



PENINSULA  
BONE AND JOINT CLINIC

# ROTATOR CUFF SURGERY



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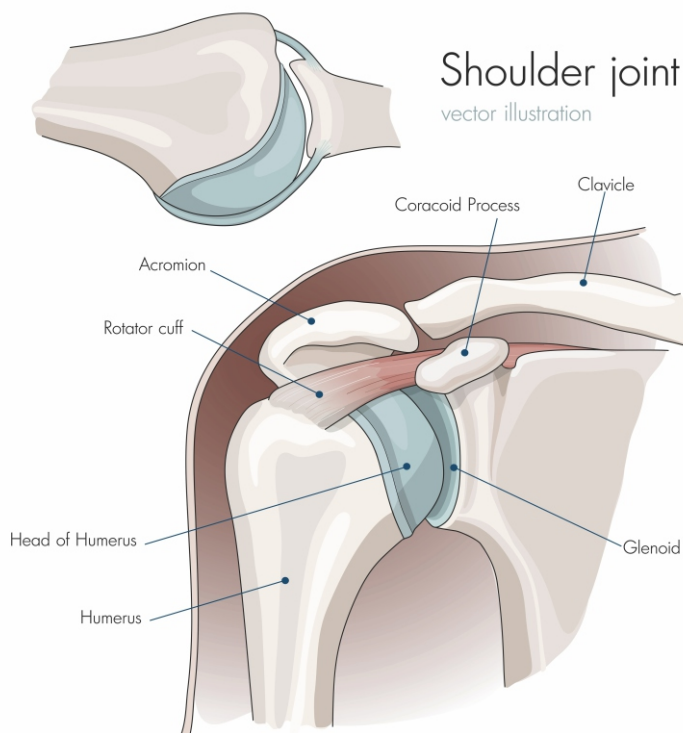
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## Anatomy and Biomechanics

The shoulder is a complex joint that is made up of the ball and socket connection between the humerus (ball) and the scapula (socket). The shoulder is the most mobile joint in the body. The shoulder's proper function and stability is largely dependent on the soft tissues that surround it. This includes the capsule which is a thick broad ligament structure that surrounds the joint and provides stability. It also includes the rotator cuff tendons that move the joint and also add to its stability.

The rotator cuff is a group of four tendons that attach to the ball of the shoulder joint. They surround the ball on all sides. When the arm is moved away from the body the tendons act to hold the ball in the socket correctly to achieve smooth motion between the ball and the socket. When one or more of these tendons is torn it becomes very difficult to use the arm to complete even the most basic activities of daily living. A tear in the rotator cuff can happen as an acute injury such as when lifting a heavy weight or a fall onto the shoulder or elbow. The rotator cuff can also wear out as a result of repetitive activity or as part of aging which we refer to as a degenerative tear.



## Diagnosis

Symptoms of shoulder pain that awaken you at night, and/or weakness raising the arm overhead are suggestive of a torn rotator cuff. Sometimes pain and weakness are only related to activity and can often times be associated with stiffness or loss of motion. The shoulder is examined clinically in our office to reveal some of these findings. The diagnosis can be confirmed by Magnetic Resonance Imaging (MRI) which also helps to determine the size of the tear and any other associated pathology.

## Treatment Options

Regardless of how the tendon is torn we will work with you to determine the best course of treatment. In many cases a small, partial thickness tear can be treated conservatively. This may include Physical Therapy, anti-inflammatory medication, activity modification, and possibly a corticosteroid injection. Large, full thickness tears may benefit from a surgical intervention and we will make our recommendation based on multiple factors.

## Surgery

Rotator cuff repair surgery is often performed arthroscopically. A camera and specialized instruments designed to work through small incisions on the skin (portals) are used to repair the torn tendons back to the bone. The procedure is an outpatient surgery so you will not have to spend the night in the hospital. If damage to the rotator cuff is quite extensive we may have to use a small mini-open incision rather than an arthroscope to complete the procedure. This will not have a major impact on length of recovery or overall outcome. The impact is mainly cosmetic as the incision is larger than our arthroscopic portals.

## Anesthesia

General anesthesia will be required to perform the surgery. In addition, the anesthesiologist will discuss performing a nerve block in the pre-operative area prior to surgery. It is a highly effective way to decrease pain in the first 24-36 hours after surgery. It will help reduce the amount of pain medication required although we do advise starting pain meds prior to the block wearing off to smooth the transition.

## Recovery/Time off Work

Rotator cuff surgery and its recovery is time consuming and the overall outcome is highly dependent on patient compliance with post-operative protocols. You should only have rotator cuff surgery if you are prepared to be an active participant during this process, resting and utilizing the sling as directed, and performing recommended exercises to ensure there is proper return of range of motion and strength. There is a large amount of variability in the time it takes to fully recover from this procedure. In general, the larger the tear and its severity, the longer the time it will take for overall recovery. It is usually estimated that it will take at least six months to feel as though you have completely regained the use of your arm. Some cases may take as long as a year to make a full recovery. People with desk jobs or that do not require overhead lifting and reaching should plan to take at least two weeks off from work. Manual laborers will likely be out of work for approximately four to six months. Recovery is different in each case your individual time table for return to activities and work will be discussed during post-operative office visits.

## Post-Operative Visits

Your first post-op visit to our office will be approximately 7-10 days after the operation. At this visit your stitches will be removed and you will review the surgery with the surgeon or physician assistant. At this time you will most likely be cleared to make an appointment to begin rehab. You should also plan to check in with your surgeon at 6, 12, and 24 weeks after the operation.

## At Home

You may remove your post-op dressing two days after the operation and replace it with band aids over the incisions. You may shower after two days, but do not soak the incisions until your sutures are removed. It is best to keep the incisions covered during showering. You may wash under the affected arm by leaning forward and letting the arm dangle. Do not attempt to actively move your arm at the shoulder joint for any reason until cleared by your physician or therapist. You may move your hand, wrist and elbow when your arm is out of the sling, but do not lift or carry anything with your operated arm until cleared your physician or therapist.

## Sling

You will be provided with a sling to wear after the operation. You should wear this sling all of the time (even for sleeping) and should remove it only when bathing/showering, or to do your exercises. You may also remove the sling to move your elbow, wrist and fingers to avoid stiffness and discomfort. This can be done 5-6 times daily. Most patients will be required to use a sling for 4-6 weeks after the operation.

You may also type and write while using the sling. If you need to remove it for these tasks then please be sure to avoid any active motion of the shoulder.

## Medication

We will prescribe you pain medicine for use after the operation. Typically, this will be sent electronically to your pharmacy at the pre-operative visit or prior to your scheduled surgery. We typically prescribe a combination of Norco (pain medication) and Ibuprofen (pain and inflammation) to be used in concert. Every patient has a different response to pain stimulus and we may adjust as needed. We want to limit narcotic pain medication as much as possible. It can worsen nausea, constipation, and lead to dependency with long term use. Pain medication can only be refilled during regular office hours as an electronic prescription. Do not call at the end of the day, evening or weekend expecting a pain medication refill. We are a surgery office and not a pain management clinic. We do not prescribe long-term use narcotic medication.

## Ice

You must use ice on your shoulder after the operation for management of pain and swelling. Ice should be applied 3-5 times a day for 10-20 minutes at a time. Always maintain one layer between ice and the skin. Some patients prefer to use "ice machines" after surgery. These are not covered by insurance and do not require a prescription. They are an excellent convenience item but not deemed necessary. They can be purchased on-line, borrowed from a friend, or we can direct you to a vendor for direct purchase.



## Sleeping

You should sleep with your sling on and a pillow propped under your arm to keep it slightly away from the body. The sling will have a built in pillow for that purpose but you can substitute a regular pillow if it is more convenient. For many patients lying flat is very uncomfortable. It is generally easier to sleep propped up or in a recliner chair after the operation. Do not attempt to sleep on your operated shoulder for at least 6 weeks.

## Driving

You will be permitted to drive after surgery following approval from your doctor or physician assistant. Generally you should expect to not be able to drive for four to six weeks following the operation. You are not permitted to drive while wearing your sling or while taking narcotic medication.

## Risks and Complications

Risks of major complication from rotator cuff repair are inherently low but all surgeries have risks of complication with anesthesia or medications, bleeding, and infection. Rotator cuff surgery may result in shoulder stiffness, failed repair, post operative blood clots, and complications related to the orthopedic implants used for the repair.



## Rehabilitation Protocol

Your rehab may be adjusted on an individual basis. These are basic guidelines and goals for each phase of recovery. Please share with your physical therapist as these are the general guidelines that we recommend.

### Phase 1 (0-6 Weeks) Passive Range of Motion (ROM) Phase

#### Goals

- Protect Healing Tendon
- Restore Passive ROM of the Shoulder

#### Precautions

- Do not perform any Active ROM of the shoulder
- Use sling for at least four weeks (possibly six) or as instructed by physician

#### Recommended Exercises

- Pendulums (independent at home prior to starting therapy)
- Scapular Mobility (no resistance)
- Supine or Standing Passive External Rotation
- Supine, Seated or Standing Passive Shoulder Flexion limit 90 degrees (elevation)
- Passive Internal Rotation
- Passive Horizontal Adduction
- Ball Squeeze

#### Guidelines

- Perform these exercises 3-5 times a day. Do 1-2 sets of 10-20 repetitions of each exercise.

**Phase 2 (6-12 Weeks) Active ROM Phase****Goals**

- Continued protection of healing tendon
- Continue to improve passive ROM and initiate progression of active assisted and active ROM
- Progress to Active ROM against gravity
- Initiate gentle sub-maximal rotator cuff isometrics

**Precautions**

- Discontinue use of sling if you have not already
- Be careful with raising your arm away from your body
- Do not use your arm to pick anything up or carry anything more than 3lbs

**Recommended Exercises****Passive ROM and Stretching**

- Continue passive ROM with physical therapist
- Continue exercises from Phase 1 until each can be progressed to active assisted or active motion
- Supine Passive External Rotation in scapular plane progressing to 90 deg of Abduction

**Active Assisted Progressing to Active ROM**

- Supine stick flexion with progression to standing active shoulder flexion/scaption
- Table slides in flexion with progression to wall slides
- Overhead pulleys
- Supine or standing cross body stretch
- Sidelying internal rotation stretch
- Sidelying external rotation
- Prone row, extension, horizontal abduction, scaption (by end of phase 2)

**Strengthening**

- Sub-maximal isometric internal and external rotation

**Guidelines**

- Perform these exercises once a day. Do 2-3 sets of 15-20 repetitions.

**Phase 3 (12 - 24 Weeks) Strengthening Phase****Goals**

- Continue to focus on restoration of ROM, biomechanics and strength
- Initiate progressive strengthening of rotator cuff and peri-scapular muscle groups
- Begin to use arm for daily activities

**Precautions**

- Caution with lifting especially away from body and overhead
- Caution with repetitive use of arm
- Stop activity if it causes pain in shoulder

**Recommended Exercises****Passive ROM and Stretching**

- Continue on own and with therapist as needed

**Active Assisted and Active ROM**

- Continue ROM exercises from phase 2 until ROM is normalized

**Strengthening (Resistance Band or Dumbbell)**

- Scapular Retraction
- Prone Extension
- Prone Horizontal Abduction
- Standing/Prone Scaption
- Internal Rotation
- External Rotation
- Progress to Diagonal Patterns and Multi-Planar/Functional Planes of Motion
- Dynamic Strengthening
- Manual Resistance Patterns
- Rhythmic Stabilization
- Proprioceptive Drills
- Push Up Progression

**Guidelines**

- Perform ROM and stretching exercises once a day until normal ROM is achieved. Do 2 sets of 15-20 Reps. Once normal ROM is achieved continue exercises to maintain ROM 3-5 times per week.
- Perform strengthening exercises 3-5 times a week. Do 2-3 sets of 15-20 Reps.





## Phase 4 (24 Weeks - 1 Year) Return to Sport/Activity

### Goals

- Maintain normal ROM and strength
- Continue to encourage progressive use of arm for functional activity and return to sport

### Precautions

- Encourage slow progression back to sport and high level activity
- Work with physical therapist regarding specific return to sport/activity plan

### Recommended Exercises

#### ROM and Stretching

- Continue ROM and stretching exercises from phase 2-3

#### Strengthening

- Continue to progress strengthening program from phase 3

### Guidelines

- Perform ROM and stretching program 1-3 times a week to maintain normal ROM. Do 1-2 sets of 15-20 Reps.
- Perform strengthening 2-3 times a week. Do 2-3 sets of 15-20 Reps.

