TWIN CITIES ORTHOPEDICS

Christopher M. LaPrade, MD
Sports Medicine/Shoulder & Elbow Surgeon
TCOmn.com/Christopher-LaPrade

Reverse Total Shoulder Arthroplasty PT Protocol

POST-OP PRECAUTIONS/RESTRICTIONS

The most common complication following rTSA in anterior/inferior dislocation of the prosthesis. Precautions should be implemented for at least 12 wks.

- **No combined IR/Adduction/Extension** (tucking shirt in, reaching for wallet)
- **No glenohumeral extension beyond neutral**

Acromial Stress Fractures may also occur following rTSA. Caution must be used when strengthening the deltoid muscle due to the increased tension and workload added. This is marked by a sudden decrease in AROM tolerance, pain to palpation at the acromion, no loss of PROM, pain w/ resisted deltoid activation. If experienced, notify the physician and hold active elevation and deltoid activity for 4-6 weeks or until pain-free. Treatment should continue for maintaining PROM and IR/ER strengthening.

***If pt is not progressing as expected per the protocol or given healing restraints, the referring physician MUST be notified.**

Ultimate goals/Outcomes: ROM at least 105-120 active elevation in the plane of the scapula, functional ER up to 30 degrees; Functional: light housework/leisure activities with BUE lifting to approximately 10-15 lbs (indefinitely); pain control.

****Progression of patient from one phase to the next should be based on evaluation (criteria based) within the given timeframes due to healing constraints.**

PHASE I: IMMEDIATE POST-OP PHASE- JOINT PROTECTION (DAY 1-WEEK 6)

Goals:

- Patient/Family Independent w/ Home Exercise Program (dressing, cryotherapy)
- Promote healing of soft tissue/maintain the integrity of the replaced joint
- Enhance AAROM (while avoiding end-range stretching)
- Restore the AROM of distal joints
- Independent with ADLs with modifications

Precautions

- **Sling 3-4 weeks post-op for primary (unless otherwise told by MD), 6 weeks if revision or fracture.**
- Avoid shoulder extension by placing a small towel roll or pillow under the distal humerus/elbow when lying supine. Pt should "always be able to see their elbow while lying."
- No shoulder AROM
- No lifting objects with rTSA extremity

- No supporting of body weight using affected UE
- Keep incision dry and clean (no getting wet for 2wks); no whirlpool, Jacuzzi, ocean/lake for 4wks.

Days 1-4 (acute care therapy)

- Begin gentle AAROM/ therapist guided for neuromuscular re-ed (NOT PROM) in supine upon resolution of interscalene block
    - Forward flexion and scaption to 90°
    - ER in scapular plane to available ROM (typically about 20°-30°)
    - No IR ROM
- AROM/AAROM of cervical spine and distal joints
- Begin periscapular submaximal pain-free isometrics in the plane of scapula (POS)
- Cryotherapy (continuous for the 1st 72 hours then 4-5x's/day PRN for 20min), pain control modalities (i.e. interferential/TENS PRN)

Days 5-21

- Continue above exercises
- Begin submax, pain-free deltoid isometrics in POS (avoid extension when isolating posterior deltoid)
- Cryotherapy frequently (4-5x's/day)

Weeks 3-6

- Progress above exercises
- Progress AAROM
    - Forward flexion and scaption to 120° while supine
    - ER in POS to tolerance, respecting soft tissue restraints
- At 6 weeks start AAROM for IR to tolerance (not to exceed 50°) in POS
- Gentle resisted exercise of elbow/wrist/hand
- Pendulums
- Cryotherapy frequently

****Criteria for progression to Phase II: Pt tolerates shoulder AAROM and AROM of distal joints. Pt demonstrates the ability to isometrically contract all parts of the deltoid and parascapular muscles in the POS.**

PHASE II: AROM, EARLY STRENGTHENING PHASE (WKS 6-12)

Goals

- Continue progression of AAROM/therapist assisted ROM for neuromuscular re-ed (FULL PROM IS NOT EXPECTED)
- Gradually restore AROM
- Control Pain and inflammation
- Allow continued healing of the soft tissue/do not overstress healing tissue
- Re-establish dynamic shoulder stability

Precautions

- Avoid hyperextension
- Avoid repetitive shoulder AROM exercises/activity in the presence of poor mechanics
- No supporting of body weight by involved UE

Weeks 6-8

- Continue AAROM program (avoid overstretching/overpressure at end ranges)
- Begin shoulder AAROM/AROM as appropriate
    - Forward flexion and Scaption in supine with slow progression to sitting/standing (i.e. supine wand to pulleys to standing wand)
    - Table slides in supine position (avoid weightbearing through UE) progressing to wall slides with low-friction cloth
    - ER/IR in supine position with progression to sitting/standing
- Begin gentle glenohumeral IR/ER submax pain-free isometrics
- Initiate gentle scapulothoracic rhythmic stabs and alternating isometrics in supine. Begin gentle periscapular and deltoid submax pain-free isotonic strengthening exercises (typically towards the end of the 8th week)
- Progress strengthening of elbow/wrist/hand
- Gentle glenohumeral and scapulothoracic joint mobs as indicated (grade I and II)
- Continue Cryotherapy and/or modalities PRN
- Pt may begin to use UE for feeding and light ADL's as tolerated

Weeks 9-12

- Continue with above exercises and functional activity progression
- Begin AROM supine flexion and Scaption with light weights (1-3lbs) at varying degrees of trunk elevation (i.e. supine to semirecumbant to sitting/standing)
- Progress to gentle GH IR/ER isotonic strengthening exercises (T-bands, Side lying with dumbbells)
- Resisted Serratus, Rows/scapular retractions, shrugs

****Criteria for progression to Phase III: Improving function/mechanics of shoulder. Pt demonstrated the ability to isotonically activate all components of the deltoid and periscapular muscles and increasing strength. Absence of shrug sign.**

PHASE III: MODERATE STRENGTHENING (WEEK 12+)

Goals

- Enhance functional use of operative extremity and advance functional activities
- Enhance shoulder mechanics, muscular strength, power, and endurance

Precautions

- No lifting of objects heavier than 5 lbs with the operative UE
- No sudden lifting or pushing activities

Weeks 12-16

- Continue with previous program as indicated
- Progress to gentle resisted Forward flexion and scaption as appropriate

PHASE IV: CONTINUED HOME EXERCISE PROGRAM (TYPICALLY 4+ MONTHS POST-OP)

Typically, the patient is on HEP 3-4 x's/week with the focus on:

- Continued strength gains
- Continued progression toward a return to functional and recreational activities within limits (and outlined by surgeon and PT)

**Criteria for discharge from skilled PT: Pt is able to maintain pain-free shoulder AROM, demonstrating proper shoulder mechanics (typically 105-120 elevation, with functional ER of about 30°)

Return to Activities:

- Computer (supported) 1-2 wks, (unsupported/no sling) 4wks
- Golf 4-6 months (if good strength and ROM) hitting all shots off of tee
- Tennis 4 months avoiding overhead
- WBing thru UE: No pushups (indefinitely), quadruped position 4 months or more, pushup from chair to standing 4 months