

PHYSICAL THERAPY PROTOCOL
PROCEDURE: REVERSE TOTAL SHOULDER ARTHROPLASTY

- **Shoulder Dislocation Precautions:**
 - No shoulder motion behind back. (NO combined shoulder ADD, IR, EXT)
 - No glenohumeral (GH) extension beyond neutral.
 - Precautions should be implemented for 12 weeks postoperatively unless surgeon specifically advises patient or therapist differently.

Phase I – Immediate Post-Surgical Phase/Joint Protection (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
 - Enhance PROM
 - Full 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 per pre-admission status.
- **Precautions:**
 - Sling is worn for 4 weeks post-op and only removed for exercise and hygiene.
 - 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 shoulder AROM.
 - No weight bearing or lifting with operative extremity.
 - Keep incision dry for 2 weeks; no soaking for 4 weeks.
- **Weeks 1-3:**
 - Begin supine PROM.
 - Forward flexion and elevation in the scapular plane in supine to 90°
 - External rotation (ER) in scapular plane to 30°.
 - No Internal Rotation (IR) ROM
 - A/AAROM of cervical spine, elbow, wrist, and hand.
 - Begin periscapular sub-maximal pain-free isometrics in the scapular plane.
 - Begin sub-maximal pain-free deltoid isometrics in scapular plane

- Frequent cryotherapy (4-5 x/day for 20-30 minutes).
- Home exercise program
- Weeks 4-6:
 - Progress exercises listed above.
 - Progress supine PROM:
 - Forward flexion and elevation in the scapular plane to 120°.
 - ER in scapular plane to tolerance, respecting soft tissue constraints.
 - Gentle resisted exercise of elbow, wrist, and hand.
 - Continue frequent cryotherapy.
- Criteria for progression to the next phase (Phase II):
 - Tolerates shoulder PROM and isometrics; and, AROM- minimally resistive program for elbow, wrist, and hand.
 - Able to isometrically activate all components of the deltoid and periscapular musculature in the scapular plane.

Phase II –Active Range of Motion / Early Strengthening Phase (Week 7 to 12)

- Goals:
 - Continue progression of PROM (full PROM is not expected).
 - Gradually restore AROM.
 - Control pain and inflammation.
 - Allow continued healing of soft tissue
 - Re-establish dynamic shoulder and scapular stability.
- 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 acromion 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
 - Restrict lifting of objects to no heavier than a coffee cup.
 - No supporting of body weight by involved upper extremity.
- Weeks 7-8
 - Continue with PROM program.
 - Begin PROM IR to tolerance (not to exceed 50 degrees) in the scapular plane.
 - Begin shoulder AA/AROM as appropriate.
 - ER, IR, FF and elevation in scapular plane in supine with progression to sitting/standing.
 - Initiate gentle scapulothoracic rhythmic stabilization and alternating isometrics in supine as appropriate. Minimize deltoid recruitment during all activities / exercises.
 - Progress strengthening of elbow, wrist, and hand.
 - Gentle joint mobilizations as indicated (Grade I and II).

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- Begin using operative extremity for feeding and light ADLs
- Weeks 9-12
 - Continue with above exercises and functional activity progression.
 - Begin gentle glenohumeral IR and ER sub-maximal pain free isometrics.
 - Begin gentle periscapular and deltoid sub-maximal pain free isotonic.
 - Begin AROM forward flexion and elevation in the plane of the scapula with light weights (1-3lb) at varying degrees of trunk elevation as appropriate.
 - Progress to gentle glenohumeral IR and ER isotonic in sidelying position with light weight (1-3 lb) and/or with light resistance resistive bands.
- Criteria for progression to the next phase (Phase III):
 - Improving function of shoulder.
 - Patient demonstrates the ability to isotonicly activate all components of the deltoid and periscapular musculature and is gaining strength.

Phase III – Moderate strengthening (Week 12+)

- Goals:
 - Enhance functional use of operative extremity and advance functional activities.
 - Enhance shoulder mechanics, muscular strength and endurance.
- Precautions:
 - No lifting of objects heavier than 10lbs with the operative upper extremity
 - No sudden lifting or pushing activities.
- Continue with the previous program as indicated.
- Progress to gentle resisted flexion, elevation in standing as appropriate.

Phase IV – Continued Home Program (Typically 4 + months postop)

- Home exercise program to be performed 3-4 times per week with the focus on:
 - Continued strength gains
 - Continued progression toward a return to functional and recreational activities within limits as identified by progress made during rehabilitation and outlined by surgeon and physical therapist.
- Criteria for discharge from skilled therapy:
 - Patient is able to maintain pain free shoulder AROM demonstrating proper shoulder mechanics. (Typically 80 – 120 degrees of elevation with functional ER of about 30 degrees.)
 - Typically able to complete light household and work activities.