

Shoulder – Rotator Cuff Tear

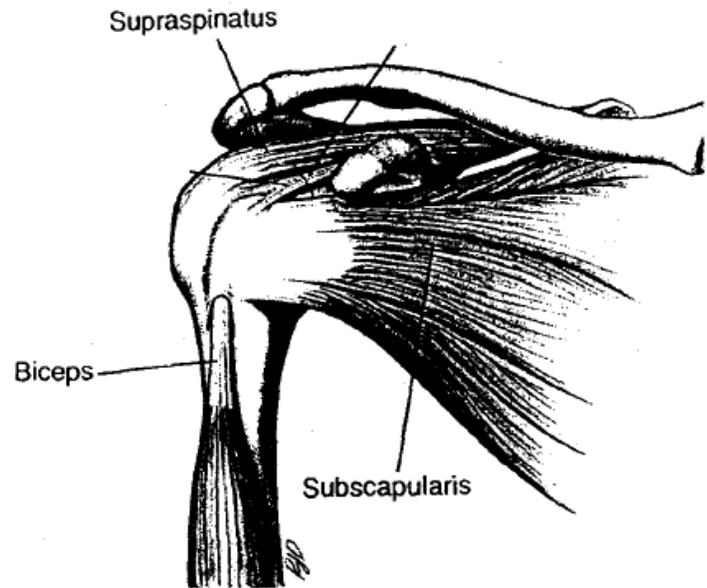
Brett Sanders, MD

Center For Sports Medicine and Orthopaedic
2415 McCallie Ave.
Chattanooga, TN
(423) 624-2696

ANATOMY AND FUNCTION

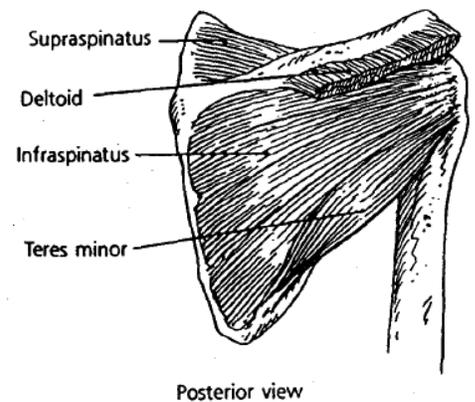
The shoulder joint is a ball and socket joint that connects the bone of the upper arm (humerus) with the shoulder blade (scapula). The capsule is a broad ligament that surrounds and stabilizes the joint. The shoulder joint is moved and also stabilized by the rotator cuff. The rotator cuff is comprised of four muscles and their tendons that attach from the scapula to the humerus.

The rotator cuff tendons (supraspinatus, infraspinatus, teres minor) and are just outside the shoulder joint and its capsule. The muscles of the rotator cuff help stabilize the shoulder and enable you to lift your arm, reach overhead, and take part in activities such as throwing, swimming and tennis.



ROTATOR CUFF INJURY AND TREATMENT OPTIONS

The rotator cuff can tear as an acute injury such as when lifting a heavy weight or falling on the shoulder or elbow. The shoulder is immediately weak and there is pain when trying to lift the arm. A torn rotator cuff due to an injury is usually best treated by immediate surgical repair. The rotator cuff can also wear out as a result of degenerative changes. This type of rotator cuff tear can usually be repaired but sometimes the tear may not need to be repaired and sometimes cannot be repaired. However, if the tear is causing significant pain and disability, surgery may be the best treatment to relieve pain and improve shoulder function. If a torn rotator cuff is not repaired, the shoulder often develops degenerative changes and arthritis many years later. This type of arthritis is very difficult to treat and the longstanding tear in the rotator cuff may be irreparable.



DIAGNOSIS OF TORN ROTATOR CUFF

Symptoms of shoulder pain that awaken you at night, and weakness raising the arm are suggestive of a torn rotator cuff. Examination of the shoulder usually reveals weakness. The diagnosis can be confirmed by magnetic resonance imaging (MRI) or an x-ray taken after dye has been injected into the shoulder (arthrogram). A more sensitive test such as arthrogram MRI or arthroscopy may be needed to diagnose a small tear or a partial tear of the rotator cuff.

ROTATOR CUFF REPAIR

Most rotator cuff tears can be repaired surgically by reattaching the torn tendon(s) to the humerus. It is not a big operation to repair a torn rotator cuff, but the rehabilitation time can be long depending on the size of the tear and the quality of the tendons/muscles. The deltoid muscle is separated to expose the torn rotator cuff tendon(s). Sutures are attached to the torn tendons. Tiny holes are made in the humerus where the tendons were attached and the sutures are passed through the bone and tied, securing the rotator cuff tendons back to the humerus. Sometimes, suture anchors are used as well. The tendons heal back to the bone, reestablishing the normal tendon-to-bone connection. It takes several months for the tendon to heal back to the bone. During this time, forceful use of the shoulder such as weight lifting and raising the arm out to the side or overhead must be avoided.

After surgery, you will probably use a sling for 4 to 6 weeks. You can remove the sling 4 to 5 times a day for gentle pendulum motion exercises. Rarely, a large pillow that holds your arm out to the side of your body is needed for 6 weeks if the tear is very large or difficult to repair.

RESULTS OF SURGERY AND RISKS

The success of surgery to repair the rotator cuff depends upon the size of the tear and how long ago the tear occurred.. Usually, a small tear has a good chance for full recovery. If the tear is large, the extent of recovery cannot be accurately predicted until the repair and rehabilitation is completed. If the tear occurred a long time ago (several months or longer) it can be difficult or sometimes impossible to repair. Most patients achieve good pain relief following repair regardless of the size of the tear unless the tear is massive.

Shoulder pain is usually worse than before surgery the first 3 to 4 weeks or even several months after surgery, but then gradually the pain lessens. This is especially true while trying to sleep at night. It can take up to a full year to regain motion and function in the shoulder. Shoulder stiffness and loss of motion are potential problems after rotator cuff repair. Re-rupture of the repaired rotator cuff is possible if too much force is placed on the repaired tendon before it is fully healed. Nerve and muscle injury and infection are infrequent complications.

Shoulder Surgery to Repair a Torn Rotator Cuff

PREOPERATIVE INSTRUCTIONS

Brett Sanders, MD

Center For Sports Medicine and Orthopaedic
2415 McCallie Ave.
Chattanooga, TN
(423) 624-2696

Schedule surgery with the secretary in Dr. Sanders office.

Within one month before surgery

- * Make an appointment for a preoperative office visit regarding surgery
- * A history and physical examination will be done
- * Receive instructions
- * Complete blood count (CBC)
- * Electrocardiogram (EKG) if over the age of 40

Within several days before surgery

- * Wash the shoulder and area well
- * Be careful of the skin to avoid sunburn, poison ivy, etc.

The day before surgery

- * Check with Dr. Berkson's office for your time to report to the operating room area
- * ***NOTHING TO EAT OR DRINK AFTER MIDNIGHT***

The day of surgery

- * **nothing to eat or drink**
- * Report to the operating room area as scheduled.

Shoulder – Rotator Cuff Repair

Post-operative Instructions

Brett Sanders, MD

Center For Sports Medicine and Orthopaedic
2415 McCallie Ave.
Chattanooga, TN
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Phase One: the first week after surgery

GOALS:

1. Control pain and swelling
2. Protect the rotator cuff repair
3. Protect wound healing
4. Begin early shoulder motion

ACTIVITIES:

Immediately After Surgery

After surgery you will be taken to the recovery room. The decision to stay in the hospital for a night or two is usually made preoperatively. Arrangements can be made to stay in the hospital if you have significant pain.

You should get out of bed and move around as much as you can. When lying in bed, elevate the head of your bed and put a small pillow under your arm to hold it away from your body.

At home, you may find it easier to sleep in a semi-seated position.

Apply cold packs to the operated shoulder to reduce pain and swelling.

Move your fingers, hand and elbow to increase circulation. The novocaine in your shoulder wears off in about 6 hours. We should be able to find a combination of pain medications to control your pain.

You will receive a prescription for pain medication for when you go home (it will make you constipated if you take it for a long time).

The Next Day After Surgery

1. The large dressing can be removed and a small bandage applied.
2. Remove the sling several times a day to gently move the arm in a pendulum motion: lean forward and passively swing the arm. (Figure 1)
3. You can be discharged from the hospital as long as there is no problem.

At Home

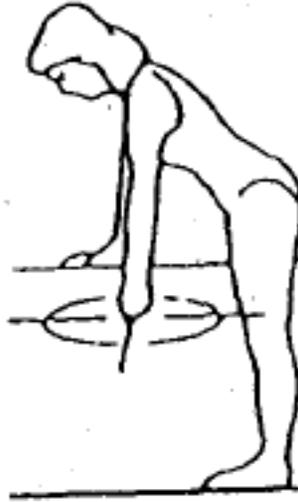
You can remove the bandages but leave the small pieces of tape (steristrips) in place.

If you had an arthroscopic surgery only, you may shower and get the incision wet after 48 hours.

If you had an ‘open’ surgery, keep your incision clean and dry. To wash under the **operated** arm, bend over at the waist and let the arm passively come away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise.

Apply cold to the shoulder for 20 minutes at a time as needed to reduce pain and swelling.

Remove the sling several times a day: move the elbow wrist and hand. Lean over and do pendulum exercises for 3 to 5 minutes every 1 to 2 hours.



DO NOT lift your arm at the shoulder using your muscles. Because of the need for your comfort and the protection of the repaired tendon, a sling is usually necessary for 4 to 6 weeks, unless otherwise instructed by Dr. Berkson.

OFFICE VISIT

Please arrange to see Dr. Sanders in the office 7-10 days after surgery for suture removal and further instructions.

Shoulder –Rotator Cuff Repair

Phase I (Weeks 1-6)

Brett Sanders, MD

Center For Sports Medicine and Orthopaedic
2415 McCallie Ave.
Chattanooga, TN
(423) 624-2696

Goals:

Maintain / protect integrity of repair
Gradually increase passive range of motion (PROM)
Diminish pain and inflammation
Prevent muscular inhibition
Become independent with activities of daily living with modifications

Precautions:

Maintain arm in abduction sling / brace, remove only for exercise
No active range of motion (AROM) of shoulder
No lifting of objects
No shoulder motion behind back
No excessive stretching or sudden movements
No supporting of any weight
No lifting of body weight by hands
Keep incision clean and dry

Criteria for progression to the next phase (II):

Passive forward flexion to at least 125 degrees
Passive external rotation (ER) in scapular plane to at least 75 degrees
Passive internal rotation (IR) in scapular plane to at least 75 degrees
Passive Abduction to at least 90 degrees in the scapular plane

DAYS 1 TO 6:

- Abduction brace/sling
- Pendulum exercises
- Finger, wrist, and elbow AROM
- Begin scapula musculature isometrics / sets; cervical ROM
- Cryotherapy for pain and inflammation
- Day 1-2: as much as possible (20 minutes of every hour)
- Day 3-6: post activity, or for pain
- Sleeping in abduction sling
- Patient Education: posture, joint protection, positioning, hygiene, etc.

DAYS 7 TO 28:

- Continue use of abduction sling / brace
- Pendulum exercises
- Begin passive ROM to tolerance (these should be done supine and should be pain free)
 - Flexion to 90 degrees
 - ER in scapular plane to at least 35 degrees
 - IR to body/chest
- Continue Elbow, wrist, and finger AROM / resisted
- Cryotherapy as needed for pain control and inflammation
- May resume general conditioning program – walking, stationary bicycle, etc.
- Aquatherapy / pool therapy may begin at 3 weeks postop

Activities

1. Sling

Use your sling most of the time. Remove the sling 4 or 5 times a day to do pendulum exercises (fig. 1).

2. Use of the operated arm

You may use your hand on the operated arm in front of your body but **DO NOT** raise your arm or elbow away from your body. It is alright for you to flex your arm at the elbow.

3. Showering

You may shower or bath and wash the incision area. To wash under the operated arm, bend over at the waist and let the arm passively come away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise.

Exercise Program

ICE

Days per Week: 7 As necessary 15- 20 minutes

Times per Day: 4-5

STRETCHING / PASSIVE MOTION

Days per Week: 7

Times per day : 4-5

Program:

Pendulum exercises 1-2 sets 20- 30 reps

Supine External Rotation 1-2 sets 10-15 reps

Supine passive arm elevation 1-2 sets 5-10 reps

Starting at 3rd week after surgery:

Behind the back internal rotation 1-2 sets 5-10 reps

Exercises

Shoulder stretching is divided into two phases. **Phase 1, or passive range of motion**, is always performed with the uninjured arm assisting or helping the operated arm. **Phase 2, or active range of motion** with a terminal stretch, is performed by the operated arm with the uninjured arm assisting for a "terminal stretch". In most instances, wean off passive range of motion by using the uninjured arm in isolated incidents to assist the operated arm. The other major difference between passive and active stretching is the "terminal stretch". During active stretching and upon reaching your "endpoint" of pain or movement, push the operated arm with the uninjured hand another 5-10 degrees for additional movement. This final movement is labeled "terminal stretch". Maximum motion for each person remains the goal and terminal stretching will assist in achieving that goal.

All stretching exercises should be done slowly to maximize muscle and soft connective tissue involvement. When stretching, your goal is to reach the maximum range of motion for YOU. There is a reason for multiple sets and repetitions. This reason stems from "warming up" the shoulder so it can actually stretch further in the last few repetitions that you will do. The first few repetitions prepare the stiffened or swollen shoulder for initial movement.

Since there is more than one repetition per set, allow the first one or two repetitions to be warm-up reps, with very little pain. Gradually work into more and more range of motion.

It is also important to allow pain to be your guide. Move the arm to an "endpoint" (that endpoint is dictated by the amount of pain). Your goal is to increase the endpoint as often as possible until you have reached the full range of motion. As far as pain, you want to avoid excruciating pain, but "discomfort" is tolerated as long as the pain does not remain for a prolonged period of time. A basic rule to follow when stretching is, if the pain does not linger, you did not stretch too far.

1. Pendulum exercise

Bend over at the waist and let the arm hang down. Using your body to initiate movement, swing the arm gently forward and backward and in a circular motion.

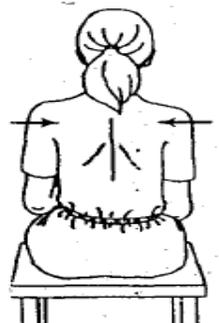


2. Shoulder shrug

Shrug shoulders upward as illustrated.

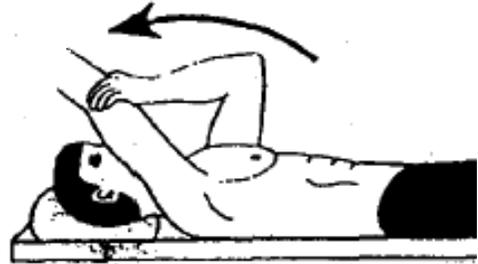
3. Shoulder blade pinches

Pinch shoulder blades backward and together, as illustrated.



4. Supine passive arm elevation

Lie on your back. Hold the affected arm at the elbow with the opposite hand. Using the strength of the opposite arm, lift the affected arm upward, as if to bring the arm overhead, slowly lower the arm back to the bed.



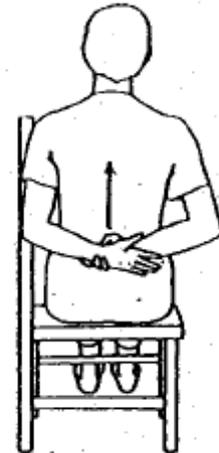
5. Supine external rotation

Lie on your back. Keep the elbow of the affected arm against your side with the elbow bent at 90 degrees. Using a cane or long stick in the opposite hand, push against the hand of the affected arm so that the affected arm rotates outward. Hold 10 seconds, relax and repeat.



6. Behind-the-back internal rotation

Sitting in a chair or standing, place the hand of the operated arm behind your back at the waistline. Use your opposite hand, as illustrated, to help the other hand higher toward the shoulder blade. Hold 10 seconds, relax and repeat.



Office Visit

Please arrange to see Dr. Sanders approximately 4 weeks following your first post-operative visit (6 weeks after surgery).

Shoulder – Rotator Cuff Repair

Phase II (Weeks 5-10)

Brett Sanders, MD

Center For Sports Medicine and Orthopaedic
2415 McCallie Ave.
Chattanooga, TN
(423) 624-2696

Protection / Active motion (weeks 5 - 10):

Goals:

Allow healing of soft tissue
Do not overstress healing tissue
Gradually restore full passive ROM (week 4-5)
Decrease pain and inflammation

Precautions:

No lifting
No supporting of body weight by hands and arms
No sudden jerking motions
No excessive behind the back movements
Avoid upper extremity bike or upper extremity ergometer at all times.

Criteria for progression to the next phase (III):

Full active range of motion

WEEK 5-6:

- Continue use of sling/brace full time until end of week 4
- Between weeks 4 and 6 may use sling/brace for comfort only
- Discontinue sling/ brace at end of week 6
- Initiate active assisted range of motion (AAROM) flexion in supine position
- Progressive passive ROM until approximately Full ROM at Week 4-5.
- Gentle Scapular/glenohumeral joint mobilization as indicated to regain full passive ROM
- Initiate prone rowing to neutral arm position
- Continue cryotherapy as needed
- May use heat prior to ROM exercises
- May use pool (aquatherapy) for light active ROM exercises
- Ice after exercise

Weeks 6-8

- Continue active and active assisted ROM and stretching exercises
- Begin rotator cuff isometrics
- Continue periscapular exercises
- Initiate active ROM exercises
 - flexion scapular plane
 - abduction
 - external rotation
 - internal rotation

Activities

1. Your sling is no longer necessary unless Dr. Sanders instructs you to continue using it.

2. Use of the operated arm.

You should continue to avoid lifting your arm away from your body, since this is the action of the tendon that was repaired. You can lift your arm forward in front of your body but not to the side. You may raise your arm to the side, if you use the good **arm** to assist the operated **arm**.

3. Bathing and showering

Continue to follow the instructions from phase one and the instructions above.

Exercise Program

ICE

Days per week: 7

Times per day : 4-5 As necessary

STRETCHING / ACTIVE MOTION

Days per week: 7

Times per day : **3-4**

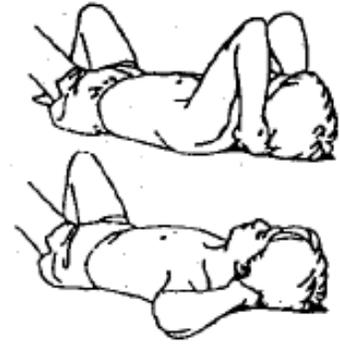
Program:

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|---|----------|------------|
| Pendulum exercises | 1-2 sets | 20-30 reps |
| Supine External Rotation | 1 set | 10-15 reps |
| Standing External Rotation | 1 set | 10-15 reps |
| Supine passive arm elevation | 1 set | 5-10 reps |
| Seated-Standing Arm Elevation | 1 set | 5-10 reps |
| Behind the back internal rotation | 1-2 sets | 5-10 reps |
| Supine external Rotation with Abduction | 1 set | 5-10 reps |
| Supine Cross Chest Stretch | 1 set | 5-10 reps |
| Side-lying External Rotation | 1 set | 10-20 reps |
| Prone Horizontal Arm Raises | 1 set | 10-20 reps |

Exercises

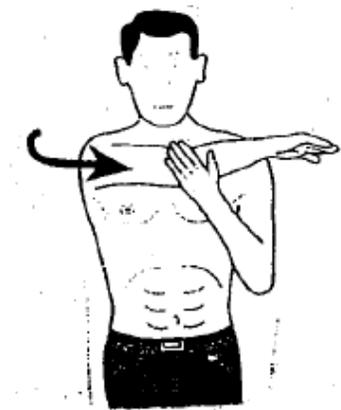
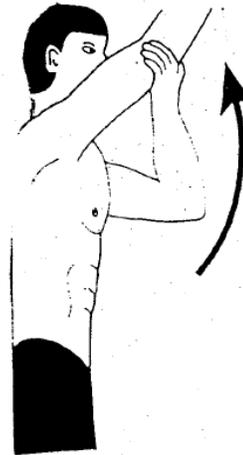
1. Supine external rotation with abduction

Lie on your back. Place your hands behind your head as shown in illustration Ia. Slowly lower the elbows to stretch the shoulder toward the position shown in illustration Ib. Hold for 10 seconds, then return to the starting position.



2. Supine/Seated Forward Elevation (Overhead Elbow Lift)

During this phase, you can sit in a chair. If it is easier, begin in a supine position until you achieve maximal motion, then use a seated position. Assume an upright position with erect posture, looking straight ahead. Place your hands on either thigh with the operated thumb facing up. This stretch is not performed solely with the operated arm, but use the uninjured hand for assistance going up and coming down. Begin by pulling the operated arm toward your feet, as if to lengthen the arm (establish slight traction). Keep your elbow slightly flexed. The operated arm is lifted as high as possible, or to your endpoint of pain. Upon reaching that endpoint, take the uninjured hand and actually push on the outstretched forearm of the operated arm. Push 1 or 2 inches to achieve a "terminal stretch". Hold 10 seconds per repetition. Release and slowly return to the start position.

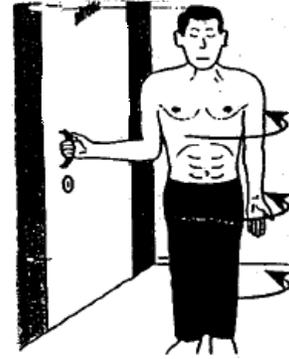


2. Supine cross-chest stretch

Lying on your back, hold the elbow of the operated arm with the opposite hand. Gently stretch the elbow toward the opposite shoulder. Hold for 10 seconds.

3. Standing external rotation

Stand with the operated shoulder toward a door as illustrated. While keeping the operated arm firmly against your side and the elbow at a right (90 degree) angle, rotate your body away from the door to produce outward rotation at the shoulder.



4. Supine passive arm elevation

Continue this exercise from phase two, stretching the arm overhead. Hold for 10 seconds.

5. Behind-the-back internal rotation

Sitting in a chair or standing, place the hand of the operated arm behind your back at the waistline.

Use your opposite hand to pull on a towel, as illustrated, to help the other hand higher toward the shoulder blade. Hold 10 seconds, relax and repeat.



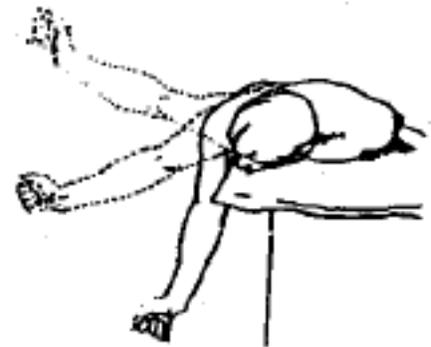
6. Side-lying external rotation

Lying on the non-operated side, bend your elbow to a 90 degree angle and keep the operated arm firmly against your side with your hand resting on your abdomen. By rotation at the shoulder, raise your hand upward, toward the ceiling through a comfortable range of motion. Hold this position for 1 to 2 seconds, then slowly lower the hand.



7. Prone or bent-over horizontal arm raise

Lie face down on your bed with the operated arm hanging freely off the side (or bend over at the waist as if doing pendulum exercises). Rotate your hand so that the thumb faces away from you. Slowly raise your **arm** away from your body through a pain-free range of motion. Hold that position for 1 to 2 seconds and slowly lower.



Office visit

Please arrange an appointment to see Dr. Sanders in **6** weeks (12 weeks from surgery).

Shoulder – Rotator Cuff Repair

Phase III (Weeks 10-14)

Brett Sanders, MD

Center For Sports Medicine and Orthopaedic
2415 McCallie Ave.
Chattanooga, TN
(423) 624-2696

Early strengthening (weeks 10-14):

Goals:

Full active ROM (week 10-12)
Maintain full passive ROM
Dynamic shoulder stability
Gradual restoration of shoulder strength, power, and endurance
Optimize neuromuscular control
Gradual return to functional activities

Precautions:

No heavy lifting of objects (no heavier than 5 lbs.)
No sudden lifting or pushing activities
No sudden jerking motions
No overhead lifting
Avoid upper extremity bike or upper extremity ergometer at all times.

Criteria for progression to the next phase (IV):

Able to tolerate the progression to low-level functional activities
Demonstrates return of strength/dynamic shoulder stability
Re-establish dynamic shoulder stability
Demonstrates adequate strength and dynamic stability for progression to higher demanding work/sport specific activities.

WEEK 10:

- Continue stretching and passive ROM (as needed)
- Dynamic stabilization exercises
- Initiate strengthening program
 - External rotation (ER)/Internal rotation (IR) with therabands/sport cord/tubing
 - ER side-lying (lateral decubitus)
 - Lateral raises*
 - Full can in scapular plane* (avoid empty can abduction exercises at all times)
 - Prone rowing
 - Prone horizontal abduction
 - Prone extension

- Elbow flexion
- Elbow extension

*Patient must be able to elevate arm without shoulder or scapular hiking before initiating isotonic; if unable, continue glenohumeral joint exercises

WEEK 12

- Continue all exercise listed above
- Initiate light functional activities as Dr. Sanders permits

WEEK 14

- Continue all exercise listed above
- Progress to fundamental shoulder exercises

Activities

Use of the operated arm

You may now safely use the arm for normal daily activities involved with dressing , bathing and self-care. You may raise the arm away from the body, however, you should not raise the arm when carrying objects greater than one pound. Any forceful pushing or pulling activities could disrupt the healing of your surgical repair.

Exercise Program

STRETCHING / ACTIVE MOTION

Days per week: 7

Times per day : 1-2

Pendulum exercises

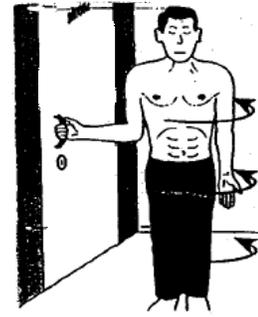
| | | |
|---|----------|------------|
| Standing External Rotation / Doorway | 1-2 Sets | 20-30 reps |
| Wall Climb Stretch | 1 Set | 5-10 reps |
| Comer Stretch | 1 Set | 5-10 reps |
| Standing Forward Flexion | 2 Sets | 5-10 reps |
| Behind the back internal rotation | 1-2 Sets | 10-20 reps |
| Supine external Rotation with Abduction | 1 Set | 5-10 reps |
| Supine Cross Chest Stretch | 1 Set | 5-10 reps |
| Side-lying External Rotation / 1 lb. | 1 Set | 10-20 reps |
| Prone Horizontal Arm Raises / 1 lb. | 1 Set | 10-20 reps |

STRENGTHENING / THERABAND

| | | |
|------------------------|----------|------------|
| External Rotation | 1-2 Sets | 15-20 reps |
| Internal Rotation | 1-2 Sets | 15-20 reps |
| Standing Forward Punch | 1-2 Sets | 15-20 reps |
| Shoulder Shrug | 1-2 Sets | 15-20 reps |
| Seated Row | 1-2 Sets | 15-20 reps |

1. Standing external rotation

Stand with the operated shoulder toward a door as illustrated. While keeping the operated arm firmly against your side and the elbow at a right (90 degree) angle, rotate your body away from the door to produce outward rotation at the shoulder. Hold 10 seconds.



2. Comer stretch

Standing facing a comer, position the arms as illustrated with the elbows at shoulder level. Lean your body gently forward toward the comer until a stretch is felt. Hold 10 seconds, relax and repeat .

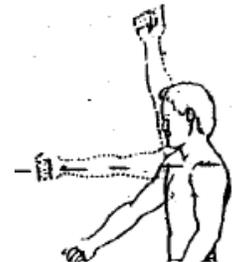


3. Wall climb

Stand facing a wall, place the fingers of the affected arm on the wall. Using the fingers as "feet", climb the hand and arm upward. As you are able to stretch the hand and arm higher, you should move your body closer to the wall. Hold 10 seconds, lower the arm by pressing the hand into the wall and letting it slide slowly down.

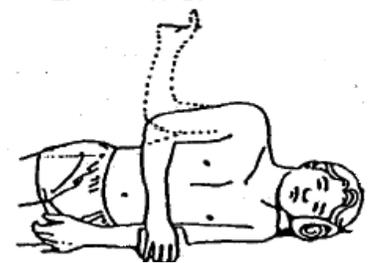
4. Standing forward flexion

Stand facing a mirror with the hands rotated so that the thumbs face forward. Raise the arm upward keeping the elbow straight. Try to raise the arm by hinging at the shoulder as opposed to raising the arm with the shoulder blade. Do 10 repetitions to 90 degrees. If you can do this without hiking the shoulder blade.



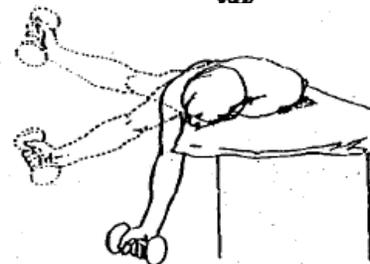
5. Side-lying ~ external rotation

Continue this exercise from phase one using a one or two pound weight. 10 repetitions.



6. Prone or bent-over horizontal arm raise

Continue this exercise from phase one using a one or two pound weights. These resistance exercises should be done very slowly in both directions. Your goal is to achieve a maximum amount of strengthening while listening to your endpoint of pain. Obviously, we want to strengthen you throughout the full range of motion. It is very important that this exercise be done very slowly, not only when you complete the exercise (concentric), but also as you come back to the start position (eccentric). The slower the motion, the more maximal the contraction throughout a full range of motion.



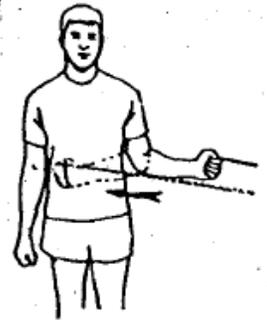
1. External Rotation

Attach the theraband at waist level in a door jamb or other. While standing sideways to the door and looking straight ahead, grasp one end of the band and pull the band all the way through until it is taut. Feet are shoulder width apart and the knees are slightly flexed. The injured elbow is placed next to the side with the injured hand as close to your chest as possible (think of this elbow as being a hinge on a gate). Taking the cord in the injured hand, move the hand away from the body as far as it feels comfortable (at least 90 degrees is our goal), or to where the endpoint of pain limits you. Return to the start position; if you would like, during future repetitions go a few more degrees to work more of a range of motion.



2. Internal Rotation

Attach the Theraband at waist level in a doorjamb or other. While standing sideways to the door and looking straight ahead, grasp one end of the handle and pull the cord all the way through until it is taut. Feet are shoulder width apart and the knees are slightly flexed. The injured elbow is placed next to the side and is flexed at 90 degrees (think of this elbow as being a hinge on a gate). Taking the cord in the injured hand, move the hand toward the chest as far as it feels comfortable, or to where the endpoint of pain limits you. Return to the start position



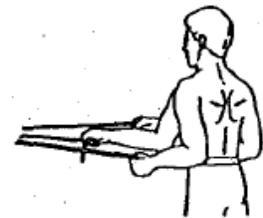
3. Shoulder Shrug

Stand on the theraband with your feet at should width apart and. Look straight ahead. Next, straighten up, keeping the knees slightly flexed, with your arms straight down at the sides (palms in). Slowly raise the shoulders in a shrug (toward the ears), then rotate the shoulders backward in a circular motion, and finally down to the original position. This movement is completed while keeping constant tension on the cord.



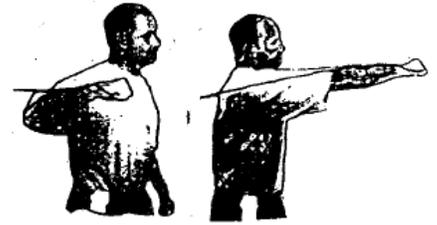
4. Seated/Standing Row

Attach the theraband in a door jamb or other. Sit or stand facing the door. Use a wide flat-footed stance and keep your back straight. Begin with the arms slightly flexed, hands together at waist level in front of your body, thumbs pointing upward, and with the cord taut. You are producing a rowing motion. Pull the cord all the way toward the chest. While pulling the cord, the elbows should be drawn along the side of the body until the hands touch the lower ribs. Always return slowly to the start position.



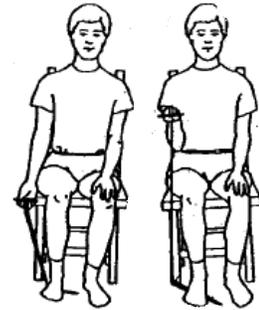
5. Standing Forward Punch

Attach the theraband at waist level in the door jamb. Facing away from the door, stand in a boxing position with one leg ahead of the other (stride position). Do not bend at the waist and remain in an upright position. If the right shoulder is the injured extremity, you will want to grasp the handle in the right hand and step out until the cord is taut. If you use the right hand, the left foot should be forward in the stride position. Begin with your right arm at waist level and bend the elbow at a 90 degree angle, with the elbow remaining near your side. Slowly punch forward while slightly raising the right arm in a forward, upward punching motion. The hand should reach approximately neck level with the right arm almost straight.



6. Biceps Curls

Place your feet on the cord, shoulder width apart, knees slightly bent. Keeping your elbows close to the sides of your body, slowly bend the arm at the elbow and curl towards the shoulder. Alternate arms while performing this exercise.



Office Visit

Please arrange an appointment with Dr. Sanders in **3** months (6 months post-surgery).

Shoulder – Rotator Cuff Repair

Phase IV (6 mo to 12 mo)

Brett Sanders, MD

Center For Sports Medicine and Orthopaedic
2415 McCallie Ave.
Chattanooga, TN
(423) 624-2696

Advanced strengthening (weeks 6 to 12 months):

Goals

Maintain full non-painful active ROM
Advance conditioning exercises for enhanced functional use
Improve muscular strength, power, and endurance
Gradual return to full functional activities

WEEK 16

- Continue ROM and self-capsular stretching for ROM maintenance
- Continue progression of strengthening
- Advance proprioceptive, neuromuscular activities
- Light sports (golf chipping/putting, tennis ground strokes), if doing well

WEEK 20

- Continue strengthening and stretching
- Continue stretching, if motion is tight
- May initiate interval sport program (i.e. golf, doubles tennis, etc.), if appropriate.

Activities

1. Sports that involve throwing and the use of the arm in the overhead position are the most demanding on the rotator cuff. Dr. Sanders will provide you with specific instructions on how and when to return to golf, tennis, volleyball, swimming and throwing.

2. For people who wish to return to training with weights, your Dr. Sanders will give you guidelines regarding the timing and advice when returning to a weight training program.

3. The following timetable can be considered as a minimum for return to most activities:

| | |
|-----------------|------------|
| Ski | 4-6 months |
| Golf | 4-6 months |
| Weight Training | 6 months |
| Tennis | 6-8 months |
| Swimming | 6-8 months |
| Throwing | 6 months |

Before returning safely to your activity, you must have full range of motion, full strength and no swelling or pain. Dr. Sanders will provide you with a specific program to follow when it is time to return the above activities.