

This protocol provides appropriate guidelines for the rehabilitation of patients following standard arthroscopic or open rotator cuff repair. 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**

**No use of UBEs** (Upper Body Ergometer/Upper Arm Bike).

**No TheraBand®** use for rotator cuff exercises. Okay to use with scapular retraction, biceps, triceps, etc.

**No pulleys.**

For all rotator cuff repairs, protect the anterior supraspinatus by adhering to the following precautions:

### **Rotator Cuff Repair (Supraspinatus)**

*ER (0 abduction):* 30° max for 4 weeks post-op. 50° max for 8 weeks.

No TheraBand® use with rotator cuff exercises. Free weights only.

If the following procedures were also completed, adhere to the additional precautions below:

### **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 for 6 weeks post-op.  
No resisted IR for 12 weeks post-op.

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

### **Biceps Tenodesis/Transplantation**

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

### **AC Joint Resection/Distal Clavicle Excision**

No cross-body adduction for 2-3 weeks post-op.

No internal rotation behind the back for 2-3 weeks post-op.

## **PT FREQUENCY & DURATION**

- » Eight to 12 physical therapy visits over 5-6 months.
- » Begin physical therapy 4-6 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.

## **MODALITIES**

**Cold Therapy/Ice:** Instruct patient to 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) beyond 90 degrees of forward flexion until 6–8 weeks after rotator cuff repair. Okay for PROM after 6–8 weeks. Okay for joint mobilizations to address shoulder hypomobility after 12 weeks only if prescribed by surgeon. Please reach out to surgeon/team prior to initiating joint mobilizations or with any questions. Soft tissue techniques to upper trapezius/levator scapulae/pec minor are permitted.
- » Joint mobilization to address shoulder hypomobility after 12 weeks ONLY if prescribed by surgeon.
- » Soft tissue techniques to upper trapezius/levator scapula/pec 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.
- » 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

- » **For standard rotator cuff repairs:** Strengthening of the rotator cuff will be initiated at 3 months/12 weeks post-op. General upper extremity conditioning is permitted (with patient's arms at their sides) at 3-4 months post-op. Examples of general upper extremity conditioning include biceps, triceps, and rows.
- » Okay for full can and flexion exercises without weight as early as 10 weeks post-op. Do not start adding small weights until 12 weeks post-op when repair integrity is achieved.
- » **For large to massive rotator cuff repairs:** Decelerated protocol; will not start strengthening of the rotator cuff until 4 months post-op. General upper extremity conditioning is permitted (with patient's arms at their sides) at 4-6 months post-op. Examples of general upper extremity conditioning include biceps, triceps, and rows.
- » **Free Weights:** Use the following age guidelines to establish a maximum weight for rotator cuff strength/conditioning ONLY when the protocol calls for the use of free weights.
  - » **For patients over 60 years old:**  
Work up to <1 pound maximum for rotator cuff strengthening exercises.
  - » **For patients aged 40-60:**  
Work up to 1-2 pounds maximum for rotator cuff strengthening exercises.
  - » **For patients under 40 years old:**  
Work up to 1-2 pounds maximum for rotator cuff strengthening exercises. Dr. Freehill does NOT want patients exercising the rotator cuff with 3-4 pounds. Okay for this with other exercises, but NOT for the rotator cuff.
- » **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 rotator cuff repair, the surgeon determines the length of time in a sling based on basic principles of tissue healing as well the size of the tear and tissue quality. Four weeks in a sling is typical after a rotator cuff repair. However, the surgeon may extend the time in a sling to protect the repair if the tear is larger or 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 four.

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 3 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).
- » If early postoperative stiffness is noted, contact the surgeon or team.
- » HEP 5-7x/week (up to two days off per week to allow for good/bad days).
- » Ice after PT/HEP.
- » Appropriate exercises:

<b>PAGE</b>	<b>EXERCISE</b>	<b>DOSE</b>
12	Ceiling Punch (active or active assisted)	2x10 with goal of 2x20
13	Reverse Codman (active or active assisted)	2x10 with goal of 2x20
10	Seated ER	2x10 with goal of 2x30
11	Wings	2x10 with goal of 2x30
13	Table Circles	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 permitted for standard RCRs only. Decelerated protocol permits this after 12 weeks.
  - » Surgical precautions (see page 1).
- » If postoperative stiffness is noted, contact the surgeon.
- » 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):

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 (full pain-free ROM)	2x30
11	Wings	2x30
13	Table Circles	20 clockwise and counterclockwise
6	Prayer Stretch	5x10" with goal of 10x10"
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.
- » If postoperative stiffness is noted, contact the surgeon.
- » HEP 3-4x/week (every other day).
- » Ice after PT/HEP as needed.
- » Appropriate exercises (if exercises from week 7-11 result in a max of 3/10 pain):

PAGE	EXERCISE	DOSE
10	Side Lying ER (neutral to full ROM)	2x30 with goal of 2x50
11	Bear Hug	20x3 seconds with gentle pressure
8	Lower Trap Retraining	20
8	Prone I	20
9	Prone W	1-2x20
9	Prone Superman	1-2x20
13	Wall Circles	20 clockwise and counterclockwise with towel
3	Sleeper Stretch	3x30 seconds
12	Full Can	2x30 only when scap machines are good
12	Flexion	2x30 only when scap machines are good

## 5+ MONTHS:

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

PAGE	EXERCISE	DOSE
10	Side Lying ER	2x50. See page 3 for max weights
11	Bear Hug	20x3 seconds with moderate pressure
11	Belly Press	20x3 seconds
12	Full Can	2x30 only when scap mechanics are good
12	Flexion	2x30 only when scap mechanics are good
9	Prone W	1-2x20
9	Prone Superman	1-2x20
13	Wall Circles	20 clockwise and counterclockwise with ball
14	Bird Dog	2x30-60 seconds
14	Front Plank	2x30-60 seconds
14	Side Plank	2x30-60 seconds
3	Sleeper Stretch	3x30 seconds

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

## RETURN TO SPORT

### WEIGHT TRAINING

- » Return to modified program when rotator cuff strength is 5/5 in all planes and cleared by physician.
- » Upper body weight training no more than 2x/week.
- » First do rehab exercises as part of upper body warm-up.
- » Lift appropriate weight for 2-3 sets of 15.
- » Acceptable Upper Body Lifts
  - » **Biceps:** Start at 3-4 months post-op.  
Curls with free weights, elbows at sides, scap set throughout.
  - » **Triceps:** Start at 3-4 months post-op.  
Press down with V rope on cable column.  
Bent-over kick back with free weights.  
No “skull crusher” variations.
  - » **Row:** Start at 3-4 months post-op.  
Seated row with cable column.  
Bent over row with free weights.  
Scap set during pull phase, elbows never behind body.
  - » **Lat Pull-downs:** Start when overhead function is achieved.  
Lean slightly back and pull bar to chest.
- » Advise the patient that the following exercises should NEVER be completed after rotator cuff repair unless specifically cleared by the physician:
  - » Dips
  - » Shrugs
  - » Incline Press
  - » Military Press
  - » Bench Press
  - » Push-ups
  - » Lateral Raise
  - » Pec Fly



## **THROWING**

If applicable, begin return to throw program at 6+ months when rotator cuff strength is 5/5 in all planes and cleared by physician.

## **COLLISION SPORTS**

Six to nine months as determined by surgeon.

## **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.
- » Begin weight-bearing postures at 5+ months once cleared by the physician.
- » Instruct that during the sun salutation/chaturanga, the patient should bypass the low plank (downward dog » high plank on knees » hold high plank [while others in class pass through low plank] » upward dog).

## **OTHER SPORTS**

When cleared by physician.