



# Charlotte Shoulder Institute

**Patient Centered. Research Driven. Outcome Maximized.**

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## **DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY INSTRUCTIONS FOR REVERSE TOTAL SHOULDER REPLACEMENT**

Initial recovery after shoulder surgery entails healing, controlling swelling and discomfort and regaining some shoulder motion. The following instructions are intended as a guide to help you achieve these goals until your 1<sup>st</sup> postoperative visit.

### **A. Comfort:**

Although surgery uses small incisions around the shoulder joint, swelling and discomfort can be present. To minimize discomfort, please do the following:

1. **Ice-** Ice controls swelling and discomfort by slowing down the circulation in your shoulder. Place crushed ice in cloth covered plastic bag over your shoulder for no more than 20 minutes, 3 times a day.
2. **Pain Medication-** Take medications as prescribed, but only as often as necessary. Avoid alcohol and driving if you are taking pain medication.
3. **Sling-** A sling has been provided for your comfort and should be worn as described below.
4. **Driving** – Driving is NOT permitted as long as the sling is necessary.

### **B. Activities:**

1. You are immobilized with a sling and abductor pillow, full time, for approximately one month. Your doctor can tell you when you can discontinue use of the sling at your 1<sup>st</sup> postoperative visit. The sling may be removed for exercises and for hygiene.
2. Your sling may be removed for gentle **PASSIVE** range-of-motion (PROM) exercises. (**SOMEONE ELSE MOVES YOUR SHOULDER**). This should be done 3x a day /15 repetitions (**ABDUCTION ONLY** – away from your body).
3. Active range-of motion (**AROM** – you move your shoulder) should be performed for shoulder internal/external rotation. Keep elbow positioned at the side and flexed at 90° so forearm is parallel to the floor. This should be done

within a comfortable range until you feel slight pain (3x a day for 15 repetitions). You can shrug your shoulders.

4. While your sling is off you should flex and extend your elbow and wrist – (3x a day for 15 repetitions) to avoid elbow stiffness.
5. Handball squeezes should be done in the sling (3x a day for 15 squeezes).
6. You may NOT move your shoulder by yourself in certain directions. NO active flexion (lifting arm up) or abduction (lifting arm away from body) until Dr. Romanowski or your therapist gives permission. These exercises must be done by someone else (Passive Range of Motion).
7. Physical therapy will begin approximately 3-4 weeks after surgery. Make an appointment with a therapist of your choice for this period of time. You will be given a prescription and instructions for therapy at your 1<sup>st</sup> post op or 1 month visit. Please take these with you to your first therapy visit.
8. Athletic activities such as throwing, lifting, swimming, bicycling, jogging, running, and stop-and-go sports should be avoided until cleared by Dr. Romanowski.

### **C. Wound Care:**

1. Keep the dressing on, clean and dry until your 1 week post op follow up appointment.
2. Should your dressing come off, you may apply band-aids to the small incisions around your shoulder.
3. You may shower the first day after surgery with the dressings in place.
4. Bathing, swimming, and soaking should be avoided for two weeks after your surgery.

### **D. Eating:**

Your first few meals after surgery should include light, easily digestible foods and plenty of liquids, as some people experience slight nausea as a temporary reaction to anesthesia.

### **C. Call your physician if:**

1. Pain persists or worsens in the first few days after surgery.
2. Excessive redness or drainage of cloudy or bloody material from the wounds. (Clear red tinted fluid and some mild drainage should be expected). Drainage of any kind 5 days after surgery should be reported to the doctor.
3. Temperature elevation greater than 101°.
4. Pain, swelling, or redness in your arm or hand.
5. Numbness or weakness in your arm or hand.
6. Chest pain or difficulty breathing.

### **D. Return to the office**

Your first return to the office should be within the first 1-2 weeks after your surgery. Call Dr. Romanowski's office to make your first postoperative appointment.

## **REHABILITATION PROTOCOL FOR REVERSE TOTAL SHOULDER ARTHROPLASTY**

The intent of this protocol is to provide the clinician with a guideline for the post-operative rehabilitation course of a patient that has undergone a reverse Total Shoulder Arthroplasty. It is not intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam/findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient they should consult with the referring surgeon.

The scapular plane is defined as the shoulder positioned in 30 degrees of abduction and forward flexion with neutral rotation. ROM performed in the scapular plane should enable appropriate shoulder joint alignment.

### **Shoulder Dislocation Precautions:**

- No shoulder motion behind back. (NO combined shoulder adduction, internal rotation, and extension.)
- No glenohumeral (GH) extension beyond neutral.
- \*Precautions should be implemented for 12 weeks postoperatively unless Dr. Romanowski specifically advises patient or therapist differently.

### **Surgical Considerations:**

The surgical approach needs to be considered when devising the postoperative plan of care.

- Traditionally rTSA procedure is done via a typical deltopectoral approach, which minimizes surgical trauma to the anterior deltoid.
- Some surgeons perform this procedure via a superior approach, retracting the anterior deltoid from the anterior lateral one third of the clavicle. This allows for superior exposure to the GH joint between the retracted anterior deltoid and the clavicle. Upon surgical closure the anterior deltoid is sutured back to its anatomical location. In these cases early deltoid activity is contraindicated. We recommend a variation of the below protocol for patients who have had a superior approach. Patient's should use a sling for 4-6 weeks, not to begin deltoid isometrics for at least four weeks postoperatively, not to begin active range of motion (AROM) flexion for at least six weeks, and not begin deltoid strengthening for at least 12 weeks post operatively.
- The start of this protocol is delayed 3-4 weeks following rTSA for a revision and/or in the presence of poor bone stock based on the surgeon's assessment of the integrity of the surgical repair. In the case of a delayed start to physical therapy adjust below timeframes so that day 1 is the first day of physical therapy.

**Progression to the next phase based on Clinical Criteria and Time Frames as Appropriate.**

## **Phase I – Immediate Post Surgical Phase/Joint Protection (Day 1-6 weeks):**

### **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 PROM.
- Restore active range of motion (AROM) of elbow/wrist/hand.
- Independent with activities of daily living (ADL's) with modifications.
- Independent with bed mobility, transfers and ambulation or as per pre-admission status.

### **Phase I Precautions:**

- Sling is worn for 3-4 weeks postoperatively and only removed for exercise and bathing once able. The use of a sling often may be extended for a total of 6 weeks, if the current rTSA procedure is a revision surgery.
- 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.

### **Acute Care Therapy (Day 1 to 4):**

- Begin PROM in supine after complete resolution of interscalene block.
  - Forward flexion and elevation in the scapular plane in supine to 90 degrees.
  - External rotation (ER) in scapular plane to available ROM as indicated by operative findings. Typically around 20-30 degrees.
  - No Internal Rotation (IR) range of motion (ROM).
- Active/Active Assisted ROM (A/AAROM) of cervical spine, elbow, wrist, and hand.
- Begin periscapular sub-maximal pain-free isometrics in the scapular plane.
- Continuous cryotherapy for first 72 hours postoperatively, then frequent application (4-5 times a day for about 20 minutes).
- Insure patient is independent in bed mobility, transfers and ambulation
- Insure proper sling fit/alignment/ use.
- Instruct patient in proper positioning, posture, initial home exercise

program

- Provide patient/ family with written home program including exercises and protocol information.

**Day 5 to 21:**

- Continue all exercises as above (typically 2-3 times per day).
- Begin sub-maximal 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.

**3 Weeks to 6 Weeks:**

- Progress exercises listed above.
- Progress PROM:
  - o Forward flexion and elevation in the scapular plane in supine to 120 degrees.
  - o ER in scapular plane to tolerance, respecting soft tissue constraints.
- Gentle resisted exercise of elbow, wrist, and hand.
- Continue frequent cryotherapy.

**Criteria for progression to the next phase (Phase II):**

- Tolerates shoulder PROM and isometrics; and, AROM- minimally resistive 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 –Active Range of Motion / Early Strengthening Phase (Week 6 to 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 and scapular stability.

**Precautions:**

- Due to the potential of an acromion stress fracture one needs to continuously monitor the exercise and activity progression of the deltoid. A sudden increase of deltoid activity during rehabilitation could lead to excessive acromion stress. A gradually progressed pain free program is essential.
- 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.

**Week 6 to Week 8:**

- Continue with PROM program.

- At 6 weeks post op start PROM IR to tolerance (not to exceed 50 degrees) in the scapular plane.
- Begin shoulder AA/AROM as appropriate.
  - o Forward flexion and elevation in scapular plane in supine with progression to sitting/standing.
  - o ER and IR in the scapular plane in supine with progression to sitting/standing.
- Initiate gentle scapulothoracic rhythmic stabilization and alternating isometrics in supine as appropriate. Minimize deltoid recruitment during all activities / exercises.
- Progress strengthening of elbow, wrist, and hand.
- Gentle glenohumeral and scapulothoracic joint mobilizations as indicated (Grade I and II).
- Continue use of cryotherapy as needed.
- Patient may begin to use hand of operative extremity for feeding and light activities of daily living including dressing, washing.

#### **Week 9 to Week 12:**

- Continue with above exercises and functional activity progression.
- Begin gentle glenohumeral IR and ER sub-maximal pain free isometrics.
- Begin gentle periscapular and deltoid sub-maximal pain free isotonic strengthening exercises. Begin AROM supine forward flexion and elevation in the plane of the scapula with light weights (1-3lbs. or .5-1.4 kg) at varying degrees of trunk elevation as appropriate. (i.e. supine lawn chair progression with progression to sitting/standing).
- Progress to gentle glenohumeral IR and ER isotonic strengthening exercises in sidelying position with light weight (1-3lbs or .5-

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

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

### **Phase III – Moderate strengthening (Week 12 +)**

#### **Goals:**

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

#### **Precautions:**

- No lifting of objects heavier than 2.7 kg (6 lbs) with the operative upper extremity
- No sudden lifting or pushing activities.

#### **Week 12 to Week 16:**

- Continue with the previous program as indicated.
- Progress to gentle resisted flexion, elevation in standing as appropriate.

## **Phase IV – Continued Home Program (Typically 4 + months postop):**

Typically the patient is on a home exercise program 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 and 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 degrees of elevation with functional ER of about 30 degrees.)
- Typically able to complete light household and work activities.

Adapted from Brigham and Women's Hospital. Department of Physical Therapy.