

## **Altru Advanced Orthopedics**

### **Reverse Total Shoulder Arthroplasty with Subscapularis Repair Protocol**

The intent of this protocol is to provide the therapist with a guideline for the post-op rehab of a patient who has had a reverse total shoulder arthroplasty with subscapularis repair. It is not intended to be a substitute for appropriate clinical decision making regarding the progression of a patient's rehab. The actual therapy plan of care must be based on the surgical approach, physical exam and findings, individual progress, any post-op complications, and/or co-morbidities. If a therapist needs assistance or has questions regarding the progression of a patient post surgically they should consult the referring surgeon.

- Due to subscapularis reattachment delay ER ROM past neutral (0°) until 6 weeks post-op
  - After 6 weeks, begin ER to 30° until 12 weeks post-op
  - After 12 weeks post-op progress ER past 30° to tolerance

#### **PHASE I: 0–6 Weeks**

##### Precautions:

- Avoid increased pain with flexion and abduction
- No combined shoulder adduction, IR, extension for 12 weeks (such as tucking in a shirt, toileting hygiene)
- No shoulder extension beyond neutral
- Protect subscapularis if repaired
  - No ER beyond neutral for 6 weeks
- No shoulder AROM
- No supporting body weight with involved extremity
- No lifting of objects with operative extremity
- Keep incision clean and dry
- Continue use of sling at all times except during exercises and for hygiene

##### Goals:

- Gradual increase of PROM
- Decrease pain and inflammation
- Allow for soft tissue healing and maintain integrity of replaced joint
- Restore elbow, wrist, and hand AROM
- Independent ADLs with modifications
- HEP performance 2-3 times per day

##### Immobilization:

- Sling/immobilizer D/C as tolerated after 3-4 weeks
  - Up to 6 weeks if it is a revision of a previous traditional total shoulder arthroplasty

#### **0-3 Weeks:**

##### Therapeutic Exercise

1. PROM
  - Increase flexion in supine as tolerated
  - IR in neutral position only as tolerated
  - ER in scapular plane as tolerated
  - Pendulum exercises
2. AAROM (start at 2 weeks)
  - Supine flexion to tolerance with cane
  - Seated flexion to tolerance with cane/table slides
  - Pulleys- flexion and scaption, progress as tolerated
3. AROM
  - Elbow, wrist, and hand
  - Cervical and thoracic spine
4. Submax, pain-free isometrics in neutral
  - Flexion, extension, abduction (deltoid)
  - No extension beyond neutral
5. Scapular stabilization
  - Scapular pinch, sternal lifts, lawn mower done in sling
  - Manual resistance to scapular movements performed in a position of comfort

Manual Therapy:

- Grade I and II joint mobilizations

Modalities:

- Cryotherapy prn
  - Frequent icing recommended up to 4-5x/day, 15-20 min per session
- E-stim prn

4-6 Weeks:

Therapeutic Exercise:

1. Progress previous exercises as tolerated
2. PROM
  - Progress flexion and scaption in supine to 120°
  - Progress ER in scapular plane as tolerated respecting soft tissue constraints
3. Gentle resisted exercises for elbow, wrist, and hand

Manual Therapy:

- Grade I and II joint mobilizations, scar mobilization prn

Modalities:

- Cryotherapy prn
- E-stim prn

**Criteria for progression to Phase II:**

- **Tolerates shoulder PROM and isometrics**
- **Tolerates AROM and gentle resisted program for elbow, wrist, and hand**
- **Pt able to isometrically activate all components of the deltoid and periscapular musculature in scapular plane**

## **PHASE II: 7-12 Weeks**

### Precautions:

- Gradually progress pain-free HEP
- Avoid shoulder extension beyond neutral
- No lifting greater than 5 lbs.
- No sudden lifting or pushing activities, or jerking movements
- No supporting body weight by involved UE
- In presence of poor mechanics avoid repetitive shoulder AROM exercises/activity

### Goals:

- Continue to progress PROM (full PROM is not expected)
- Gradual restoration AROM (full AROM is not expected)
- Control pain and inflammation
- Allow continued soft tissue healing and maintain integrity of the replaced joint
- Re-establish dynamic shoulder and scapular stability
- Pt may begin using involved arm for light ADLs, like feeding, dressing, washing

### 7-8 Weeks:

#### Therapeutic Exercise:

1. Continue with PROM
  - At 6 weeks start PROM IR to tolerance (do not exceed 50°) in scapular plane
2. Begin AROM
  - Flexion, scaption in supine, progress to sitting and standing as tolerated
  - Shoulder IR and ER in scapular plane in supine, progress to sitting and standing
3. Initiate gentle scapulothoracic rhythmic stabilization and alternating isometrics in supine
4. Begin gentle IR/ER submax, pain-free isometrics

#### Manual Therapy:

- Grade I and II joint mobilizations, scar mobilization prn

#### Modalities:

- Cryotherapy prn
- E-stim prn

### 9-12 Weeks:

#### Therapeutic Exercise:

1. Continue with above exercises and functional activity progression

2. Isotonic strengthening
  - Progress to IR and ER in side lying with 1-3 lbs. and/or resistive bands
  - Periscapular and deltoid muscles
3. Begin AROM in supine with 1-3 lbs., vary degrees of trunk elevation, progress to sitting and standing
4. Begin use of hand and involved UE for eating and light ADLs

#### **Criteria for progression to Phase III:**

- **Improving functional use of the involved shoulder**
- **Pt demonstrates ability to isotonicly activate all components of deltoid and periscapular muscles and shows strength gains**

#### **PHASE III: 13 Weeks to 6 Months**

##### Precautions:

- No lifting more than 6 lbs. with involved UE
- No sudden lifting or pushing activities
- Gradually progress closed kinetic chain exercises

##### Goals:

- Improve shoulder mechanics, strength, and endurance
- Improve tolerance of functional activities
  - light household and work activities
- Progress closed chain exercises as appropriate
- Pain free shoulder AROM demonstrating proper mechanics
  - 80-120° elevation, 30° ER

##### Therapeutic Exercise:

1. Continue with phase II exercises as needed
2. Resistive exercises (GENTLE PROGRESSION)
  - Standing flexion, scaption, and abduction as tolerated
3. Closed chain proprioception exercises
  - Wall or table push-up, wall washes, balance boards, BOSU
  - Perturbation training
4. HEP strength, mobility, and function 3-4 times per week for 1-year post-op
5. 4-6 months return to recreational hobbies, gardening, sports, etc. within limits outlined by surgeon and PT

#### **Criteria for D/C from skilled therapy:**

- **Patient maintains pain-free functional AROM**
- **Patient demonstrates proper shoulder mechanics with elevation 80-120° and functional ER of ~30°**