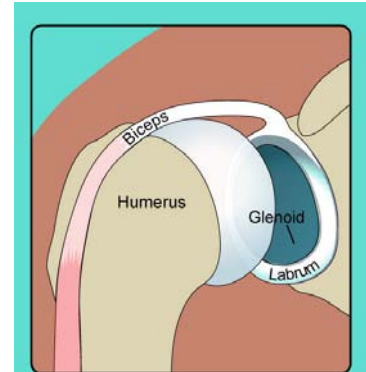


Bankart Repair Protocol

Anatomy and Biomechanics

The shoulder is a wonderfully complex joint that is made up of the ball and socket connection between the humerus (ball) and the glenoid portion of the scapula (socket). The socket portion of the joint is not naturally deep. For this reason the shoulder is the most mobile joint in the body. Due to the lack of boney coverage the shoulder's proper function and stability is largely dependent on the soft tissues that surround it.



The glenoid labrum is a fibrocartilage rim that surrounds the edge of the glenoid fossa (socket). It serves to deepen the socket and provide a suction effect on the head of the humerus (ball), thus improving the stability of the naturally shallow joint. The labrum can be damaged or torn in many different ways. When the shoulder is traumatically or repetitively dislocated, the front (anterior) part of the labrum is often torn. This is called a Bankart tear and may or may not be accompanied by damage to the head of the humerus as it dislocates.

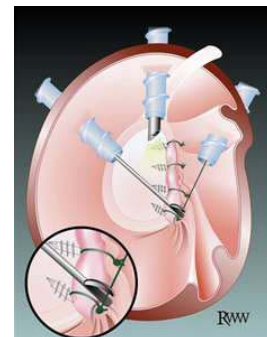
Treatment Options



Regardless of how the labrum is torn your physician will work with you to determine what the best course of treatment will be. In many cases the pain and dysfunction associated with a Bankart tear can be successfully treated with rest, anti-inflammatory measures, activity modification and Physical Therapy. When conservative measures are unsuccessful in restoring function you and your physician may elect to have the torn labrum repaired.

Surgery

Labral repair surgery involves re-anchoring and suturing or trimming away the torn piece of cartilage. The procedure is usually performed arthroscopically and is, in most cases an outpatient day surgery procedure. This means that it is very rare to have to spend the night in the hospital. If damage to the labrum or other tissue is extensive your surgeon may have to use an open incision rather than an arthroscope to complete the procedure. Regardless, of whether the procedure is open or arthroscopic all patients will likely be home on the same day as surgery.



Recovery/Time off Work

Recovering from labral repair surgery is not easy. It is very important that the patient knows that the recovery process is difficult and time consuming. He or she must be an active participant during this process, performing daily 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. It is usually estimated that it will take at least 4-6 months to feel as though you have completely regained the use of your arm. Some cases may take as long as 9-12 months to make a full recovery. People with desk jobs should plan to take at least 1 week off from work. Those with jobs that require physical activity and lifting will likely be out of work for at least 4-6 months. **Recovery is different in each case.** Your individual time table for return to activities and work will be discussed by your surgeon during post operative office visits.

Post Operative Visits

Your first post-op visit to the doctor's 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 doctor or his or her physician assistant. At this time you will most likely be cleared to make an appointment to begin Physical Therapy. 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 2 days after the operation and replace it as needed. Do not remove the strips of tape (steri-strips) that are across your incision. Allow them to fall off on their own. You may shower after 2 days, but use a water-tight dressing until your sutures are removed. Bathing without getting the shoulder wet or sponge baths are a good alternative. 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 your doctor allows you. You may remove your sling several times a day and gently move your hand, wrist and elbow and perform shoulder pendulum exercises.

Medication

Your surgeon will prescribe pain medicine for you after the operation. Please call the doctor's office if you have any questions regarding 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. Putting a pillow case over your ice pack works well for this.

Sling

You will be provided with a sling to wear after the operation. You should wear this sling most of the time for at least the first 2 weeks after the operation. Remove it when bathing/showering, or to do your exercises. It is recommended that you continue to sleep in the sling and wear it when you are out in a

crowd for the first 4 weeks after the operation. If your case is atypical your doctor may have custom guidelines for you regarding use of the sling.

Sleeping

You may sleep with a pillow propped under your arm to keep it slightly away from the body. For many patients lying flat is uncomfortable at first. It is generally easier to sleep propped up or in a recliner for a short period of time after the operation. Do not attempt to sleep on your operated shoulder for at least 6 weeks.

Rehabilitation

****The following is an outlined progression for rehab. Time tables are approximate and advancement from phase to phase as well as specific exercises performed should be based on each individual patient's case and sound clinical judgment by the rehab professional. ****

Phase 1 (0-4 Weeks) Passive ROM Phase

Goals

Control Pain and Swelling
Protect Healing Tissue
Begin to Restore Range of Motion

Precautions

Do not actively reach overhead.
Do not actively reach arm behind your head.
Do not lift anything with your arm.
Do not let your arm rotate away from your body

Recommended Exercises

See passive ROM limitations in chart on page 8

Pendulums
Standing Scapular Mobility (no resistance)
Supine or Standing Passive External Rotation
Supine, Seated or Standing Passive Shoulder Flexion (elevation)
Passive Internal Rotation (starting at 2 wks post op)
Sub-maximal Isometric Shoulder Internal and External Rotation
Ball Squeeze

Guidelines

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

Phase 2 (4-8 Weeks) Active ROM Phase

Goals

Continued protection of healing tissue
Continue to improve ROM
Initiate gentle peri-scapular and rotator cuff strengthening
Begin using your arm for daily activities in front of body only

Precautions

Discontinue use of sling if you have not already
Be careful with raising your arm, especially overhead, and away from your body
Continue to avoid lifting or carrying anything

Recommended Exercises

ROM

Continue passive ROM with physical therapist
See passive ROM limitations in chart on page 8
Pendulums
Supine stick flexion and table slides
Supine or Standing Passive External Rotation
Internal Rotation

Strengthening (Resistance Band or Body Weight Against Gravity) beginning at 6 wks post-op.

Row
Prone Extension
Prone Horizontal Abduction
Standing/Prone Scaption
Internal Rotation (Neutral)
External Rotation (Neutral)

Dynamic Strengthening with Physical Therapist

Gentle proprioceptive and rhythmic stabilization drills with therapist

Guidelines

Perform all ROM and Strengthening exercises once a day. Do 2-3 sets of 15-20 repetitions.

Phase 3 (8-12 Weeks) Strengthening Phase

Goals

Continue to acquire normal ROM (both passive and active)
Progress strengthening of rotator cuff and shoulder blade muscle groups
Begin limited use arm for daily activities in all planes

Precautions

No lifting away from your body or overhead greater than 1 or 2 pounds
Caution with repetitive use of arm especially overhead
Stop activity if it causes pain in shoulder

Recommended Exercises

Range of Motion

Continue passive ROM with physical therapist as needed gradually progress to full ROM
Continue ROM exercises from phase 2 until ROM is normalized
Gentle progression of abduction angle with external rotation stretch
Gentle supine or standing cross body stretch
Gentle sidelying internal rotation stretch ("sleeper") *caution to not cause impingement*

Strengthening (Resistance Band or Dumbbell)

- Row
- Prone Extension
- Prone Horizontal Abduction
- Standing Scaption with progression to Prone
- Internal Rotation
- External Rotation

Dynamic Strengthening

- Manual Resistance Rhythmic Stabilization
- Proprioceptive Drills (90° of Elevation or Below)

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 a week. Perform strengthening exercises 3-5 times a week. Do 2-3 sets of 15-20 Reps. Strict attention must be paid to scapulohumeral rhythm with completion of all strengthening exercises.

Phase 4 (12-24 Weeks) Sport Specific and Return to Activity Phase

Goals

- Progress to normal ROM and strength
- Continue to encourage progressive use of arm for functional daily activity

Precautions

- Encourage return to full use of arm for daily activities
- Pay particular attention to scapulohumeral rhythm especially with abduction and overhead activity
- Discuss return to sport and activity plan with physician

Recommended Exercises

ROM and Stretching

- Continue ROM and stretching exercises from phase 2-3

Strengthening

- Continue strengthening exercises from phase 3
- IR/ER strengthening at 90 deg of abduction
- May begin supervised weight training pending surgeons clearance

Dynamic Strengthening

- Progress manual resistance patterns
- Progress proprioceptive drills to include rhythmic stabilization
- Slowly progress to overhead proprioceptive and plyometric drills
- Push up progression

Guidelines

Perform ROM and stretching program 1-3 times a week to maintain normal ROM. Do 1-2 sets of 15-20 Reps. Perform ROM and stretching more frequently in any planes of motion that are still deficient
Perform strengthening 3 times a week. Do 2-3 sets of 15-20 Reps.

Time	Focus	Range of Motion	Recommended Exercises	Precautions
Phase 1 0-4 Weeks	*Tissue Healing *Decrease Pain and Inflammation *Start Early Passive ROM with Attention to Restrictions	*Flexion 90-100° (0-2 wks) As Tol (after 2 wks) *ER in Neutral 5-10° (0-2 wks) 30° (2-6 wks) *ER in Scap Plane 15° (0-2 wks) 30° (2-4 wks) *IR in Scap Plane 45° (0-2 wks) 60° (2-4 wks)	<u>Passive/Active ROM</u> Pendulums Scapular Retraction Shoulder Shrugs Passive External Rotation Passive Flexion Passive Internal Rotation (at 2 wks post op) <u>Strengthening</u> Submaximal Isometric ER/IR Ball Squeeze	*Sling 0-4 Weeks or per MD Instruction *Limit ROM Especially ER *No Excessive Shoulder Extension *No Active ER, Extension, Abduction
Phase 2 4-8 Weeks	*Improve ROM with Careful Progression of IR/ER *Slow Transition to Strengthening after MD Follow Up	*Flexion Progress As Tolerated * ER in Neutral 30° (4-6 wks) Slowly Progress (after 6 wks) *ER in Scap Plane 45° (4-6 wks) 60° (6-8 wks) *IR in Scap Plane Slowly Progress (after 4 wks) *Abduction Limit to 90° (0-6 wks)	<u>Passive ROM</u> Continue PROM Exercises <u>Active Assisted ROM</u> Supine/Standing Flexion Crossbody Adduction (6-8wks) <u>Active ROM Against Gravity (6-8 wks)</u> Sidelying ER Standing Scaption Prone Row Prone Extension Prone Horizontal Abduction Prone Scaption <u>Strengthening (6-8 wks)</u> T-Band IR/ER (in 0° Abd) *Work from full IR to 0° ER* <u>Dynamic Progressions (6-8 wks)</u> Gentle Rhythmic Stabilization and Proprioceptive Drills	*No Resisted Activity/Lifting *Avoid Repetitive Motion Overhead and in Rotation Away from Body *Must have good Scapular Control with Active ROM and Strengthening *Never Force ROM especially ER
Phase 3 8-12 Weeks	*Progressive Strengthening *Continued Attention to ROM if Still Deficient *Establish Proper Scapulohumeral Rhythm *Enhance Proprioception	* ER in Neutral Slowly Progress to Normal by 12 wks *ER in Scap Plane Slowly Progress to Normal by 12 wks *ER/IR in 90° Abd Begin at 8 wks and Slowly Progress to Normal by 12 wks	<u>Passive ROM</u> Continue as Needed <u>Active Assisted/Active ROM and Stretching</u> Continue Phase 2 Exercises Wall Slide Sidelying IR (“Sleeper”) Progressive Abd Angle with ER Supine/Standing Cross Body <u>Strengthening (Dumbbell/T-band)</u> Row Prone Extension Prone Horizontal Abduction Standing/Prone Scaption Internal Rotation External Rotation “W” (Row/ER) Bicep Curl <u>Dynamic Progressions</u> Rhythmic Stabilization Proprioceptive Drills	*No Heavy or Repetitive Overhead Lifting/Reaching *Limited Return to Gym Lifting Late in Phase 3 per MD Discretion *Dynamic Progressions if Pain Free/Full ROM with all ROM and Strengthening Exercises *Never Force ROM especially ER

<p>Phase 4 12-24 Weeks</p>	<p>*Progress strengthening *Regain use of arm for all daily activities. *Prepare for Return to Sport and Physical Activity</p>	<p>*Continue to work toward normal ROM in all planes</p>	<p><u>Active Assisted/Active/Stretch</u> Continue Phase 3 As Needed <u>Strengthening</u> Continue T-band and Dumbbell Progressions from Phase 3 Progress to Diagonal Patterns IR/ER at 90° Abd May Begin Limited Weight Training <u>Dynamic Progressions</u> Pushup Progression Continue Proprioceptive Drills Plyometrics/Rebounder Progress to Overhead Rhythmic Stabilization Manual Resistance Patterns</p>	<p>*Progress Gym Lifting per MD Discretion *Avoid Activities that Cause Shoulder Pain *Begin Progressive Return to Sports and Physical Activity Program After MD Evaluation</p>
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*Reviewed by Michael Geary, MD