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# Rotator Cuff Repair

# **Post-Operative Rehabilitation Protocol**

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

Range of Motion

**PROM** PROM → AAROM AAROM → AROM Flexion 0-6 weeks 6-8 weeks 8+ weeks Max: as tolerated Max: as tolerated Max: as tolerated Extension 0-6 weeks 6-8 weeks 8+ weeks Max: as tolerated Max: as tolerated Max: as tolerated Abduction 0-6 weeks 6-8 weeks 8+ weeks Max: as tolerated Max: as tolerated Max: as tolerated 8+ weeks **External Rotation** 0-6 weeks 6-8 weeks *Max*: 60° Max: as tolerated Max: as tolerated Internal Rotation 0-6 weeks 6-8 weeks 8+ weeks Max: as tolerated Max: as tolerated Max: as tolerated

Resisted/Isotonic Strengthening

Begin at 12-weeks post-op. Avoid overhead strengthening until 20+ weeks post-op.

**Return to Sport** 

No earlier than 6-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".

#### 0-4 weeks

- Shoulder abduction sling at all times x 4 weeks
  - Exception: May remove sling for showering, but should maintain arm in sling position
- Active ROM Elbow, Wrist and Hand
- Grip strenthening
- True Passive (ONLY) ROM Shoulder to be initiated in PT at 2 weeks post-op. <u>NO ACTIVE MOTION</u>.
  - PROM to patient tolerance in scapular plane.
  - 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°
  - Emphasize External Rotation to tolerance with arm at side. (Minimum goal 40°; Maximum of 60°)
- Deltoid isometrics in neutral (submaximal) as ROM improves.

# Shoulder Abduction Sling

Sling on at all times x 4 weeks. Take off only for exercises and hygiene.

## **ROM Restrictions**

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

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#### 0-4 weeks

- Pendulums
- Unresisted scapular stabilization exercises (sidelying on uninvolved side with arm supported; seated; standing): retractions, circles, etc.
- No Pulley/Canes until 6 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.

#### 4-6 weeks

- Discontinue abduction sling at 4 weeks post-op.
- Elevation in scapular plane and external rotation as tolerated.
- No active Internal rotation or behind back until 6 weeks post-op.
- Begin Cuff Isometrics at 6 weeks with arm at the side.

## 6-12 weeks

- Advance from PROM to AAROM weeks 6-8
  - Supine dowel exercises, incline table slides, sidelying supported flexion.
  - Deltoid isometrics in neutral (submaximal to tolerance)
  - Address thoracic mobility.
- Advance from AAROM to AROM weeks 6-8
  - Begin pulleys at week 8 (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 9. Do <u>not</u> 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.



## 3-5 months

- 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.
- 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 20 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%

#### 5+ months

- 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).



## 5+ months

- Plyometric-based exercises (progress from two-hand to one-hand movements, work through frontal/sagittal/transverse planes).
- 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.</p>
- >90% strength as compared to uninvolved side.>100% if affected side is dominant arm.

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Exercise	Week													
	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Initial Exercises:	1							1		I			<u> </u>	
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:	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Begin Assisted Active ROM														
Begin Active ROM														
Cuff Isometrics														
Light Stretching at End Ranges														
Upper Body Ergometer														
Eccentrically Resisted Motions/Plymotrics														
Sports-related Rehab														
Cardiovascular Exercises:	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Bike			<u>,                                     </u>	•					•					
Elliptical Trainer														
Rowing														
Stair Stepper														
Agility Exercises:	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Running Progression														
Functional Sports Test														
High Level Activities:	1	2	3	4	5	6	7	8	9	10	12	16	20	24
Golf Progression														
Return to Throwing														
Return to Throwing @ Pitcher's Mound at 9 months														
Return to Full/Collision Sport at <b>9 months</b> post-op.														