SUMMIT ORTHOPEDICS

MASSIVE ROTATOR CUFF REPAIR PROTOCOL

This protocol provides appropriate guidelines for the rehabilitation of patients following a massive 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

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.

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.

Deltoid Precautions

Apply to patients with super-sling, abduction pillow, or sling with bump.
No resisted abduction until 12 weeks post-op.

PT FREQUENCY & DURATION

- Eight to 15 physical therapy visits over 6–12 months.
- Begin physical therapy 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).
- Joint mobilization to address shoulder hypomobility after 12 weeks ONLY if prescribed by surgeon.
- 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.
- 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 massive 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. Six weeks in a sling is typical after a massive 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 6 weeks, the therapist should delay this protocol by the number of weeks in a sling beyond six.

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/**

WEEK 0–6+ (CONTINUOUS USE OF SLING):

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

- Wear sling continuously for 6+ 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 6–7:

- 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.
- 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
3	Pendulum/Codman	20 each direction
12	Ceiling Punch (active assisted)	2x10 with goal of 2x20
10	Seated ER	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 8–16:

- Continue physical therapy.
- Educate the patient regarding:
  - Allowable ADLs (not to lift anything heavier than a coffee cup).
  - No overhead reaching.
  - Surgical precautions (see page 1).
- If postoperative stiffness is noted, contact the surgeon.
- Assess active elevation looking for compensatory shoulder hiking.
- 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 6–7 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
10	Seated ER - full pain free ROM	2x30
13	Table Circles	20 clockwise and counterclockwise
6	Prayer Stretch	5x10” with goal of 10x10”
8	Table Press	20x3”
12	Isometric Adduction	If compensatory shoulder hiking is noted
7	Anterior Deltoid Isometric	Gentle
7	Middle Deltoid Isometric	Gentle

4–5 MONTHS:

- 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.
- 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 8–16 result in a max of 3/10 pain):

PAGE	EXERCISE	DOSE
12	Ceiling Punch	2x20 Progress from 4 oz. to 8 oz.
13	Reverse Codman	2x20 Progress from 4 oz. to 8 oz.
10	Seated ER (full pain-free ROM)	2x30
10	Side Lying ER	2x30
11	Bear Hug	20x3”
13	Table Circles	20 clockwise and counterclockwise
6	Prayer Stretch	5x10” with goal of 10x10”
8	Table Press	20x3”
12	Isometric Adduction	If compensatory shoulder hiking is noted
7	Anterior Deltoid Isometric	Moderate
7	Middle Deltoid Isometric	Moderate

6+ 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.
- Appropriate exercises (if exercises from 3–4 months result in a max of 3/10 pain):

PAGE	EXERCISE	DOSE
12	Ceiling Punch	2x20 Progress from 8 oz. to 16 oz.
13	Reverse Codman	2x20 Progress from 8 oz. to 16 oz.
10	Side Lying ER	2x30
11	Bear Hug	20x3”
11	Belly Press	20x3”
13	Wall Circles	20 clockwise and counterclockwise
8	Table Press	20x3”
12	Isometric Adduction	If compensatory shoulder hiking is noted
7	Anterior Deltoid Isometric	Moderate+
7	Middle Deltoid Isometric	Moderate+

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

RETURN TO SPORT

Must be discussed with physician.