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

- 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:

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

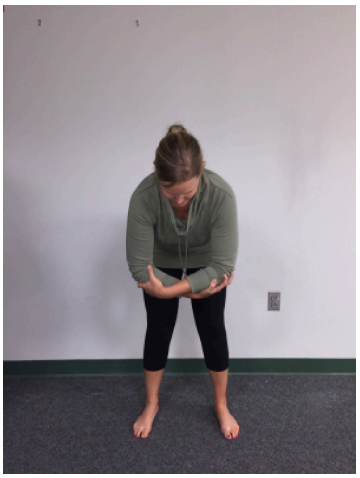
Physiotherapy management for Phase 0-2 weeks:

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



Cradle Pendulums

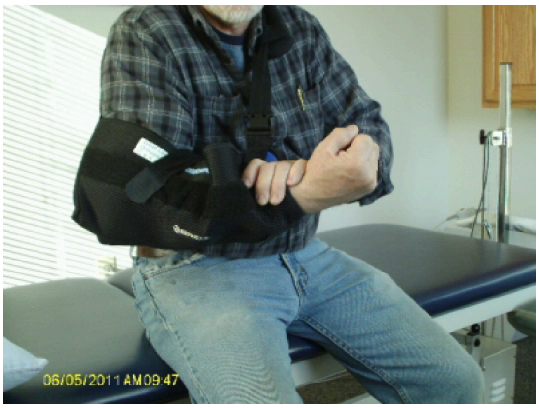
Support your affected arm by holding your bent elbow with the other hand. Gently lean forward at the waist and gently rock the affected arm side to side as if you were rocking a baby. Keeping your arm supported by the opposite side the whole time. You can also perform small circles or rock forward and 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 0-2 WEEKS AFTER SURGERY (cont'd)

Cervical Side Bend

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

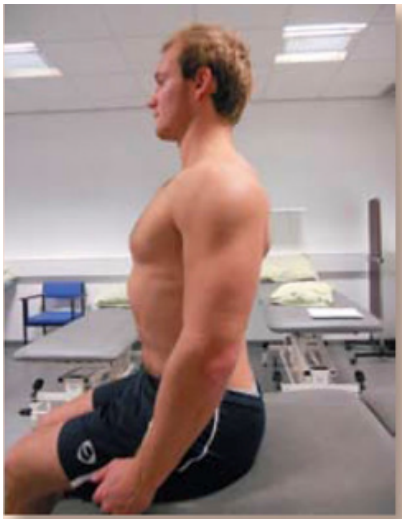
Repeat 3 times, Hold 30 seconds, Complete 1 set, Perform 2 times per day

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 brace (including 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)**
2. Passive ROM (passive physiological ROM) within end of a joint's available ROM
3. Soft tissue massage to shoulder complex (as needed, 4 weeks post surgery)
4. 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 (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)
E. Unilateral scapular/depression/protraction/retraction (commence in sling); progress to scapular clock exercises (as able)
F. Humeral head alignment/setting
G. Proprioceptive awareness

4. Pool Therapy-

A. PROM and AAROM in the pool is an excellent way to restore shoulder mobility.

Massage Therapy (4 weeks post surgery)

A. Rotator cuff and surround musculature; periscapular musculature
B. Scar massage

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

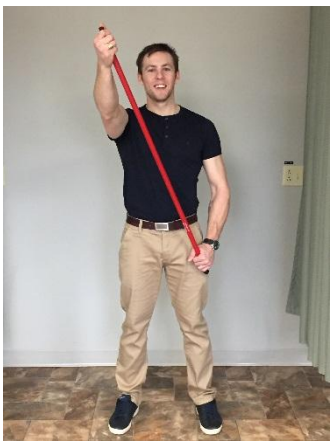
Sitting comfortably in ideal posture (shoulder blade down and in, looking straight ahead).

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.

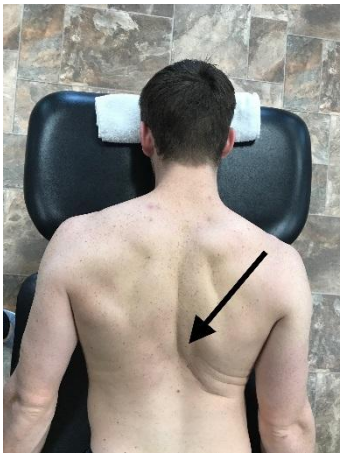
15 Repetitions, 3 sets, 3 second hold

*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 improves, begin to focus on endurance (8 weeks)
   - May begin strength/hypertrophy > 10 weeks as long as exercise is pain-free

4. **Pool therapy**

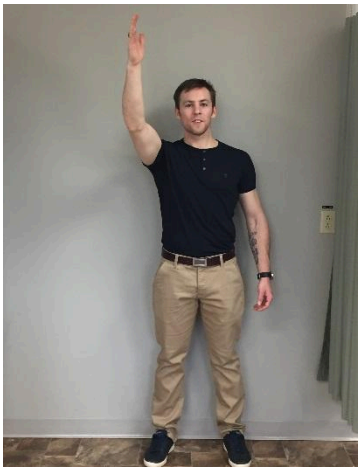
a. - Patients can progress well with ROM and strengthening using water to facilitate mobility and to add resistance. Swimming can start at week 12.

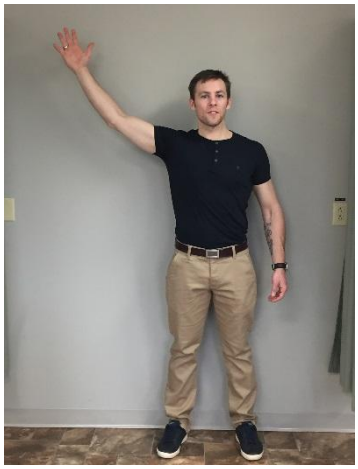
5. **Proprioceptive Awareness** – OKC and CKC intermediate exercises
   - *May include gentle perturbations to GHJ*

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

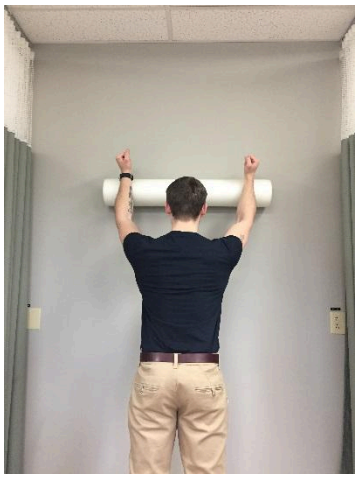
Standing in good posture slowly raise your arm straight in front of you. Do not allow your shoulder blade to raise towards your ear. Slowly return to starting position.

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

15 Repetitions 3 sets 3 second hold

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

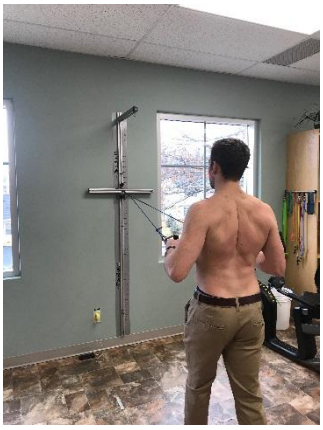
- Full PROPER active range of motion bilaterally
- 90% return of strength (using handheld dynamometer, compared to opposite limb) and maintaining
- **Typically patients should be monitored until 12 months post op to ensure maintenance of strength and function.**

EXERCISE PROGRAM: BANKART REPAIR: 12+ WEEKS

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

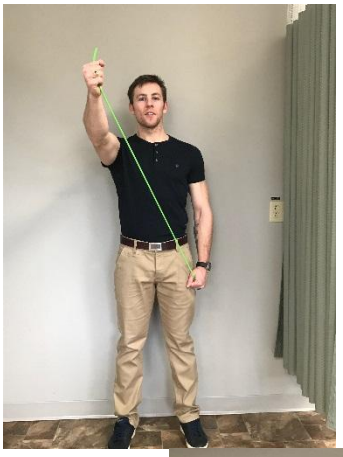
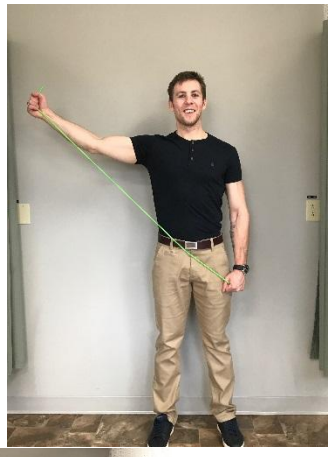
Standing in good posture, (with resistance band anchored in front of you at shoulder level). Pull back on the resistance band by squeezing your shoulder blades down and in. Do not allow your shoulders/neck to squeeze towards your ears.

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

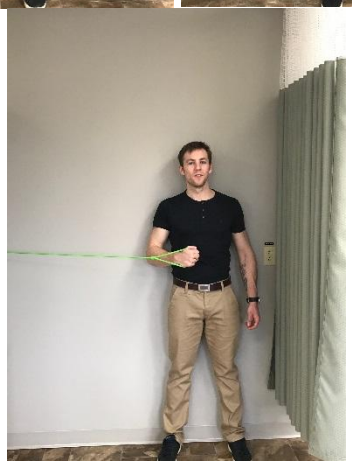
15 Repetitions, 3 sets, 3 second hold

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.

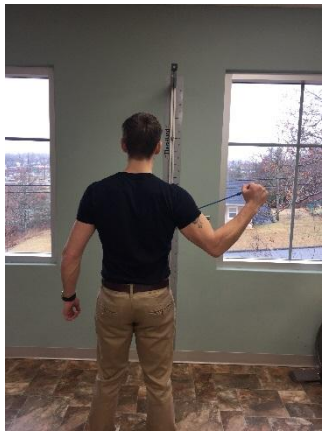
B. Holding TheraBand in one hand (or under your foot), pull the TheraBand away from you (1/2 of snow angel) (abduction), hold just above shoulder level then return to starting position.
Repeat 15 repetitions before moving to next motion.



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.

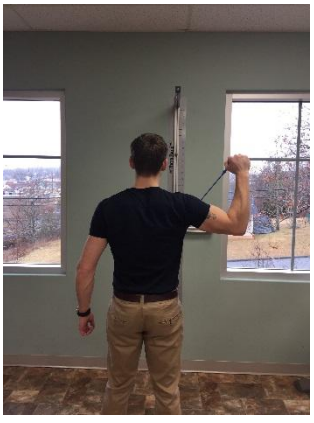
**Complete 3 sets of the above exercises*

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

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