



Banff Sport Medicine



Banff Sport Medicine  
FOUNDATION

Better Stronger Motion

**BANFF SPORT MEDICINE**

**Orthopaedic Surgeons**

207-303 Lynx Street | Box 1300 Banff AB T1L 1B3  
P: 403 760 2897 | F: 403 760 8234 | banffsportmed.ca

**Dr. Mark Heard**

**Dr. Greg Buchko**

**Dr. Laurie Hiemstra**

**Dr. Michaela Kopka**

# Post Operative Rehabilitation Program

for  
Anterior Shoulder Stabilization

December 2019

This protocol is designed to assist you with your rehabilitation after surgery and should be followed under the direction of a physiotherapist.



**Covenant Health**  
Banff Mineral Springs

# PHASE 1: Early Healing and Range of Motion (ROM)

## 0 to 2 Weeks

### GOALS

1. **Control pain**
2. **Reduce inflammation and swelling**
3. **Maintain mobility of your elbow, hand, and wrist**

#### **IMPORTANT!! This is primarily a Healing Phase**

Shoulder sling/immobilizer should be worn AT ALL TIMES and removed only for exercises. You may also remove the sling carefully for showering and changing clothes.

AVOID ANY ACTIVE (UNASSISTED) MOTION OF THE SHOULDER.

#### **COLD THERAPY**

A Cold Therapy Unit or an ice pack should be applied immediately after surgery and used for at least 20 minutes every other hour while you are awake. In order to avoid skin irritation, place a towel between the unit and your skin, and do not leave it running continuously.

#### **MEDICATION**

Follow instructions provided by your physician.

#### **SLEEPING RECOMMENDATIONS**

Apart from doing your exercises, your operative shoulder should be in the sling AT ALL TIMES – including at night **or as instructed by your surgeon**. Initially you may sleep on your non-operative shoulder, on your back, or in a semi-upright position with pillows under your back. Place a pillow between your forearm and your body to help support your operative shoulder.

#### **WOUND CARE**

For arthroscopic procedures, remove dressing 2 days after surgery. For open procedures, remove dressing 4 days after surgery. Please do not shower until 2 days after surgery to reduce the risk of infection. Remove the skin tapes (steri-strips) 2 weeks after surgery or when they start falling off on their own. You may gently wash the wound area with soap and water. Be sure to keep your armpit clean!

### EXERCISES

#### **1. Hand/wrist/elbow pumps**

- These exercises can be performed with your arm in a sling or resting comfortably at your side.
- The hand should be actively opened and closed 10-20 times every hour. You can squeeze a stress ball if available.
- You should also move your wrist in circles and an up/down motion 10-20 times every hour.
- You should straighten and bend your elbow every hour to avoid stiffness.

## 2. Neck Mobility

- You should also stretch and rotate your neck side to side, up and down, and in a circle motion 10 times every hour.

## 3. Range of Motion

- **Pendulum** - Remove your arm gently from the sling. Lean forward into a chair or counter with your non-operated shoulder. Perform 30 circles clockwise and 30 anti-clockwise. You should not be using your shoulder muscles to move your arm. Use your body's momentum and gravity to assist you with the movement.
- **Standing passive shoulder elevation to 120 degrees** - Bring both arms onto a table or counter and bend down through your hips until a comfortable stretch is felt in the shoulder **without pain**. Increase the amount of motion gradually, but **do not exceed 120 degrees**. Repeat 5 times.
- **Supine passive shoulder elevation with clasped hands** - Lying on your back, clasp your hands and use your non-operative arm to slowly lift up the operative arm until a comfortable stretch is felt in the shoulder, **without pain**. Increase the amount of motion gradually, but do not exceed 120 degrees. Repeat 5 times.



## 4. Scapular Stability

- **Shoulder shrugs** - Slowly bring both shoulders up towards your ears and then down. Perform 2 sets of 10 repetitions with a 30 second break between sets.
- **Shoulder retraction** - Retract your shoulders by squeezing your shoulder blades together. Hold each contraction for 5 seconds. Perform 2 sets of 10 repetitions with a 30 second break between sets.



**\*\* Perform all exercises at least 3 times per day. \*\***

## CARDIOVASCULAR EXERCISES

- Exercises should be limited to those that allow the arm to be maintained in the shoulder immobilizer/sling.
- Safe options for cardiovascular exercise include: stationary cycling, elliptical (non-operative arm only), walking.

## REQUIREMENTS FOR PROGRESSION TO PHASE 2

- ✓ **Resolving post-operative inflammation and swelling**
- ✓ **Absence of pain with range of motion exercises**

# PHASE 2: Early Motion

## 2 to 6 Weeks

### GOALS

1. Passive/assisted range of motion to 120 degrees FORWARD ELEVATION and 20 degrees EXTERNAL ROTATION.
2. Good scapulothoracic control
3. Rotator cuff muscle engagement

### COLD THERAPY

Continue to monitor and control swelling by using ice or your cold therapy unit. This is particularly important at the end of the day and after exercise!

### EXERCISES

#### 1. Range of Motion

- **Standing passive shoulder elevation to 120 degrees** - Bring both arms onto a table or counter and bend down through your hips until a comfortable stretch is felt in the shoulder **without pain**. Increase the amount of motion gradually, but **do not exceed 120 degrees**. Repeat 5 times.
- **Supine passive shoulder elevation with clasped hands** - Lying on your back, clasp your hands and use your non-operative arm to slowly lift up the operative arm until a comfortable stretch is felt in the shoulder, **without pain**. Increase the amount of motion gradually, but do not exceed 120 degrees. Repeat 5 times.
- **Passive external rotation** - Lying on your back, hold a pole with your arm by your side and your elbow bent at 90 degrees. Keeping your elbow against your body, with your uninvolved hand, gently push the operated arm outwards into external rotation. Do not use the muscles of your operative shoulder. Stop when you feel a stretch or pain, or have rotated your arm to 20 degrees. Hold for 5 seconds and repeat 10 times.
- **Pulleys** - Using a rope/band over a pulley, rod, or door, gently pull your operative arm up with the use of your non-operative shoulder. This should be a **passive range of motion exercise**. Perform 2 sets of 5-10 repetitions with a 30 second break between sets.



**5. Scapular Stability - Continue with the scapular exercises from Phase 1 and add the following:**

- **Shoulder shrugs with resistance** - Hold onto an elastic band wrapped under your feet or grasp lightweight (1-2lbs) dumbbells. Slowly bring both shoulders up towards your ears then slowly lower down. Perform 2 sets of 10 repetitions with a 30 second break between sets.



- **STRAIGHT ARM push up (scapular spread) on wall** - This is NOT a regular push up exercise! If you have enough range of motion, place your hands on a wall at shoulder level, tucking your chin slightly. Widen your rib cage as you protract the scapula (spreading your shoulder blades apart). Your body should move slightly away from the wall. Hold for 2 seconds, and then retract the scapula (squeeze your shoulder blades together), keeping your elbows straight the whole time. Move slowly and maintain control throughout the entire range of movement. Perform 2 sets of 5-10 repetitions with a 30 second break between sets.



**6. Proprioception**

- **Alphabet with ball on table** - Using a small ball on a table or counter, press the ball gently while drawing the letters of the alphabet by actively moving your arm. Draw the alphabet two times with a 30 seconds break between sets.



**7. Strengthening**

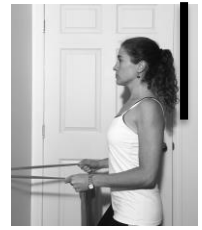
- **Isometrics** - With your elbow bent at 90 degrees and always in contact with your rib cage, push into a wall or doorframe for resistance. **There should be NO arm movement or pain with these exercises.** Maintain good posture and scapular position throughout these exercises. Hold each contraction for 5 seconds. Repeat 10 times.



- **Bicep/triceps strengthening with tubing** - Your physiotherapist will instruct you regarding the exact exercises and progressions. Perform 2 sets of 10 repetitions of each exercise, or as instructed by your physiotherapist.
- **Upper body ergometer** - This exercise should only be performed with guidance from your physiotherapist. Perform slow and controlled rotations using primarily your non-operative arm. The axis of rotation must remain below shoulder height.



- **Standing row** - Attach an elastic band to a doorknob or another stable object. Stand holding the band with your elbow bent to 90 degrees at your side. Keeping your arms close to your side, slowly pull your elbows back, squeezing your shoulder blades together. **Take care not to extend your arms past midline!** Slowly return to the starting position. Maintain good posture and scapular position throughout the exercises. Perform 2 sets of 10 repetitions with a 30 second break between sets.



## CARDIOVASCULAR EXERCISES

- Exercises should be limited to those that allow the arm to be maintained in the shoulder immobilizer/sling.
- Safe options for cardiovascular exercise include: stationary cycling, elliptical (non-operative arm only), walking, water walking (shallow end only)

***\*\* Perform the range of motion and isometric exercises 2 times per day,  
and the rest of the exercises once per day.\*\****

## REQUIREMENTS FOR PROGRESSION TO PHASE 3

- ✓ **Passive forward elevation to 120 degrees and external rotation to 20 degrees**
- ✓ **Maintenance of good posture and scapular control during strengthening exercises**

# PHASE 3: Strengthening

## 6 to 12 Weeks

### GOALS

1. Active range of motion, including INTERNAL ROTATION
2. Excellent scapulothoracic control
3. Progressive rotator cuff strengthening

*If approved by your surgeon, your sling can be discontinued at this stage.*

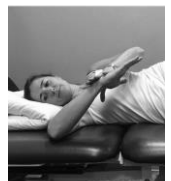
### COLD THERAPY

Continue to monitor and control swelling by using ice or your cold therapy unit. This is particularly important at the end of the day and after exercise!

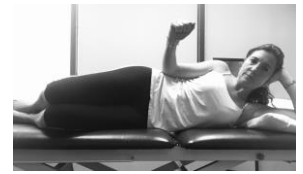
### EXERCISES

#### 1. Range of Motion: Continue with the same exercises from Phase 2 and add the following:

- **Passive external rotation** - Lying on your back, hold a pole with your arm by your side and your elbow bent at 90 degrees. Keep your elbow against your body and use your uninvolved hand to gently push the operative arm outwards into external rotation then back to neutral. Do not use the muscles of your operative shoulder. Hold each repetition for 10 seconds and repeat 10 times.
- **Passive internal rotation (towel behind back)** - Holding a towel overhead with your non-operative arm, pull your operative arm up until a comfortable stretch is felt. Hold for 10 seconds. Perform 5-10 repetitions.
- **Passive internal rotation at 90 degrees of abduction** - Lying half way between your back and your operative side, bring your operative arm to 90 degrees of abduction. Gently lower your operative arm with your opposite one until a stretch is felt. Hold for 10 seconds and return to a neutral position. Perform 5-10 times. Do not push the shoulder if you experience pain.
- **Active flexion** - Holding onto a pole with both hands while lying on your back, gently lift your arms until a comfortable stretch is felt in the shoulder. Hold for 5 seconds. Continue to gradually increase the degree of motion to full elevation. Perform 2 sets of 10 repetitions with a 30 second break between sets.

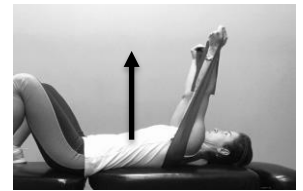


- **Active external rotation** - Lying on your non-operative side with your elbow against your body, retract your shoulder and gently start bringing your arm into external rotation. Perform 2 sets of 10 repetitions with a 30 second break between sets.



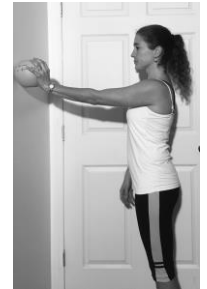
## 2. Scapular Stability

- **Resisted scapular spread (protraction) supine** - Lying on your back, wrap a rubber band underneath your shoulder blades, and hold onto it with both hands. Lift both arms up to a 90 degree position. Rotate your palms up as far as possible. Now lift your shoulder blades off the bed against the resistance of the band. Hold for 5 seconds then slowly lower down, resting the shoulder blades on the bed. Perform 2 sets of 10 repetitions. You can use a lightweight dumbbell instead of the rubber band.



## 3. Proprioception

- **Alphabet with ball, against the wall** – Place a small ball against a wall at around shoulder level and draw the letters of the alphabet by actively moving your arm. Be sure to maintain good posture and keep your scapula retracted and stable throughout. Perform the alphabet 2 times with a 30 second break between sets.

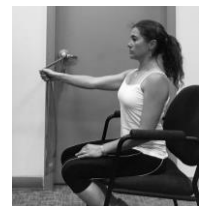


- **Plank on knees** - Plant your hands on the floor slightly wider than your shoulders and rest your knees on a rolled up mat or towel. Your head should be in line with your back. Shift your weight to the right shoulder and then to the left. Perform this side-to-side motion 10 times. Perform 2 sets with a 30 second break between sets.



## 4. Strengthening

- **Upper body ergometer** - As instructed by your physiotherapist. Using both arms, perform slow and controlled rotations below shoulder height.
- **Resisted exercises with tubing** - If you experience minimal pain with the preceding exercises, you may begin elastic tubing exercises. These should be performed below shoulder height. Your physiotherapist will instruct you regarding the exact exercises and progressions. Perform 2 sets of 10 repetitions of each exercise, 2 times a day or as instructed by your physiotherapist.



**Flexion**



**Extension to Middle**



**Adduction**



**Abduction**



**Internal Rotation**



**External Rotation**





- **Wall push up** - Use both arms for support and ensure that your scapula remains in a neutral position. Perform 2 sets of 10 repetitions, 2 times a day or as instructed by your physiotherapist. Posterior stabilization should not do bench press or push-ups until 3 months post-operative.



- **Ball toss** - Initially toss ball with two hands (underhand), and then progress overhand, and then eventually one hand



- **Body Blade Exercises** - Start with flexion and extension movements, and then progress to abduction and adduction. Once you feel comfortable with those movements, you can progress to spelling out the alphabet and doing circular movements.
- **Progressive isotonic exercise with weight machines** - seated row machine, preacher curl or bicep curl machine, tricep extension machine, cable pulling machine for shoulder rotations.



## CARDIOVASCULAR EXERCISES

- Avoid jumping, as it may stretch the repaired tissue. May progress to running toward the end of this phase
- Other safe options for cardiovascular exercise include: cycling (smooth and even surfaces only; no mountain biking), elliptical (can use both arms), walking, water walking (shallow end only), legs-only swimming (flutter kick), deep water running with aqua belt

*If you are experiencing discomfort modify your activities as necessary.*

**\*\* Perform the range of motion exercises still 1-2 times everyday and the rest of the exercises once per day, 4-5 days per week, including cardio and resistance training, to improve your strength.**

**You should perform all of the exercises on both shoulders\*\***

## REQUIREMENTS FOR PROGRESSION TO PHASE 4

- ✓ Active range of motion to 160 degrees forward elevation and external rotation to 45 degrees
- ✓ Excellent scapulothoracic control with all exercises
- ✓ Absence of pain with strengthening exercises

# PHASE 4: Strengthening and Return to Sport

## 3 to 6 Months

### GOALS

1. Full active range of motion in all planes
2. Full strength
3. No pain with exercises

### COLD THERAPY

Continue to monitor and control swelling by using ice or your cold therapy unit. This is particularly important at the end of the day and after exercise!

### EXERCISES

#### 1. Range of Motion: Continue with the same exercises from Phase 3 and add the following:

- **Passive external rotation at 90 degrees of abduction** - Lying on your back, bring your operative arm to 90 degrees of abduction. Hold a pole with your opposite arm and gently push the operative arm down through the hand. Hold for 10 seconds then return to a neutral position. Perform 5-10 repetitions. Do not push the shoulder if you experience PAIN.



#### 2. Scapular Stability

- **1.47 Straight arm push up with hands together** - Place your hands on the floor close together and with a slight internal rotation. Rest your knees on a rolled up mat or towel. Your head should be in line with your back. Retract your shoulder blades (bringing them close together), then slowly protract the shoulder blades (bringing them apart). **Be sure to keep your elbows straight the whole time.** Perform 2 sets of 10 repetitions with a 30 second break between sets.

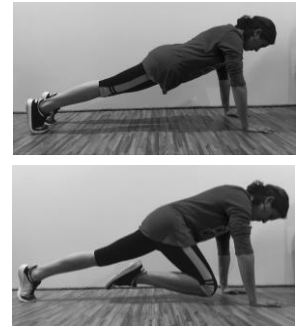


#### 3. Proprioception: Continue with the same exercises from Phase 3 and add the following:

- **Plank with knees on ball** - Plant your hands on the floor slightly wider than shoulder-width apart and rest your knees on an exercise ball. Your head should be in line with your back. Shift your weight to the right shoulder and then to the left. Perform this side to side motion 10 times. Perform 2 sets with a 30 second break between sets.



- **Mountain climber** - Assume a press up position with your hands directly under your chest and shoulder width apart. Keep your elbows straight. Your body should form a straight line from your shoulders to your ankles. Lift your right foot off the floor and slowly raise your knee as close to your chest as you can. Return to the starting position then repeat with your left leg. Start with one set of 10 repetitions. Increase the number of repetitions as your strength increases for up to 3 sets of 15 repetition.



#### 4. Strengthening

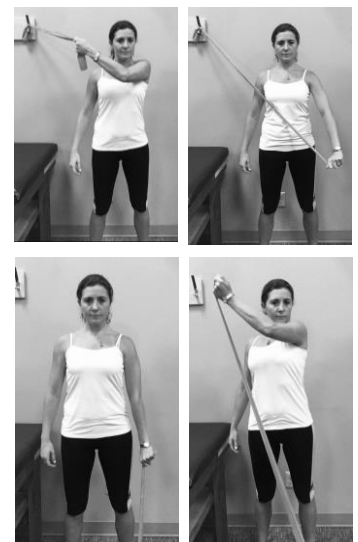
- **Resisted Exercises with tubing** - Continue with the previous exercises increasing the range of motion and resistance.
- **Resisted external rotation at 90 degrees abduction supported** - Lying on your back, wrap one end of an elastic tubing around your foot. Hold onto the other end with your operative shoulder at 90 degrees of abduction. Gently move your shoulder into external rotation then return to the initial position. Begin by performing 2-3 sets of 10 repetitions and increase as your strength improves.
- **Resisted internal rotation at 90 degrees abduction supported** - Lying on your back, wrap one end of an elastic tubing around a stable anchor (e.g. table leg). Hold onto the other end with your operative shoulder at 90 degrees of abduction and external rotation. Gently move your shoulder into internal rotation then return to the initial position. Begin by performing 2-3 sets of 10 repetitions and increase as your strength improves.



- **Scaption** - Standing tall and using either elastic tubing or dumbbells, lift your arms up slightly further forward then straight to the side. Stay within a comfortable range of motion. If you feel comfortable, you may go past shoulder level. Begin by performing 2-3 sets of 10 repetitions and increase as your strength improves.



- **PNF Diagonals** - Perform these exercises under the supervision of your physiotherapist.
  - **D1 Flexion:** Start in shoulder flexion, adduction, external rotation, forearm supination, and wrist flexion. The ending position is shoulder extension, abduction, internal rotation, forearm pronation, and wrist extension. Resistance comes from the top.
  - **D1 Extension:** Reverse of the D1 flexion pattern. Resistance comes from the bottom.



- **D2 Flexion:** Start in shoulder flexion, abduction, external rotation, forearm supination, and wrist extension. The ending position is shoulder extension, adduction, internal rotation, forearm pronation, and wrist flexion. Resistance comes from the top.
- **D2 Extension:** Reverse of the D2 flexion pattern. Resistance comes from the bottom.



- **Progressive isotonic exercise with dumbbells and weight machines** - Same exercises as Phase 3. You can add the chest press machine and lat pulldown. Be sure to focus on correct posture and scapular position. Stop or reduce the weight if you experience pain or notice your form deteriorating.
- **Ball toss with medicine ball** - Initially toss the ball with two hands (underhand), then progress to overhand, and eventually to a one-hand toss.
- **Body blade Exercises** - Progress to more challenging arm positions, like overhead, 90 degrees of abduction, and PNF diagonals.
- **High velocity strengthening** - Perform resisted exercises with tubing (Phase 3) in all planes of motion as quickly as you can while maintaining appropriate posture and scapular control. Stop when you fatigue and/or your form deteriorates.

## 5. Sport Specific Exercises

- Lay-ups
- Rebound repetitions against a wall
- Tossing a baseball
- Volleying with yourself or a partner, then progressing to overhead drills
- Using a racket overhead
- Bench dips
- High bands
- Floor push-ups

## CARDIOVASCULAR EXERCISES

- It is safe to progress to most controlled cardiovascular activities (ie. running, cycling, aerobics)
- Swimming should be avoided until at least 6 months post surgery.
- Avoid activities with a high risk of falling until 6 months post surgery.

## RETURN TO SPORT

- **4-6 Months:** Return to **non-contact** and sports with a **low risk of falling**. No swimming.
- **6 Months:** Return to **swimming, contact sports, and sports with a high risk of falling** (ie. snowboarding, downhill mountain biking, dirt biking, football, rugby, contact hockey).

**\*\*Perform all exercises once per day, 4-5 days per week. You should perform all of the exercises on both shoulders\*\***

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*Please contact our office for more information:*

**Banff Sport Medicine**

**PO Box 1300 Banff, Alberta, Canada T1L 1B3**

**Phone: 403-760-2897 Ext 6**

**Fax: 403-760-8234**

**[sarah@banffsportmed.ca](mailto:sarah@banffsportmed.ca)**

**[www.banffsportmed.ca](http://www.banffsportmed.ca)**