

Rotator Cuff Repair

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The rotator cuff is made up of four muscles and their tendons. The four muscles originate from the “wing bone” of the shoulder (the scapula) and together form a single tendon unit. This unit inserts on the upper humerus. It primarily helps to stabilize the ball of the shoulder within the joint, rotates the humerus and helps lift the arm. Rotator cuff tears are most common in people over the age of 40 who do repetitive overhead work, sports or weight training. It may also occur in younger patients following acute trauma or sports activity. Tears can be partial or full thickness. Partial tears can be within the tendon itself, on the upper or lower surface. Sometimes these partial tears are associated with calcium deposits; this is called calcific tendonitis.

Patients with rotator cuff tears usually experience loss of motion, weakness and pain. Night pain and pain with certain arm motions are typically the most difficult for a patient with a rotator cuff tear. Loss of sleep often affects daily life and inability to lift common items (like a container of milk) frequently brings the patient to the doctor.

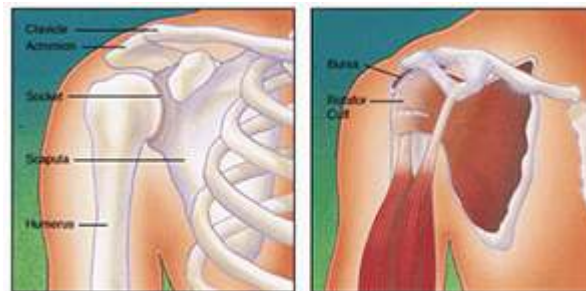


Figure 1: Normal anatomy of the shoulder

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Treatment: When a rotator cuff tear is involving more than $\frac{1}{2}$ the thickness of the tendon and/or the patient has failed conservative treatments, surgical repair is often the best option. Dr. Reznik performs this surgery through a fiber-optic scope using small incisions on an outpatient basis. The type of repair and recovery depends on the size, shape and location of the tear. A partial tear may require only a trimming or smoothing procedure called a “debridement.” Removing thickened bursal tissues (bursitis) or calcium deposits may also help. When bone spurs are impinging on the tendon, they can also be a source of pain and would be removed at the same time. A complete tear within the substance of the tendon is repaired by suturing the two sides of the tendon. If the tendon is torn from its insertion on the tuberosity of the humerus, it can be repaired directly to the bone using tiny suture anchors. The complication rate for arthroscopic repair is extremely low. For example, the risk of infection for open surgery is near 1 in 100 were as in arthroscopic surgery it is less than 1 in 2000. Remember, the sutures hold the tendon in

place while your body heals, so your post op activities and restrictions will depend on the type of tear you have.

Arthroscopic Repair The cuff is seen through arthroscopic cannula (Figure 1) and then the cuff can be cleared of scar tissue and debris (Figure 2). Once the repair site is ready an anchor is introduced and placed in the bone (Figures 3 and 4). With the suture firmly in the bone (Figure 5) the suture can be passed through the tendon (Figure 6) and tied in place. Pending the size of the tear, repeating these steps multiple times completes the repair (Figure 7).



Figure 1: Cannula placement Lateral shoulder.

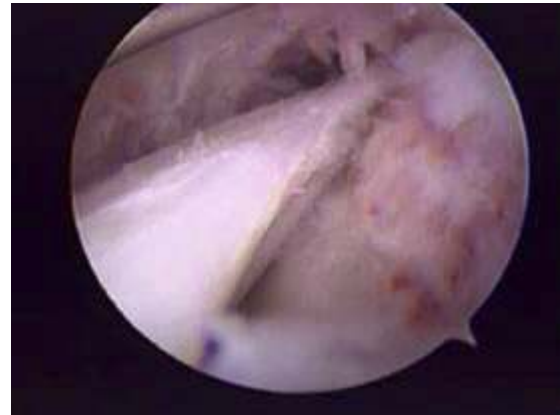


Figure 2: Rotator cuff tear with exposed bone edge



Figure 3: Introducing the Bone anchor.



Figure 4: Placing anchor in bone.



Figure 5: Sutures anchored to the bone.

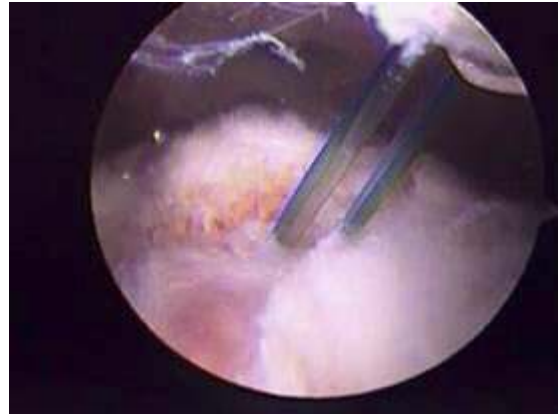


Figure 6: Suture passing.

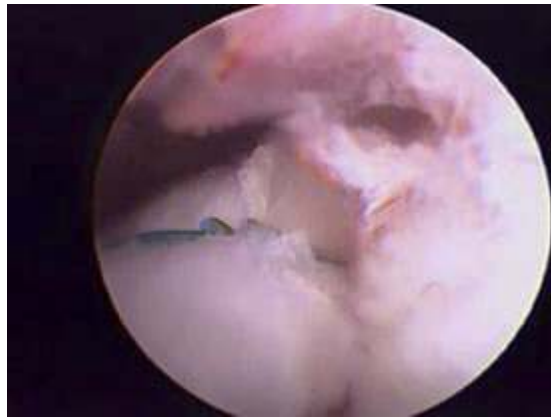


Figure 7: The cuff tear is sutured to the bone

General Instructions All Rotator Cuff Repair Patients:

Diet: You may resume a regular diet when you return home. Most patients start with tea or broth adding crackers or toast, then a non-spicy sandwich. If you become nauseated, check to see if one of your medications is upsetting your stomach, most narcotics can. If your stomach feels acidic, try Tums, Zantac or Pepcid AC to settle it and drink some clear liquids.

Lungs: After surgery you are encouraged to deep breathe and cough frequently (at least 3-4 times per day). This will reduce mucous from building up in your lungs, and will reduce the risk of developing a post anesthetic pneumonia.

Pain Control: Take medication as prescribed by Dr. Reznik. Please call our office with any questions regarding your medication.

Call the Physician or Go to the ER if:

****You develop excessive, prolonged nausea or vomiting**

****You develop a fever above 101.**

****You develop any type of rash:**

****You experience calf pain**

Sling: Patients are to wear the pillow sling at all times for 3 weeks. Move fingers and wrist often. Expect some swelling. Use Ice pack for 20 minutes periods throughout the first 24 hours after surgery and then as needed. It is recommended that patients wear the sling with the pillow removed when going out for the next 3 weeks. This will help to alert others to avoid the affected arm during this healing period.

Driving: Patients cannot drive until they are off all pain medications, completely out of the sling, and can easily place hands at 12:00 position on the steering wheel and can move hands freely from the 9:00 –3:00 position.

Airline Flights: Patients may fly 2-3 weeks after surgery on short flights (up to 2 hours) but should in general wait 6-8 weeks for longer flights. You should get up and walk frequently to avoid blood clots and take an aspirin (unless allergic).

Returning to Work: A patient with a small tear, and/or low demand work, can usually return to work within 3 weeks. They will still have restrictions on lifting and overhead use. Patients with higher demand jobs or repetitive arm use need at least 6 weeks. Any heavy labor with overhead lifting can take at least 4-6 months.

Blood Clots:

Patients at high risk for blood clots include:

- Those with long car or train commutes
- May be overweight Have a history of having cancer
- Females on birth control pills
- Males over the age of 40

These patients should be taking 1 aspirin per day for 6 weeks after surgery unless allergic to aspirin.

Physical Therapy:

Vital to your recovery of good shoulder function is a graduated activity and exercise program to increase muscle strength and motion. You will begin simple exercises the day of surgery. They should be done every day for the first week post-op, to maintain blood flow and help prevent blood clots.



Your physical therapy will begin 3-4 days after surgery. The physical therapist will guide you in your shoulder rehabilitation program. And, it is very important for you to start therapy when recommended.

To avoid complications, postoperative follow up appointments with your physician are also required to monitor your progress.

Rotator Cuff Repair Recovery Plan:

Day 1: The Day of Surgery

Maintain dressing and 4x4 bandages if needed for drainage through dressing. Use ice pack for 20 minute periods throughout today. (Do not place ice directly on skin to avoid frostbite.) Keep pillow sling on at all times. Move fingers and wrist often. Expect some swelling, if you have any change in skin color or sensation in arm, notify our office. When sleeping, most patients find sleeping in a semi-upright position is more comfortable for the first few weeks after shoulder surgery. Begin hand squeezing and wrist range of motion exercises tonight. (See exercise list) The arm sling must remain on at all other times, including bedtime.

Day 2: The Day after Surgery Same as Day 1

Day 3: (usually about 48 hours after surgery) Continue same activities, including using ice for 20 minute periods as needed. You should remove your dressing. You may remove the sling to shower today, supporting the affected arm with the opposite hand. You may wash the skin around the incisions. When washing the under arm, do not use a large amount of soap. It may dry out the skin and cause a rash. After a short shower, dry the shoulder well and place Band-aids over incisions. You may begin elbow range of motion exercise today. Physical therapy will start today unless otherwise directed by Dr. Reznik. Add Biceps Curls to your home exercise program.

Days 7-10:

Change band-aids as daily as needed. Maintain sling use. Continue exercises, adding Wall Walking and Pendulum exercises.

The first Post-op visit: Usually after 7-10 days: Your sutures will be removed at this visit. Further instructions will be given to your rehabilitation and recovery. You may increase your biceps curls by add light weight only if comfortable.

Exercises: Do three times each day as directed

Starting Day 1:

Hand squeezes or grip strengthening: Using a small soft rubber ball or soft sponge, squeeze your hand. When in the shower, you can use a sponge filled with water. Do this for 3-5 sets of



10-20 repetitions each day. If this is too easy, later in the rehab course you can use a grip strengthener.

Wrist Range of Motion: Roll your wrist in circles for 30 seconds after each round of grip exercises.

On Day 3 add:

Elbow Range of Motion: Turning your palm inward, towards your stomach, flex and extend the elbow as comfort allows. This will decrease pain and prevent elbow stiffness.

On Day 4 add:

Pendulum Exercise: Holding the side of a table with your good arm, bend over at the waist, and let the affected arm hang down. Swing the arm back and forth like a pendulum. Then swing in small circles and slowly make them larger. Do this for a minute or two at a time, rest, then repeat for a total of 5 minutes, 3 times per day.

Not before Day 7-10 add:

Wall Walking: Stand facing a blank wall with your feet about 12 inches away. "Walk" the fingers of the affected hand up the wall as high as comfort allows. Mark the spot and try to go higher next time. Do at least 10 repetitions, 3 times per day. When more comfortable and stronger (not before three weeks) do these exercise sideways, with the affected side facing the wall. Do not let the hand drop down from the wall- walk your fingers down as well as up. Dropping the arm will strain the repair and be painful. If having weakness on the way down, feel free to use the other arm to help.

Biceps Curls: Curl the arm up and down 12 times; rest for one minute and repeat for a total of 3 sets of 12. When comfortable try it holding a very small can to start, in a few days you can increase can size only as comfort allows. This exercise should not be painful. If painful decrease or eliminate the weight.

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