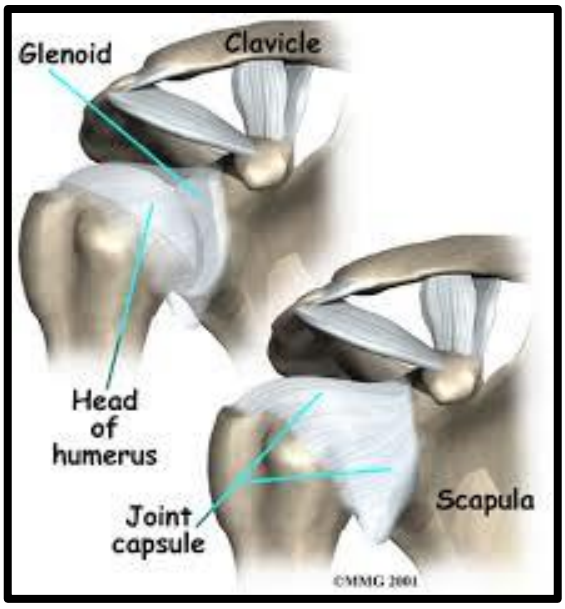
The Unstable Shoulder

Surgical Bankart Repair

A Patient Information Guide



NAME: _____

SURGICAL DATE: _____

IMPORTANT CONTACT INFORMATION:

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Apex Orthopedic Rehabilitation: (902) 835-2932

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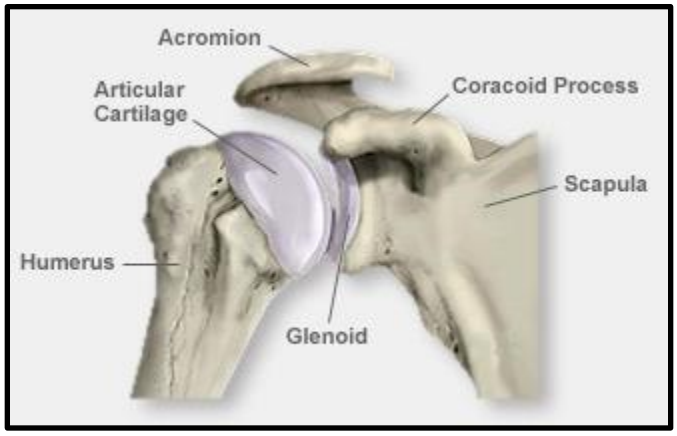
SHOULDER JOINT ANATOMY

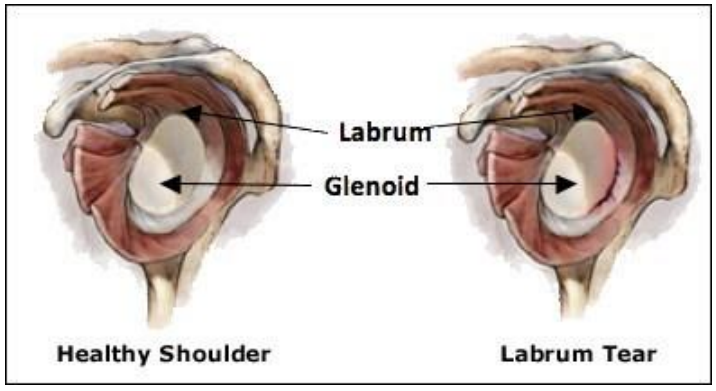


The shoulder joint (fig 1) (glenohumeral joint) is the most mobile joint in the body. This ball and socket joint is made up of the **humerus** (ball) and the scapula (socket). Movement is achieved through the movement of humeral head within the glenoid fossa. The glenoid fossa is very shallow and therefore, the joint is further secured by the surrounding muscles, ligaments, and cartilage. The cartilage is known as the **labrum** and surrounds the glenoid. This provides an extension of the socket. The major muscles are known as the rotator cuff. Surrounding all of this is the joint capsule.

FIG 1

WHAT CAUSES SHOULDER INSTABILITY?

As mentioned above, the bony structure of your shoulder is very shallow and relies heavily on the supporting soft tissue structures (labrum, rotator cuff and surround muscles, and joint capsule). These structures work to maintain the humeral head in the centre of the joint. If there is damage to these structures, it can result in the humeral head sliding out of position. Damage (over stretched/loose) to these tissues are typically through **dislocation, subluxation, or repetitive strain**. A dislocation is when the humeral head is forcefully pulled out of joint typically through a blunt trauma to the shoulder. A subluxation is when the humeral head is partially pulled out of joint. You do not have to have a forced trauma to the shoulder for it to be unstable – repetitive strain on these soft tissue structures can also loosen the shoulder joint so that it feels unstable and painful. Finally, in a small percentage of the population patients may have a natural laxity (looseness) of their joints causing the humeral head to dislocate in all directions – this is termed **multidirectional instability.** A **Bankart lesion** occurs when the labrum of the shoulder is torn. A **glenoid fracture** may be present with some dislocations or multiple dislocations. This is when part of the glenoid rim is broken away. If the bone loss is significant enough the bone will need to be replaced surgically (see types of surgeries for shoulder instability).



Procedures

- **Bankart Repair**

  A very common injury in the shoulder is dislocations. It is known that the risk of recurrent dislocations increases with the number of shoulder dislocations a patient experiences. It is also known that when the shoulder dislocates, bone loss is frequently experienced on the glenoid or the humerus (shoulder bones). The Bankart Repair is the current standard for shoulder dislocation surgery in North America. This procedure consists of repairing the soft tissue that was damaged during the dislocation, and in most cases plicating the torn tissue to compensate for the bone loss.

- **Anatomic Glenoid Reconstruction**

  This surgery is very similar to the Bankart Repair, but incorporates another step, which utilizes a bone graft to help reconstruct the bone loss on the glenoid. In this procedure, the bone graft is cut and shaped to match the bone loss. Augmenting the traditional Bankart Repair with a bone graft can help stabilize the shoulder joint, in hopes of lowering the recurrence rate of another shoulder dislocation.

- **SLAP repair**

  SLAP is an acronym for “Superior Labral tear from Anterior to Posterior”. A SLAP tear is an injury to the superior glenoid labrum, where the biceps tendon attaches. This procedure is done to repair a tear of the biceps tendon where it attaches to the labrum.

- **Biceps Release/Tenodesis**

  The biceps muscle is in the front of your upper arm. It has two tendons that attach it to bones in the shoulder. The long head attaches to the top of the shoulder socket (glenoid), the short head of the bicep tendon attaches to a bump on the shoulder blade called the coracoid process. The long head of biceps can often become irritated, inflamed, or torn. In some cases, the long head of the bicep tendon may be too damaged to repair, so the damaged tendon is released from its attachment and sometimes repaired onto the humerus. This is called a biceps release or biceps tenotomy.

DEFINING YOUR TREATMENT

PreHab Treatment

There is approximately a 12-24+ month wait to have surgery. During this time all patients should have some form of prehab education and should be monitored during this time. It is common to have weakness and muscle imbalance as a result of having shoulder instability for many years. The best non-operative treatment is to improve and strengthen any muscle imbalances/weakness. Common weaknesses will be in the muscles that stabilize the shoulder blade that allow for proper shoulder and shoulder blade movement. You should be assessed by a Physiotherapist to address any imbalances around the shoulder joint and be provided with a home exercise program along with follow ups every 3 weeks for progressions and reporting.

Post-Op Treatment

There is a specific protocol that will be provided to you for your treating therapist that outlines your rehab from Day zero.

The main goals during **phase 1 (0-2 weeks)** are: Protection – passive range of motion (PROM). **Phase 2 (2-4 weeks)** goals are: Protection & Mobility - regaining PROM and working into active assisted (AAROM). Restrictions remain the similar as phase 1. **Phase 3 (4-8 weeks)** goals are Mobility & Patterning - Regain full active range of motion - **Phase 4 (8+ weeks)** goals are**:** Strength & Function - Early strengthening.

With each phase there will be criteria that you will need to meet in order to progress to the next phase. These will be assessed by Dr Wong's Rehab team and provided to your caring physiotherapist.

Other important timelines are: Return to work 2-6 months and return to sport 6-12 months.

FREQUENTLY ASKED QUESTIONS

1. **How long is the surgery?**
   This will depend on how much surgery is required in the joint. Typically, this surgery will last 1-2 hours.

2. **Where are the incisions?**
   This surgery is completely done arthroscopically, typically using 2-4 one cm incisions.

3. **Are there risks of having surgery?**
   a. **Infection:** The risk of infection is reportedly about 0.8% and when recognized is treated with cleaning out the joint and antibiotics. Preventative measures are taken such as: cleansing of the skin prior to surgery, careful surgical techniques, small incisions, and pre-operative antibiotics. If an infection develops, you may require antibiotics.
   b. **Swelling:** Swelling around the joint is normal after surgery. This can be alleviated by applying ice or using a cryotherapy device such as a Polar Care Unit.
   c. **Wound Healing Problems:** Incisions are quite small and therefore complications are rare. Occasionally blisters occur but these are usually treated with local dressing changes. Most wounds heal to a neat scar but a thickened, red and painful scar can occur and may require treatment.
   d. **Numbness:** Numbness down the arm can occur after surgery; the likely cause is the swelling around the shoulder and will subside.
   e. **Blood Clots:** Blood clots (deep vein thrombosis) can develop after surgery. Patients at risk include patients with a family history of clotting, a history or prior clots, patients over 40, obesity, cigarette smoking, women, birth control pills, history of cancer, and immobility. Preventative measures include early mobilization, compression stockings, home care exercises such as ankle pumps, smoking cessation, and discontinue the use of birth control pills for a week prior to surgery and for a least 1-2 weeks after surgery. If you or a direct relative has had a blood clot in the past please advise the hospital before surgery. Long trips including air travel should be avoided in the first 7 days after surgery to minimize the risk of developing blood clots. **If you suddenly get short of breath and have chest pain after surgery, you need to go to the nearest emergency room or call 911 immediately. A pulmonary embolism is a medical emergency and can cause death.**
   f. **Shoulder Stiffness:** Scar tissue can develop fast after surgery. Patients are instructed to start their post-surgical exercises within 2-3 days after surgery to decrease swelling and maintain mobility.
   g. **Injury to Artery or Nerve:** An injury to a major artery or nerve is rare after surgery.
   h. **Severe Pain:** severe pain after surgery is rare but can occur. If you are experiencing excessive pain in the hospital, you may require to stay in recovery longer, if pain is not controlled you may be admitted overnight. Medication will be prescribed for pain management.

4. **How long do I have my brace?**
   The shoulder joint and surrounded musculatures are not strong enough to support the shoulder immediately after surgery and rest is required for healing. You will be instructed to wear your brace for up to 6 weeks post surgery.

5. **How do I sleep?**
   Sleeping in the brace can be very difficult. We recommend a lazy boy chair/recliner. If you do not own a recliner try using pillows to prop yourself a little, lying flat on your back can be uncomfortable.

6. **When can I shower?**
   You may shower 5 days after your surgery with a waterproof band aid over each incision.

7. **When can I drive?**
   You should never operate a vehicle while taking prescription medications; this can affect your ability to drive. The protocol will outline specifically when you are able to drive; generally, it is 6 weeks after your operation. It is very important you do not drive before it is safe to do so, if you are questioning this, please consult your doctor or your Physiotherapy Team.

8. **How long is physiotherapy and how often?**
   The goal of physiotherapy is to control pain and swelling, restore function, restore range of motion, strengthen, and prepare you for return to work or sport. This can vary from patient to patient; generally, physiotherapy will be 2-3xweekly for 12 weeks. It is very important you follow the recommended rehabilitation protocol outlined unless you are advised otherwise. Patient progression through a rehabilitation program may be different between patients. Most patients will continue with home or gym-based exercise plans for 6-12 months.

9. **What happens after surgery?**
   You will be seen by Dr. Wong's Rehab team 2-5 days after surgery for wound care and baseline measurements. Physiotherapy should be booked 2-3 days after this appointment. You will be reassessed at regular intervals for 2 years after your surgery (typically the appointments are at 2 weeks, 6 weeks, 12 weeks, 6 months, 12 months and 24 months). At your 2 week appointment, you will have your staples removed and will be instructed to arrive one hour prior for x-rays.

10. **When can I return to work?**
    Ever patient will progress differently, generally a return-to-work program will begin within 2-6 months of surgery date depending on what your occupation is. A return-to-work program may be set up for you, this may include modified duties or shortened hours. It is very important you follow the program set up by your therapy team, returning to work too quickly or without proper training can cause progression in recovery or cause re-injury.

11. **When can I return to sport?**
    Return to sport will depend on the patient and the sport. Sport specific retraining is indicated between 4-6 months after surgery (pool program at 4months; land training 5-6 months). The goal for return to sport is 6-12 months. It could take up to 2 years for maximum function and performance.

12. **Can I re injure my shoulder?**
    Yes, it is possible to re injure your shoulder after surgery. It is extremely important to follow the protocol outlined for you, this will minimize your chances of re injury.

SHOULDER SURGERY CHECKLIST

Before Surgery:

- ☐ Make sure you have been working on regaining strength and mobility of the shoulder as well as core strength.
- ☐ You should know the date and location of your surgery.
- ☐ You should make arrangements with work/school that you will be missing time.
- ☐ You have been to your pre-operative appointment, and received your shoulder brace, and other recommended surgical equipment.
- ☐ No liquids or food after midnight prior to surgery.

Day of Surgery:

- ☐ Bring your health card to the hospital
- ☐ Wear loose fitting clothing
- ☐ Bring all surgical equipment to the hospital
  - **Shoulder Brace**
  - **Cold therapy unit + hip pad and barrier**
- ☐ Bring all medications (or list of medications) that you take on a regular basis.
- ☐ If you have a sleep apnea machine, please bring it with you to the hospital.
- ☐ You will need transportation after surgery, and someone should stay with you for 24 hours after the surgery.

After Surgery:

- ☐ You should have a follow-up appointment booked within 2-5 days after surgery.
- ☐ You should have physiotherapy booked within 5-7 days after surgery, 2-3x week.
- ☐ You should have information on your 2 week follow up at the Orthopedic Clinic.

PREOPERATIVE APPOINTMENT

(WILL BE SCHEDULED MINIMUM 1 WEEK BEFORE SURGERY)

- SURGICAL CHECKLIST
- PREOP FORMS

PRE OP SHOULDER CONSULTATION – DR. IVAN WONG

MINIMIZE INFLAMMATION AND SWELLING:

- BREG Kodiak Cold Therapy Device (cryotherapy): 2-3 hours on, 40-60 minutes off - Instructions are given with your unit.
- Hand pumps and gripping exercises (instructions with exercises).
- Wound Care: must stay clean and dry at all times during the healing process. You will be unable to shower for the first 5 days until your dressing is removed. When your dressing is removed it will be replaced with a waterproof Band-Aid. **You will be given a box of XL Waterproof Band-Aids at your first follow-up appointment.**
- You will need to see a doctor to have your staples removed 10 – 14 days after surgery. If you do not see Dr. Wong within 14 days after your surgery, you should make an appointment with your family doctor to have them removed.

POST-OP MOBILITY:

- **Absolutely NO active shoulder mobility or muscle activation for 0 – 6 weeks after surgery.**
- Your brace is to be worn at all times for 6 weeks, it may be removed for showering, changing, and home exercise plan.
- No pushing, pulling, or lifting even with your brace on.
- Your physiotherapist will be working on restoring range of motion of the shoulder.
- We recommend massage therapy starting at 4 weeks after surgery. This will help reduce scar tissue and help restore range of motion in conjunction with physiotherapy.

EARLY SHOULDER/NECK ROM:

- Postural awareness.
- Range of motion exercises will be done by your physiotherapist.
- Post-Op exercises: all instructions are on the exercise sheets; exercises are to be done as directed on your exercise sheet.

FOLLOW-UP APPOINTMENTS:

- There will be a series of follow up appointments booked after surgery – these appointments will be given to you by Dr. Wong's office.
- **You will need to visit Apex Orthopedic Rehabilitation before every appointment with Dr. Wong.** This is to provide Dr. Wong with a progress report. These are setup to provide communication between our team, Dr. Wong, and your Physiotherapist.
- Follow up appointments will be at: **2-5 days, 2 weeks, 6 weeks, 12 weeks, 6 months, and 12 months.**
- **We ask that you bring your form W to your 2-5 day visit.**
- Physiotherapy should start at 5-7 days after surgery (2 – 3 per week).

BREG SHOULDER BRACE INFORMATION:

- This BREG brace is an immobilizer, it is worn to protect and support your shoulder while it heals. **There should be no muscle movement.**
- Your brace is to be worn at all times for 6 weeks after surgery. It can only be taken off to shower, to dress, and to do any exercises given to you by your physiotherapist.
- When your arm is not in your brace, it must be supported. You may let your arm hang in the resting position when showering and dressing.
- When you are getting dressed always dress the affected arm first, followed by the unaffected arm.
- You can remove the brace to shower, but your arm must be supported at all times. You may let the arm hang to your side or sit and rest arm on your leg.
- Sleeping can be difficult. **You are required to sleep with your brace on.** We recommend a lazy boy or a recliner. If you do not have either, mimic that position in bed, using pillows to support you back and elbow. We recommend you sleep on you back, sleeping on your side could cause the brace to rotate and shift around the body, causing the shoulder to rotate.

PreOp Shoulder Surgery Physiotherapy Checklist

Name: _____ DOB: _____ Sx Date: _____

BASELINE MEASUREMENTS	
GH general AROM	
GH Flexion	
GH Abduction	
GH Ext Rot	
GH Int Rot	
Scap. Posn/Rhythm	
OUTCOME SCORE	

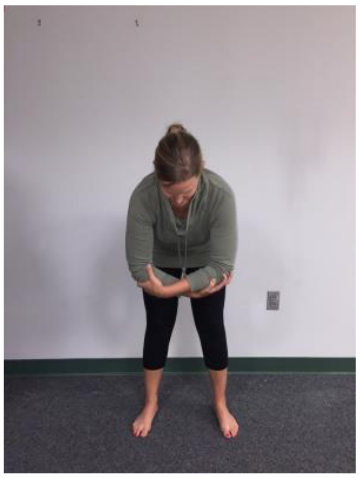
CHECKLIST		
☐	*Review of surgery and answer questions*	
☐	*Importance of early PASSIVE movement and exercises – in brace – 6 weeks RCR, 8 weeks Graft, 3-6 weeks latarjet*	
☐	*Review exercises to begin as soon as possible*	
☐	*Overview of protocol, RTW (3-6 months), RTS (8-12 months)* *No Driving while in brace*	
☐	*Plan for physiotherapy – ideal: 2-3x/week for 6 weeks, 1x/ until 10 weeks, biweekly until 3-4 months, every 6-8 weeks until 1 year.* *PROM (0-4/6w) – AROM (6-12 w)-Strengthen (12+w)*	*Location:*
☐	*Follow ups with rehab team and Dr Wong 2 weeks, 6 weeks, 12 weeks, 6 months, 1 year, 2 year. Importance of doing outcome measure (emailed to patient).*	
☐	*Schedule 2-5 day appointment*	*Date:*
☐	*If Local schedule 2w, 6w on the Wed/Thurs/Friday before actual (instead of day of Wong visit)*	*2 week date:* *6 week date:*
☐	*Provide 0-2 week protocol and exercises*	
☐	*Provide contact information (drwongrehab@apexorthorehab.ca)*	

I acknowledge that all of the above information has been provided to me and that I was able to discuss any questions I had with the providing physiotherapist.

Name: _____ Signature: _____

PT: _____ Signature:_____ Date: _____

EXERCISES TO BEGIN AS SOON AS POSSIBLE AFTER SURGERY



Cradle Pendulums

Support your affected arm by holding your bent elbow with the other hand. Gently lean forward at the waist and gently rock the affected arm side to side as if you were rocking a baby. Keeping your arm supported by the opposite side the whole time. You can also perform small circles or rock forward and backward.

Hold: 5 minutes, Complete 2 sets, Perform 2 times

RCR Active Wrist Movements

With your surgical arm in the slingshot brace, actively move your wrist up and down into flexion and extension and side to side or radial and ulnar deviation. Also perform wrist circles.

Repeat 20 times, Complete 2 sets, Perform 2 times per day

Elbow Extension Stretch

Place your elbow on the edge of a table or on a pillow on your lap (DO NOT PUT WEIGHT THROUGH ELBOW) and use your other hand to press it into a more straightened position.

Repeat 10 times, Hold for 2 seconds, Complete 3 sets, Perform 2 times per day

EXERCISES TO BEGIN AS SOON AS POSSIBLE AFTER SURGERY (cont'd)

Cervical Side Bend

Tilt your head away from surgical shoulder – hold where you feel a comfortable stretch.

Repeat 3 times, Hold 30 seconds, Complete 1 set, Perform 2 times per day

Cervical Rotation

Turn your head away from surgical shoulder – hold where you feel a comfortable stretch

Repeat 3 times, Hold 30 seconds, Complete 1 set, Perform 2 times per day

Posture Correction

Sit tall, lift your sternum. Correct head position with a chin tuck, and gently retract your scapula.

Repeat 3 times, Hold 30 seconds, Complete 1 set, Perform 2 times per day.

SHOULDER INSTABILITY REHAB PROTOCOL

- CHECKLISTS FOR EACH PHASE
- DETAILED PROTOCOL FOR EACH PHASE
- EXERCISE DESCRIPTIONS FOR EACH PHASE

BANKART REPAIR PROTOCOL

This protocol is intended to provide clinicians with guidelines for the post-operative management of a patient who has undergone an arthroscopic Bankart repair. This protocol is not a substitute for a clinician's clinical reasoning during a patient's post-operative healing/progress. Clinical reasoning should be based on individual symptoms, physical signs, progress, and/or the presence of operative complications. If a clinician requires assistance or guidance at any stage of recovery they should consult with Dr. Wong's office.

Purpose: To restore the anterior stability of the glenohumeral joint (shoulder) by tightening the soft tissue of the shoulder joint capsule.

Postoperative Patient Guidelines:

- Physiotherapy commencing at 2-5 days post-op – at Apex Orthopaedic Rehabilitation
- Protect surgical repair

- It is crucial to allow the soft tissue to tighten and heal to stabilize the shoulder
- Do not overstretch the anterior capsule (avoid hyper-extension, external rotation)
- Prevent Infection
- Keep wound dry, covered and clean
- Staples/stitches are removed at 2 week follow up appointment. If you do not have a 2 week appointment you will need to see your family doctor to have the staples removed (please be sure the office has a removal kit)
- Shoulder Movement- (passive only)
- Gaining PASSIVE Range of Motion too slowly may result in long term stiffness
- Strengthening before the patient has full range of movement can lead to bad movement patterns and faulty muscle activation. It is important to achieve full shoulder mobility first.
- Exercises should not reproduce pain

Returning to work:

- These decisions are determined by Dr. Wong with occupational therapist consult – and generally occur between 2-6 months post-operatively
- Often associated with graduated hours and modified duties

Returning to sport:

- These decisions are determined by Dr. Wong and rehab team – and usually occur between 6 to 12 months post-op
- Timelines vary and are dependent on contact vs. non-contact sport, as well as level of play.

ARTHROSCOPIC BANKART REPAIR

Phase I (Protection): *0-2 weeks*

Restrictions for 0-2 weeks:

- Shoulder PROM only. Focus on gaining shoulder flexion and abduction predominantly.
- **No ER in any plane past neutral until 12 weeks post op. Avoid shoulder hyper-extension.**
- Remain in sling at all times; Remove only for showering and exercises
- No driving for 6 weeks
- Avoid getting incisions wet
- No mobilizations/manipulations/traction to glenohumeral joint
- No lifting/pushing/pulling objects with operative shoulder.
- No shoulder AROM

Short Term Physiotherapy Goals for 0-2 weeks:

- ✓ Education: posture, joint protection, positioning, hygiene, restrictions, ADLs
- ✓ Immobilization with sling (neutral pillow/wedge) to protect surgical site
- ✓ Minimize pain and inflammatory response
- ✓ Maintain/restore ROM of uninvolved joints (neck, thorax, elbow, wrist/hand) and PROM of glenohumeral joint
- ✓ Improve scapular position

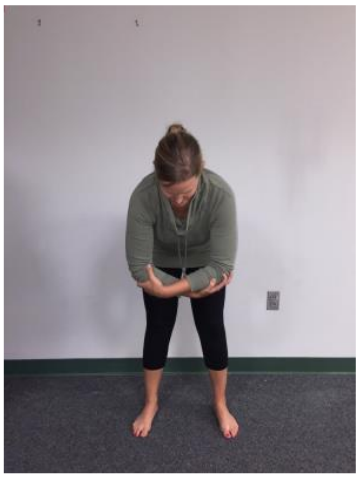
Physiotherapy management for Phase 0-2 weeks:

1. **Manual therapy (2-3x/week)**
   - PROM is required to prevent stiffness. Emphasis should be on shoulder flexion and abduction
   - Gentle PROM can be started on day 3 post-operatively.

2. **Exercises**
   - Pendulum cradles, Neck, thoracic, elbow, wrist/hand AROM
   - Ball squeezes
   - Gentle walking. Ensure surgical site is not compromised in any way

3. **Modalities**
   - Use ice or cryotherapy unit as directed for pain and inflammatory control

EXERCISES TO BEGIN 0-2 WEEKS AFTER SURGERY



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Hold: 5 minutes, Complete 2 sets, Perform 2 times

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Repeat 20 times, Complete 2 sets, Perform 2 times per day

Elbow Extension Stretch

Place your elbow on the edge of a table or on a pillow on your lap (DO NOT PUT WEIGHT THROUGH ELBOW) and use your other hand to press it into a more straightened position.

Repeat 10 times, Hold for 2 seconds, Complete 3 sets, Perform 2 times per day

EXERCISES TO BEGIN 0-2 WEEKS AFTER SURGERY (cont'd)

Cervical Side Bend

Tilt your head away from surgical shoulder – hold where you feel a comfortable stretch.

Repeat 3 times, Hold 30 seconds, Complete 1 set, Perform 2 times per day

Cervical Rotation

Turn your head away from surgical shoulder – hold where you feel a comfortable stretch

Repeat 3 times, Hold 30 seconds, Complete 1 set, Perform 2 times per day

Posture Correction

Sit tall, lift your sternum. Correct head position with a chin tuck, and gently retract your scapula's.

Repeat 3 times, Hold 30 seconds, Complete 1 set, Perform 2 times per day.

***Maintain wrist mobility by moving wrist around and squeeze the ball provided in the brace throughout the day**.

ARTHROSCOPIC BANKART REPAIR

Phase II (Mobility): *2-6 weeks*

Requirements to progress to Phase II:

1. Follow-up with Dr. Wong at 2 weeks
2. Appropriate healing from surgery
3. ROM guidelines met but not exceeded
4. Pain control within allowed ROM

Short Term Goals of Phase II:

- ✓ Education: posture, joint protection, positioning, hygiene, restrictions, ADLs
- ✓ Immobilization with sling (neutral pillow/wedge) to protect surgical site
- ✓ Minimize pain and inflammatory response
- ✓ Maintain/restore ROM of uninvolved joints (neck, thorax, elbow, wrist/hand)
- ✓ Achieve recommended ROM through gentle and pain-free ROM activities
- ✓ Normalize scapular position and mobility (dissociation from GHJ)

Restrictions/Precautions for Phase II:

- x No AROM of shoulder
- x ER to neutral only (PROM) until 12 weeks
- x Remain in sling (include sleeping). Remove only for showering and exercises. Patient can be out of sling for 30 minutes 3-4 times daily provided the shoulder is protected/at rest.
- x Do not stress the anterior GH capsule (i.e., doorway stretch, pec flies, push-ups, etc.)
- x No shoulder strengthening can be initiated until 12 weeks AND full ROM is achieved. If full shoulder ROM has not been achieved at 6 weeks, then continue with PROM work instead of strengthening.
- x Avoid hyper-extension *(esp. hand behind back)*
- x No direct mobilizations/manipulations/traction to GHJ
- x No lifting/pushing/pulling objects with operative shoulder
- x Avoid Active Release Techniques

Management Recommendations for Phase II:

1. **Manual Therapy (2-3x/week)**
    - **a.** Passive ROM (passive physiological ROM) within end of a joint's available ROM
    - **b.** Soft tissue massage to shoulder complex (as needed, 4 weeks post surgery)
    - **c.** Cervical, thoracic and rib 1 mobilization may be indicated to gain full shoulder ROM

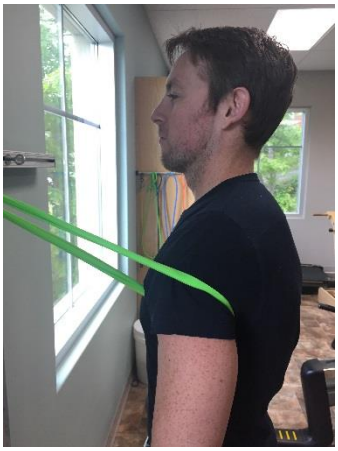
2. **Mobility - PROM** *(0-4 weeks)* and **AAROM** *(begin at 4 weeks IF 90% full PROM)*

3. **Exercise (see attached)**
    - **a.** PROM- cradle rocks
    - **b.** AAROM (week 4) – pulleys
        - **i.** Can progress to wall walking or a stick/cane for AAROM if appropriate timeline and follow ROM restrictions. Ensure patient does not push beyond R2
    - **c.** Neck, thorax, elbow, wrist/hand*:* general ROM (as needed) eg: thoracic rotation
    - **d.** Scapular setting to restore optimal position (counteract anterior tilt, depression and downward rotation)
        - **i.** Unilateral scapular/depression/protraction/retraction (commence in sling); progress to scapular clock exercises (as able)
    - **e.** Humeral head alignment/setting
    - **f.** Proprioceptive awareness

4. **Pool Therapy-**
    - **a.** PROM and AAROM in the pool is an excellent way to restore shoulder mobility.

5. **Massage Therapy (4 weeks post surgery)**
    - **a.** Rotator cuff and surround musculature; periscapular musculature
    - **b.** Scar massage
6. **Modalities** *(if no contraindications present)*
    - a. Pain management (e.g., Ice, heat, TENS, IFC, US, acupuncture)

EXERCISE PROGRAM: BANKART REPAIR: <u>2-6 WEEKS</u>




Humeral Head Setting

Standing in good posture with TheraBand (for feedback reasons only!) wrapped around shoulder and fixed in front of you. Gently slide your shoulder back. Do not move the elbow. Visualize moving the ball of your shoulder to the middle of the socket.

30 reps, 3 sets, 3 second hold

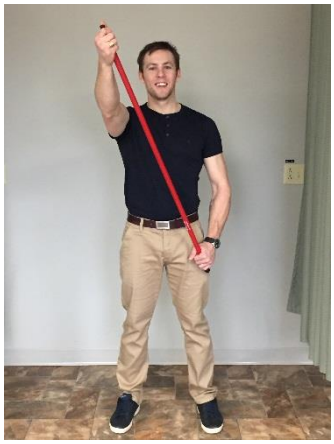

Shoulder Pulleys (flexion and abduction)

(Week 4) *IF PROM FULL

Sitting comfortably in ideal posture (shoulder blade down and in, looking straight ahead).
Step 1: Using non-surgical arm pull down and pulley to have surgical arm raise out in front of you.
Step 2: With surgical arm to the side, pull down on pulley with non-surgical arm to have surgical arm raise to the side.

5 minutes each direction, 3x/day

High achievers (90% restoration of PROM, full AAROM with pulleys, minimal pain with movement, greater than week 4):

AAROM STICK FLEX/ABD
****WEEK 4 IF PROM FULL***

Standing in ideal posture, Step 1: using non-surgical arm to assist raise surgical arm in front of you. Step 2: Using non-surgical arm to assist raise surgical arm to the side. With both steps be sure your shoulder blade does not rise until near the end of movement.

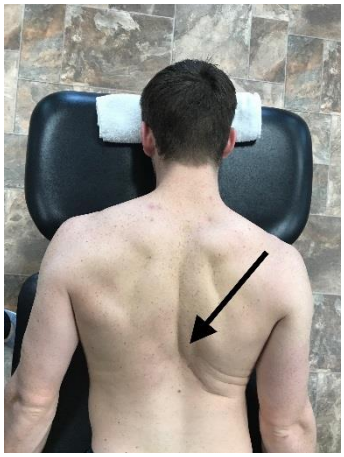
15 Repetitions, 3 sets, 3 second hold

*If unable to control shoulder blade trial this exercise laying on your back.


SCAPULAR STABILIZATION WITH AROM

Maintaining ideal posture and shoulder blade position slide a towel along the wall raising the arm in front of you. Repeat with raising the arm to the side. Be sure not to arch the spine.

15 Repetitions, 3 sets, 3 second hold



PRONE SCAPULAR RETRACTIONS

Lay on your stomach with a towel roll under your forehead. Tuck chin gently towards spine to ensure ideal neutral posture. Slide your surgical shoulder blade down and in. Hold this position. When able perform this exercise with both shoulder blades together.

15 Repetitions, 3 sets, 3 second hold

ARTHROSCOPIC BANKART REPAIR

Phase III (Neuromuscular Retraining): *6-12 weeks*

Requirements to Progress to Phase III:

1. Follow-up with Dr. Wong and rehab team at 6 weeks
2. Compliant with recommendations/restrictions to ensure appropriate healing from surgery
3. ROM guidelines met but not exceeded

Short Term Goals of Phase III:

- ✓ Education: restrictions
- ✓ Eliminate pain and inflammatory responses
- ✓ Restore full active shoulder mobility within correct movement patterns
- ✓ Restore appropriate capsular extensibility
- ✓ Improve scapular awareness and stability
- ✓ Improve neuromuscular control and endurance of rotator cuff musculature
- ✓ Increase endurance of cervical spine stabilizing musculature (if applicable)

Restrictions/Precautions for Phase III:

- x Brace removed at 6 weeks.
- x Shoulder ER to neutral only (until 12 weeks)
- x Avoid over-stressing the anterior GH capsule (i.e., doorway stretch, pec flies, push-ups, etc.)
- x Avoid exercises that promote hyper-extension, anterior translation and shoulder impingement
- x Strengthening can be initiated provided shoulder ROM is full
- x No joint mobilizations/manipulations/traction to GHJ

Special considerations:

Management Recommendations for Phase III:

1. **Manual Therapy**
   - Restore full mobility (Passive Physiological ROM, Muscle Energy, capsular stretching_
   - Maintain tissue health (continued massage therapy as required)
   - Gentle graded mobilizations can occur at 8 weeks

2. **Mobility – AROM**
   - Perform AROM in all movement planes of the shoulder with good scapular control and avoidance of compensatory movements
   - May begin in scapular plane to maximize humeral head/glenoid congruency

3. **Muscle Activation/Endurance**
   - *Scapular stabilization*
     i. Restore and challenge optimal mechanics and positioning of scapula
     ii. Include OKC & CKC exercises. Consider requirements for ADLs, sport, and work
   - *Rotator Cuff:*
     i. Progress from dynamic relocation training for head of humerus positioning to recruitment
     ii. As motor recruitment improve, begin to focus on endurance (8 weeks)
   - May begin strength/hypertrophy > 10 weeks as long as exercise is pain-free

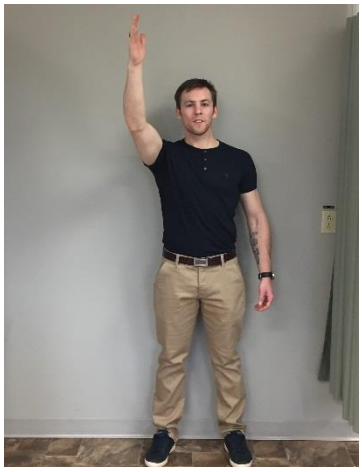
4. **Pool therapy**
   - Patients can progress well with ROM and strengthening using water to facilitate mobility and to add resistance. Swimming can start at week 12.

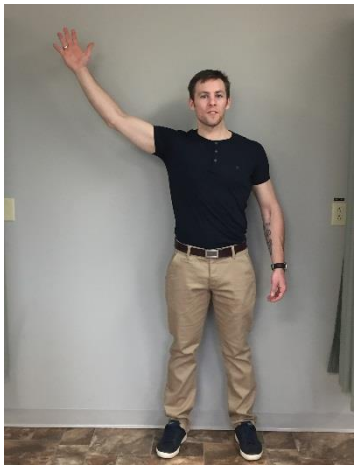
5. **Proprioceptive Awareness** – OKC and CKC intermediate exercises
   - *May include gentle perturbations to GHJ*

6. **Modalities** *(if no contraindications present)*
   - Pain management (as needed)
   - Neuromuscular Electrical Stimulation (as needed)

7. **Massage Therapy**
   - can be useful to help mobilize neck, thoracic spine and shoulders. Ensure massage therapist aware of postoperative restrictions (ie, NO ER, NO Hand Behind Back, NO shoulder traction)

EXERCISE PROGRAM: BANKART REPAIR: <u>6-12 WEEKS</u>





AROM FLEXION AND ABDUCTION

Standing in good posture slowly raise your arm straight in front of you. Do not allow your shoulder blade to raise towards your ear. Slowly return to starting position.

15 Repetitions, 3 sets, 3 second hold

Standing in good posture, slowly raise your arm to the side not allowing shoulder blade to raise. Slowly return.

15 Repetitions, 3 sets, 3 second hold

*This is best to be done in a door frame to maintain shoulder blade position

SCAPULAR STABILITY (WITH ROLLER)

(Serratus Anterior engagement)

Standing with forearms against a roller on wall, elbows under wrist, lumbar spine neutral. Push slightly into roller as you slide up the wall. Do not let your neck muscles take over. You can add a resistance band around the forearms to make this exercise more challenging.

15 Repetitions, 3 sets, 3 second hold

HUMERAL HEAD POSITIONING WITH RC ISOMETRIC CONTRACTION

Standing in good posture facing wall, place small soft ball on wall maintain position with fist. Keeping shoulder centered gently push fist into ball (just feel activation). Relax

15 Repetitions, 3 sets, 3 second hold

Standing in good posture side onto wall, place small soft ball on wall maintain position with elbow. Keeping shoulder centered gently push elbow into ball (just feel activation). Relax

ARTHROSCOPIC BANKART REPAIR

Phase IV (Strength and Function): *12^{+} weeks*

Requirements to progress to Phase IV:

1. Follow-up with Dr. Wong
2. Compliant with recommendations/restrictions to ensure appropriate healing from surgery
3. Full active shoulder mobility within correct movement patterns
4. Improved neuromuscular control and stabilization of scapula
5. Improved neuromuscular control and recruitment of rotator cuff musculature

Short Term Goals of Phase IV:

- ✓ Increase strength and endurance of rotator cuff musculature (OKC & CKC)
- ✓ Improve functional strength of shoulder girdle
- ✓ Introduce return to work retraining – complete return to work assessment by occupational therapist
- ✓ Introduce sport-specific retraining (approx. 16^{+} weeks post-op)

Restrictions/Precautions for Phase IV:

- x Slowly increase ER mobility
- x Avoid terminal stretching to restore full ABER mobility
  - *Patient must use <u>self</u> control and strengthening/endurance exercises to restore ABER*
- x No manipulations to GHJ
- x Light-to-moderate lifting/pushing/pulling objects with operative shoulder

Management Recommendations for Phase IV:

1. **Manual Therapy**
   a. Restore external rotation PROM and AROM slowly
   b. Mobilizations may be required at the upper thoracic spine, 1st rib, etc. if proper patterns are not achieved.

2. **Muscle Endurance and Strength**
   a. Scapular stabilization/peri scapular strengthening
   b. Rotator Cuff: Progress from one dimensional movements to multi-dimensional (eg. ABER/IR, PNF patterns, etc)

3. **Pool therapy**
   a. Pool therapy for sport specific retraining, higher function

4. **Modalities (if no contraindications present)**
   a. Pain management (as needed)
   b. Neuromuscular Electrical Stimulation (as needed)

7. **Massage Therapy-** can be useful to help mobilize neck, thoracic spine and shoulders.

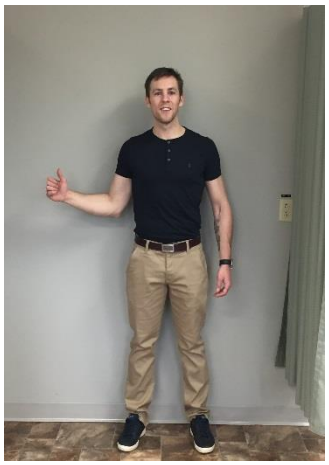
Return to sport criteria (typically 6-12 months post surgery):

- Full PROPER active range of motion bilaterally
- 90% return of strength (using handheld dynamometer, compared to opposite limb)
- Completed sport specific re-training (pool therapy is recommended for sport specific retraining)
- Cleared by orthopedic surgeon and rehab team

Patient Discharge Criteria from Physiotherapy

- Full PROPER active range of motion bilaterally
- 90% return of strength (using handheld dynamometer, compared to opposite limb) and maintaining
- **Typically patients should be monitored until 12 months post op to ensure maintenance of strength and function.**

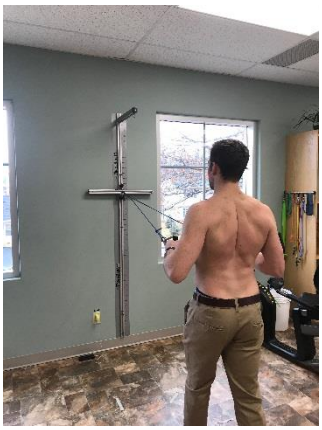
EXERCISE PROGRAM: BANKART REPAIR: <u>12+ WEEKS</u>

AAROM → AROM SHOULDER EXTERNAL ROTATION

Standing in good posture, hold a stick in both hands (surgical hand should have palm facing up). With your non-surgical arm gently push your surgical arm away from you without allowing the elbow to come off your side. Progress to being able to do this movement without the stick.

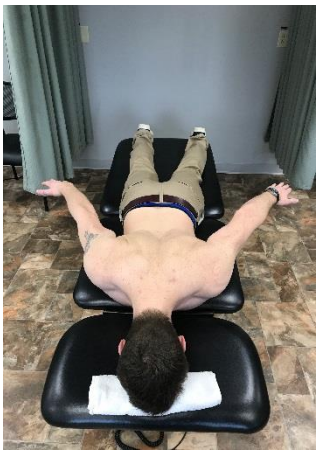
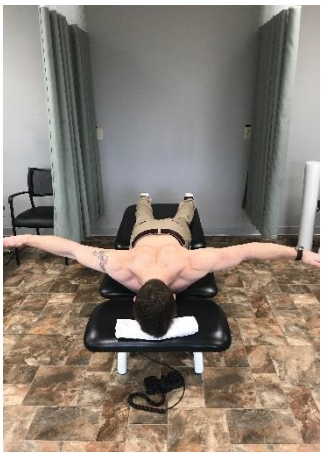
15 Repetitions, 3 sets, 3 second hold



RESISTED SCAPURAL RETRACTION

Standing in good posture, (with resistance band anchored in front of you at shoulder level). Pull back on the resistance band by squeezing your shoulder blades down and in. Do not allow your shoulders/neck to squeeze towards your ears.

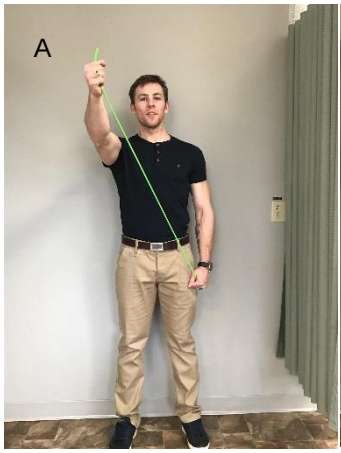
15 Repetitions, 3 sets, 3 second hold

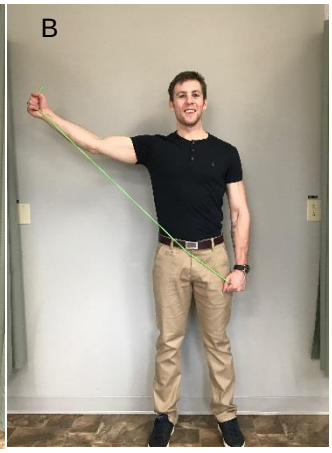



PRONE SCAPURAL RETRACTIONS

Laying on your stomach with neck/head in good posture, squeeze both shoulders blades down and in (sliding shoulders away from ears). Hold. You should feel this at the bottom of our shoulder blades, not in your neck! Progress to lifting arms of the table. Over time, progress to have arms out to the side, and the above your head

15 Repetitions, 3 sets, 3 second hold





RESISTED SHOULDER FLEXION, ABDUCTION, AND INTERNAL ROTATION

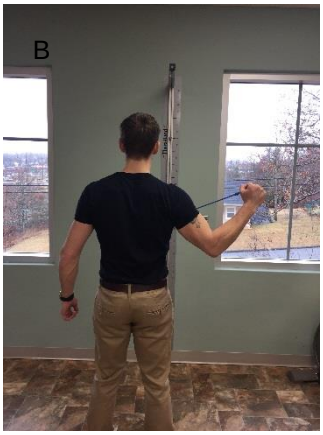
A. Standing in good posture, holding TheraBand in one hand (or under your foot), pull the TheraBand straight out in front of you (flexion), hold just above shoulder level then return to starting position.
Repeat 15 repetitions before moving to next motion.

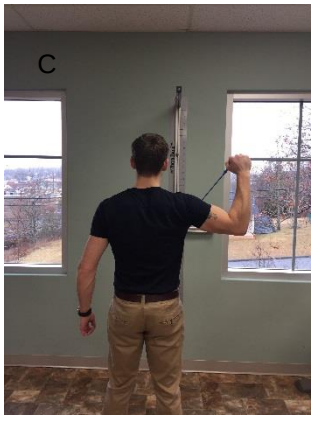
B. Holding TheraBand in one hand (or under your foot), pull the TheraBand away from you (1/2 of snow angel) (abduction), hold just above shoulder level then return to starting position.
Repeat 15 repetitions before moving to next motion.

C. Standing in good posture, anchor TheraBand on the same side as your surgical shoulder pull the TheraBand in front of you (internal rotation) without allowing the elbow to slide onto your stomach.
Repeat 15 repetitions before moving to next motion.

**Complete 3 sets of the above exercises*

***When full Active external rotation and ease off above resisted exercises move to this progression*





A.Standing in good posture, anchor TheraBand on the opposite side of your surgical shoulder pull the TheraBand away from of you (external rotation) without allowing the elbow to slide away from your side.
Repeat 15 repetitions, 3 sets

B. (Progression from A.) Standing in good posture, anchor TheraBand in front of you. Have elbow approximately 45 deg off of side, pull the TheraBand away from of you (external rotation) without allowing the elbow to move up or down.
Repeat 15 repetitions, 3 sets

C. (Progression from B). Standing in good posture, anchor TheraBand in front of you. Have elbow approximately 90 deg off of side, pull the TheraBand away from of you (external rotation) without allowing the elbow to move up or down

POST OP REASSESSMENT FORMS

To be completed by Dr Wong's Rehab Team

2 weeks, 6 weeks, 12 weeks, 6 months, 1 year, 2 years