. Crutch: Use one crutch as needed for 3-5 days (if needed)
- ix. Exercises:
 1. Gripping exercises
 2. Wrist ROM
 3. Shoulder isometrics (No Shoulder ER)
 4. Biceps isometrics
 5. No involved leg Isotonic exercises first week
 6. No hamstring stretching
- x. Cryotherapy: To elbow joint and to graft site below knee

C. POST-OPERATIVE WEEK 2: Days 8 – 14

- i. ROM: To tolerance (elbow and knee)
- ii. Brace: Elbow ROM Brace unlocked at all times

- iii. Exercises:
 - 1. Continue all exercises listed above
 - 2. Elbow Range of Motion in brace (as tolerated) Initiate elbow extension isometrics
 - 3. Continue knee ROM exercises
 - 4. Initiate light scar mobilization over distal incision {graft site incision}
- iv. Cryotherapy: Continue ice to elbow and graft site
- v. Stitches Removed: 14 days postoperative

D. POST-OPERATIVE WEEK 3: Days 15 – 21

- i. Brace: Elbow ROM as tolerated
- ii. Exercises:
 - 1. Continue all exercises listed above
 - 2. Elbow ROM (in- brace)
 - 3. Initiate active ROM Wrist and Elbow (No resistance)
 - 4. Initiate light hamstring stretching (Gentle)
 - 5. Initiate active ROM shoulder;
 - a. Full can
 - b. Lateral raises
 - c. ER/IR tubing
 - d. Elbow flex/extension
 - 6. Initiate light scapular strengthening exercises
 - 7. Initiate bicycle for lower extremity ROM and strength
 - 8. May initiate light hamstring isometrics

II. INTERMEDIATE PHASE (WEEKS 4–7)

A. GOALS:

- i. Gradual increase to full ROM as tolerated
- ii. Promote healing of repaired tissue
- iii. Regain and improve muscular strength
- iv. Restore full function of graft site

B. WEEK 4

- i. Brace: Elbow ROM -full ROM as tolerated
- ii. Exercises:
- iii. Begin light resistance exercises for arm (1 lb)
 - 1. Wrist curls, extensions, pronation, supination
 - 2. Elbow extension/flexion
- iv. Progress shoulder program emphasize rotator cuff and scapular strengthening
- v. Initiate shoulder strengthening with light dumbbells
- vi. Isometrics for hamstrings and calf muscles

C. WEEK 5

- i. ROM: Elbow full as tolerated
- ii. Discontinue brace
- iii. Continue all Exercises: Progress all shoulder and UE exercises (progress weight 1lb.)

D. WEEK 6

- i. AROM: 0-145° without brace or full ROM
- ii. Exercises:
 - 1. Initiate Thrower's Ten Program
 - 2. Progress elbow strengthening exercises
 - 3. Initiate shoulder external rotation strengthening
 - 4. Progress shoulder program
 - 5. Initiate isotonic strengthening for graft site hamstrings/calf

E. WEEK 7

- i. Progress Thrower's Ten Program (progress weights)
- ii. Initiate PNF diagonal patterns (light)

III. **ADVANCED STRENGTHENING PHASE (8-14 WEEKS)**

A. GOALS:

- i. Increase strength, power, and endurance
- ii. Maintain full elbow ROM
- iii. Gradually initiate sporting activities

B. WEEK 8

- i. **Exercises:**
 - 1. Initiate eccentric elbow flexion/extension
 - 2. Continue isotonic program: forearm & wrist
 - 3. Continue shoulder program- Thrower's Ten Program
 - 4. Manual resistance diagonal patterns
 - 5. Initiate plyometric exercise program
 - a. (2 hand plyos close to body only)
 - b. Chest pass
 - c. Side throw close to body
 - 6. Continue stretching calf and hamstrings

C. WEEK 10

- i. Exercises:
 - 1. Continue all exercises listed above
 - 2. Program plyometrics to 2 hand drills away from body
 - a. Side to side throws
 - b. Soccer throws
 - c. Side throws

D. WEEKS 12 14

- i. Continue all exercises
- ii. Initiate isotonic machines strengthening exercises (if desired)
 - 1. Bench press {seated}
 - 2. Lat pull down
- iii. Initiate golf, swimming
- iv. **Initiate interval hitting program**

IV. RETURN TO ACTIVITY PHASE (14-32 WEEKS)

A. GOALS:

- i. Continue to increase strength, power and endurance of upper extremity musculature
- ii. Gradual return to sports activities

B. WEEK 14

i. Exercises:

1. Continue strengthening program
2. Emphasis on elbow and wrist strengthening and flexibility exercises
3. Maintain full elbow ROM
4. Initiate one hand plyometric throwing (stationary throws)
5. Initiate one hand wall dribble
6. Initiate one hand baseball throws into wall
- 7.

C. WEEK 16

i. Exercises:

1. Initiate interval throwing program (Phase I) [long toss program]
2. Continue Thrower's Ten Program and plyos
3. Continue to stretch before and after throwing

D. WEEK 22 – 24

- i. Exercises: Progress to Phase II throwing (once successfully completed Phase I)

E. WEEK 30 – 32

- i. Exercises: Gradually progress to competitive throwing/sports