

*This information is provided as a clinical resource. Clinicians should always seek physician approval and guidance for specific care protocols and precautions*

## ROTATOR CUFF INJURY PROTOCOL

### A. Repair (Deltoid Splitting) of Type I Rotator Cuff Injury (Small Tear- Less than 1 cm)

#### PHASE I- Protective Phase (week 0-6)

➤ Goals:

- Gradual return to full ROM
- Increase shoulder strength
- Decrease pain

➤ 0 to 3 weeks

- Fit sling for comfort (1-2 weeks)
- Perform pendulum exercises
- Initiate active-assisted ROM exercises. Employ ROM exercises in a nonpainful range, with a gentle and gradual increase of motion to tolerance
- Use rope and pulley **for flexion only**
- Perform elbow ROM, hand gripping
- Begin isometrics (sub-maximal, sub-painful isometrics), abductors, external rotators, internal rotators, elbow flexors shoulder flexors
- Use pain control modalities (ice, ES)

➤ 3 to 6 weeks

- Progress all exercises (continue all above exercises)
- Perform active-assisted ROM, L-bar exercises ER/IR (shoulder at 45° abduction)
- Begin surgical tubing ER/IR (arm at side)
- Initiate humeral head stabilization exercises

## PHASE II- Intermediate Phase (7 – 12 weeks)

### ➤ Goals:

- Full, non painful ROM
- Improve strength and power
- Increase functional activities, decrease residual pain

### ➤ 7 to 10 weeks

- Perform active-assisted ROM exercises (L-bar):
  - a. Flexion to 170° to 180°
  - b. Perform ER/IR at 90° abduction of shoulder: ER to 75° to 90°; IR to 75° to 85°
  - c. Perform ER exercises with 0° abduction: ER to 30° to 40°
- Perform strengthening exercises for shoulder
  - a. Perform exercise tubing ER/IR with arm at side
  - b. Use isotonic dumbbell exercises for the following: deltoid, supraspinatus, abductors, external rotators, internal rotators, elbow flexors, shoulder flexors
  - c. Use upper body ergometer
  - d. Full ROM is the goal of weeks 8-10

### ➤ 10 to 12 weeks

- Continue all above exercises
- Initiate isokinetic strengthening (scapular plane)
- Initiate sidelying ER/IR exercises (dumbbell)
- Initiate neuromuscular scapulae control exercises

**PHASE III- Advanced Strengthening Phase (weeks 13-21)**

➤ Goals:

- Maintain full, non painful ROM
- Improve shoulder complex strength
- Improve neuromuscular control
- Gradual return to functional activities

13 to 18 weeks

- Begin active stretching program for the shoulder
- Use active-assisted ROM L-bar flexion, ER/IR
- Perform capsular stretches
- Initiate aggressive strengthening program (isotonic program)
  - a. Shoulder flexion
  - b. Shoulder abduction
  - c. Supraspinatus
  - d. ER/IR
  - e. Elbow flexors/extensors
  - f. Scapular muscles
- Perform isokinetic test (modified neutral position) at week 14: ER/IR at 180° and 300° per second
- Begin general conditioning program

18 to 21 weeks

- Continue all exercises listed above
- Initiate interval sport program

**PHASE IV- Return to activity Phase (21 to 26 weeks)**

➤ Goals:

- Gradual return to recreational sport activities

21 to 26 weeks

- Perform isokinetic test (modified neutral position)
- Continue interval sport program
- Continue basic exercises for strengthening and flexibility

## B. Repair (Deltoid Splitting) of Type II Rotator Cuff Injury (Medium to Large Tear- Greater than 1 cm and less than 5 cm)

<b>PHASE I- Protective Phase (0 to 6 weeks)</b> <ul style="list-style-type: none"><li>➤ Goals:<ul style="list-style-type: none"><li>• Gradual increase in ROM</li><li>• Increase shoulder strength</li><li>• Decrease pain and inflammation</li></ul></li></ul>
0 to 3 weeks <ul style="list-style-type: none"><li>• Fit brace or sling (<b>physician determines</b>)</li><li>• Begin pendulum exercises</li><li>• Perform active-assisted ROM exercises (L-bar exercise)<ul style="list-style-type: none"><li>a. flexion to 125°</li><li>b. ER/IR (shoulder at 40° abduction) to 30°</li></ul></li><li>• Perform passive ROM to tolerance</li><li>• Use rope and pulley-flexion</li><li>• Perform elbow ROM and hand gripping exercises</li><li>• Begin sub maximal isometrics: flexors, abductors, ER/IR, elbow flexors</li><li>• Use ice and pain modalities</li></ul>
3 to 6 weeks <ul style="list-style-type: none"><li>• Discontinue brace or sling</li><li>• Continue all exercises listed above</li><li>• Perform active-assisted ROM exercises<ul style="list-style-type: none"><li>a. Flexion to 145°</li><li>b. ER/IR (performed at 65° abduction) range to tolerance</li></ul></li></ul>
<b>PHASE II- Intermediate Phase (7-14 weeks)</b> <ul style="list-style-type: none"><li>➤ Goals:<ul style="list-style-type: none"><li>• Full, non-painful ROM (10 weeks)</li><li>• Gradual increase in strength</li><li>• Decrease pain</li></ul></li></ul>

7 to 10 weeks

- Perform active-assisted ROM L-bar exercises
  - a. Flexion to 160°
  - b. ER/IR (performed at 90° shoulder abduction) to tolerance (greater than 45°)
- Perform strengthening exercises
  - a. Use exercise tubing ER/IR, arm at side.
  - b. Initiate humeral head stabilizing exercise
  - c. Initiate dumbbell strengthening exercises for the following; deltoid, supraspinatus, elbow flexion/extension, scapular muscles
  - d. Begin neuromuscular control exercises for scapular

Note: Patient must be able to elevate arm without shoulder and scapular hiking before initiating isotonic; if unable, maintain on humeral head stabilizing exercises.

### **PHASE III- Advanced Strengthening Phase (15 to 26 weeks)**

➤ Goals:

- Maintain full, non-painful ROM
- Improve strength of shoulder
- Improve neuromuscular control
- Gradual return to functional activities

15 to 20 weeks

- Continue active-assisted ROM exercise with L-bar
  - a. Flexion, ER, IR
- Perform self-capsular stretches
- Begin aggressive strengthening program
  - a. shoulder flexion
  - b. Shoulder abduction (to 90°)
  - c. Supraspinatus
  - d. ER/IR
  - e. Elbow flexors/ extensors
  - f. Scapular muscles

<ul style="list-style-type: none"> <li>• Begin conditioning program</li> </ul>
<p>21 to 26 weeks</p> <ul style="list-style-type: none"> <li>• Continue all exercises listed above</li> <li>• Use isokinetic test (modified neutral position) for ER/IR at 180° and 300° per second</li> <li>• Begin interval sport program</li> </ul>
<p><b>PHASE IV- Return to Activity Phase (24 to 28 weeks)</b></p> <p>➤ Goals:</p> <ul style="list-style-type: none"> <li>• Gradual return to recreational sport activities</li> </ul>
<p>24 to 28 weeks</p> <ul style="list-style-type: none"> <li>• Continue all strengthening exercises</li> <li>• Continue all flexibility exercises</li> <li>• Continue progression on interval programs</li> </ul>

This Rotator Cuff Injury Protocol was peer reviewed and approved by the 2012 HTS orthopedic committee.

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