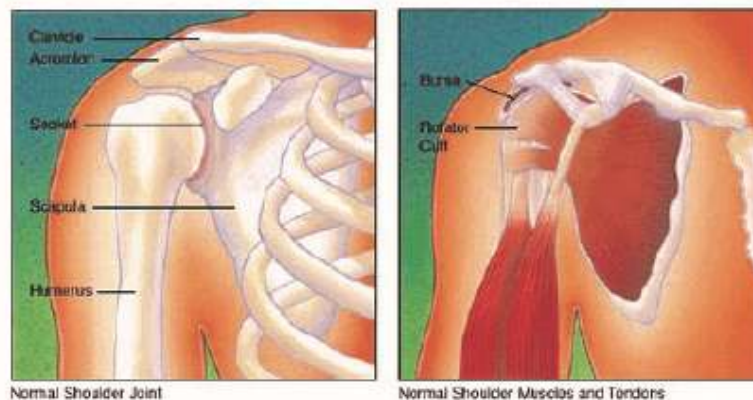


Treatment for Shoulder Impingement Syndrome, Chronic Rotator Cuff Tendonitis and AC Joint Pain

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For Shoulder Impingement Syndrome/ Chronic RTC Tendonitis



Arthroscopic Acromioplasty/Mumford Procedure:

Problem: This is referred to as “impingement syndrome.” This can be caused by an injury to the shoulder and the rotator cuff. It can also occur in athletes who participate in sports that have repetitive overhead movements (weightlifting, basketball, tennis, volleyball, etc.) or people whose work involves performing repetitive shoulder movements or overhead movements are also susceptible to shoulder impingement. With impingement of the tendons, overuse of the shoulder may lead to damage of the tissues underneath the Acromion process. The tendons and bursa may thicken and then pinch against the bone and/or the nearby coraco-acromial ligament, causing irritation and pain.

The **AC joint** can also become arthritic, injured (as in a shoulder separation), or worn by repetitive motion like weightlifting or become cystic (a condition known as osteolysis of the clavicle). Sometimes the end of the clavicle can be stressed by repetitive injury as in frequent overhead weightlifting. It becomes soft, cysts may form, and the bone becomes weak. Pain with overhead lifting and night pain is common. The stressed bone and swollen AC Joint can also be a source of pain.

If left untreated, these bone spurs rub on the rotator cuff. The friction from the rubbing weakens and damages the cuff, causes worsening pain and, in time, this can lead to a rotator cuff tear even with seemingly minor trauma.



Figure 1: Inflamed RTC

Anatomy: The top of the scapula (shoulder blade) attaches to thicker piece of bone and it forms the roof of the shoulder joint, known as the **Acromion**. Normally, the tendons of the shoulder (the Rotator Cuff) and a fluid-filled bursa sac have plenty of room underneath the Acromion to move. They glide freely in this space and it allows for a smooth, full range of motion of the shoulder joint. Some patients have anatomic variation of the acromion (an overhanging tip or hook shaped tip) and are more prone to this problem. Impingement can also occur where this bone meets the

collarbone (**clavicle**). The **acromioclavicular** or AC joint is the name of the joint that connects the collarbone to the scapula. Occasionally there are significant arthritis, wear, damage and spurs at the AC Joint, and like a hooked acromion, the cuff is “impinged” upon by these spurs.



Figure 2: Spur and Bursitis



Figure 3: Abnormal AC Joint

Treatment:

If the problem has failed to improve with non-surgical methods, like anti-inflammatory drugs (NSAIDs), injection and therapy, and when the problem relates to an overhanging acromion, calcified acromial-clavicular ligaments, or a thickened bursa, arthroscopic surgery can help. Through the arthroscope and small incisions, Dr. Reznik can remove any damaged tissue, remove the spurs, increase the sub-acromial space and clear the inflamed bursa. This procedure is called an “**Acromioplasty**.” When the AC joint is the source of pain, the spurs, arthritic surface, cysts and softened bone can also be removed arthroscopically. This is known as a “**Mumford Procedure**” (resection of the distal clavicle). Many times, both areas are the source of pain and the tendon impingement. The choice of procedure you need depends on the problem you have, and, in many cases, both are needed to relieve the persistent symptoms of

shoulder pain. Both procedures are minimally invasive. They can be done through tiny incisions, using a fiber optic scope under a very light general anesthesia (while nicely sleeping and breathing on your own).

Minimally Invasive Arthroscopic Surgery:

Acromioplasty / Mumford Procedure Recovery Plan



Figure 4: Spur Removal



Figure 5: Smoothing the Distal Clavicle

Pain Control: Take medication as prescribed by Dr Reznik. Please call our office with any questions regarding your medication. We often give two types of pain relievers; they work differently. You will have a local in your shoulder before you wake up, it will wear off in approximately 6-8 hours. Take your pain pills as directed, with food, before the local wears off.

After surgery, some patients will see some swelling. Use an ice pack for 20-minute periods throughout the first 24 hours after surgery and then as needed for comfort and to reduce swelling.

Sling: It is recommended that patients wear the sling when going out for the next 3 weeks and in a crowd. This will help to alert others to avoid the affected arm during this healing period.

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 it is important to do **deep breathing** exercises. This is done by taking at least **5 deep breaths** holding for **2-5 seconds** with rest in between each breath. This should be done **3-4 times daily** to prevent possible post anesthetic pneumonia. Patients that are over 40, have a history of blood clots, on birth control pills or overweight should be on some type of blood thinner to prevent blood clots. In many cases a baby aspirin a day for six weeks is enough. Please ask Dr. Reznik if you have any of these risk factors.

Blood Clots: Blood clots are rare after shoulder surgery and patients should be up and walking as soon as comfortable. Leg and foot motion is encouraged several times during each day and they should be done every day for the first 3-6 weeks post-op to maintain blood flow and help prevent blood clots. **Still some patients have higher risks than others for clots.**

Patients at high risk for blood clots include:

- Those with long car or train commutes
- May be overweight BMI >30
- Have a history of having cancer
- Females on birth control pills
- Over the age of 40

These patients should be taking 1 aspirin per day for 6 weeks after surgery unless allergic to aspirin. Patients with a prior blood clot or a **family (genetic) history** of increased risk for blood clots may need a formal blood thinner like Coumadin or one of the newer agents like Xarelto or Eliquis. Some genetic factors include Factor V Leiden, Protein S Deficiency, and prior DVT or PE history. **YOU MUST TELL DR. REZNIK** if you have these issues.

Remember: Call the physician and/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 shortness of breath, calf pain or increased swelling in the calf and ankle.

Physical Therapy: Good shoulder function is a graduated/ progressive activity and an exercise program is **VITAL TO YOUR RECOVERY**. You will begin simple exercises the day of surgery. Your physical therapy will begin 3-4 days after surgery. The Physical Therapist will guide you in your shoulder rehabilitation program. It is very important for you to start therapy when recommended.

Post-Operative Appointments: To avoid complications, keep all your post-operative follow-up appointments with your physician. These are also required to monitor your progress and help in recovery.

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 to 3:00 position.



Returning to Work: Most patients performing sedentary or low demand work can return to work within 7 to 10 days. They will still have restrictions on lifting (usually 5 lbs.) and repetitive and overhead use. Patients performing medium work that may require some light lifting may return in about 3-4 weeks. Patients with higher demand occupations with infrequent repetitive arm use will need at least 6-8 weeks. Heavy laborers or those with frequent repetitive or overhead work (as in manufacturing or construction) will need a minimum of 3-4 months and then a work conditioning program prior to returning to work.

Note: Most patients see 80% of their improvement by 4 months. Endurance strength, and the remainder of improvements will occur between 4-12 months after surgery. Most people heal at their own rate, some slower some faster.

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

Post-Operative Exercises to be done at Home

Day 1: The Day of Surgery

You will start exercises in the recovery room. Once home leave on dressing. You may add 4x4 bandages if needed for drainage through dressing. Apply ice pack for 20-minute periods throughout the day. Take care to avoid icing for too long as prolonged ice to the skin can cause frost bite.

Move your fingers and wrist often. Expect some swelling. If the color of your arm or hand changes, or sensation changes notify the physician. Start **pendulum** and **wall walk** (see list) exercises tonight.

** Most patients find **sleeping semi-upright** is more comfortable the first few days after shoulder surgery. Many find they cannot sleep flat in bed for 2-3 weeks. It turns out a reclining chair is often most comfortable for the first 2-3 weeks post op. For some reason, for shoulder surgery patients, trying to sleep flat too soon only leads to lost sleep.

Day 2: The Day after Surgery

The same as day 1.

Day 3: (48 hours post-operatively):

Resume same activities as the surgical day; use ice for 20-minute periods as needed. Continue



gripping exercises and be sure to move your wrist and fingers frequently. Take your dressing off and shower today. In the shower, begin to flex and extend your elbow, you should move the arm freely in the shower. You may wash under the arm, but use very limited amounts of soap, too much soap may dry out the skin and cause a rash or yeast infection. After your shower, dry the shoulder well and place Band-Aids over incisions.

Physical therapy usually begins in the next day or two. It is a key part of your post op care. Continue the therapy program, each week **they will be adding new exercises** to your home program based on your individual progress.

** Now, your arm sling is for comfort only; use it only as needed and when in a crowded place (this will warn people to avoid your injured area). Do your elbow, wrist, and hand exercises at least two more times each day—15 reps. Isolated hand swelling without signs of an infection is often a sign of leaving the arm still and not moving the fingers/hand/elbow enough. Moving the wrist and doing the simple exercises at home will help to reduce the potential swelling in the hand and fingers.

Days 4-10:

Change Band-Aids daily or as needed. Maintain sling use for comfort and continue with exercises as directed. Add Bicep Curls and increase the circle size when doing the Pendulum exercises as pain and comfort allow. Remember holding the arm perfectly still all the time is not natural. Being perfectly still requires the muscles to be tight; and in time that will cause more pain in the arm, some small movements are natural. It is good to keep the fingers, wrist and elbow moving; even a little will reduce pain and stiffness.

Days 7-10:

Keep your first post visit with Dr. Reznik; further instructions will be given to continue your rehabilitation and recovery.

Exercises Explained: Do three times each day as directed above.

Hand: Grip Strengthening

When in the shower hold a large wet sponge in your hand. Let it fill up with water and squeeze the water out. Do this for 3 sets of 15 repetitions. To do this two more times, when not in the shower, use a light grip strengthener or small rubber squeeze ball.

Wrist: Range of Motion

Roll your wrist in circles for 30 seconds after each round of grip exercises.



Elbow: Range of Motion

The palm should be turned inward, towards your stomach. Flex and extend the elbow as comfort allows; this will decrease pain and prevent elbow stiffness.

Elbow: Biceps Curl

Using a small can of soup to start, with your upper arm still at your side, curl the arm by bending the elbow moving the hand up and down 12 times. Rest for one minute and repeat for a total of 3 sets of 12. Increase can size as comfort allows.

Shoulder: Pendulum Exercises

Holding the side of a table with your good arm, bend over at the waist and let the affected arm hang down and swing the arm back and forth like a pendulum. Then 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, and do this 3 times a day.

Shoulder: 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. Also do this exercise sideways, with the affected side facing the wall.

