

# LARGE-MASSIVE ROTATOR CUFF REPAIR GUIDELINE

## Rotator Cuff Background and Guidelines

### Background

The rotator cuff is crucial for stabilization and movement of the glenohumeral joint. Injuries, whether acute or from overuse, can result in varying degrees of tears, leading to pain and dysfunction. Tears are classified by size:

Large tear



3-5 cm

Massive tear



>5 cm

Rotator cuff repair is conducted either arthroscopically or via a mini-open procedure, suturing the torn tendon to the humerus.

### Disclaimer

- Progression in rehabilitation is based on time and specific criteria, taking into account soft tissue healing, patient demographics, and clinician evaluation.
- For questions, contact Dr. Sujan Gogu's clinic.

### Superior Capsule Reconstruction Considerations

Consideration	Details
Protocol Adherence	Follow prescribed timeframes strictly.
Weight Limit	Limit lifting to <i>5 lbs for 6 months</i> .

### Recommendations

Category	Details
Risk Factors	<ul style="list-style-type: none"><li>• Low preoperative functional level</li><li>• Poor preoperative active ER</li><li>• Younger age</li><li>• Lower education level</li></ul>

Category	Details
	<ul style="list-style-type: none"> <li>• Workman's comp claims</li> </ul>
<b>Precautions</b>	<ul style="list-style-type: none"> <li>• Sling use for 6 weeks</li> <li>• No PROM into pain</li> <li>• Start physical therapy at 4-6 weeks</li> </ul>
<b>Subscapularis Repair (12 weeks)</b>	<ul style="list-style-type: none"> <li>• No ER past 30 degrees</li> <li>• No cross body adduction</li> <li>• No active IR or IR behind back</li> <li>• No supporting of body weight on affected side (i.e., pushing up from chair)</li> </ul>

### Manual Therapy

Timeframe	Details
<b>Week 0-4</b>	Continue post-operative home exercises (wrist and hand, pendulums, scap squeeze).
<b>Week 4-6</b>	Posterior and caudal GH mobilizations, soft tissue mobilization as appropriate.
<b>Week &gt;6</b>	PROM, soft tissue and joint mobilization as appropriate.

### Corrective Interventions

Intervention	Details
<b>Pain and Edema Control</b>	Utilize modalities for pain and edema control.
<b>Manual Therapy</b>	Improve glenohumeral and scapular mobility and shoulder ROM.
<b>Therapeutic Exercise</b>	Neuromuscular re-education for UE strength, control, and postural stability.
<b>Therapeutic Activity</b>	Simulations to increase strength and endurance for return to

Intervention	Details
	work.
<b>Sport-Specific Training</b>	Engage in activities specific to the patient's sport.

### Outcome Testing

Test	Details
Disability of Arm, Shoulder, Hand (DASH)	Assess overall arm, shoulder, and hand function.
Quick DASH	A shorter version of the DASH for quicker assessment.

### Criteria for Discharge

Criteria	Details
Full AROM	No scapular substitution.
Strength	5/5 MMT RTC strength.
Isokinetic Testing	65-70% IR/ER strength.

### Phase 1: Protection (Week 4-6)

Category	Details
<b>ROM</b>	<ul style="list-style-type: none"> <li>• Continue PROM</li> <li>• Begin PROM in flexion and external rotation only</li> <li>• Avoid pushing into pain</li> <li>• Shoulder joint mobilizations (<i>grade II-III</i>) – posterior and caudal</li> <li>• Scapular mobilization</li> </ul>

Category	Details
	<p><b>Pectoralis minor flexibility:</b></p> <ul style="list-style-type: none"> <li>• Supine postural stretch</li> <li>• Passive therapist overpressure</li> </ul> <p><b>Start wand exercises in a seated position:</b></p> <ul style="list-style-type: none"> <li>• Shoulder external rotation</li> <li>• Shoulder flexion with physician's authorization</li> </ul>
<b>Strengthening</b>	<ul style="list-style-type: none"> <li>• Initiate isotonic scapular retraction/protraction:</li> <li>• Serratus punches</li> <li>• PNF patterns in sidelying (scapular clock)</li> <li>• Sitting retraction</li> </ul> <p><b>Begin manual resistance scapular stabilization:</b></p> <ul style="list-style-type: none"> <li>• Sitting</li> <li>• Sidelying</li> <li>• Rows</li> <li>• Pulldowns (light resistance)</li> </ul>
<b>Modalities</b>	Apply ice and pain modalities as needed
<b>Goals for Progression to Next Phase</b>	<ol style="list-style-type: none"> <li>1. Pain reduction</li> <li>2. Achieve full PROM in supine position</li> <li>3. Ability to sleep through the night</li> <li>4. Maintain normal posture</li> </ol>

### Phase 2: Initial Rehabilitation (Week 6-12)

Category	Week 6-8
<b>ROM</b>	<ul style="list-style-type: none"> <li>• AAROM as tolerated by the patient, including abduction and horizontal abduction (while maintaining subscapularis precautions)</li> <li>• Ball on wall and UE Swiss ball mobility for IR/ER</li> <li>• Towel wipes on table in any direction</li> </ul>

Category	Week 6-8
<b>Strengthening</b>	<ul style="list-style-type: none"> <li>• Closed-chain stability with elbow extension, using a ball for oscillations</li> <li>• Advance scapular neuromuscular strengthening</li> <li>• Begin sub-maximal (50% effort) strengthening</li> <li>• Isometric exercises for flexion, extension, abduction, ER, and IR</li> <li>• Isometric exercises for lower traps</li> </ul>
<b>Week 8-10</b>	
<b>ROM</b>	<ul style="list-style-type: none"> <li>• AROM as tolerated by the patient</li> <li>• Avoiding scapular substitution</li> </ul>
<b>Strengthening</b>	<ul style="list-style-type: none"> <li>• Light resistance on UBE</li> </ul> <p><b>Start prone exercise program</b> without weights, below shoulder level:</p> <ul style="list-style-type: none"> <li>• Row</li> <li>• Shoulder extension</li> <li>• Continue progressing scapular strengthening</li> </ul> <p><b>Begin closed-chain UE activities:</b></p> <ul style="list-style-type: none"> <li>• Towel wipes on wall (horizontal, diagonal, vertical)</li> <li>• Quadruped weight-shifts</li> </ul>
<b>Week 10-12</b>	
<b>ROM</b>	Continue AROM as tolerated by the patient   - Add gentle IR stretching
<b>Strengthening</b>	<ul style="list-style-type: none"> <li>• Moderate resistance on UBE</li> <li>• Continue isometric strengthening</li> <li>• Dynamic isometric walk-outs</li> <li>• Progress prone exercise program without weights:</li> <li>• Row</li> <li>• Shoulder extension</li> </ul> <p><b>Advance closed-chain UE activities:</b></p> <ul style="list-style-type: none"> <li>• Seated press-ups</li> </ul>

Category	Week 6-8
	<ul style="list-style-type: none"> <li>Serratus punches</li> </ul> <b>Proprioceptive exercises:</b> <ul style="list-style-type: none"> <li>Ball on wall</li> <li>Supine ABCs</li> </ul>
<b>Goals for Progression to Next Phase</b>	<ol style="list-style-type: none"> <li>Achieve full AROM without scapular substitution</li> <li>No reactive inflammation with strengthening exercises</li> <li>Return to full ADLs without pain</li> </ol>

### Phase 3: Intermediate Rehabilitation (Week 12-16)

Category	Details
<b>Strengthening</b>	<b>T band exercises:</b> <ul style="list-style-type: none"> <li>Shoulder IR/ER</li> <li>Horizontal abduction/adduction</li> <li>Diagonal patterns</li> </ul> <b>Begin prone exercise program with weights:</b> <ul style="list-style-type: none"> <li>Row</li> <li>Shoulder extension</li> <li>Horizontal abduction (T position)</li> <li>Lower trapezius (Y position)</li> <li>Start rhythmic stabilization exercises supine, progressing to side lying, prone, and standing</li> <li>Functional eccentric strengthening and decelerations</li> </ul> <b>Advance closed-chain UE strengthening:</b> <ul style="list-style-type: none"> <li>Push up with a plus</li> <li>Swiss ball activities</li> <li>Plank BOSU weight shifts</li> <li>Trunk and lower extremity strengthening</li> </ul>
<b>Goals for Progression to Next Phase</b>	<ol style="list-style-type: none"> <li>Full AROM without scapular substitution (achieved between weeks 10-12)</li> </ol>

Category	Details
	<ol style="list-style-type: none"> <li>2. 5/5 rotator cuff strength</li> <li>3. 65-70% IR/ER isokinetic testing</li> </ol>

### Phase 4: Return to Sport / Activity (4-6 Months)

Category	Details
<b>ROM</b>	Emphasis on posterior capsule stretching General stretching and flexibility program
<b>Strengthening</b>	<ul style="list-style-type: none"> <li>• Progress T-band exercises</li> </ul> <p><b>Advance dumbbell program with weights:</b></p> <ul style="list-style-type: none"> <li>• Scaption</li> <li>• Diagonal patterns</li> <li>• Bent row</li> <li>• Prone retraction with ER</li> <li>• Functional eccentric strengthening</li> </ul> <p><b>Progress closed-chain UE strengthening:</b></p> <ul style="list-style-type: none"> <li>• Push up with a plus</li> <li>• Swiss ball activities</li> <li>• Continuation of trunk and lower-extremity strengthening</li> <li>• Initiate throwing progression (refer to OSU Sports Med Throwing Program)</li> <li>• Start short toss and overhead endurance activities per physician's approval</li> <li>• Ongoing functional UE/LE strengthening and endurance activities</li> </ul>
<b>Goals to Return to Sport</b>	<ol style="list-style-type: none"> <li>1. Completion of throwing progression</li> <li>2. No reactive effusion, pain, or instability</li> <li>3. 65-70% IR/ER isokinetic testing</li> <li>4. Full functional mobility and strength</li> </ol>