

This protocol provides appropriate guidelines for the rehabilitation of patients following total shoulder arthroplasty. The protocol draws evidence from the current literature and accounts for preferences of the surgeons at Summit Orthopedics. The program may be modified by the referring provider for an individual patient. If questions arise regarding the utilization of the protocol or the progress of the patient, contact Summit Orthopedics: **(651) 968-5200**

## **PRECAUTIONS**

Always adhere to subscapularis precautions:

### **Subscapularis Repair**

*ER (0 abduction):* 0° max for 4 weeks post-op. 20° max for 8 weeks.  
Striving toward symmetrical ER ROM at 6-8 months.

*ER (90 abduction):* 0° max for 6 weeks post-op.

*IR:* No IR behind the back until 6 weeks post-op.  
No resisted IR until 12 weeks post-op.

*Extension:* No extension behind midaxillary line for 6 weeks post-op.

If a biceps tenodesis/transplantation was completed, adhere to the additional precautions below:

### **Biceps Tenodesis/Transplantation**

No elbow flexion or supination against resistance for 6 weeks post-op.

## **LIFETIME RESTRICTIONS**

- » Lifting maximum of 25 pounds
- » No repetitive overhead reaching. Max of 1-3 pounds for overhead reaching.
- » No jarring activities (hammering) or contact sports.

## **PT FREQUENCY & DURATION**

- » Eight to 12 physical therapy visits over 4-5 months.
- » Begin physical therapy 4+ weeks after surgery as instructed by surgeon.

## REHAB PRINCIPLES

- » Focus on active engagement of the patient through patient education and therapeutic exercise. Establish a home exercise program that can be progressed gradually throughout the postoperative period.
- » Respect tissue healing. The surgeons at Summit Orthopedics uniformly prefer a slow progression of post-op patients with minimal postoperative pain.
- » Postoperative pain may be experienced. However, physical therapy, including the home exercise program, should result in minimal to no symptom exacerbation. The patient should call the PT for recommendations if pain increases during or after exercise.
- » The therapeutic exercises listed in this protocol convey the appropriate load for the shoulder given the time elapsed since surgery in regard to tissue healing. It is acceptable for a patient to progress more slowly. However, it is not acceptable for a patient to progress more quickly unless directly indicated by the surgeon.
- » Recommended max of 6 exercises for home exercise program. Select a well-rounded program that targets each area of insufficiency identified during physical exam.
- » *For goal setting after total shoulder arthroplasty, expect postoperative ROM to improve by approximately 10% compared to preoperative ROM.*

## MODALITIES

**Cold Therapy/Ice:** Use ice daily until pain-free or 8 weeks after surgery.

**Other Modalities:** DO NOT USE

## MANUAL THERAPY

- » No passive range of motion (physiologic/long arc).
- » No joint mobilization.
- » Soft tissue techniques to upper trapezius/levator scapula/pect minor are permitted.

## THERAPEUTIC ACTIVITY & PATIENT EDUCATION

Patient education is very important in getting the patient to take an active role in therapy and recovery. Educate the patient at the appropriate level regarding:

- » Anatomy of the shoulder girdle.
- » Basics of surgical procedure in layman's terms.
- » Surgical precautions.
- » Lifetime lifting restrictions (see page 1).
- » Shoulder girdle mechanics: typical and pathomechanical.
- » The inhibitory effect of pain on the rotator cuff.
- » Avoidance of pain-provoking activities.
- » Effect of posture on shoulder girdle mechanics.
- » Preferred positioning of the shoulder during sleep

## **THERAPEUTIC EXERCISE**

- » **Free Weights:** Use only as directed throughout protocol.
- » **Exercise Band:** DO NOT USE  
The use of Yellow Theraband®, the least resistive color in the Theraband series, results in 2.9 pounds of resistance when elongated by 100%. In addition, length-tension principles of muscle function do not align with exercise band properties; the muscle is asked to provide maximum force at a shortened and inefficient length. Therefore, exercise band use is not permitted for use during rotator cuff conditioning.
- » **Pulleys:** DO NOT USE

## **REHABILITATION PROGRESSIONS**

For the total shoulder arthroplasty, the surgeon determines the length of time in a sling based on basic principles of tissue healing and tissue quality. Four weeks in a sling is typical after a total shoulder arthroplasty. However, the surgeon may extend the time in a sling to protect the anterior structures of the shoulder if tissue quality is poor. If the patient is instructed to wear a sling for more than 4 weeks, the therapist should delay this protocol by the number of weeks in a sling beyond 4.

Page numbers below reference the Therapeutic Exercise Handout. The PDF for the Therapeutic Exercise Handout file containing instructions and pictures for each exercise can be printed from the Summit Orthopedics website: [www.summitortho.com/provider/michael-q-freehill-m-d/](http://www.summitortho.com/provider/michael-q-freehill-m-d/)

### **WEEK 0-4+ (CONTINUOUS USE OF SLING):**

After surgery, patient receives post-op instructions that include:

- » Wear sling continuously for 4+ weeks as instructed by surgeon. Sling may be removed to shower and dress.
- » Begin pendulum exercises the day after surgery. Ten reps in each direction four times per day.
- » AROM of the elbow, wrist, and hand.
- » Application of ice with shoulder ice wrap (Bird & Cronin).
- » Remove wound dressing 2 days after surgery (or as instructed). Leave Steri-Strips in place.
- » OK to drive once off narcotic pain medication. Check with auto insurance regarding driving in sling.
- » OK to write, type, eat, shave, wash face, brush teeth within pain tolerance.

## WEEK 5-6:

- » Begin physical therapy 0-2 weeks after discontinued use of sling.
- » Educate the patient regarding:
  - » Allowable ADLs (writing, typing, self-cares, not to lift anything heavier than a coffee cup).
  - » No overhead reaching.
  - » Surgical precautions (see page 1).
- » HEP 5-7x/week (up to two days off per week to allow for good/bad days).
- » Ice after PT/HEP.
- » Appropriate exercises:

PAGE	EXERCISE	DOSE
12	Ceiling Punch (active assisted to active)	2x10 with goal of 2x20
13	Reverse Codman (active assisted to active)	2x10 with goal of 2x20
10	Seated ER (to neutral)	2x10 with goal of 2x30
11	Wings	2x10 with goal of 2x30
13	Table Circles	10 with goal of 20 clockwise and counterclockwise
6	Prayer Stretch	5x10" with goal of 10x10"

## WEEK 7-11:

- » Continue physical therapy.
- » Educate the patient regarding:
  - » Allowable ADLs (not to lift anything heavier than one pound).
  - » Limited overhead reaching — max of one plate/cup.
  - » Surgical precautions (see page 1).
- » HEP 5-7x/week (up to two days off per week to allow for good/bad days).
- » Ice after PT/HEP.
- » Appropriate exercises (if exercises from week 5-6 result in a max of 3/10 pain):

Gentle self-stretching to promote gradual improvement in ROM:

PAGE	EXERCISE	DOSE
3	Golfer Stretch	3x30"
4	Behind-the-Back Stretch	3x30"
5	ER Stretch with Door	3x30" Adhere to surgical precautions
6	Prayer Stretch	3x30"

Early strengthening and proprioception:

PAGE	EXERCISE	DOSE
12	Ceiling Punch (active)	2x10 with goal of 2x20
13	Reverse Codman (active)	2x10 with goal of 2x20
7	Supine Protraction	2x10 with goal of 2x20
10	Seated ER	2x30 Pain-free ROM adhering to surgical precautions
11	Wings	2x30
13	Table Circles	20 clockwise and counterclockwise
8	Table Press	20x3"
12	Isometric Adduction	20x3" if compensatory shoulder hiking is noted

### 3-4 MONTHS:

- » Continue physical therapy.
- » Educate the patient regarding:
  - » ADLs as pain-free.
  - » Gradual return to activities as directed by surgeon.
- » HEP 3-4x/week (every other day).
- » Ice after PT/HEP as needed.
- » Continue gentle self-stretching if goal of 10% improvement in ROM is not achieved.
- » Appropriate exercises (if exercises from week 7-11 result in a max of 3/10 pain):

<b>PAGE</b>	<b>EXERCISE</b>	<b>DOSE</b>
12	Ceiling Punch (active)	2x20 with goal of 2#
13	Reverse Codman (active)	2x20 with goal of 2#
10	Side Lying ER (neutral to full ROM)	2x30 with goal of 2x50. No weight.
11	Bear Hug	20x3 seconds with gentle pressure
8	Table Press	20x3"
8	Lower Trap Retraining	20
8	Prone I	20
13	Wall Circles	20 clockwise and counterclockwise with towel

## 5+ MONTHS:

- » Continue physical therapy.
- » HEP 3-4x/week (every other day).
- » Ice after PT/HEP as needed.
- » Appropriate exercises (if exercises from 3-4 months result in a max of 3/10 pain):

PAGE	EXERCISE	DOSE
10	Side Lying ER	2x50. No weight.
11	Bear Hug	20x3 seconds with moderate pressure
11	Belly Press	20x3 seconds
12	Full Can	2x30 only when scap mechanics are good
13	Wall Circles	20 clockwise and counterclockwise with ball

- » After discharge from formal physical therapy, continue with HEP 2x/week until two-year anniversary of surgery.

## **RETURN TO SPORT**

### **GOLF**

- » Putting and chipping at 3+ months once cleared by physician.
- » Driving at 4+ months once cleared by physician. Work down through irons (9 » 3) before using woods/driver.

### **YOGA**

- » Patient may begin a modified yoga practice consisting of non-weight-bearing movement patterns when scapular mechanics are good and AROM is pain-free and without compensatory shoulder hiking.
- » Limited to no weight-bearing postures. Must be cleared by the physician.

### **OTHER SPORTS**

- » When cleared by physician.