Connecticut Orthopaedics

Dr. Ruwe Rotator Cuff Repair Protocol

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

1. Degree of shoulder instability/laxity.
2. Acute versus chronic condition.
3. Strength/Range of motion status.
4. Length of time immobilized.
5. Performance/Activity demands.

INITIAL 3 WEEKS POST-SURGERY:

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

3-5 WEEKS POST-SURGERY:

1. Patient no longer required to wear immobilizer.
2. Use of modalities as needed (heat, ice, electrotherapy)
3. Continue passive range of motion 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 adduction (supine) as tolerated.

Connecticut Orthopaedics

6-8 WEEKS POST-SURGERY:

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 lying prone with arm abducted to 90 degrees or side-lying with the arm at side. Perform movement through available range.
Internal rotation: internal rotation is performed supine with the arm at the side and elbow flexed at 90 degrees.
3. Active shoulder abduction from 0-90 degrees.
4. Add supraspinatus strengthening exercise of adequate ROM is available (0-90 degrees. 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-SURGERY:

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 exercise to increase ROM in shoulder flexion and abduction as needed.
5. Active horizontal abduction (prone).
6. Add strengthening exercises to the elbow and wrist joint 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-SURGERY:

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 side),

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-SURGERY:

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 80-9- 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-SURGERY:

1. Continue strengthening program. Emphasis may be placed on exercising the shoulder in positions specific to the sport. Isokinetic test results for the shoulder patterns should demonstrate at least 80% strength.