RALEIGH UPPER EX

THE BONE & JOINT SURGERY CLINIC

Reverse Total Shoulder Arthroplasty Postoperative Rehabilitation Protocol

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The intent of this protocol is to provide the clinician with guidelines of the postoperative rehabilitation after reverse total shoulder arthroplasty ("RTSA"). It is not intended to be a substitute for special instructions from Dr. Nelson or clinical decision making regarding the progression of a patient's post-operative course. The actual postsurgical physical therapy management must be based on surgical approach, physical exam/findings, individual progress, and/or the presence of post-operative complications. Please contact Dr. Nelson with any questions. Expectation for range of motion gains should be set on a case-by-case basis depending upon underlying pathology. **Normal/full active range of motion of the shoulder joint following RTSA is not expected.**

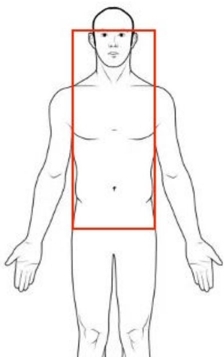
Phase I: Immediate Post-Surgical Phase: Typically 0-4 weeks; 2 PT Visits

- Goals:
    - Allow healing of soft tissue
    - Maintain integrity of replaced joint
    - Educate patient on joint protection
    - Gradually increase shoulder passive range of motion
    - Restore elbow/wrist/hand active range of motion
    - Reduce pain and inflammation
    - Reduce muscle inhibition and splinting
    - Independent with activities of daily living (ADL's) while maintaining integrity of replaced joint
- Precautions:
    - Sling should be worn at all times
        - Exceptions: showering, dressing, and joint gliding & hand/wrist/elbow range of motion exercises
    - While lying supine, a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension, anterior capsule stretch, or subscapularis stretch
    - Avoid shoulder extension past neutral
    - Avoid shoulder adduction and internal rotation, "scratching the back" (should be avoided for 12 weeks postoperatively)
    - Avoid shoulder AROM as much as possible.
    - No lifting, pushing, or pulling with operative arm
    - No internal rotation (IR) behind the back (toileting, bra straps) or resisted internal rotation ("washing the belly")
    - No supporting of body weight by hand on the involved side unless cleared by MD
    - No excessive stretching or sudden movements (especially into external rotation (ER))
- Post-Operative PT Visit #1: Typically 8-10 days post-operatively
    - **Begin 5x daily Phase I Gliding Exercises on postoperative day 3**
        - Video available at www.YouTube.com/@RaleighUpperExMD
        - Instruct patient on proper technique, should be fully passive ROM with assistance from contralateral extremity
    - Passive IR to chest
    - Active distal extremity exercises (elbow/wrist/hand)
    - Cervical range of motion, trapezius stretches
    - Pendulums
    - Scapular mobilization and sub-max isometrics - shrugs & squeezes

- Frequent cryotherapy for pain, swelling, and inflammation management
    - Patient education regarding proper positioning and joint protection techniques
        - Sling alignment, fit, with abduction pillow in proper position
- Post-Operative PT Visit #2: Typically 2-3 weeks post-operatively
    - Continue previous exercises
    - Continue cryotherapy as much as able for pain and inflammation management

Phase II: Early Strengthening Phase: Typically 4-8 weeks

- Goals:
    - Gradually restore shoulder *functional* AROM
    - Control pain and inflammation
    - Allow continued healing of soft tissue
    - Re-establish dynamic shoulder stability
    - Strengthening of elbow, wrist, and hand
- Precautions:
    - While lying supine, a small pillow or towel roll should be placed behind the elbow to avoid shoulder hyperextension, anterior capsule stretch, or subscapularis stretch
    - No internal rotation (IR) behind the back (toileting, bra straps, scratching the back, tucking in a shirt) (should be avoided for 12 weeks postoperatively)
    - No resisted internal rotation ("washing the belly")
    - Avoid shoulder extension past neutral
    - Avoid cyclic loading activities or high-frequency shoulder AROM exercises
    - No passive ER stretching
    - No lifting heavier than a coffee cup
    - NO ISOTONIC STRENGTHENING EXERCISES PERMITTED – due to risk of insufficiency fracture
        - Gentle isometrics are acceptable
    - OK to support partial body weight with operative extremity (e.g. walker, pushing off chair)
    - No sudden jerking movements
- Early Phase II: (typically 4-6 weeks)
    - PROM
        - Passive elevation in scapular plane to tolerance - pulleys OK
            - Usually 120° maximum in this phase
    - Begin AAROM & AROM
        - **Begin Phase II Motion Exercises**
            - Video at www.Youtube.com/@RaleighUpperExMD
            - This is a supine exercise, stabilizes scapulothoracic joint, eliminates gravity at 90 degrees, engages pecs/lats/deltoid/traps, encourages and re-trains normal glenohumeral rhythm without scapular substitution or trapezial over-activation
            - May begin active-assisted and progress to active as tolerated
        - ER to neutral
        - Elevation in scapular plane to 90° (note difference between PROM & AROM)
        - Functional rehabilitation
            - Patient may discontinue sling to begin gentle waist-level activities at home
                - Computer use, food preparation without loading/exertion, dressing, frontal hygiene, hand-to-mouth and head activities
                - Instruct patient on "catcher's box" concept (see diagram): not permitted to use hands outside rectangular space between beltline, face/mouth
                - Encourage frequent (5x daily) home performance



        - Initiate glenohumeral and scapulohumeral rhythmic stabilization
    - May initiate periscapular strengthening
        - Isometric squeezes and shrugs only
    - Progress elbow/wrist/hand strengthening
    - Continue cryotherapy as much as able for pain and inflammation management
- Late Phase II: (typically 6-8 weeks)
    - Progress PROM
        - ER to 30°

        - Horizontal adduction to tolerance - reach contralateral shoulder
    - Progress AROM
        - flexion, external rotation, abduction, horizontal adduction to pain free tolerance
    - Instruct and ensure proper performance of Phase II Motion exercises for frequent 5x daily home performance
    - Initiate periscapular stretching & mobilization
    - Continue cryotherapy as much as able for pain and inflammation management

Phase III: Moderate Strengthening Phase: Typically 8-12 weeks: 2-3xper week

- Goals:
    - Optimize functional shoulder AROM
    - Optimize neuromuscular control
    - Gradual return to functional activities with involved extremity
- Precautions:
    - No heavy lifting of objects (>5lbs)
    - No sudden lifting or pushing activities
    - No sudden jerking
    - NO ISOTONIC STRENGTHENING EXERCISES PERMITTED – due to risk of insufficiency fracture
        - Gentle isometrics are acceptable
- Early Phase III: (typically 8-10 weeks)
    - Continue PROM as needed to maintain ROM
        - Advance PROM to stretching as appropriate (wand, pulleys)
    - Progress AROM exercises/activity as appropriate
    - Isometric strengthening
        - Resisted shoulder internal and external rotation with arm at the side
            - Isometric, sub-maximal, pain free
        - Continued distal upper extremity strengthening and scapular strengthening is OK, including isotonics
- Late Phase III: (typically 10-12 weeks)
    - Begin more advanced functional rehabilitation
            - May gradually begin work on scapulohumeral movements (e.g., golf swing)
    - Initiate AAROM & AROM internal rotation behind the back
        - Avoid PROM or stretching behind back

To obtain further copies of this protocol, please visit www.RaleighUpperEx.com