

Large / Massive Rotator Cuff Repair

Pathology and Treatment:

Massive tears are defined by the amount of tissue that is torn. There are 4 rotator cuff tendons and massive tears involve at least 2 of the 4. The repairs take more time to repair and heal. Operative intervention is typically indicated in acute tears especially in younger and more active patients and in chronic tears that have failed nonoperative treatment. There are several repair techniques, but even in massive tears, we usually repair these tears arthroscopically with a two row technique which has been shown to have improved biomechanical strength and surface area for healing. It is cliché to say that every tear is a little different, but in many respects this is true. The tendons can be torn from the bone (most common) and within its substance. The tears can also have different shapes and tissue quality. Some patients are placed on the large/massive protocol not because of tear size but because of tissue quality.

The rotator cuff tendons are repaired to the bone and to themselves. The quality of the repair is determined by the quality of the bone and tendon tissue and dictates how and when therapy is performed. Most of the time the patient will have arthroscopic pictures of their own surgery which can be reviewed with them if desired.

At the time of the rotator cuff repair other procedures might need to be performed. These can include a subacromial decompression which typically involves removing any bone spurring and making ample space for the rotator cuff. It can also include repairing the biceps tendon and cleaning up any other damaged tissue.

Goals & Guidelines:

Obtain range of motion (ROM) first then proceed to strengthening. In general it takes about 8-10 weeks for the tendon tissue to heal enough to begin strengthening. Therefore we have to be careful with the range of motion exercises in that first phase of therapy which is 8-10 weeks. Remember that the goal of the first 8-10 weeks is to not re-tear the rotator cuff and get some ROM (a shoulder with an intact rotator cuff with some stiffness is easier to

manage than a shoulder with re-torn rotator cuff with dysfunction). The patient is allowed to use the operative arm for waist level activities such as using a computer, countertop level activities, and personal hygiene care but is to do no lifting, pushing or pulling with the arm nor reaching behind one's back. Shoulder immobilizer/sling needs to be worn when sleeping or when outside the home for the first 8-10 weeks. When the patient is at home, the sling should be worn when they are up and walking around but may be removed when they are seated. Most patients are more comfortable sleeping in a recliner for the first few weeks, but may sleep in a bed when comfortable. While sleeping the patient is to place a pillow or a stack of blankets under the elbow and arm of the operative extremity in order to have the arm/shoulder in the plane of the body (extension of the shoulder is both painful and stresses the repair).

A multimodal approach is used to manage the discomfort which typically includes NSAID's like ibuprofen, ice or cryotherapy, and narcotics. It is preferable to discontinue the use of narcotics as soon as possible and switch to Tylenol or other less addictive medications.

The second phase of therapy focuses on regaining the remaining range of motion deficits, including internal rotation, and the initiation of strengthening. At no point should the patient be asked to use a UBE machine or cycling with the arms because this is a repetitive activity that stresses the repair. Pain medication of some sort can be taken prior to therapy. The patient should perform their stretching program 1 time per day for the first 8 weeks and then 2 times per day after the 8 week point until FROM is obtained. Their strengthening program should be performed every other day once it is started. Expect maximum medical improvement 6-8 months after surgery. It is important to note that everyone is not the same, nor are all rotator cuff tears the same or repaired the same fashion. Everyone progresses at different rates depending on age, past medical history, current health status, smoking, etc... These are only guidelines and not set in stone. If the patient is not progressing as he/she should, please contact us.

0-2 Weeks

- Pendulums, Elbow and hand ROM ONLY

2-4 Weeks

- Continue Pendulum exercises, GENTLE passive supine forward elevation to 90 degrees-external rotation to 30 degrees

4-6 Weeks

- Passive Supine Forward Elevation and Passive External Rotation exercises may be performed by a **therapist or family member or using the opposite arm to raise the operative arm**. It is imperative that the patient and family member understands the therapy protocol and is able to demonstrate that he/she can perform the exercises, as they are responsible for performing these at home. Ten reps of each exercise is done one time per day. Stress to the patient that there should be no active use of the operative shoulder with these exercises...it is being **passively** stretched only.
- Start working on scapular stabilization for protraction, retraction, elevation and depression.

6-8 Weeks

- Start Supine Active Assisted Forward Elevation (SAAFE)
- Start table slides

8-10 Weeks

- Start internal rotation stretching behind the back. It is easy to teach the patient how to use a belt or towel in the nonoperative arm to pull the operative arm up their back. Pulleys can also be used for this.
- Supine Active Forward Elevation (SAFE).
- Start using pulleys for forward elevation.

10-14 Weeks

- Start Active forward elevation using good mechanics. Set the shoulder blades by retracting them first. Make sure the patient is not using any trapezial substitution. These should be performed with the thumb up.
- Progress to Wall Slide into Scaption (using the wall as a support).
- Progress to Active Range of Motion in abduction, and scaption with the elbow flexed to decrease the moment arm for the deltoid and RC. If minimal to no soreness and no substitution patterns are seen you may begin strengthening with theraband.
- If good form and mechanics are observed you may begin Standing Overhead Reach.
- Progress to light dumbbell strengthening

14-18 Weeks

- Continue more strengthening focusing on deltoid and RC and periscapular strengthening, resisted abduction in scapular plane, and neuromuscular control.
- Continue stretching which can be more aggressive at this point.

18-22 Weeks

- Strengthening can include light bench press (being careful not to extend the shoulder). Dumbbell bench on the floor can minimize this extension. Can start lat pulls and seated rows.
- Once good strength is obtained, sport specific exercise such as concentric and eccentric resisted throwing, rebounder throwing, swimming and ground strokes can be started.
- Golfers can start swinging a golf club and work on swing mechanics
- Emphasize proper mechanics for the patient's desired activities (golf, overhead throwing, etc.)

24 Weeks

- May return to sport and other activities.