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# Post-Operative Rotator Cuff Rehabilitation Guidelines

It is important that full range of motion (ROM) is restored while respecting soft tissue healing. Classification and progression are both criteria-based and time based due to the healing constraints of the human body.

The first phase is focused on soft tissue healing and maintenance of pain-free ROM. Phases two and three are focused on building foundational strength and stability which will allow the patient to progress to phase four which includes advanced strengthening.

With the completion of phase four the patient will be able to start the final phase which includes return to previous recreational activities. Cardiovascular endurance, hip and core strengthening should be addressed through the rehabilitation process. The clinician should use their skilled judgement and decision making as progressions may not be linear.

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## POST-OPERATIVE PHASE I: Recovery (Week 0-4)

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| SPECIAL CONSIDERATIONS | ▪ Biceps tenodesis: AROM with neutral wrist, no resisted biceps activity for 8 weeks<br>▪ Massive cuff tear: Remain in phase I for 6 weeks<br>▪ Subscapularis repair: No ER beyond 30° for 6 weeks |
| PRECAUTIONS | ▪ Avoid weight bearing on operative upper extremity<br>▪ No shoulder active range of motion (AROM)<br>▪ Avoid pain during ROM exercises<br>▪ No shoulder external rotation (ER) past 30° depending on surgeon preference<br>▪ Avoid lying on operative side<br>▪ Use sling at all times except when bathing, dressing, icing or performing HEP<br>▪ Use pillows to support operative arm when sitting or sleeping |

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| | ▪ If combined with biceps tenodesis, no biceps strengthening for 8 weeks |
| TREATMENT RECOMMENDATIONS | ▪ Transfer training in and out of bed and sit to stand, and stair training while<br>▪ maintaining non-weight bearing on operative upper extremity<br>▪ Pain-free distal AROM: see guidelines for consideration if biceps tenodesis<br>▪ Shoulder PROM exercises<br>o Passive ER to 30 degree<br>o Codman Exercises<br>o AAROM exercises in supine in plane of the scapula |
| TREATMENT RECOMMENDATIONS (CONT.) | ▪ Scapular mobility and scapular stability exercises (sidelying, progressing to manual resistance)<br>▪ Instruct in semi-reclined sleeping position, avoiding lying on operative side<br>▪ Educate on donning/doffing and proper positioning in sling<br>▪ ADL training |

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| | ▪ Cryotherapy and elevation of upper extremity to prevent swelling<br>▪ Elbow and wrist AROM |
| EMPHASIZE | ▪ Pain and edema control<br>▪ Proper sling positioning and compliance<br>▪ Protection of repair<br>▪ Independent transfers, ambulation and stair negotiation<br>▪ Pain-free HEP |
| MINIMUM CRITERIA FOR ADVANCEMENT TO NEXT PHASE | ▪ Safely transfers unassisted<br>▪ Independent with sling management, or caregiver independent in assisting<br>▪ Independent with ADLs<br>▪ Independent with home exercise program (HEP)<br>▪ Decreasing discomfort at rest |

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# POST-OPERATIVE PHASE II: INTERMEDIATE (Weeks 4-6)

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| PRECAUTIONS | ▪ Follow precautions until cleared by MD<br>▪ Sling to be worn at all times except when exercising, icing, dressing and showering<br>▪ Limit shoulder PROM based on pain and MD guidelines, with emphasis on limiting ER to protect subscapularis repair<br>▪ No shoulder AROM until cleared by MD<br>▪ Avoid severe pain with therapeutic exercise and functional activities<br>▪ Avoid weight bearing through operative upper extremity<br>▪ Avoid holding items greater than 1 lb.<br>▪ Avoid prolonged sling use once discharged by surgeon |
| | ▪ PROM shoulder elevation in scapular plane<br>▪ AAROM shoulder ER with wand in scapular plane within prescribed limits |

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| TREATMENT RECOMMENDATIONS | ▪ Scapular mobility and stability exercises progression to manual resistance<br>▪ Manual scapular clocks<br>▪ Codman's pendulum exercises<br>▪ Distal AROM exercises (unless PROM specified by MD for elbow)<br>▪ Core strengthening<br>▪ Deltoid isometrics<br>▪ ROM Goals (DO NOT FORCE BUT ASSESS FOR STIFFNESS)<br>▪ Week 4<br>o Elevation in scapular plane: 90°<br>o ER in scapular plane: 5°-15°<br>o Internal rotation (IR) in scapular plane: to chest |
| TREATMENT RECOMMENDATIONS (CONT.) | ▪ Week 6<br>o Elevation in scapular plane: 120°<br>o ER in scapular plane: 30°-45°<br>o IR in scapular plane: to chest<br>▪ 0-6 weeks<br>o Abduction 0°-90° (gentle motion) |

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| | ▪ Week 6: Rotator cuff (RC) isometrics<br>o Submaximal rhythmic stabilization ER/IR isometrics |
| EMPHASIZE | ▪ Control swelling<br>▪ Proper donning/doffing of sling and use per MD instruction<br>▪ Protect surgical repair<br>▪ Importance of patient compliance with HEP and protection during ADLs |
| MINIMUM CRITERIA FOR ADVANCEMENT TO NEXT PHASE | ▪ Swelling and pain controlled<br>▪ Passive shoulder ER to 45° in scapular plane<br>▪ Passive shoulder elevation to 120° in scapular plane<br>▪ Tolerance of scapular and RC exercises without discomfort<br>▪ Independent with HEP |

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## POST-OPERATIVE PHASE III: WEEK 7-11

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| PRECAUTIONS | ▪ Avoid pain with ADLs and therapeutic exercise<br>▪ No combined shoulder abduction and ER (pitch motion)<br>▪ No lifting greater than 5 lb.<br>▪ Avoid supporting full body weight on operative upper extremity |
| TREATMENT RECOMMENDATIONS | ▪ D/C sling if still in use<br>▪ Shoulder ROM exercises<br>o AA/PROM using wand: forward flexion and ER, abduction, extension<br>o Initiate AROM in all planes<br>o Posterior capsule stretch<br>▪ Stabilization exercises<br>o Humeral head control exercises<br>o Closed kinetic chain exercises, e.g. ball stabilization begin week 10<br>o Scapular stabilization |

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| | ▪ Strengthening exercises<br>  o Sub-maximal shoulder isometrics, e.g. flexion, extension, external and internal rotation<br>  o Multi-planar deltoid strengthening<br>▪ General upper extremity strengthening<br>  o Prone rows, extension<br>▪ Core strengthening<br>▪ Cervical AROM and upper trapezius stretching<br>▪ Upper body ergometry if motion allows<br>▪ Reeducation of movement patterns<br>▪ Manual therapy as needed, e.g. scapular mobilization, soft tissue mobilization<br>▪ Functional mobility training<br>▪ Modalities for pain and edema<br>▪ Pool therapy if available<br>▪ Progression of HEP |
| EMPHASIZE | ▪ Gradually restore shoulder AROM<br>▪ Restore scapular and rotator cuff muscle balance and endurance |

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| | ▪ Reduce compensatory movements, e.g. overuse of upper trapezius |
| MINIMUM CRITERIA FOR ADVANCEMENT TO NEXT PHASE | ▪ Pain controlled<br>▪ Shoulder AROM in plane of scapula: elevation to 150°, ER to 45°<br>▪ Independent with HEP<br>▪ Restore forward flexion (passive) in scapular plane to full<br>▪ ER (passive) in scapular plane to 70°-90° |

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# POST-OPERATIVE PHASE IV: WEEKS 12-15

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| PRECAUTIONS | ▪ Avoid scapular compensations with AROM<br>▪ No painful activities |
| TREATMENT RECOMMENDATIONS | ▪ Progress shoulder ROM and flexibility to WNL<br>▪ Manual therapy to restore shoulder girdle ROM<br>▪ Address flexibility of thoracic spine<br>▪ Proprioception Neuromuscular Facilitation patterning<br>▪ Progressive resistive exercises for UE, shoulder girdle and core<br>▪ Latissimus pull downs, serratus strengthening, side lying ER<br>▪ Initiate banded ER/IR<br>▪ Initiate closed chain upper body exercises with gradual loading (avoid full body weight) |

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| | ▪ Progress humeral head rhythmic stabilization exercises, e.g. closed chain, upright position, overhead<br>▪ Upper body ergometry and general conditioning<br>▪ Functional training to address patient's goals<br>▪ Progress to more advanced long term HEP |
| EMPHASIZE | ▪ Restore normal ROM and flexibility<br>▪ Restore strength<br>▪ Posterior capsule mobility<br>▪ Reduce compensatory patterning |
| MINIMUM CRITERIA FOR ADVANCEMENT TO NEXT PHASE | ▪ Normal/near normal shoulder motion and flexibility over 90º<br>▪ UE and periscapular muscle strength 4+/5 for control with functional movements<br>▪ Fully independent with ADLs with minimal pain<br>▪ Tolerance to all exercises without discomfort |

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# POST-OPERATIVE PHASE: RETURN TO ACTIVITY (WEEKS 16+)

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| PRECAUTIONS | ▪ Avoid high impact, e.g. contact sports<br>▪ Avoid too much too soon- monitor exercise dosing<br>▪ Note that expert opinion varies widely on allowable sports- consult with MD |
| TREATMENT RECOMMENDATIONS | ▪ Progress humeral head control exercises in a variety of overhead positions<br>▪ Progress isotonic exercises to higher loads as indicated<br>▪ Sustained single arm holds with perturbations<br>▪ Closed kinetic chain progression exercises<br>▪ Progress cardiovascular conditioning<br>▪ Sport-specific multidirectional core retraining<br>▪ Dynamic balance activities |

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| | ▪ Neuromuscular shoulder reeducation for control with dynamic sports-specific exercises<br>▪ Progress total body multidirectional motor control exercises to meet sport-specific demands at 6 months if appropriate<br>▪ Collaboration with trainer, coach or performance specialist |
| EMPHASIZE | ▪ Monitor load progression and volume of exercise<br>▪ Monitor for loss of strength and flexibility<br>▪ Improve muscle strength and flexibility<br>▪ Neuromuscular patterning<br>▪ Collaboration with appropriate Sports Performance expert |
| MINIMUM CRITERIA FOR DISCHARGE | ▪ Independent in long-term sport-specific exercise program<br>▪ Movement patterns, strength, flexibility, motion, power and accuracy to meet demands of sport symptom free |

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- Monitor load progression