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## PHYSICAL THERAPY PROTOCOL REVERSE TOTAL SHOULDER ARTHROPLASTY

### Procedure

Date of Surgery: \_\_\_\_\_ R L B/L Reverse Total Shoulder Arthroplasty  
[ ] For OA/Cuff Tear [ ] For proximal humerus fracture  
[ ] For Revision Arthroplasty

Additional Procedures: \_\_\_\_\_

### Plan

Physical Therapy for R L B/L Shoulder 2-3x per Week x 12 Weeks

### General Guidelines

The intent of this protocol is to provide the physical therapist with a guideline/treatment protocol for the postoperative rehabilitation management for a patient who has undergone a Reverse Shoulder Arthroplasty (RSA). It is not a substitute for a physical therapist's clinical decision making regarding the progression of a patient's postoperative rehabilitation based on the individual patient's physical exam/findings, progress, and/or the presence of postoperative complications. If the physical therapist requires assistance in the progression of a postoperative patient who has had RSA the therapist should consult with the referring surgeon.

The *scapular plane* is defined as the shoulder positioned in 30 degrees of abduction and forward flexion with neutral rotation. ROM performed in the scapular plane should enable appropriate shoulder joint alignment.

#### **Shoulder Dislocation Precautions:**

- o No shoulder motion behind back. (NO combined shoulder adduction, internal rotation, and extension.)
- o No glenohumeral (GH) extension beyond neutral.  
\*Precautions should be implemented for 6 weeks postoperatively unless surgeon specifically advises patient or therapist differently.

**Surgical Considerations:** The surgical approach needs to be considered when devising the postoperative plan of care.

- o Deltopectoral approach
- o Unless stated otherwise by the surgeon a RSA is completed via deltopectoral approach, which minimizes surgical trauma to the anterior deltoid.
- o An incision is made from the coracoid, extending 5cm distally along the deltopectoral groove. The cephalic vein is mobilized and the deltoid is gently retracted laterally. Meticulous care is taken to protect injury to the deltoid muscle. The biceps tendon is released and later tenodesed. If intact, the subscapularis tendon is peeled off the lesser tuberosity allowing for exposure of the humeral head.

#### **Delayed Start of Therapy:**

The start of this protocol is delayed 2-4 weeks for a revision surgery.

In the case of delayed start to physical therapy adjust below timeframes so that day 1 is the first day of physical therapy.

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## Phase I - Immediate Post-Surgical and Initiation of Range of Motion Phase (Day 1-6 weeks)

### Goals:

- Patient and family independent with:
- Joint protection
- Passive range of motion (PROM)
- Assisting with putting on/taking off sling and clothing
- Assisting with home exercise program (HEP)
- Cryotherapy
- Promote healing of soft tissue / maintain the integrity of the replaced joint.
- Enhance PROM.
- Restore active range of motion (AROM) of elbow/wrist/hand.
- Independent with activities of daily living (ADL's) with modifications.
- Independent with bed mobility, transfers and ambulation or as per pre-admission status.

### Precautions:

- Sling is worn for 2 weeks postoperatively and only removed for exercise and bathing once able. The use of a sling maybe extended for a total of 6 weeks, if the current RSA procedure is a revision surgery or for fracture management.
- While lying supine, the distal humerus/elbow should be supported by a pillow or towel roll to avoid shoulder extension.
- Patients should be advised to "always be able to visualize their elbow while lying supine."
- No lifting of objects with operative extremity. ☒ No supporting of body weight with involved extremity.
- May shower on post op day 1.
- Outside of showering, keep the incision clean and dry.
- No soaking/submerging for 2 weeks;
- No whirlpool, fresh or salt water for 4 weeks.

### Activity:

#### Day 1- 2 weeks

- Insure patient is independent in bed mobility, transfers and ambulation.
- Insure proper sling fit/alignment/use.
- Active/Active Assisted ROM (AROM/AAROM) of cervical spine, elbow, wrist, and hand.
- Continuous cryotherapy for first 72 hours postoperatively, then apply as needed for pain

#### 2 weeks to 6 weeks:

- Continue all exercises as above
- Continue to maintain precautions of combined internal rotation and extension (reaching behind back) as well as no lifting heavier than 1-2 lbs
- Passive Range of Motion (PROM) typically begins at 2 weeks:
- Forward flexion and elevation in the scapular plane in supine to 120 degrees.
- ER in scapular plane to tolerance, respecting soft tissue constraints.
- No internal rotation
- Gentle resisted exercise of elbow, wrist, and hand
- May begin gentle pain free scapular pinches
- **Begin to wean from sling at 2 weeks post-op**
- May also begin pain free sub-max deltoid isometrics at this time
- May use arm for pain free waist level activities

- Active Assisted Range of Motion (AAROM) typically begins at 2 weeks
  - Forward flexion and elevation in scapular plane in supine with progression to lawn chair then to standing
  - ER in scapular plane in supine
- Active Range of motion (AROM) typically begins at 3 weeks
  - Based on response to AAROM
  - Progress from supine to lawn chair to standing
- Manual Therapy
  - Soft tissue massage upper trapezius, pec minor, scapular stabilizers
  - Desensitization scar tissue

## Phase II – Restoration of Functional Motion - Weeks 6 to 8

### Goals:

- ROM goals to be achieved by week 8
- Forward elevation 0-140° degrees
- ER 0-30° in neutral
- Functional external rotation (to mouth and behind head)
- Internal rotation not beyond 50 degrees in scapular plane or back pocket (initiated at 6 weeks)
  - Continue progression of PROM
  - Restore full prosthesis appropriate AROM. Re-establish dynamic shoulder and scapular stability.
  - Control pain and inflammation.

### Precautions:

- Due to the potential of an acromion stress fracture one needs to continuously monitor the exercise and activity progression of the deltoid. A sudden increase of deltoid activity during rehabilitation could lead to excessive acromial stress. A gradually progressed, pain-free program is essential.
- Continue to avoid shoulder hyperextension. ☒ In the presence of poor shoulder mechanics avoid repetitive shoulder AROM exercises/activity.
- Restrict lifting of objects no more than 1-2 lbs
- No weight bearing through involved upper extremity.

### Activity:

- Continue progression of PROM, gentle stretching allowed.
- Restore full AROM
- May initiate active IR, adduction and extension (to back pocket) at 6 weeks for functional activities only. No stretching behind the back.
- Begin gradual return to all non-weight bearing and light lifting ADL's
- Initiate gentle scapulothoracic rhythmic stabilization and alternating isometrics in supine as appropriate.

## Phase III – Restoration of Functional Strength - Weeks 8 to 12

### Goals:

Restoration of deltoid, periscapular and teres minor strength for functional activities.

### Precautions:

- If subscapularis was repaired, internal rotation strengthening may begin at 12 weeks

- Monitor closely for acromial tenderness. Discontinue all strengthening and consult surgeon if acromial pain persists.

**Activity:**

- Strengthening typically begins at week 8-10
  - Peri-scapular musculature
  - Gentle deltoid strengthening once demonstrate good quality of motion, without excessive compensation and minimal symptoms
  - Focused teres minor strengthening
  - Gentle (grade I and II) glenohumeral and scapulothoracic joint mobilizations as needed. Note that anatomic arthrokinematic rules do not apply for the reversed joint.
- If subscapularis is repaired, may begin gentle IR strengthening at 12 weeks.
- In the absence of an intact subscapularis, IR strengthening is not indicated.
- May weight bear through the arm only as needed for activities of daily living.