

Orthopaedic Sports Specialists, P.C.

Michael E. Joyce, M.D. and Alex G. Dukas, M.D.

84 Glastonbury Blvd., Suite 101, Glastonbury, Connecticut 06033

Voice: 860-652-8883, Fax: 860-652-8887

Post Operative Rehabilitation Protocol:

Reverse Total Shoulder Replacement

GOAL:

This rehabilitation program's goal is to return the patient to their activity/sport as quickly and safely as possible. In regard to Reverse Total Shoulder Arthroplasty, early restrictions revolve around allowing the subscapularis repair to heal, avoiding instability of the implant and allowing the implant bone interface to mature. It is important early on to follow certain restrictions and avoid instability and injury to the repair site. If too much strain is placed onto the shoulder too early, the prosthesis can potentially become unstable. If this happens, revision surgery would be necessary. The program is based on muscle physiology, biomechanics, anatomy, and the healing process following surgery for a Reverse Total Shoulder Arthroplasty.

The rehab process is divided into 3 phases:

First Phase (week 1–4): The main goals are to protect the implant (and reconstructions) and prevent stiffness. Parallel to this, the ingrowth of the implant and its connection to the bone should be supported. Mainly passive and assistive exercises are conducted during this time.

Second Phase (week 4–12): This period focuses on regaining function and returning to ADL. Therefore, more complex exercises related to daily life are performed. In addition, the development of strength is important in this phase.

Third Phase (week 12–16): Advanced strengthening and an increase in daily activities play an important role in this phase. Special emphasis is placed on proprioception and strength endurance. As the patient progresses to the end of third phase they are introduced to a return to full daily activities and/or sports and a logical stepwise manner.

I. Phase One – Immediate Motion Phase (Weeks 0-4)

Goals: (1) *Increase passive range of motion*
(2) *Decrease post-operative pain/inflammation*
(3) *Retard muscle atrophy*

A. Week 0-2

1. Abduction sling use
2. ***Precautions – AVOID the following:***
 - a. *Combination of IR + ADD + Extension*
 - b. *Combination of excessive ABD + ER, horizontal abduction*
3. Pendulum exercises
4. Passive range of motion
 - a. Flexion and elevation in scapular plane (0-90 degrees)
 - b. ER in scapular plane (0-20 degrees)
 - c. Abduction (0-45 degrees)
5. Elbow/wrist/hand active range of motion
6. Gripping exercises
7. Frequent cryotherapy application

B. Week 2-4

1. Sling use (Physician determines D/C ABD pillow)
2. ***Precautions – Follow same as listed above****
3. Continue all exercises listed above
4. Passive range of motion
 - a. Flexion and elevation in scapular plane (90-120 degrees)
 - b. ER (in scapular plane) to tolerance recognizing soft tissue restrictions
 - c. Abduction (45-90 degrees)
5. Rope and pulley (can start 2nd week)
 - a. Flexion and elevation in scapular plane
6. Active assisted range of motion exercises with L-bar
 - a. Flexion and elevation in scapular plane
 - b. ER
7. Initiate pain-free submaximal isometrics for:
 - a. Deltoid (in scapular plane)
 - b. Elbow flexors/extensors
 - c. ER/IR (in scapular plane)
8. Continue frequent cryotherapy

II. Phase Two – Active Motion and Early Strengthening Phase (Weeks 4-12)

Goals: (1) *Improve range of motion*
(2) *Improve shoulder strength*
(3) *Decrease pain/inflammation*
(4) *Increase functional activities*

****Patient must be able to tolerate PROM, AAROM, and isometric exercises without pain in order to initiate active range of motion and light strengthening exercises***

A. Week 4-6

1. Sling use
2. Progress PROM/AAROM as tolerated
 - a. Initiate PROM for IR in scapular plane (0-30 degrees) week 6
3. Begin AROM in supine and progress to sitting/standing as appropriate
 - a. Flexion and elevation in scapular plane
 - i. Supine to full available range
 - ii. Seated 45-90 degrees, progress to standing
 - b. Seated abduction (0-90 degrees)
 - c. ER/IR
4. Gentle rhythmic stabilization/alternating isometric exercises (week 6)
5. Continue frequent cryotherapy application

B. Week 6-12

1. Discontinue sling
2. Continue above program and progress functional exercises to improve patient's performance of light ADLs.
3. PROM:
 - a. Flexion to 120-140 degrees
 - b. ER to 30-40 degrees
 - c. IR to 40-50 degrees
 - d. Abduction to 90 degrees
4. Progress pain-free AROM as appropriate
5. Initiate light isotonic strengthening with exercise tubing (week 6-8)
 - a. Rows
 - b. ER/IR
 - c. Extension
6. Sidelying ER/IR AROM as tolerated
7. Dumbbell biceps/triceps
8. Gentle pain-free joint mobilization (week 6-8)
9. Continue cryotherapy as needed
10. Goal of pain-free AROM flexion 90-120 degrees, ER of 20-30 degrees

III. Phase Three – Advanced Strengthening Phase (Week 12+)

***Initiation of this phase begins when patient exhibits:**

- 1) PROM: Flexion to 120 degrees

ER to 30-40 degrees
IR to 40-50 degrees

2) Strength level 4/5 for Flexion, ER/IR, Abduction

***NOTE: Some patients may not enter this phase**

Goals: (1) *Improve strength of shoulder musculature*
(2) *Improve and gradually increase functional activities*

A. Week 12-16

1. Continue pain-free isotonic strengthening with exercise tubing
 - a. Rows
 - b. ER/IR
 - c. Extension
2. Initiate light isotonic dumbbell strengthening (1-3 lbs)
 - a. Flexing and elevation in plane of scapula
 - b. Abduction
 - c. Sidelying ER/IR
3. Continue flexibility/stretching exercises
 - a. L-bar exercises – Flexion, ER/IR, elevation in scapular plane