

Reverse Total Shoulder Replacement Post Operative Therapy.

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Background

The Reverse Shoulder Arthroplasty is a specific type of shoulder replacement. It involves reversing the normal anatomy of the shoulder by placing the ball on the socket, and the socket is placed in the position of the humeral head. This biomechanically allows shoulder motion even when the rotator cuff is not working.

The indications for a reverse total shoulder replacement include: shoulder arthritis associated with massive rotator cuff tears, irreparable rotator cuff tears, complex proximal humerus fractures, revisions of previous shoulder replacements.

The reverse shoulder replacement was originally introduced by Dr. Gramont in France in 1985. These operations have been performed in the United States since FDA approval in 2004. The results of this operation are very promising but its use is still approached with caution.

Restrictions

The reverse shoulder replacement does not have long term follow up, and complications when they occur can be severe. Therefore, we try to avoid scenarios that could result in fracture or dislocation. The following are life-time restrictions.

1. Patients should not lift more than 25 lbs overhead with the operated arm
2. Patients should not use the operated arm for upper extremity weight bearing
3. Patients should not forcefully stretch the arm in adduction/ internal rotations as in reaching up the back. (position of instability)
4. Patients should not forcefully stretch in combined extension, external rotation (position of instability)

Therapy Protocol

Acute Phase (0-2 weeks)

Goals: Soft tissue healing, and reduction of pain.

Sling Wear: Patients should wear the sling at all times except when showering or exercising. When the sling is removed to shower, the hand should be left on the belly.

Patients may continue to ice three times per day for twenty minutes.

Exercises:

Codman exercises may be performed.

Hand, Wrist, Elbow AROM

Phase 1 (2-6 weeks)

Goals: Increase PROM.

Precautions:

Stretching exercises should not be forceful. Each patient will achieve a different range of motion.

External rotation stretches at the side should be limited to twenty degrees unless otherwise specified.

Shoulder extension and internal rotation adduction (hand behind back) should be avoided.

Sling: Patients should continue to wear sling at all times except when showering or exercising.

Exercises:

Codman exercises

Supine Passive Forward Elevation to 120 degrees

External Rotation to 20 degrees

Scapular Mobilization (shoulder shrugs, scapular retraction))

Phase 2 (6-12 weeks)

Goals: Begin AROM, continue to increase PROM.

Precautions: Avoid placing hand behind back. Avoid combined extension external rotation. No external rotation beyond 30 degrees.

Sling Wear: Patients may discontinue sling wear and attempt normal arm swing when walking.

Exercises:

Continue passive ROM exercises (No restrictions on forward elevation).

Begin AAROM using doorway pulley, Begin AROM (elevation) in supine position and then progress with supine inclination. Begin deltoid and pectoral strengthening using supine press with progressive inclination.

Have patient perform twenty supine bench press motions with no weight, then with 2lb weights. When able to perform twenty repetitions increase angle of seat inclination by twenty degrees and repeat process. Perform at supine, 20 deg, 40 deg, 60 deg, 80 deg.

Restrictions:

No external rotation beyond 30 degrees

No stretching up behind the back

Phase 3 (12 weeks and beyond)

Goals: Increase AROM of shoulder and increase strength.

Precautions: No lifting more than 25 lbs.

Exercises:

Continue AROM, AAROM with pulley. Patients may work on AROM to place hand behind back with caution.

Strengthening with progressive incline supine press

Strengthening with deltoid isometrics,

Progress to light weights 1-5lbs of forward elevation in scapular plane