OrthoIllinois REHABILITATION

Reverse Total Shoulder Arthroplasty

Delto-pectoral Interval Approach

Precautions: Avoid IR, adduction, and extension (tucking in a shirt or performing bathroom/personal hygiene is particularly dangerous during post-op phase) – "always be able to see your elbow"

- For 12 weeks:
  - No IR or motion behind the back (IR/add/ext)
  - No extension beyond neutral (towel behind elbow while supine)

Phase I (1 – 5 days post-op)

- Bed mobility & transfer training without UE
- Modalities: prn for pain and inflammation
- Sling: Ultrasling worn continuously except in therapy or during exercise sessions
- Soft tissue mobilization for cervical, cuff, and periscapular
- ROM:
  - Pendulums 4 ways
  - AROM of forearm, wrist, hand, and cervical
- Soft tissue mobilization for cervical, cuff, and periscapular

Phase II (5 days – 4 weeks post-op)

- Wound care: Monitor site / scar management techniques
- Modalities: prn for pain and inflammation
- Sling:
  - Dr. Trenhaile: At 2 weeks, gradually wean from sling
  - Ultrasling worn continuously except in therapy or during exercise sessions
- PROM:
  - Dr. Trenhaile, at 2 weeks post-op:
    - Flex/abd to 90*
    - ER to 30*
  - Dr. Whitehurst: no PROM until 4 weeks post-op

Phase III (4 weeks – 10 weeks post-op)

- Sling:
  - Dr. Trenhaile: At 2 weeks, gradually wean from sling
  - Until 4 weeks post-op, Ultrasling worn continuously, except in therapy or during exercise sessions. Remove abduction pillow at 4 weeks.
  - Until 6 weeks post-op, Sling must continue to be worn outdoors or in public settings and when sleeping

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- ROM: At 4 weeks post-op, progress with PROM, progressing to AAROM, and then AROM
    - PROM:
        - Gradually progress flexion and scaption to 120 degrees, ER to 30-45 degrees, IR in scapular plane only, abduction to 90 degrees
        - Continue to follow dislocation precautions
        - At 8 weeks: Stretch horizontal adduction, lats, triceps. Grade I-II GH joint and scapular thoracic joint mobilizations
    - AAROM:
        - May begin and progress to AROM depending on stability and movement pattern quality for progression to AROM.
        - Begin flexion and scaption supine providing greater scapular stability, then progress to seated and standing position
        - IR, ER, and scapular retraction must be performed with UE in a protected position in the scapular plane where the patient is able to see their elbow at all times (avoiding adduction and extended position with IR)
        - At 8 weeks begin to used involved UE for eating, dressing
- Strengthening:
    - Until 12 weeks, NO resisted IR
    - May begin gentle pain-free sub-max isometrics for the deltoid and periscapular musculature with the humerus in a protected position in scapular plane
    - Strengthening of elbow, wrist, and hand
    - 4 weeks: periscapular muscle activation, deltoid activation
    - 7-8 weeks: rhythmic stabilization, progress deltoid and scapular strength/endurance

Phase IV (10+ weeks post-op)

- ROM:
    - At 10 weeks,
        - Continue to progress as above
        - Until 12 weeks, follow dislocation precautions
    - At 12 weeks,
        - Gradually progress ROM as tolerated

- Strengthening: Do not begin until appropriate AAROM/AROM control is achieved
    - At 10 weeks,

        - PNF D1/D2
        - Begin gradual light resistance for flexion, abduction, and ER. Extension to neutral
        - Until 12 weeks, No resistance for IR
    - At 12 weeks,
        - May begin resisted IR with isometrics gradually progressing resistance with light bands and weights
        - Advance strengthening as tolerated for rotator cuff, deltoid, and scapular stabilizers
        - May begin closed-chain exercises and eccentric strengthening
- Goals at 16 weeks:
    - Continue to progress with ultimate goal of 80≤140 degrees of elevation and 30 degrees of ER, ≤ 50 degrees IR in scapular plane or back pocket
    - Functional level: Goal is for patient to be able to complete light household work within 10-15# lifting limit with bilateral UEs

Adapted From:

1) Romeo A. Reverse total shoulder (reverse ball and socket) protocol. Midwest Orthopedics at RUSH. Chicago, 2008.
2) Beacon Orthopedics & Sports Medicine protocol
3) Brigham and Women's Hospital protocol; https://www.brighamandwomens.org/assets/BWH/patients-and-families/rehabilitation-services/pdfs/shoulder-reverse-total-shoulder-arthroplasty-protocol.pdf
4) https://www.massgeneral.org/assets/mgh/pdf/orthopaedics/sports-medicine/physical-therapy/rehabilitation-protocol-for-reverse-shoulder-arthroplasty.pdf
5) **http://watsonorthopaedics.com/home/rehab-protocols/shoulder/reverse-total-shoulder-replacement-rehab/**
6) Consultation with Dr. Scott Trenahile, MD, OrthoIllinois.