



Virtua Reconstructive Orthopedics
SPORTS MEDICINE & ARTHROSCOPY

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SUPERIOR LABRAL REPAIRS

The shoulder joint involves three bones: the scapula (shoulder blade), the clavicle (collarbone) and the humerus (upper arm bone). The humeral head rests in a shallow socket on the scapula called the glenoid. Because the head of the humerus is much larger than the glenoid, a soft fibrous tissue labrum called the labrum surrounds the glenoid to help deepen and stabilize the joint. The labrum deepens the glenoid by up to 50 percent so that the head of the humerus fits better. In addition, it serves as an attachment site for several ligaments.

Injuries to the labrum can occur from acute trauma or repetitive shoulder motion. Examples of traumatic injury include:

- Falling on an outstretched arm
- Direct blow to the shoulder
- Sudden pull, such as when trying to lift a heavy object
- Forceful overhead motions

Tears can be located either above (superior) or below (inferior) the middle of the glenoid. A SLAP lesion (superior labrum, anterior [front] to posterior [back]) is a tear of the labrum above the middle of the glenoid that may also involve the biceps tendon. A tear of the labrum below the middle of the glenoid socket that also involves the inferior glenohumeral ligament is called a Bankart lesion. Tears of the glenoid labrum often occur with other shoulder injuries, such as a dislocated shoulder (full or partial dislocation).

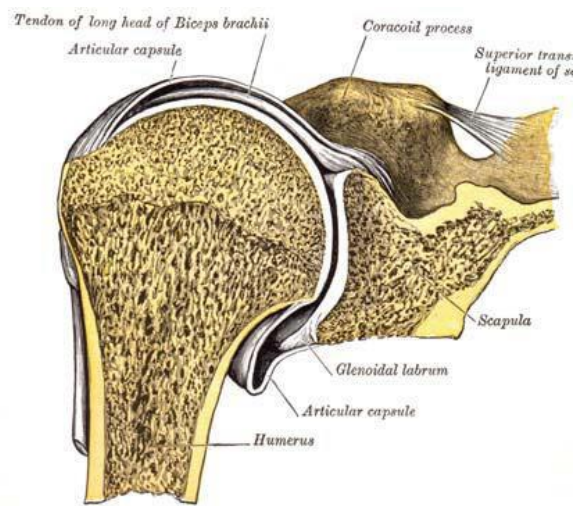


FIG. 5-32.—A section through the shoulder joint.

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It is difficult to diagnose a tear in the glenoid labrum because the symptoms are very similar to other shoulder injuries. Symptoms include:

- Pain, usually with overhead activities
- Catching, locking, popping or grinding
- Occasional night pain or pain with daily activities
- A sense of instability in the shoulder
- Decreased range of motion
- Loss of strength

Until the final diagnosis is made, Dr. Mc Millan may prescribe anti-inflammatory medication and rest to relieve symptoms. Rehabilitation exercises to strengthen the rotator cuff muscles and the muscles around the scapula (shoulder blade) may also be recommended. If these conservative measures are insufficient, Dr. Mc Millan may eventually recommend arthroscopic surgery.

During the surgery, we will examine the labrum and the biceps tendon. If the injury is confined to the labrum itself, without involving the tendon, the biceps tendon attachment is still stable. Dr. Mc Millan will remove the torn flap and correct any other associated problems. If the tear extends into the biceps tendon or if the tendon is detached, the result is an unstable biceps attachment. Your doctor will need to repair and reattach the tendon, using suture anchoring devices. If there is a tear below the middle of the glenoid, we will reattach the ligament to the glenoid (called a Bankart repair).

The risks of the surgery include but are not limited to:

- Infection
- Nerve injury
- Failure of the repair
- Stiffness in the shoulder
- Pain, postoperative and/or persistent
- Arthritis
- Blood clots

Postoperative Instructions

You will wake up in the operating room with a sling and pillow in place and ice on your shoulder. You will then be brought to the recovery room for a few hours while the effects of anesthesia run their course. You will be discharged from the recovery room after a few hours and will need someone to drive you home.



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If you had a nerve block placed you will likely have numbness and pain relief for 6 or more hours afterwards. It will be important to begin taking pain medicine prior to this wearing off, as it is always important to “stay ahead of the pain.” You will be prescribed oxycontin and oxycodone to help with your pain control for the first several days.

Activities and advice for in the hospital and while at home:

1. Please call with any concerns: (609) 747-9200
2. Apply ice to the shoulder, as it will be quite helpful. After two days, you can change the dressing to a smaller one to allow the cold to better get to the shoulder. Be sure to leave the little pieces of tape (steri-strips) in place.
3. Remove the sling on the first day after surgery. Move your elbow, wrist, hand and fingers several times a day. Begin the pendulum exercises several times a day. Put the sling back on when you're done with these exercises. It is likely the sling will be used for 4-6 weeks.
4. If you had a purely arthroscopic procedure, it is okay to shower and get the wound wet after two days, but do not soak the wound as you would in a bath tub or hot tub. If you had an open procedure it will be necessary to keep the wound(s) dry for two weeks.
5. It is important to look out for signs of infection following surgery. These can include: fever (temperature > 101.5^o, chills, nausea, vomiting, diarrhea, redness around your incision, or yellow or green drainage from your incision. Should any of these be present please contact Dr. Mc Millan's office immediately.
6. To wash under your operated arm bend over at the waist and let the arm passively swing away from the body. It is safe to wash under the arm in this position.
7. DO NOT lift the arm or move the arm at your shoulder using your muscles. This could damage the repair.
8. After shoulder surgery there is a variable amount of pain and swelling. This will dissipate after several days. Continue to take the pain medicine you were prescribed as needed. Remember it is called pain control, not pain elimination.
9. You will have an office visit with Dr. Mc Millan scheduled approximately 10-14 days after your surgery.

REHABILITATION AFTER LABRAL REPAIR

Phase I: Immediate post-op phase (first 5-7 days after surgery, prior to starting PT)

Goals:

1. Protect the labral repair
2. Ensure wound healing
3. Diminish pain and inflammation
4. Prevent stiffness and regain motion

Activities:

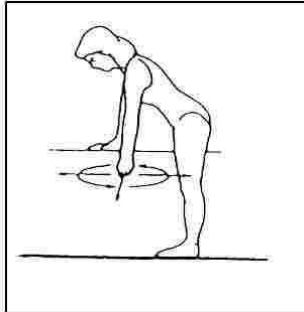
1. Sling: Use your sling all of the time except for when doing therapy. Remove the sling 4 or 5 times a day to do pendulum exercises. You will need to sleep with your sling and pillow in place. It is often more comfortable to sleep in a recliner or on several pillows.
2. Use of the affected arm: You may use your hand on the affected arm in front of your body but **DO NOT** raise your arm or elbow away from your body. It is all right for you to flex your arm at the elbow. Continue to move your elbow wrist and hand to help circulation and motion. Also:
 - a. No lifting of objects
 - b. No excessive shoulder extension
 - c. No excessive stretching of sudden movements
 - d. No supporting of body weight by hands
3. Continue to ice on a regular basis. At least 20 minutes at a time, 4-5 times per day.
4. Your first therapy appointment should be within 5-7 days after your surgery.

Exercises:

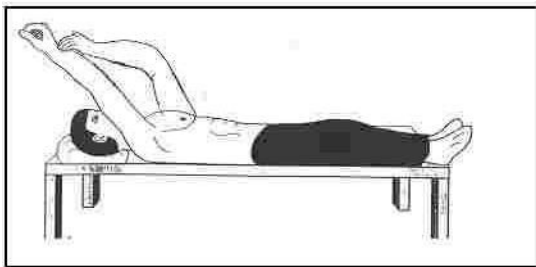
Program: 7 days per week, 4-5 times per day

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
Scapular retraction	1-2 sets	5-10 reps
Shoulder shrug	1-2 sets	10-15 reps

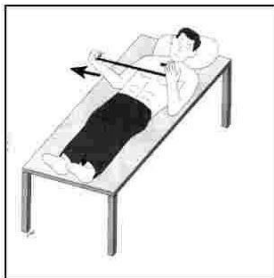
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*Pendulum exercise*

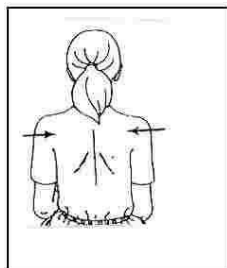
Remove your sling, bend over at the waist and let the arm hang down. Using your body to initiate movement, swing the arm gently forward and backward and in a circular motion.

*Supine passive forward elevation*

Lie on your back. Hold the affected arm at the elbow with the opposite hand. Assisting with the opposite arm, lift the operated arm upward, as if to bring the arm overhead. Slowly lower the arm back to the bed.

*Supine external rotation*

Lie on your back. Keep the elbow of the operated arm against your side with the elbow bent 90 degrees. Using a cane or a long stick in the opposite hand, push against the hand of the operated arm so that the operated arm rotates outward. Hold for 10 seconds, relax and repeat. The amount of allowed external rotation will be specified after surgery.

*Shoulder blade pinches*

While standing, pinch shoulder blades backward and together.

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Phase II: Intermediate post-op phase (5-7 days post surgery – 4 weeks)

At this point you should begin your formal physical therapy, the instructions that follow are to aid your therapist in maximizing the results of your surgery while still protecting the repair.

Your therapist will instruct you on how to perform the exercises below and give you a home exercise program. It is important that you stay within the limits demonstrated and that you perform your exercises daily. You should strive to do your home exercise program at least 3-4 times per day, every day. The success of your repair depends on your rehab.

****PT should not hurt. Do not force painful motions****

Goals:

1. Protect the surgical repair
2. Ensure wound healing
3. Prevent shoulder stiffness
4. Regain range of motion
5. Control pain and swelling

Activities:

1. Sling: Use your sling most of the time for the first 2 weeks. Dr. Mc Millan will give you additional instructions on the use of the sling at your post-operative office visit. Remove the sling 4 or 5 times a day to do pendulum exercises.
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 overhead. Avoid extending the arm behind you and avoid putting your arm in a position as if your hands were behind your head. It is all right for you to flex your arm at the elbow but do not lift any objects in excess of 2 pounds or engage in activities that involve forceful use of the forearm such as using a screwdriver. Use of a computer or writing is all right as long as it is not painful.
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.
4. Continue to ice on a regular basis
5. You will have your first follow-up appointment with Dr. Mc Millan at 2 weeks after surgery.

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Exercises: (focus on stretching and passive motion)

- Supine External Rotation
- Supine assisted arm elevation
- Behind the back internal rotation
- Isometric exercises: internal and external rotation at neutral
- Rhythmic stabilization and proprioceptive training drills with physical therapist
- Ball squeeze exercise (squeeze rubber ball in your hands for 5-7 seconds)
- Scapular retraction

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Phase III: Active motion phase (weeks 5 to 7)**Goals:**

1. Protect the surgical repair
2. Improve range of motion of the shoulder
3. Begin gentle strengthening

Activities

1. Sling: Your sling is no longer necessary unless Dr. Mc Millan instructs you to continue using it (use it for comfort only).
2. Use of the operated arm: You can now move your arm for most daily activities, but you need to continue to be careful not to lift objects heavier than 1 or 2 pounds. You should avoid forceful pushing or pulling activities. You should avoid activities that load the biceps muscle, such as turning a screwdriver or carrying a heavy box. You should continue to avoid reaching behind you or other positions with the hand behind the head.
3. Bathing and showering: Continue to follow the instructions from phase one and the instructions above.
4. Driving: At this point, assuming you are no longer taking any pain medicine and are comfortable using your arm it is okay to drive.
5. You will have a follow-up appointment with Dr. Mc Millan 6 weeks after your surgery.

Exercises:*Stretching/PROM:*

- Pendulum exercises
- Supine external rotation
- Standing external rotation
- Supine passive arm elevation
- Seated-standing arm elevation
- Behind the back internal rotation

AROM/Strengthening:

- Theraband internal and external rotation
- Standing forward flexion (scaption)
- Prone row
- Prone horizontal abduction "T's"
- Prone extension
- Sidelying external rotation

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Phase IV: Advanced strengthening phase (8 weeks after surgery)

Goals:

1. Protect the surgical repair
2. Regain full range of motion
3. Continue strengthening progression

Activities:

1. 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 still disrupt the healing of your surgical repair.
2. You will have a follow-up appointment with Dr. Mc Millan 3 months after your surgery.

Exercises:

Stretching/PROM:

- Pendulum exercises
- Standing external rotation / doorway / wall slide stretch
- Hands-behind-head stretch (starting the 9th week after surgery)
- Standing forward flexion
- Behind the back internal rotation
- Supine cross-chest stretch
- Sidelying internal rotation (sleeper stretch)

Strengthening/Theraband:

- External rotation
- Internal rotation
- Standing forward punch
- Shoulder shrug
- Dynamic hug
- Wall “W’s”
- Seated row (starting 11th week after surgery)
- Biceps curl (starting 9th week after surgery)

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Strengthening/Dynamic:

- Sidelying external rotation
- Prone Horizontal Arm Raises “T’s”
- Prone row
- Prone scaption “Y’s”
- Prone extension
- Standing forward flexion “full can” scaption
- **May add resistance 1-3 lbs.
- Rhythmic stabilization and proprioceptive training drills with therapist.

May add the following advanced program exercises at 12 weeks after surgery:

Strengthening/Theraband:

- External rotation at 90°
- Internal rotation at 90°
- Standing “T’s”
- Diagonals up/down

Strengthening/Dynamic:

- Prone external rotation at 90° abduction “U’s
- Biceps curls
- Resisted forearm supination-pronation
- Resisted wrist flexion/extension
- PNF manual resistance with therapist
- Push ups

Plyometrics:

1. Rebounder throws with arms at sides
2. Wall dribbles overhead
3. Rebounder throwing/weighted ball (starting at 16 weeks)
4. Deceleration drills with weighted ball (starting at 16 weeks)
5. Wall dribbles at 90° (starting at 16 weeks)
6. Wall dribble circles (starting at 16 weeks)

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At the 12-week mark it is okay to start a weight-training program, but the following weight training exercises should be avoided after Bankart repair for shoulder instability and superior labrum repairs:

1. Pull downs behind-the-neck (wide-grip)
2. Behind-the-neck shoulder press
3. Wide-grip bench press
4. Standing lateral deltoid raises
5. Triceps press overhead

If your goal is returning to high-level weight training or weight lifting, it will take 3 to 6 months of cautious, gradual progression to return to top form. In general, avoid increasing the amount of weight lifted by more than 10-15% (at a time) of your present working weight every 10-14 days.

Remember: Weight training is beneficial to improve muscular strength and protect the joints from injury. If done improperly by using too much weight and/or improper technique, weight training can cause serious injury.

At the 16-week mark it is okay to start an interval return to sport program for swimming, tennis, golf or throwing.