

# Dr. Ben Szerlip

SHOULDER & SPORTS MEDICINE SURGEON

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## REVERSE TOTAL SHOULDER ARTHROPLASTY PROTOCOL

### **Shoulder Dislocation Precautions**

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

- No shoulder motion behind lower back and hip (no combined shoulder adduction, internal rotation [IR], and extension)
- No glenohumeral (GH) joint extension beyond neutral.

Progression to the next phase is based on clinical criteria and time frames as appropriate.

### Phase I: Immediate Postsurgical Phase, Joint Protection (Day 1 – Week 6)

Goals:

- 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)
  - Cryotherapy
- Promote healing of soft tissue/maintain the integrity of the replaced joint
- Enhance ROM
- Independent with activities of daily living (ADLs) with modifications

### *Precautions*

- Sling worn for 3-4 weeks (including while sleeping) depending on progression and surgeon preference
- 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
- Keep incision clean and dry (no soaking/wetting for 2 weeks); no whirlpool, Jacuzzi, ocean/lake wading for 4 weeks

### **Days 1-4 (acute care therapy)**

- Begin PROM in supine after complete resolution of interscalene block
  - Forward flexion and elevation in the scapular plane in supine to 90°

- o External rotation (ER) in scapular plane to available ROM as indicated by operative findings, typically around 20°-30°
  - o No IR range of motion (ROM)
- AROM/active assisted ROM of cervical spine, elbow, wrist, and hand
- Begin periscapular submaximal pain-free isometrics in the scapular plane
- Continuous cryotherapy for the first 72 hours postoperatively, then frequent application (4-5 times a day for about 20 min)

#### **Days 5-21**

- Continue all exercises as previously mentioned
- Begin submaximal pain-free deltoid isometrics in scapular plane (avoid shoulder extension when isolating posterior deltoid)
- Frequent (4-5 times a day for about 20 minutes) cryotherapy

#### **Weeks 3-6**

- Progress exercises previously mentioned
- Progress PROM
  - o Forward flexion and elevation in the scapular plane in supine to 120°
  - o ER in scapular plane to tolerance, respecting soft tissue constraints
- At 6 weeks postoperatively start PROM IR to tolerance (not to exceed 50° in the scapular plane)
- Gentle resisted exercise of elbow, wrist and hand
- Continue frequent cryotherapy

#### *Criteria for progression to the next phase (phase II)*

- Patient tolerates shoulder PROM and AROM program for elbow, wrist, and hand
- Patient demonstrates the ability to isometrically activate all components of the deltoid and periscapular musculature in the scapular plane

#### **Phase II: AROM, Early Strengthening Phase (Weeks 6-12)**

##### **Goals:**

- Continue progression of PROM (full PROM is not expected)
- Gradually restore AROM
- Control pain and inflammation
- Allow continued healing of soft tissue/do not overstress healing tissue
- Re-establish dynamic shoulder stability

##### *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.

#### **Weeks 6-8**

- Continue with PROM program
- Begin gentle GH IR and 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 8<sup>th</sup> week

- Progress strengthening of elbow, wrist and hand
- Gentle GH and scapulothoracic joint mobilizations as indicated (grades I and II)
- Continue use of cryotherapy as needed
- Patient may begin to use hand of operative extremity for feeding and light ADLs

#### **Weeks 9-12**

- Continue with above exercises and functional activity progression
- Begin AROM supine forward flexion and elevation in the plane of the scapula with light weights of 1-3 lb at varying degrees of trunk elevation as appropriate (i.e. supine lawn chair progression with progression to sitting/standing)
- Progress to gentle GH IR and ER isotonic strengthening exercises

#### *Criteria for progression to the next phase (Phase III)*

- Improving function of shoulder
- Patient demonstrates the ability to isotonically activate all components of the deltoid and periscapular musculature and is gaining strength.

#### **Phase III: Moderate Strengthening (Weeks 12+)**

##### **Goals:**

- Enhance functional use of operative extremity and advance functional activities
- Enhance shoulder mechanics, muscular strength, power, and endurance

##### *Precautions*

- No lifting of objects heavier than 6lb with the operative upper extremity
- No sudden lifting or pushing activities

#### **Phase IV: Continued Home Program (Typically 4+ Months Postoperatively)**

Typically the patient is on a HEP at this stage, to be performed 3-4 times per week, 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 outlined by surgeon and physical therapist.

#### *Criteria for discharge from skilled therapy*

- Patient is able to maintain pain-free shoulder AROM, demonstrating proper shoulder mechanics (typically 80° - 120° of elevation, with functional ER of about 30°)