Reverse Total Shoulder
POST-OPERATIVE PHYSICAL THERAPY PROTOCOL

Rehabilitation Precautions

Precautions should be implemented for the first 12 weeks postoperatively unless the surgeon specifically advises the patient or therapist differently.

- No shoulder motion behind lower back and hip (no combined shoulder adduction, internal rotation and extension) x 12 weeks
- No internal rotation (IR) x 12 weeks
- No cross chest adduction x 12 weeks
- No glenohumeral (GH) joint extension beyond neutral
- Forward elevation in SCAPTION only
- No excessive stretching or sudden movements, particularly in external rotation (ER)
- 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 lifting of objects with operative extremity
- No supporting of body weight with involved extremity (for example, pushing up from a chair)
- Keep incision clean and dry (no soaking/wetting for two weeks); no whirlpool, jacuzzi, ocean/lake wading for four weeks
- No driving for six weeks

Progression is time- and criterion-based, dependent on soft tissue healing, patient demographics and clinician evaluation

Days 1 to 4 – Acute care therapy

Continuous cryotherapy for first 72 hours postoperatively, then frequent application – 4-5 times a day for 15 to 20 minutes

- **ROM**
  - Begin PROM in supine after complete resolution of interscalene block
  - Forward scaption in supine to 90°
  - External rotation (ER) in scapular plane to available ROM as indicated by operative findings, typically around 20°-30°
  - AROM/active assisted ROM of cervical spine, elbow, wrist and hand

  → NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT

- **Strengthening**

  Begin periscapular submaximal pain-free isometrics in the scapular plane

- **Goals to Progress to Next Phase**

  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)

Days 5-21

- **ROM**
  - Continue all exercises as above
  - Frequent cryotherapy application – 4-5 times a day for 15 to 20 minutes

  → NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT
- **Strengthening**
  - Begin submaximal pain-free deltoid isometrics in scapular plane (avoid shoulder extension when isolating posterior deltoid)
- **Goals to Progress to Next Phase**
  1. Enhance PROM
  2. Restore active range of motion (AROM) of elbow/wrist/hand
  3. Independent with activities of daily living (ADLs) with modifications

Week 3-6

- **ROM**
  - Progress PROM
    - Forward scaption in supine to 120°
    - ER in scapular plane to tolerance, respecting soft tissue constraints (30-45°)
  - Continue frequent cryotherapy

  → NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT
- **Strength**
  - Gentle resisted exercise of elbow, wrist, and hand
  - Discontinue use of sling at six weeks
- **Goals to Progress to Next Phase**
  1. Patient tolerates shoulder PROM as outlined above
  2. Patient tolerates elbow, wrist and hand AROM
  3. Patient demonstrates the ability to isometrically activate all components of the deltoid and periscapular musculature in the scapular plane

Week 6-10

- **Precautions**
  - Continue to avoid shoulder hyperextension
  - In the presence of poor shoulder mechanics avoid repetitive shoulder AROM exercises/activity
  - Restrict lifting of objects to no heavier than a coffee cup
  - No supporting of body weight by involved upper extremity
- **ROM**
  - Begin shoulder active assisted ROM/AROM progressing from supine to seated as tolerated in scaption, and ER in the scapular plane
  - Gentle glenohumeral and scapulothoracic joint mobilizations as indicated (Grades I and II)
  - Patient may begin to use hand of involved extremity for feeding and light ADLs
  - Continue use of cryotherapy as needed

  → NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT
- **Strength**
  - Progress strengthening of elbow, wrist, and hand
  - Begin gentle glenohumeral ER submaximal pain-free isometrics
  - Initiate gentle scapulothoracic rhythmic stabilization and alternating isometrics in supine as appropriate.
  - Begin gentle periscapular and deltoid submaximal pain-free isotonic strengthening exercises, typically toward the end of the eighth week

Goals

1. Continue progression of PROM (full PROM is not expected)
2. Gradually restore AROM
3. Control pain and inflammation
4. Re-establish dynamic shoulder stability

Weeks 10-12

- **ROM**
  - Continue with above exercises and functional activity progression

  → NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT

- **Strength**
  - Begin supine forward flexion scaption with light weights of 1-3 pounds at varying degrees of trunk elevation as appropriate (ie, supine to sitting/standing)
  - Progress to gentle glenohumeral ER isotonic strengthening exercises

- **Goals to Progress to Next Phase**
  1. Improving function of shoulder
  2. Patient demonstrates the ability to isotonically activate all components of the deltoid and periscapular musculature and is gaining strength

Weeks 12+

- **Precautions**
  - No lifting of objects heavier than six pounds with the operative upper extremity
  - No sudden lifting or pushing activities
- **ROM**
  - Continue to maintain gains
  - Begin progressing IR as tolerated
- **Strength**
  - Continue with the previous program as indicated
  - Progress to gentle resisted flexion, elevation in standing as appropriate
  - Typically the patient is on a HEP at this stage, to be performed 3-4 times per wk, 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 physical therapy**
  1. Patient is able to maintain pain-free shoulder AROM (typically 80°-120° of elevation, with functional ER of about 30°)
  2. Patient demonstrates proper shoulder mechanics

References

Bourdreau S, Bourdreau E, Higgins LD, and Wilcox RB. Reahabilitation Following Reverse Total Shoulder Arthropoplasty. *Journal of Orthopaedic and Sports Physical Therapy*. 2007; 37:12 (734-743).