Inland Orthopaedic Surgery
& Sports Medicine Clinic

Kyle J. Hazelwood, M.D.

LARGE TO MASSIVE SIZED ROTATOR CUFF REPAIR ± BICEPS TENODESIS
REHAB PROTOCOL AND POST-OP INSTRUCTIONS

This protocol has been developed specifically for large to massive rotator cuff tears. These injuries usually occur secondary to repetitive microtrauma and decreased blood supply to the tendon as well as degeneration and retraction over time. Large rotator cuff tears may also occur as a result of a traumatic event or shoulder dislocations. The following protocol may vary in length and aggressiveness depending on factors such as: Size and location of the tear, tissue quality and muscle atrophy, strength/pain/swelling/range of motion status, pre-operative function, rehabilitation goals and expectations.

While healing rates after surgery for small full-thickness rotator cuff tears are generally quite good approximately ranging between 75-90%, healing rates after repair for massive rotator cuff tears range between 50-80%. For this reason the rehabilitation is approached quite differently than for the more typical rotator cuff tears. Healing rates are generally about 10% per month and you should expect it will take about 1 year from the date of surgery for complete healing.

For the first 6 weeks the majority of your rehab program will be done at home. This will consist of **elbow and wrist range of motion exercises, shoulder pendulums and table slides ONLY (see below).** Otherwise, you are not supposed to move the shoulder and **it is important to stay in the abduction brace at all times for the first 6 weeks.** Within 2-3 weeks after surgery you can schedule your fist physical therapy visit which will be an educational visit. Your therapist will educate you on what exercises are appropriate and what to avoid. After 6 weeks, formalized physical therapy will begin.

Return to activity requires both time and clinical evaluation. Too safely return to normal or higher level of functional activity, the patient requires adequate strength, flexibility, and endurance. Functional evaluation including strength and range of motion testing is one method of evaluating a patient’s readiness to return to activity. Return to intense activities following rotator cuff repair requires both a strenuous strengthening and range of motion program along with a period of time to allow for tissue healing.

I. <u>POST-OP INSTRUCTIONS:</u>

a. Abduction sling to be worn **a minimum of 6 weeks** from the date of surgery.
b. May **remove bandage post-op day 3** and clean shoulder with alcohol and gauze. Keep steri-strips/sutures in place and reinforce with band aids as needed. Sling or abduction pillow at all times except for exercises and shower. **Ok to shower, keeping shoulder covered and as dry as possible** with saran wrap and tape
c. After removing dressing on 3rd day, do not scrub over incisions while in shower. Just let soap/water drain over shoulder and pat dry. Do not submerge incisions in bath or pool until fully healed (4-5 weeks)
d. If you had a **nerve block at the time of surgery, it usually wears off 12-24 hrs post-operatively**. It is normal to have some numbness in the shoulder/arm the first few days after surgery as a result. **The first night after surgery take pain medication before going to bed as the nerve block will often wear off during the night.**
e. Take the prescribed pain medications as directed. You can supplement your pain control with ice and over-the-counter ibuprofen if needed, making sure to follow the dosage as recommended on the bottle.
f. Decrease the frequency of your pain medicine as your symptoms allow. Although everyone is different, generally patients are able to be off of pain medicine around 1-2 weeks post-op.
g. There is no conclusive data about when it is safe to return to driving after shoulder surgery. You cannot drive while taking pain medications. Generally it is a good idea to arrange for someone else to drive for you for the first few weeks. Return to driving is highly individualized and is generally guided by your ability to drive safely and your ability to make evasive maneuvers if that was required.
h. The risk of blood clots is extremely low after surgery of the shoulder or upper extremity. However, certain conditions may increase your risk including smoking, family or personal history of blood clots or birth control pills. If any of these situations apply, please let Dr. Hazelwood know and take 1 tablet of aspirin (325 mg) per day for 3 weeks after surgery.

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II. **<u>REHABILITATION PROTOCOL 0-3 WEEKS POST-OP:</u>**

a. **For the first phase of rehab emphasis is placed on healing not motion!**
b. Establish **1st visit with physical therapist within 2-3 weeks after surgery**. If you did not get a referral for therapy before surgery, please call Dr. Hazelwood's office so that we may fax the referral to the therapist. This first visit will be an educational visit to teach you home exercises and what to avoid. Other than this visit, the first 6 weeks is a **<u>home program.</u>**
c. **No active or passive motion for the first 6 weeks**
d. Pendulum exercises, Table Slides 3x/day **beginning one week from the date of surgery**.
e. Modalities, ice as needed. Place a towel or covering between your skin and the ice to protect your skin. Maximum 20 minutes/per hour. Gradually wean off ice as swelling/discomfort decreases.
f. Hand, wrist range of motion
g. If no biceps tenodesis, then no elbow ROM restrictions. If there was a biceps tenodesis, **No active elbow flexion x 4 weeks**

II. **<u>3-6 WEEKS POST-OP:</u>**

a. Continue to wear the sling at all times except for showering/bathing. May submerge wounds once fully healed around 4-5 weeks
b. Table Slides/Pendulums 3x/day
c. Weight Restrictions: <5 lbs
d. Hand/wrist motion. Grip strengthening. **Begin elbow motion after four weeks if biceps tenodesis was done**
e. Modalities as needed (heat to start, ice, electrotherapy, estim…)

III. **<u>6-12 WEEKS POST-OP:</u>**

a. Can begin to wean out of abduction sling as tolerated
b. **Initiate Passive range of motion**
    i. flexion, abduction, IR / ER
    ii. begin with arm at side and elbow flexed to 90 degrees
    iii. progress to scapular plane and then 90/90 position
c. **Goal is for full passive range of motion by 12 weeks**
d. Initiate **active assisted range of motion (AAROM) in scapular plane at 8 weeks**
e. Begin gentle posterior capsular strengthening
f. Begin biceps PRE's if had biceps tenodesis
g. Deltoid isometrics, active assisted scapular strengthening in protective range (shrugs/retractions)
h. Weight restrictions: <10 lbs

IV. **<u>12-16 WEEKS POST-OP:</u>**

a. Begin progressive active range of motion exercises
b. No range of motion restrictions
c. Initiate sub-maximal pain free isometrics with the arm at the side
d. Wall climbs, pulleys, functional reach behind the back
e. Progress Rotator cuff isotonics as ROM approaches normal
    i. Begin Theraband IR / ER with the arm at the side
    ii. Upper extremity progressive resistance exercises for large muscle groups, (pec, lats)
    iii. Begin isokinetic program
f. Advance scapular stabilization exercises
g. Progress posterior capsular stretching
h. Weight restriction: <20 lbs

V. **<u>16-24 WEEKS POST-OP:</u>**

a. Return to normal everyday activity, still avoiding heavy overhead lifting >30 lbs

b. Continue ROM exercises and stretching as needed
c. Continue isotonic exercises with emphasis on strengthening the rotator cuff

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d. For shoulder internal/external rotation, gradually increase the stress to the shoulder by exercising in the functional shoulder position (progressing from 0° to 45° to 90° of shoulder abduction as tolerated). Add supraspinatus strengthening 0°-70°. This movement should be pain free and performed in the scapular plane
e. Active horizontal abduction (prone).
f. Add total conditioning program – strength, endurance and core stabilization
g. May start gentle gym weight training military press, bench press, flys, and lat pull-downs

VI. **24+ WEEKS POST-OP:**

a. Advance progressive strengthening exercises, begin to emphasize sport specific positions
b. Initiate light upper body plyometrics program
c. As strength improves, continue to increase weight resistance and high speed training with isotonic and isokinetic exercises
d. Emphasize eccentric phase in strengthening the rotator cuff
e. Continue total body conditioning program with emphasis on the shoulder
f. Begin practicing skills specific to the activity (work, recreational activity, sport, etc.

VII. **RETURN TO SPORTS/ACTIVITY**

a. Return to sports/unrestricted activity will vary depending on each individual and factors such as activity demand, strength, range of motion, pain, etc. Generally the earliest return to sports is between around 10 months
b. Overhead athletes initiate throwing program around 8 months
c. Isokinetic test results for the shoulder patterns should demonstrate at least 80% strength and endurance (as compared to the other side) before proceeding to sport specific activities

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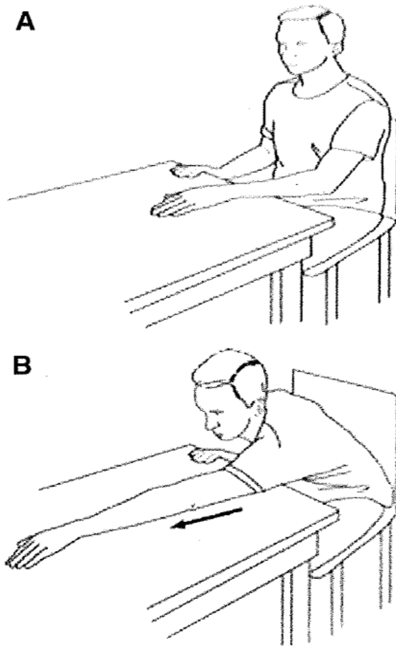
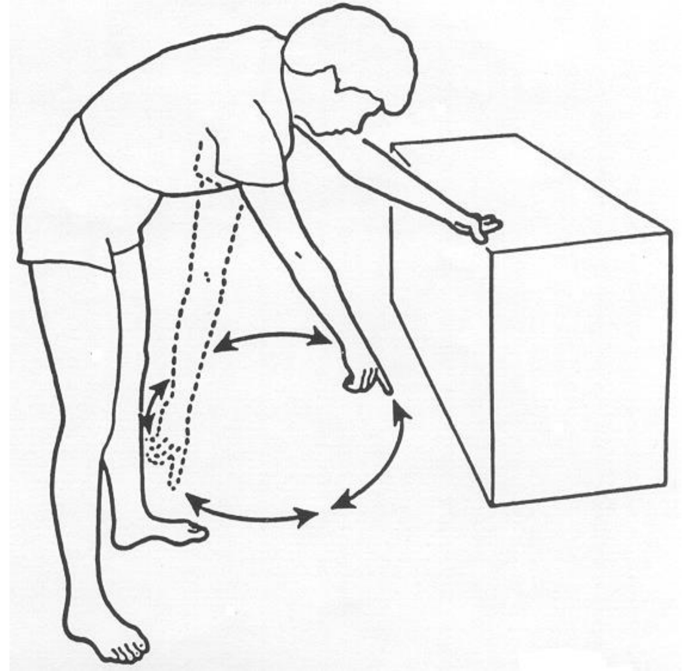


FIGURE 1. Table slide. (A) Starting position. While seated at a table, the patient places the hand of the affected shoulder on a sliding surface (e.g., a magazine that slides over a smooth table surface). (B) Ending position. The patient slides the hand forward, maintaining contact with the table, while the head and chest advance toward the table.



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