Traditional Rehabilitation Protocol for Rotator Cuff Repair

The intent of this physical therapy protocol is to provide the clinician with a guideline of the post-operative rehabilitation course of a patient who has undergone a Rotator Cuff Repair with Ortho Rhode Island. It is by no means intended to be a substitute for one's clinical decision making regarding the progression of a patient's postoperative course based on their physical exam/findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient, the clinician should consult with the referring surgeon.

Phase 1: Immediate Post-Op (3–5 Days – 3 weeks Post-Op)	
Rehabilitation Goals	• Educate patient on physical therapy and recovery • Pain/surgical sequelae management via passive and active modalities • Promote consistent sling use • Protect repair, promote tendon to bone healing • Maintain and progress shoulder PROM within tolerable range • Maintain UE and periscapular PROM and AROM
Sling	• Wear until 6-weeks post-op
Precautions	• No active UE use • Do not support your weight through affected UE.
Interventions	**Modalities:** heat prior to PT, ice after PT **Manual Therapy:** • STM to shoulder/irritable soft tissue of brachium, antebrachium, periscapular muscles and cervical spine. • Scapular mobilizations, thoracic and cervical mobilizations/manipulation. **Range of Motion/Mobility:** • PROM- by therapist- relatively pain free range at this time, address all planes of motion • Stretching- pendulums, ER in neutral, Table slides/walk outs flexion, scaption, abduction, IR BTB towel • ** Subscapularis Repair ER in Neutral Position Only **AROM:** • Elbow/wrist, gripping (ball or towel), shoulder rolls, scapular squeezes, cervical AROM all planes • Thoracic extension/rotation in chair
Criteria to Progress	• Adequate management of surgical sequelae (pain, ecchymosis, edema) • >/=90 degrees of passive elevation of shoulder (flexion/scaption/abduction) • >/=30 degrees of passive ER and IR • Pt consistent with HEP and able to tolerate PROM shoulder exercises

Phase 2: Early Rehab (Weeks 4–6)	
Rehabilitation Goals	• Progress shoulder PROM • Minimize pain • Protect repair • Initiate AAROM • Progress to prone AROM
Precautions	• Initiate AAROM and isometrics no earlier than 4 weeks post-op

Phase 2: Early Rehab (Weeks 4–6) (continued)	
Interventions	**Modalities:** Heat/Ice as needed **Manual Therapy:** STM/cervical and thoracic mobilizations as needed, rhythmic stabilization **Range of Motion/Mobility:** • PROM- address limitations within tolerance • Stretching- supine ER progressive abd > pec stretch low, IR up back, posterior capsule stretch **AAROM:** • Pulleys, supine wand AAROM to 90 (press), sidelying flexion with ball AAROM, standing AAROM flexion/abduction/extension/IR with wand. • Wall walks > wall slides **Isometrics:** • ER/IR/extension/flexion neutral • Reactive isometrics in neutral with light band resistance **AROM:** prone scap retraction > prone row
Criteria to Progress	• Adequate tolerance to progressions, min-mod pain, good muscle activity • AAROM elevation to 90 degrees with min-mod scapular hiking at most • >/=120 degrees of passive elevation of shoulder (flexion/scaption/abduction) • >/=60 degrees of passive ER and IR

Phase 3: Mid-Stage Rehab (Weeks 6–12)	
Rehabilitation Goals	• Normalize PROM • Introduce AROM • Assess strength • Initiate band resistance • Minimal complaints of pain
Precautions	• Avoid lifting more than 10 pounds, continue to avoid weight bearing through affected UE
Interventions	**Modalities:** Heat/Ice: As Needed **Manual Therapy:** As Needed **Range of Motion/Mobility:** • PROM- restore end ranges of motion • Stretching- pec stretch mid/high, sleeper stretch, end range flx and abd wall stretch, foam roller pec stretch **AROM:** • Progression of prone exercises, neutral rot T's, Y's • Supine AROM > SL AROM > standing AROM **Reactive isometrics:** • ER/IR/extension/flexion (can progress into flexion/abduction ranges at this time) • Addition of body blade, addition of wall ball activities **Resistive exercises:** Neutral/pulling motions (extension, mid rows)
Criteria to Progress	• Adequate tolerance to progressions, minimal pain, good muscle activity • Full PROM all planes • Progressive improvement in AROM in all planes • Trace scapular compensation with active motions

Phase 4: Late-Stage Rehab (Weeks 13–16)	
Rehabilitation Goals	• Normalize AROM • Progress resistive exercises • Progressive introduction of activities that appropriately stress repair site • Pending progress and pt confidence, d/c to self-management appropriate in this phase
Precautions	• Avoid repetitive overhead tasks (painting the ceiling), no throwing/plyometric activities

Phase 4: Late-Stage Rehab (Weeks 13–16) (continued)	
Interventions	**Modalities:** d/c or decrease frequency of heat/ice/MT. Dry needling for persistent soft tissue dysfunction **Range of Motion/Mobility:** **PROM/mobility:** continue to address limitations as needed **AROM:** Continuous Articular Rotation (CAR) exercises (full functional IR to full functional ER) in various positions (standing, prone, on ball, sidelying **Reactive isometrics:** Time based oscillation training w/band, body blade, weighted ball etc. in multi-planar patterns **Resistive exercises:** • Progressive introduction of resistance via bands and dumbbells • ER/IR in neutral > flx/abd positions • Band resisted PNF patterns in supine and standing • Keiser resisted exercises such as lat pulldowns and chopping **Weight bearing:** • Bird dog UE only, to UE/LE alt • Front plank on wall > table > stair > flat • Side plank on knees > legs straight > adductor side plank • Wall push up > table push up > stair push up > flat push up > band/bosu/physioball push up **Therapist resisted:** • Supine, side lying and prone. Single plane and then multiple plane motions
Criteria to Progress	• Adequate tolerance to progressions, minimal pain, good muscle activity • Full PROM/AROM all planes • ER/IR strength LSI >/= 80%

Phase 5: Return to Sport/Manual Labor (4–6 Months Post-Op)	
Rehabilitation Goals	• Progress resistive exercises • Maintain end range PROM/AROM • Begin eccentrically resisted motions, plyometrics, proprioception • Initiate sports/work specific rehab ~4.5 months
Precautions	• Unlock brace to 30 degrees of knee flexion for weight bearing at 4 weeks. • Discharge/weaning out of brace by 6-weeks • SLRx10 without quad lag and good tolerance to functional progressions in locked brace
Interventions	**Initial plyometrics:** • Keiser- split stance/half kneeling down chops > upchops • Med ball- both arms forward pass/bent over press slam to ground > single arm, lateral pass/wall slam **Progressive plyometrics:** • Med ball- overhead slams > supine chest pass > supine overhead pass > standing windmill slam • Weighted ball- reverse throw > wall ball ER in abd > straight arm wall ball in flx/abd • Body weight- assisted plyo push up, hands on table plyo push up, plyo eccentric **Return to racket sport/golf/Swimming/Throwing:** • Consider interval return to sport protocols
Criteria to Progress	• Min pain with progressive plyometrics and interval programs • Shoulder strength LSI>/= 90% • Return to throwing at 6 months • Throw from a pitcher's mound 9 months • Collision sports at 9 months • Full Recovery ~ 12 months' post op