



Massive Rotator Cuff Repair

Post-Operative Rehabilitation Protocol

Sling

Must be worn *at all times* except when sleeping or performing PT/HEP exercises.

Range of Motion

| | PROM | PROM → AAROM | AAROM → AROM |
|-------------------|--------------------------------|---------------------------------|--------------------------------|
| Flexion | 0-8 weeks Max: 90° | 8-10 weeks Max: as tolerated | 10+ weeks Max: as tolerated |
| Extension | 0-8 weeks Max: as tolerated | 8-10 weeks Max: as tolerated | 10+ weeks Max: as tolerated |
| Abduction | 0-8 weeks Max: as tolerated | 8-10 weeks Max: as tolerated | 10+ weeks Max: as tolerated |
| External Rotation | 0-8 weeks Max: 30° | 8-10 weeks Max: as tolerated | 10+ weeks Max: as tolerated |
| Internal Rotation | 0-8 weeks Max: as tolerated | 8-10 weeks Max: as tolerated | 10+ weeks Max: as tolerated |

Resisted/Isotonic Strengthening

Begin at 14-weeks post-op. Avoid overhead strengthening until 22+ weeks post-op.

Return to Sport

No earlier than 6-8 months post-op. Must meet Return-to-Sport criteria outlined in protocol below.

** As tolerated = pain level during exercise is no greater than 2/10 above baseline. Avoid "pushing into pain".

** If subscapularis repair was performed, then ER to neutral for 4 weeks. Unrestricted PROM at 4-6 weeks.

0-8 weeks

- Shoulder abduction sling at all times x 6 weeks
 - Exception: May remove sling for showering, but should maintain arm in sling position
- Active ROM Elbow, Wrist and Hand
- Grip strengthening
- True Passive (ONLY) ROM Shoulder to be initiated in PT at 2 weeks post-op. **NO ACTIVE MOTION.**
 - PROM in flexion to max of 90° in scapular plane.
 - PROM in ER to max of 30° in scapular plane. If subscapularis repair performed, then ER PROM to neutral for 4 weeks.
 - PROM in IR/Abduction/Extension to tolerance.
 - Gentle joint mobilizations (in 30° of abduction in scapular plane) for pain modulation until 4 weeks post-op. Progress as tolerated to address post-operative stiffness.
 - Supine Elevation in Scapular plane = 140°

Shoulder Abduction Sling

Sling on at all times x 6 weeks. Take off only for exercises and hygiene.

ROM Restrictions

PROM only beginning POD 1. No AROM until 6 weeks.



0-8 weeks

- Pendulums
- Thoracic mobility exercises.
- Unresisted scapular stabilization exercises (side-lying on uninjured side with arm supported; seated; standing): retractions, circles, etc.
- No Pulley/Canes until 10 weeks post-op (these are active motions).
- **Criteria to progress to next phase:** Flexion PROM to at least 120°, ER PROM to at least 30° with minimal pain.

8-14 weeks

- Advance from PROM to AAROM weeks 8-10
 - Supine dowel exercises, incline table slides, side-lying supported flexion.
 - Deltoid isometrics in neutral (submaximal to tolerance)
 - Address thoracic mobility.
- Advance from AAROM to AROM weeks 10-14
 - Begin pulleys at week 10 (ensuring proper form)
 - ER/IR Isometrics in neutral (submaximal to tolerance)
 - Progress to resisted scapular strengthening exercises.
 - May begin horizontal adduction and functional IR (hand behind the back) at week 11. Do not push beyond light stretch sensation.
- Elevation in scapular plane and external rotation to tolerance.
- Light stretching at end ranges
- Cuff Isometrics with the arm at the side
- Upper Body Ergometer
- **Criteria to progress to next phase:** FULL flexion and ER PROM, Flexion AROM to at least 115° or more with proper glenohumeral rhythm, Ability to perform light, non-repetitive activities of daily living or work tasks below shoulder level without difficulty/pain.

14+ weeks

- Advance to full ROM as tolerated with passive stretching at end ranges. Maintain full PROM.
- Continue grade III and IV joint mobilizations (in maximally available ER and abduction) as indicated.



14+ weeks

- Advance strengthening as tolerated: isometrics, bands, and light weights (1-5lbs); 8-12 reps for 2-3 sets per rotator cuff, deltoid, and scapular stabilizers. No overhead strengthening until 22 weeks post-op.
- Only do strengthening 3x/week to avoid rotator cuff tendonitis.
- Begin eccentrically resisted motions, plyometrics (ex. weighted ball toss), proprioception (ex. body blade)
- Initiate weight-bearing exercises (incline shoulder taps/weight-shifting→quadruped→full)
- Limit long-lever (elbow extended) resistance > 2 lbs. with abduction-based exercises.
- Progress scapular strengthening.
- Begin sports related rehab at 4½ months, including advanced conditioning.
- **Criteria to progress to discharge PT:**
 - Full AROM as compared to uninvolved side.
 - Pain-free with activities of daily living.
 - >80% RTC strengthening as compared to uninvolved side using handheld dynamometer (may consider testing ER at varying degrees of abduction based on sport-specific goals).
- **Criteria to progress to sport-specific training or jobs requiring heavy manual labor:**
 - Criteria listed above.
 - ER/IR Ratio between 65-70%
 - ER/BW Ratio 15%
 - IR/BW Ratio 25%

22+ weeks

- Return to sport phase. Cannot fully return to sport until at least 6 months post-op.
- Progress with sport-specific strength and endurance exercises or interval training program (depends on sport involved).
- Proprioception training (alternating isometrics in sport-specific positions).
- Plyometric-based exercises (progress from two-hand to one-hand movements, work through frontal/sagittal/transverse planes).



6+ months

- Return to throwing at 6 months post-op.
- Throw from pitcher's mound at 9 months post-op.
- Collision sports at 9 months post-op.
- MMI is usually at 12 months post-op.

Criteria to Return to Unrestricted Play

- >90% sport-specific testing as compared to uninvolved side.
- <37 on Tampa Scale of Kinesiophobia.
- >90% strength as compared to uninvolved side.
>100% if affected side is dominant arm.

Functional Sports/Upper Body/Sports Assessment

- May begin throwing at 6 months (Interval Throwing Program)
 - Throwing Prep Screen prior to initiating throwing.
 - Schedule via spc@rushortho.com or QR Code
 - Throwing Assessment when throwing at 80% + effort or on the mound.
 - Schedule via spc@rushortho.com or QR Code
- For non-throwing patients, Upper Body Assessment when initiating return to activity progression.
 - Schedule via spc@rushortho.com or QR Code





| Exercise | Week | | | | | | | | | | | | | | |
|--|------|---|---|---|---|---|---|---|---|----|----|----|----|----|--|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 16 | 20 | 24 | |
| Initial Exercises: | | | | | | | | | | | | | | | |
| Active ROM: Elbow, Wrist, & Hand | █ | | | | | | | | | | | | | | |
| Pendulums | █ | | | | | | | | | | | | | | |
| Supine Elevation in Scapular Plane (140°) | █ | | | | | | | | | | | | | | |
| Scapular Stabilization | █ | | | | | | | | | | | | | | |
| Deltoid Isometric in Neutral | █ | | | | | | | | | | | | | | |
| Passive ROM | █ | | | | | | | | | | | | | | |
| Pulley/Cane Exercises | | | | | | | | | | █ | | | | | |
| Maintain Sling | █ | | | | | | | | | | | | | | |
| Advanced Exercises: | | | | | | | | | | | | | | | |
| Begin Assisted Active ROM | | | | | | | | █ | | | | | | | |
| Begin Active ROM | | | | | | | | | | █ | | | | | |
| Cuff Isometrics | | | | | | | | █ | | | | | | | |
| Light Stretching at End Ranges | | | | | | | | █ | | | | | | | |
| Upper Body Ergometer | | | | | | | | █ | | | | | | | |
| Eccentrically Resisted Motions/Plyometrics | | | | | | | | | | | | █ | | | |
| Sports-related Rehab | | | | | | | | | | | | █ | | | |
| Cardiovascular Exercises: | | | | | | | | | | | | | | | |
| Bike | █ | | | | | | | | | | | | | | |
| Elliptical Trainer | | | | | | | | █ | | | | | | | |
| Rowing | | | | | | | | | | | | █ | | | |
| Stair Stepper | | | | | | | | █ | | | | | | | |
| Agility Exercises: | | | | | | | | | | | | | | | |
| Running Progression | | | | | | | | | | | | █ | | | |
| Functional Sports Test | | | | | | | | | | | | █ | | | |
| High Level Activities: | | | | | | | | | | | | | | | |
| Golf Progression | | | | | | | | | | | | | | | |
| Return to Throwing | | | | | | | | | | | | | | | |
| Return to Throwing @ Pitcher's Mound at 9 months | | | | | | | | | | | | | | | |
| Return to Full/Collision Sport at 9 months post-op. | | | | | | | | | | | | | | | |