Shoulder Small/Medium Rotator Cuff Tear Repair

Purpose:
This guideline is designed to return the individual to their full activities as quickly and safely as possible, following a small-medium Rotator Cuff Repair. Modifications to this guideline may be necessary dependent on physician specific instruction or other procedures performed. This evidence-based guideline is criterion-based; time frames and visits in each phase will vary depending on many factors. The therapist may modify the program appropriately depending on the individual's goals for activity following this surgery.

This guideline is intended to provide the treating clinician a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post-operative care based on exam/treatment findings, individual progress, and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

General Classification of Rotator Cuff Tear Size:
- Small: <1 cm in length
- Medium: 1-3 cm
- Large: 3-5 cm
- Massive: >5 cm

Precautions:
- Immobilizer in place +/- abduction pillow for approximately 4-6 weeks
  - Remove for showering and exercise only
- If patient has a concomitant injury/repair, treatment will vary – consult with surgeon
- Subscapularis Repair:
  - 0-4 weeks: ER to neutral
  - 4-6 weeks: gentle passive ER from neutral to patient tolerance
  - Extension limited to neutral for 6 weeks
  - 6+ weeks: gentle stretching into ER
- Biceps Tenodesis:
  - No active elbow flexion for 6 weeks

Pre-Op:
- Improve ROM and strength to maximize functional return
- Educate patient on appropriate expectation framework for post-op rehab
- Educate patient on appropriate post-op HEP and techniques to complete independent ADLs after surgery

PHASE	SUGGESTED INTERVENTIONS	MILESTONES FOR PROGRESSION
Phase I Weeks 0-4 PROM Progression: • Flexion to at least 90° • External rotation in scapular plane to 30° • IR in scapular plane to 30°	**Precautions:** • Use immobilizer all the times except for performing exercises and showering — Sleep in sling • Avoid forward head, rounded shoulder posture • Avoid extension • Avoid lifting/pulling/pushing • Avoid AROM • Avoid aggressive/painful PROM or stretching **Therapy:** • Shoulder: — Codman's Pendulum – flexion/circles 4-8x daily — PROM flexion in scapular plane to tolerance — ER/IR with shoulder abducted 45° — PNF ⇒ Under therapist supervision, within pain limits — AAROM – supine ER/IR in scapular plane ⇒ Under therapist supervision — At 2-3 weeks: ⇒ Forward bow ⇒ Table slides in scapular plane ⇒ AAROM flexion to tolerance with therapist supporting arm • Elbow/Wrist/Hand: — AROM — Stress ball/theraputty • Cervical spine stretching: — Upper Trapezius — Levator Scapulae — Scalenes • Scapula (with immobilizer in place): — Elevation/depression, retraction/protraction • Posture training • Maintain cardiovascular health with walking, bike • Control of pain and inflammation (ice/IFC as needed) • Mobilization:	**Goals:** • Protect Repair • Initiate PROM • Pain and edema control • Prevent contractures above/below joint **Criteria to Advance:** • Controlled post-op pain • Flexion PROM 90° • ER in Scapular plane 30°

	— Grade I-II joint mobilizations — Thoracic and costovertebral joint mobilizations PRN — Scapular glides	
Phase II Weeks 4-6 PROM Progression: • Flexion: 90-120° • Abduction: 90° • ER: 45° • IR: 45°	**Precautions:** • Continue immobilizer use unless resting at home • Avoid forward head, rounded shoulder posture • Avoid extension • Avoid horizontal adduction **Therapy:** • Shoulder: — PROM ⇒ PROM position progression: supine → 45° semi-reclined → sitting/standing → pulleys (AAROM) ⇒ Flexion: 90-120° ⇒ Abduction: 90° ⇒ ER: 0-45° at modified neutral → progress to abducted position per tolerance at 4 weeks ⇒ IR: be very cautious to avoid tension if infraspinatus repaired ⇒ Gentle, passive pain free supine IR in the plane of the scapula to 30° — AAROM ⇒ Pulleys (1) Normal scapulohumeral rhythm must exist to decrease impingement ⇒ Dowel exercises • Elbow/hand: — Sub-max isometrics elbow flexion/extension in neutral shoulder position • Scapulo-thoracic: — Extension AROM — Continue scapular AROM exercises • Maintain cardiovascular health with walking, bike • L/E and trunk exercises initiated (no bouncing) • Control of pain and inflammation (ice/IFC as needed) • Mobilizations: — Grade I-II joint mobs used for pain relief/relaxation	**Goals:** • Protect repair • Pain and edema control • Gradual improvement in PROM/AAROM **Criteria to Advance:** • Appropriate healing of repair with adherence to precautions, immobilization and exercise protocol • ER PROM: 45° • Flexion PROM: 120°

	— GH, AC, ST, SC — Scapular mobilization — Thoracic PA mobs as needed: seated/supine per tolerance	
Phase III Weeks 6-12 ROM Progression: • PROM within 10° of contralateral side • AROM: — Flexion: 120-180° — Abduction: 150-180° — ER: 70-90° — IR: 45-60 ° — Extension: 30°	**Precautions:** • No aggressive strengthening • Wean from brace according to physician guidelines • Avoid activities over shoulder height • Avoid sudden/ballistic movements • Avoid lifting/pushing/pulling • Avoid horizontal adduction **Therapy:** • Continue previous AAROM exercises for mobility • Low load, long duration passive stretching • Non-resisted UBE for warm-up, minimal reach • PNF patterns, un-resisted • Rhythmic stabilization at 6-8 weeks: — Supine ER/IR in neutral position • Rhythmic stabilization at 8-10 weeks: — Supine flexion/extension 90° — Ball on table 8-10 weeks • Rhythmic stabilization at 10 weeks: — Supine flexion/extension at 120° — Ball on wall near 90° in comfortable ROM • Shoulder: — ER stretching from 30-90° abduction — Shoulder extension to tolerance — Progress to side-lying ER — Wall slides as tolerated in the scapular plane — Initiate (pain-free) sub-max isometrics: ⇒ Start with IR, ER, extension, then abduction & flexion — At 8 weeks: ⇒ Progress to AROM as quality of movement improves ⇒ Gentle IR stretching behind the back to belt line ⇒ Initiate isotonics when 80% AROM achieved • Scapulo-thoracic:	**Goals:** • Preserve the integrity of the surgical repair • Restore muscular strength and balance • Restore functional PROM in all planes with normal movement patterns • Able to tolerate initiation of submaximal, pain-free muscle activation exercise **Criteria to Advance:** • PROM arc within 10° of contralateral side • ROM: no substitution patterns — Flexion: 120-180° (or equal to contralateral side) — Abduction: 150 – 180° w/deviation toward scapular plane — ER: 70 – 90° — IR: 40 – 60° — Extension: 30° without stretching • Minimal/no pain in available ROM

	— Closed chain stability and proprioception at ranges below 60° elevation: ⇒ Large theraball on floor: circles clockwise/counterclockwise +/- pushing into ball — AROM scapular shrugs — Scapular retraction/depression — Prone rowing without resistance — Supine → standing stabilization exercises • Elbow/hand: — Supported sub-maximal Isometric elbow flexion/extension in neutral shoulder position progress to gentle isotonics — At 8 weeks: unsupported 2-5 lb. bicep curls and theraband tricep pull-downs • Maintain cardiovascular health with walking, bike • Mobilizations: — Grade II-IV joint mobs for pain/mobility as necessary — Scar mobilization when completely healed	
Weeks IV Weeks 12-24	**Precautions:** • No uncontrolled movements • Weight lifted must not cause pain or compensatory hiking • Endurance then strength: increase number of repetitions before adding resistance • Avoid pain with activity/exercise • Avoid sudden lifting, jerking, pushing or pulling movements • Avoid heavy lifting above shoulder height • Avoid full and empty can exercises: — Long lever places too much stress on rotator cuff **Therapy:** • Strengthening with theraband/progressive weights: — Initially only to 90° — Scapulo-thoracic — Glenohumeral — Rotator cuff — Biceps/triceps • Closed chain stability exercises (wall push-up) — Advance over time from partial to full weight-bearing	**Goals:** • No pain or tenderness • Independent HEP • Normal motor control **Criteria to Advance:** • Full ROM in all planes with normal mechanics • Muscular strength 75-90% of contralateral side • Quick DASH <10% disability

	• Serratus punch, dynamic hug • Progress to light resistances of PNF patterned strengthening • Prone exercises: — Y,T, I's — Rows — External rotation • Continue ROM/stretching as needed • Continue proprioception and kinesthetic awareness → standing — Ball on wall, rhythmic stabilization, body blade <u>Week 16:</u> • Plyometric exercise (if needed): — 2 handed tosses: waist/chest level → overhead → diagonal (PNF patterns) — 1 handed tosses: begin with shoulder flexion/elbow extension → progress to increased shoulder ABD and ER — Start with towel, beach ball, tennis ball → progress to lightly weighted ball • Gym exercises: — Chest press — Military press — Fly/reverse fly — Lat pull downs • Initiate sport-specific/job related tasks • Swimming/tennis/lifting/carrying • Control of pain and inflammation • Heat before therapy, ice after (as needed) • Mobilizations: — Grade II-IV joint mobilizations for mobility as needed	
Phase V Months 6-9	**Therapy:** • Interval throwing program, interval pitching program • Advance strengthening program+/- plyometric training if required • Sport-specific training: heavy labor or overhead sports • Special considerations for overhead athletes: — Successful progression of interval throwing program to 180 feet with no pain — Consider throwing mechanics assessment	**Criteria to Discharge:** • Therapist/physician clearance • No pain at rest or with activity • Sufficient ROM to meet task demands • Good/full strength and endurance of muscles to complete desired activities • Pass U/E return to sports testing

	— ER/IR Ratio >80% — U/E Return to Sports Testing	