Open Shoulder Rotator Cuff Repair
Rehabilitation Program

The physical therapy rehabilitation for shoulder rotator cuff repair will vary in length depending on factors such as:

1. Degree of shoulder instability
2. Acute versus chronic condition
3. Length of time immobilized
4. Strength/ROM status
5. Performance/activity demands

Initial 3 Weeks Post-Op

1. Patient is immobilized for initial 3 weeks
2. Immobility may be removed for gentle passive ROM exercises (flexion, abduction, external rotation)
3. Pendulum exercise (codmans)
4. Active ROM of motion for shoulder internal/external rotation (arms are positioned at side with elbows extended)
5. Shoulder shrug exercises
6. Ball Squeezes
7. NO active shoulder flexion or abduction in the first month

3-5 Weeks Post-Op

1. Patient no longer required to wear immobilizer
2. Use of modalities as needed (Heat, ice, electrotherapy)
3. Continue Passive ROM exercises. Active-assistive (wall climbs, wand) and active ROM exercises may be added
4. Add joint mobilization as needed
5. Isometric exercises-internal/external rotation, abduction, flexion, extension
6. Active internal/external rotation exercises with rubber/surgical tubing (as tolerated)
7. Active shoulder extension lying prone or standing (bending at the waist). Avoid the shoulder extended position by preventing arm movement beyond the plane of the body
8. Active horizontal abduction (supine) is tolerated

6-8 Weeks Post-Op

1. Continue shoulder ROM exercises (passive, active-assistive, and active) as needed
2. Continue active internal/external rotation exercises with rubber tubing. As strength improves, progress to free weights
   External Rotation: External Rotation may be performed while lying prone with arm abduction to 90 degrees or side lying with the arm at your side. Perform movement through available range.
   Internal Rotation: Internal rotation is performed supine with the arm at the side and elbow flexed 90 degrees
3. Active shoulder abduction from 0-90 degrees
4. Add supraspinatus strengthening exercise if adequate ROM is available (0-90). The movement should be pain-free and performed in the scapular plane (approximately 20-30 degrees forward of the coronal plane)
5. Active shoulder flexion through available range of motion (as tolerated)

2-3 Months Post-Op

1. Continue shoulder ROM exercises (as needed). Patient should have full passive and active ROM
2. Continue isotonic exercises with emphasis on eccentric strengthening of the rotator cuff.

3. Add push-ups. Movement should be pain-free. Begin with wall push-ups. As strength improves, progress to floor push-ups (modified hands and knees, or military-hands and feet) as tolerated.
4. Add shoulder bar hang exercises to increase ROM in shoulder flexion and abduction (as needed)
5. Active horizontal abduction (prone)
6. Add strengthening exercises to allow the elbow and wrist to join (as necessary)
7. Upper extremity PNF patterns may be added. Shoulder flexion/abduction/external rotation and extension/adduction/internal rotation diagonals are emphasized.

4 Months Post-Op

1. Add advanced capsule stretches as necessary
2. Continue to progress isotonic exercises
3. Isokinetic exercises. Isokinetic strength and endurance training (high speeds – 200 plus degrees/sec). For shoulder internal/external rotation (arm at sides), abduction/adduction, and horizontal abduction/adduction may be added. Prerequisite strength requirements of the rotator cuff are 5-10 pounds for external rotation and 15-20 pounds for internal rotation.
4. Add arm ergometer for endurance training.
5. Add military press exercise

5 Months Post-Op

1. Perform isokinetic strength and endurance test (as tolerated). Suggested movement patterns for testing are shoulder internal/external rotation (arm at side), abduction/adduction, and horizontal abduction/adduction. The shoulder should be pain free and have no significant amount of swelling.
2. As strength improves, continue to increase weight resistance and high speed training with isotonic and isokinetic exercises. For shoulder internal/external rotation, gradually increase the stress to the shoulder by exercising in the functional shoulder position (progress from 0 to 45 to 80 to 90 degrees of shoulder abduction as tolerated)
3. Continue to emphasize the eccentric phase in strengthening the rotator cuff
4. Add total body conditioning program- strength and endurance. Include flexibility exercises as needed.

6 Months Post-Op

1. Continue strengthening program. Emphasis may be placed on exercising the shoulder in positions specific to the sport. Isokinetic test for the patterns should demonstrate at least 80% strength and endurance (as compared to the uninvolved side) before proceeding with exercises specific to activity setting.
2. Continue total body conditioning program with emphasis on the shoulder (rotator cuff).
3. Skill mastery. Begin practicing skills to the activity (work, recreational activity, sport, etc.). For example: throwing athletes (i.e. pitchers) may proceed to throwing program.
4. Progressive shoulder Throwing Program. Advance through the throwing sequences as needed. Guidelines: It is important to use heat prior to stretching. (i.e. hot pack, whirlpool, hot showers, etc.) Heat increases circulation and activates some of the natural lubricants of the body. Perform stretching exercises after applying the heat modality and then proceed with the throwing program. Use ice after throwing to reduce cellular damage and decrease the inflammatory response to micro trauma. Proceed with tossing the ball (no wind-up) on alternate days, not more than 20 feet, for 10-15 minutes.

Additional Rehabilitation for the Throwing Athlete

6½ Months Post-Op

Easy tossing 30-40 feet, no wind-up, on alternate days, for 10-15 minutes

7 Months Post-Op

1. Add other endurance activities (i.e. jogging, biking) to the total body conditioning program
2. Continue stretching and strengthening exercises to the wrist, elbow, and shoulder
3. Chin up exercise.
4. Swimming may be added as part of the exercises program (butterfly stroke is NOT recommended)
5. Lob the ball (playing catch with an easy wind up on alternate days, throwing the ball not more than 30 feet). Lobbing should be limited to 2 to 3 times per week and 10-15 minutes per session

8 Months Post-Op

Increase the throwing distance to 40 feet while still lobbing the ball (easy wind-up). Alternate on the throwing and strengthening program. Increase the throwing time to 15-20 minutes per sessions.

8½ Months Post-Op

Increase the throwing distance to 60 feet while still lobbing the ball with an occasional straight throw at not more than ½ speed. Increase the throwing time to 20 minutes per session.

9 Months Post-Op

Perform long, easy throws from the mid-outfield (150-200 feet), getting the ball barely back to home 5-6 bounces. This is to be performed for 20-25 minutes per session on two consecutive days. Then rest the arm for one day.

Repeat 4 times over a 12 day period then progress to the next step if able to complete it without pain or discomfort.

THROW two days
REST one day
THROW two days
REST one day
THROW two days
REST one day
THROW two days
REST one day

If problems arise, contact your physical therapist, athletic trainer, or physician.

9 ½ Months Post-Op

Step 2: Long, easy throws from the deepest portion of the outfield, with the ball barely getting back to home plate on numerous bounces. This is to be performed for a 25-30 minutes per session on two consecutive days. Then rest the arm for one day. Repeat the routine over a 12 day period and progress to the next step if there is no pain or discomfort.

10 ½ Months Post-Op

Step 4: Short crisp throws with a relatively straight trajectory from the short outfield on one bounce back to home plate. These throws are to be performed not more than 30 minutes on two consecutive days. Rest one day. Repeat this step over the next two weeks.

11 Months Post-Op

Step 5: Return to throwing from your normal position (i.e. mound). The throw should be at one-half to three-fourths speed with emphasis on technique and accuracy. Throw for two

consecutive days then rest the arm for one day. A throwing session should not be more than 25 minutes. Repeat this step over the next two weeks, then advance if there is no pain or discomfort.

11 ½ Months Post-Op

Step 6: Throw from your normal position at three-fourths to seven-eighths speed. This should be done following the same sequence, throwing for two consecutive days and resting for one day over a 12 day period. Throwing should not be more than 30 minutes.

12 Months Post-Op

Step 7: Continue to throw from your normal position at three-fourths to full speed. This should be done over the next two weeks following the same pattern. Slowly increase the time throwing from your normal position.

12 ½ to 14 Months Post-Op

Step 8: Simulate game-day situation. Warm-up with appropriate number of pitches and throw for an average amount of innings taking usual rest breaks between innings. Repeat simulation a couple of times with 3 to 4 days rest.

Return to the normal pitching regimen or routine based on input from the team physician, physical therapist, athletic trainer, coach, and most important of all, the athlete.