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## **Arthroscopic Rotator Cuff Repair Physical Therapy Protocol Large to Massive Tears (Greater than 4 cm)**

### **Phase I: Immediate Post-operative (Days 1 to 10)**

#### **Goals**

- Maintain integrity of the repair
- Gradually increase passive range of motion
- Diminish pain and inflammation
- Prevent muscular inhibition

### **Days 1 to 6**

#### **Brace**

- Ultrasling with abduction pillow
- Sleep in sling or brace

#### **Exercises**

- Pendulum exercises four to eight times daily (flexion, circles)
- Active assisted range of motion exercise
  - Wand external rotation/internal rotation in scapular plane
- Passive range of motion
  - Flexion to tolerance
  - External rotation/internal rotation in scapular plane (gentle range of motion)
- Elbow/hand gripping and range of motion exercises
- Submaximal gentle isometrics
  - Flexion
  - Abduction
  - External rotation
  - Internal rotation
  - Extension
- Cryotherapy with elevation for pain and inflammation every hour for 20 minutes

### **Days 7 to 10**

#### **Brace**

- Continue ultrasling
- Continue sleeping in brace until physician instructs

#### **Exercises**

- Continue pendulum exercises
- Progress passive range of motion to tolerance
  - Flexion to at least 90 degrees
  - External rotation in scapular plane to 35 degrees
  - Internal rotation in scapular plane to 35 degrees
- Continue elbow/hand range of motion and gripping exercises
- Continue submaximal isometrics
- Continue cryotherapy for pain management

## **Functional Activities**

- Maintain arm in brace, remove only for exercise
- No lifting of objects
- No excessive shoulder extension
- No excessive or aggressive stretching or sudden movements
- No supporting of body weight by hands
- Keep incision clean and dry

## **Phase II: Protection (Day 11 to Week 6)**

### **Goals**

- Allow healing of soft tissue
- Do **not** overstress healing tissue
- Gradually restore full passive range of motion (weeks four to five)
- Re-establish dynamic shoulder stability
- Decrease pain and inflammation

## **Days 11 to 14:**

### **Brace**

- Continue ultrasling

### **Exercises**

- Passive range of motion to tolerance
  - Flexion: at least 125 degrees
  - External rotation: 90 degrees abduction to at least 45 degrees
  - Internal rotation: 90 degrees abduction to at least 45 degrees
- Active assisted range of motion to tolerance
  - External rotation/internal rotation in scapular plane
  - External rotation/internal rotation at 90 degrees abduction
- Dynamic stabilization drills
  - Rhythmic stabilization drills
  - External rotation/internal rotation in scapular plane
  - Flexion/extension at 100 degrees flexion
- Continue all isometric contractions
- Continue cryotherapy for pain management

## **Weeks 3 to 4**

### **Brace**

- Continue use of ultrasling during sleeping until week six

### **Exercises**

- Initiate active assistive range of motion flexion in supine (therapist supports arm during motion)
  - Pulleys for flexion and scaption at week four
- Continue all exercises listed above
- Initiate external rotation/internal rotation strengthening using exercise tubing at 0 degrees of abduction
- Progress passive range of motion until approximate full range of motion at weeks four to five
- Initiate prone rowing to neutral arm position
- Initiate isotonic elbow flexion
- May use pool for light range of motion exercises
- Continue cryotherapy for pain management
- May use heat prior to range of motion exercises

## Weeks 5 to 6

### Brace

- Discontinue use of ultrasling at week six if Dr. Kendall permits

### Exercises

- May use heat prior to exercises
- Continue active assistive range of motion and stretching exercises
- Initiate active range of motion exercises
- Shoulder flexion scapular plane
- Shoulder abduction
- Progress isotonic strengthening exercise program
  - External rotation tubing
  - Sidelying external rotation
  - Prone rowing
  - Prone horizontal abduction
  - Biceps curls

### Functional Activities

- No lifting
- No excessive behind the back movements
- No supporting of body weight by hands and arms
- No sudden jerking motions

## Phase III: Intermediate (Weeks 7 to 14)

### Goals

- Full active range of motion (weeks 10 to 12)
- Maintain full passive range of motion
- Dynamic shoulder stability
- Gradual restoration of shoulder strength and power
- Gradual return to functional activities

## Week 7

### Exercises

- Continue stretching and passive range of motion (as needed to maintain full range of motion)
- Continue dynamic stabilization drills
- External rotation/internal rotation tubing
- External rotation sidelying
- Lateral raises\* (active range of motion only)
- Full can in scapular plane\* (active range of motion only)
- Prone rowing
- Prone horizontal abduction
- Elbow flexion
- Elbow extension

*\*Patient must be able to elevate arm without shoulder or scapular hiking before initiating isotonic; if unable, continue glenohumeral dynamic stabilization exercises.*

## Weeks 8 to 10

### Exercises

- Continue all exercises listed above
- Pulley internal rotation/towel internal rotation stretch
- Begin sleeper stretch
- Progress to isotonic lateral raises and full can

## **Functional Activities**

- If Dr. Kendall permits, may initiate **light** functional activities

## **Weeks 12 to 14**

### **Exercises**

- Continue all exercises listed above
- Progress strengthening program
  - Empty can raises
  - Overhead shoulder press (begin without weight)
- Progress to independent home exercise program (fundamental shoulder exercises)

## **Phase IV: Advanced Strengthening (Weeks 15 to 22)**

### **Goals**

- Maintain full non-painful range of motion
- Enhance functional use of upper extremity
- Improve muscular strength and power
- Gradual return to functional activities

## **Week 15**

### **Exercises**

- Continue range of motion and stretching to maintain full range of motion
- Self capsular stretches
- Progress shoulder strengthening exercises
  - Fundamental shoulder exercises

## **Week 20**

### **Exercises**

- Continue all exercises listed above
- Continue to perform range of motion stretching, if motion is not complete

## **Phase V: Return to Activity (Weeks 23 to 30)**

### **Goals**

- Gradual return to strenuous work activities
- Gradual return to recreational sport activities

## **Week 23**

### **Exercises**

- Continue fundamental shoulder exercise program (at least four times weekly)
- Continue stretching, if motion is tight

## **Week 26**

### **Functional Activities**

- May initiate interval sport program (i.e., golf, etc.)