



Duke Sports Medicine

Rotator Cuff Repair Protocol

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Sports Medicine: Knee, Shoulder, Hip

PHASE I/Immediate Post-operative Phase: Generally 0-4 Weeks Post-Op

GOALS:

- 1) Control pain and swelling
- 2) Protect the rotator cuff repair
- 3) Protect wound healing
- 4) Normal Elbow and Wrist ROM
- 5) Begin early shoulder motion: PROM to 90deg abduction and flexion for small and medium tears

PRECAUTIONS:

NO lifting
 NO pushups, heavy lifting, or other sports participation
NO supporting of body weight by hands

ROM & SLING:

If subscapularis and/or teres major repair, no ER past neutral, and no active IR for 6 weeks.
 ER <30deg in scapular plane, no IR past neutral, no extension past neutral
 Flexion to 90deg
 Abduction to 90deg

| Tear Size | Sling Use | Begin PROM |
|---------------------------|-----------|------------|
| Small 0-1cm ² | 4 weeks | Immediate |
| Medium 1-3cm ² | 6 weeks | Immediate |
| Large 3-5cm ² | 8 weeks | 6 weeks |
| Massive >5cm ² | 8 weeks | 6 weeks |

WOUND:

Post-op dressing remains intact until post-op day #2 (~48 hours after surgery)

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| | <p>May begin showering after post-op day #2 (no need to cover incision sites)</p> <p>Do NOT submerge shoulder in tub or pool for 4 weeks</p> <p>Suture/staple removal @ 10-14 days post-op, per Ortho/PT</p> <p>Begin scar massage after incision site sloughs/scar is formed</p> |
| CRYOTHERAPY: | <p>Cold with compression (e.g. CryoCuff, ice with compression wrap)</p> <ul style="list-style-type: none"> • every hour for 15 minutes for first 24 hours, until acute inflammation is controlled • After acute inflammation is controlled: 3x per day for 15 minutes or longer as tolerated |
| REHABILITATION: | <p>Frequent use of CryoCuff and/or ice with upper extremity</p> <p>Exercise prescription is dependent upon the tissue healing process and <i>individual</i> functional readiness in <i>all</i> stages. If any concerns or complications arise regarding the progress of any patient, physical therapy will contact the orthopedist.</p> <p>Healing of the cuff tendon to the humerus can take 8 to 12 weeks.</p> <p>Begin the following rehabilitation exercises, as tolerated</p> |
| ~weeks 0-2 | <p>Supported Pendulums in small ranges</p> <p>Elbow, wrist, and hand: ROM & grip strengthening</p> <p>Scapular retractions, shoulder shrugs and scapular depression</p> <p>Shoulder PROM for small and medium tears only (flexion and abduction to 90deg)</p> <p>Aerobic Conditioning on Stationary Bike</p> |
| ~weeks 2-4 | <p>Shoulder PROM for small and medium tears only</p> <p>Gentle (“Two Finger”) Isometrics: pain free resistance, all directions</p> <p>Lower Extremity Weight Lifting: Leg & calf press, hamstring curls, hip abd/add</p> |

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| FOLLOW-UP: | Supervised rehab: 1-2x per week Physical Therapist Re-evaluation: weekly or bimonthly Ortho Re-evaluation: ~2 weeks and ~6 weeks post-op |
| CRITERIA FOR PROGRESSION: | |

| PHASE II: Generally 5-8 Weeks Post-Op | | | | | | | | | | | | | | | | | | | | | |
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| GOALS: | <ol style="list-style-type: none"> 1) No scapular adhesions 2) AAROM flexion and abduction to 120deg for small and medium tears 3) PROM flexion and abduction to 90deg for large and massive tears 4) Full AROM shoulder with normal scapulothoracic motion 5) Full IR with sleeper stretch 6) Full passive ER. | | | | | | | | | | | | | | | | | | | | |
| PRECAUTIONS: | NO regular pushups, heavy lifting, or other sports participation | | | | | | | | | | | | | | | | | | | | |
| ROM & SLING: | ER <30deg in scapular plane, no IR past neutral, no extension past neutral Flexion to 120deg Abduction to 120deg <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Tear Size</th> <th>Sling Use</th> <th>Begin PROM</th> <th>Begin AROM</th> </tr> </thead> <tbody> <tr> <td>Small 0-1cm²</td> <td>4 weeks</td> <td>Immediate</td> <td>4 weeks</td> </tr> <tr> <td>Medium 1-3cm²</td> <td>6 weeks</td> <td>Immediate</td> <td>6 weeks</td> </tr> <tr> <td>Large 3-5cm²</td> <td>8 weeks</td> <td>6 weeks</td> <td>8 weeks</td> </tr> <tr> <td>Massive >5cm²</td> <td>8 weeks</td> <td>6 weeks</td> <td>10 weeks</td> </tr> </tbody> </table> | Tear Size | Sling Use | Begin PROM | Begin AROM | Small 0-1cm ² | 4 weeks | Immediate | 4 weeks | Medium 1-3cm ² | 6 weeks | Immediate | 6 weeks | Large 3-5cm ² | 8 weeks | 6 weeks | 8 weeks | Massive >5cm ² | 8 weeks | 6 weeks | 10 weeks |
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| Massive >5cm ² | 8 weeks | 6 weeks | 10 weeks | | | | | | | | | | | | | | | | | | |
| REHABILITATION: | Continue Phase I exercises as needed Progress to the following exercises and increase intensity gradually when patient is ready (i.e. no increase in shoulder pain or stiffness since the previous exercise session) *Note: all strengthening should be done, starting with low weights, high repetitions, and in a painless ROM* | | | | | | | | | | | | | | | | | | | | |
| <i>~5-6 weeks</i> | AROM and AAROM flexion and abduction to 120deg for small and medium tears: Wand, pulley, towel stretch, sleeper's stretch, etc. AAROM ER supine in scapular plane as tolerated AAROM IR as tolerated <u>if no supscapularis repair</u> Supported pendulums in larger ROM Gentle ("Two Finger") Isometrics: pain free resistance, all directions | | | | | | | | | | | | | | | | | | | | |

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| | <p>Resisted elbow and wrist exercises</p> <p>Prone Scapular Retractions and prone rows to neutral</p> <p>Continue endurance training with elliptical, bike and/or stairmaster</p> |
| ~7-8 weeks | <p>Begin PROM for large & massive tears</p> <p>UBE (little to no resistance)</p> <p>Begin rotator cuff Theraband exercises: ER/IR at 30 degrees shoulder abduction, flexion, and scaptions (thumb up) to 90 degrees</p> <p>AROM, AAROM, stretching as needed</p> <p>Cross arm and sleeper posterior capsule stretches</p> <p>Pectoral stretches</p> <p>ER in sidelying with large towel roll under elbow. Low weight and high repetitions</p> <p>Standing rows with Theraband</p> <p>Prone horizontal shoulder abduction/scapular retraction at 90 degrees</p> <p>Serratus anterior exercises: "Pushouts"</p> <p>Hands and knees weight shifting, ball on wall weight shifting</p> <p>Pool walking/running – no UE resistive devices in pool</p> |
| FOLLOW-UP: | <p>Supervised rehab: 2-3x per week as needed</p> <p>Physical Therapist Re-evaluation: bimonthly</p> <p>Ortho Re-evaluation: ~12 weeks post-op</p> |
| CRITERIA FOR PROGRESSION: | <p>Full ROM</p> <p>Minimal pain and pain-free ADLs</p> |

| PHASE III: Generally 9-12 weeks Post-Op | |
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| GOALS: | <ol style="list-style-type: none"> 1) 50 wall push-ups, 25 bent knee push ups 2) 5/5 strength in RTC muscles 3) Strength 5/5 in scapular stabilizers |
| PRECAUTIONS: | Progress as tolerated |
| REHABILITATION: | <p>Continue Phase II exercises as needed</p> <p>Progress to the following exercises, and increase intensity gradually when patient is ready (i.e. no increase in shoulder pain or effusion since the previous exercise session)</p> <p>Note: All strengthening should be done starting with low weights, high repetitions, and in a painless ROM.</p> |
| Weeks 9-12 | <p>Progress UBE</p> <p>PROM as needed to restore full functional ROM</p> <p>Emphasize muscle fatigue-Continue Theraband, free weights and scapular stabilization exercises with increased resistance as tolerated. Perform all exercises to fatigue 3 times/week.</p> <p>Body Blade, BAPS, supine tubing perturbations for all directions</p> |

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| | <p>Rhythmic scapular stabilization exercises Ball toss with arm at side using lightest ball Push-up progression against the wall Seated lower trapezius press up for scapular depression Elliptical trainer Treadmill walking progression Pool therapy – with UE resistive devices</p> |
| Weeks 13-15 | <p>Continue cuff and scapular strengthening Continue self ROM, pectoral stretching and capsular stretching Progress to 90/90 ER strengthening Continue push-up progression program: to table, to bent knees, to regular Strengthening of biceps, triceps, deltoid, latissimus Low plyometrics: two-handed, overhead, one-handed</p> |
| FOLLOW-UP: | <p>Supervised rehab: 1-2x per week as needed Physical Therapist re-evaluation: monthly Ortho: ~6 months post-op</p> |
| MISCELLANEOUS: | <p>After 12 weeks post-op, exercises in Phase III are continued, gradually increasing intensity and duration as tolerated.</p> |

| PHASE IV: Generally 4-6 Months Post-Op | |
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| GOALS: | <ol style="list-style-type: none"> 1) Pain free ADLs 2) Pass APFT at 6 months 3) Shoulder strength equal bilaterally 4) Pain free functional/sports drills |
| PRECAUTIONS: | <p>No contact sports until 6 months post-op</p> |
| REHABILITATION: | <p>Continue Phase III exercises as needed Progress to the following exercises, and increase intensity gradually when patient is ready (i.e. no increase in shoulder pain or effusion since the previous exercise session)</p> |
| Months 4-6 | <p>Progress into higher level UE dynamic mobility program:</p> <ul style="list-style-type: none"> - Banded “Steering wheel” with TB around forearms - 3 point air taps with TB around forearms - T push ups - Full Plank alternating Lateral Walks - Bear Crawls <p>Gym program: begin weight training starting with light resistance on bench press</p> |

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| | <p>Continue strengthening and stabilization exercises as needed Gravitron – pull-ups and dips Begin functional training/ sports-specific drills:</p> <ul style="list-style-type: none"> - Basketball – dribbling, pass and catch (no overhead), shooting in the key - Frisbee – throw and catch - Racquetball , tennis, ping pong – forehand and backhand (no overhead) - Football catch and underhand throw - Volleyball: bumping, setting and underhand serve <p>When pain free, begin throwing progression and gradually work on overhead sports drills Pool – begin swimming laps May begin jogging progression</p> |
| FOLLOW-UP: | <p>Supervised rehab: 1-2x per week as needed, gradual transition to home program Physical Therapist re-evaluation: monthly Ortho re-evaluation: ~6 months post-op</p> |
| MISCELLANEOUS: | <p>The recommendation is to wait until 6-9 months post-op to return to contact/collision sports or aggressive military training (i.e. airborne school). This time period may be adjusted slightly by the surgeon and therapist according to patient progress.</p> |

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