

ANATOMIC TOTAL SHOULDER ARTHROPLASTY Rehab Protocols

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PHASE I – IMMEDIATE POSTOPERATIVE PHASE (WKS 0-3)

Goals

- Protect the surgical repair
- Reduce Swelling, minimize pain
- Maintain UE ROM in elbow, hand, and wrist
- Gradually increase shoulder PROM
- Minimize muscle inhibition
- Patient Education

Sling

- Neutral rotation
- Use of abduction pillow in 30-45 degrees abduction
- Use at night while sleeping

Precautions

- No shoulder AROM
- No shoulder AAROM
- No shoulder PROM in to IR
- No reaching behind back, especially in to internal rotation
- No lifting of objects
- No supporting of body weight with hands
- Place small pillow/towel roll under elbow while lying on back to avoid shoulder hyperextension

Intervention

- Swelling Management
 - Ice, compression
- Range of motion/mobility
 - PROM: ER < 30 degrees in the scapular plane, IR to belt line in scapular plane, Flex/Scaption to tolerance, ABD < 90 degrees, pendulums, seated GH flexion table slide, seated horizontal table slide
 - AAROM: Active assistive shoulder flexion
 - AROM: elbow, hand, wrist
- Strengthening (Week 2)
 - Perscapular: scap retraction, prone scapular retraction, standing scapular setting, supported scapular setting, inferior glide, low row, Ball squeeze

Criteria to Progress

- >50% shoulder PROM flex, scaption as compared to contralateral side
- < 90 degrees of shoulder ABD PROM
- <30 degrees of shoulder ER PROM in scapular plane
- >70 degrees of IR PROM in scapular plane
- Palpable muscle contraction felt in scapular musculature
- Pain < 4/10
- No complications with Phase I

Call **864-807-9998** with any questions
about rehab protocols.



PHASE II – INTERMEDIATE PHASE: MODERATE PROTECTION (WKS 4-6)

Goals

- Continue to protect surgical repair
- Reduce swelling, minimize pain
- Gradually increase shoulder PROM
- Improve periscapular muscle activation/strength
- Initiate RTC (external rotators) activation
- Patient education

Sling

- Use at night while sleeping
- Gradually start weaning sling over the next 4 weeks during the day

Precautions

- No excessive shoulder external rotation or abduction
- No lifting of objects heavier than a coffee cup
- No supporting of body weight with hands
- Place small pillow/towel roll under elbow while lying on back to avoid shoulder hyperextension

Intervention

- Range of motion/mobility
 - PROM: Full with exception of ER <30 in scapular plane and <90 ABD
 - AAROM: Active assistive shoulder flexion, shoulder flexion with cane, cane external rotation stretch, washcloth press, seated shoulder elevation with cane
 - AROM: supine flexion, salutes, supine punch
- Strengthening
 - Rotator Cuff: External rotation isometrics
 - Periscapular: Row on physioball, serratus punches
 - Elbow: Biceps curl, resistance band bicep curls and triceps
- Motor Control
 - ER in scaption and flex 90-125
- Stretching
 - Sidelying horizontal ADD

Criteria to Progress

- $\geq 75\%$ shoulder PROM flex, scaption, as compared to contralateral side
- $\geq 75\%$ shoulder PROM IR in scapular plane as compared to contralateral side
- 30 degrees of shoulder PROM ER in scapular plane
- 90 degrees of shoulder PROM ABD
- Minimal substitution patterns with AAROM
- AROM shoulder elevation to 100 degrees with minimal substitution patterns
- Pain < 4/10
- No complications with Phase II



PHASE III – INTERMEDIATE POST OP (WKS 7-8)

Goals

- Do not overstress healing tissue (especially the anterior capsule)
- Minimize pain
- Maintain PROM
- Improve AROM
- Progress periscapular & RTC strengthening
- Return to full functional activities
- Patient education

Sling

- Discontinue

Precautions

- No lifting heavy objects >10lbs

Intervention (Continue with Phase 2 Interventions)

- Range of motion/mobility
 - Full ROM in all planes
 - AAROM: incline table slides, wall climbs, pulleys, ball roll on wall
 - AROM: seated scaption, seated flexion, supine forward elevation with elastic resistance to 90 degrees
- Strengthening
 - Rotator cuff: internal rotation isometrics, side-lying external rotation, Standing external rotation w/ resistance band, standing internal rotation w/ resistance band, internal rotation, external rotation
 - Periscapular: Resistance band shoulder extension, resistance band seated rows, rowing, lawn mowers, robbery
- Motor Control
 - IR/ER in scaption plane and Flex 90-125 (rhythmic stabilization) in supine
- Stretching
 - Sidelying horizontal ADD, triceps, and lats, IR behind back with towel, sidelying horizontal ADD

Criteria to Progress

- Minimal to no substitution patterns with shoulder AROM
- Pain <4/10



PHASE IV – TRANSITIONAL POST OP (WKS 9-11)

Goals

- Do not overstress healing tissue (especially the anterior capsule)
- Maintain pain-free PROM
- Continue improving AROM
- Improve dynamic shoulder stability
- Gradually restore shoulder strength and endurance

Precautions

- No lifting heavy objects (>10lbs)
- Avoid exercises that put stress on the anterior shoulder capsule (ie: shoulder ER above 80 degrees of ABD)

Intervention (continue with Phase 2-3 Interventions)

- Range of motion/mobility
 - Full ROM in all planes
- Strengthening
 - Rotator cuff: increase resistance rotator cuff exercise • Periscapular: Push-up plus on knees, “W” exercise, resistance band Ws, dynamic hug, resistance band dynamic hug, prone shoulder extension ls, resistance band forward punch, forward punch, tripod, pointer
- Motor Control
 - Resistance band PNF pattern, PNF – D1 diagonal lifts w/ resistance, diagonal-up, diagonal-down Wall slides w/ resistance band

Criteria to Progress

- Supine AROM Flex ≥ 140 degrees
- Supine AROM ABD ≥ 120 degrees
- Supine AROM ER in scapular plane ≥ 60 degrees
- Supine AROM IR in scapular plane ≥ 70 degrees
- AROM shoulder elevation to 120 degrees with minimal substitution patterns
- Performs all exercises demonstrating symmetric scapular mechanics
- Pain $< 2/10$



PHASE V – ADVANCED STRENGTHENING POST OP (WKS12-16)

Goals

- Maintain pain-free ROM
- Improve shoulder strength and endurance
- Enhance functional use of upper extremity

Intervention (continue with Phase 2-4 Interventions)

- Strengthening
 - Rotator cuff: External rotation at 90 degrees, internal rotation at 90 degrees, resistance band standing external rotation at 90 degrees, resistance band standing internal rotation at 90 degrees
 - Periscapular: T and Y, "T" exercise, push-up plus knees extended, wall push up
- Motor Control
 - Progress ball stabilization on wall to overhead alternating isometrics/rhythmic stabilization

Criteria to Progress

- Clearance from MD and ALL milestone criteria have been met
- Maintains pain-free PROM and AROM
- Performs all exercises demonstrating symmetric scapular mechanics
- QuickDASH
- PENN

Return to Sport

- For the recreational or competitive athlete, return-to-sport decision making should be individualized and based upon factors including level of demand on the upper extremity, contact vs non-contact sport, frequency of participation, etc. We encourage close discussion with the referring surgeon prior to advancing to a return-to-sport rehabilitation program.

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