

## **Post-Operative Rehabilitation Protocol Following Ulnar Collateral Ligament Reconstruction Using Autogenous Graft**

### **Phase I—Immediate Post-Operative Phase**

- **Goals**
  - Protect healing tissue
  - Retard muscular atrophy
  - Decrease pain/inflammation
- **Week 1**
  - Posterior splint at 90° elbow flexion for 7 days
  - Brace: application of functional brace set at 30-100° at day 7-10 after splint
  - ROM: wrist AROM ext/flexion
  - Elbow compression dressing 2-3 days
  - Exercises
    - Gripping
    - Wrist ROM (passive only)
    - Shoulder isometrics (no shoulder ER)
    - Biceps isometrics
    - Cryotherapy
- **Week 2**
  - Brace: Elbow ROM 25-100° in brace
    - Gradually increase ROM 5° ext and 10° of flexion per week
  - Exercises
    - Continue all exercises listed above
    - Elbow ROM in brace
    - Initiate elbow extension isometrics
- **Week 3**
  - Brace: Elbow ROM 15°-110°
  - Exercises
    - Continue all exercises listed above
    - Elbow ROM in brace
    - Initiate active ROM wrist and elbow (no resistance)

### **Phase II—Intermediate Phase (Week 4-7)**

- **Goals**
  - Gradually increase to full ROM
  - Promote healing of repaired tissue
  - Regain and improve muscular strength
- **Week 4**
  - Brace: Elbow ROM 0°-125°
  - Exercises
    - Begin light resistance exercises on arm (1 lbs)
    - Wrist curls, extensions, pronation, supination
    - Elbow ext/flexion
  - Progress shoulder program to emphasize rotator cuff strengthening
    - Avoid external rotation until week 6

- **Week 5**
  - ROM: elbow ROM 0°-135°
  - Discontinue brace
  - Continue all exercises
- **Week 6**
  - ROM: 0°-145° without brace or full ROM
  - Exercises
    - Progress elbow strengthening exercises
    - Initiate shoulder external rotation strengthening
- **Week 7**
  - Initiate Thrower's Ten Program
  - Progress light isotonic program

### **Phase III—Advanced Strengthening Program (Week 8-13)**

- **Goals**
  - Improve strength/power/endurance
  - Maintain full elbow ROM
  - Gradual return to functional activities
- **Week 8-10**
  - Initiate eccentric elbow flexion/extension
  - Continue:
    - Isotonic program-forearm and wrist
    - Shoulder program- Thrower's Ten
    - Stretching program- especially elbow extension
- **Week 11-13**
  - Exercises
    - Continue all exercises listed above
    - Initiate

### **Phase IV—Return to Activity (Week 14-32)**

- **Goals**
  - Continue to increase strength, power, and endurance of upper extremity musculature
  - Gradual return to activities
- **Week 14**
  - Exercises: Continue strengthening program
    - Emphasis on elbow and wrist strengthening and flexibility exercises
    - Maintain full elbow ROM
- **Week 16**
  - Exercises
    - Initiate interval throwing program (phase I)
    - Continue all exercises
    - Stretch before and after throwing
- **Week 22-24**
  - Exercises
    - Progress to Phase II Throwing Program (once completed Phase I)
- **Week 30**
  - Exercises
  - Progress to competitive throwing