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Superior Capsular Reconstruction Post-Operative Protocol

This protocol should be used as a guide following shoulder surgery. A physiotherapist should be consulted throughout to teach and individually modify the exercises. This protocol serves as a prescription for physiotherapy.

The timelines for each phase are a general guideline and progression should be based on each individual's presentation. Criteria for progression are at the end of each phase and it may be beneficial to continue previous exercises.

It is recommended that physiotherapy sessions should be spaced at least 1-2 weeks apart to promote an active rehabilitation approach and ensure funding is available for physiotherapy in the strengthening phases. The progression for a patient with a Superior Capsular Reconstruction is much slower than other types of rotator cuff repairs and it may be worth to spread visits out even further.

Patient Name: _____ Surgery Date: _____

Surgeon: ☐ Dr. Justin LeBlanc ☐ Dr. Ian Lo

Graft Type: ☐ Dermal Allograft ☐ Tensor Fascia Latae Autograft

Additional Surgical Procedures: _____

Post-Operative Restrictions

Wear sling for a total _____ weeks after surgery.

Begin physiotherapy at _____ weeks after surgery.

Protection of Biceps?

- ☐ YES, no active elbow flexion for 4-6 weeks, no elbow flexion strengthening for 10 weeks
- ☐ NO, this is not required

No strengthening (Phase 3) until _____ weeks after surgery.

Range of Motion Restrictions (gradually progress in pain free ROM to full unless specified below)

ELEVATION restricted to:	EXTERNAL ROTATION restricted to:
_____ degrees until _____ weeks after surgery	_____ degrees until _____ weeks after surgery
_____ degrees until _____ weeks after surgery	_____ degrees until _____ weeks after surgery

Please feel free to contact our office if there are any questions or concerns.

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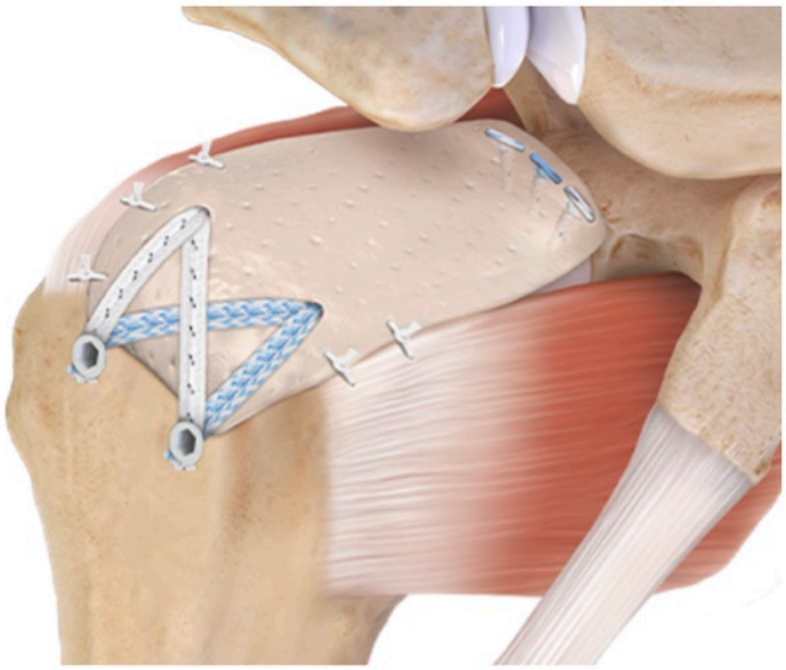
Information about the Surgical Procedure – Superior Capsular Reconstruction

Superior capsular reconstruction is a surgical procedure performed in the place of non-repairable supraspinatus tears. A dermal allograft is used to reconstruct the superior capsule of the glenohumeral joint and provide a mechanical barrier to superior humeral head translation. The post-operative rehabilitation requires a conservative protocol and gradual progression in order to promote healing of the graft.

Expected outcomes of the surgery in terms of range of motion and strength depend largely on the patient's pre-operative active range of motion, shoulder pathology and other surgical procedures and should be discussed with the surgeon. It is important to use the criteria for progression at the end of each phase when considering moving a patient to the next phase as opposed to only considering time since surgery.



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PHASE 1 – Immediate Post Operative

This phase involves the initial recovery period after surgery and generally lasts until 8 weeks (sling discharge).

GOALS

Control Pain and Inflammation
Protect Repaired and Healing Tissue
Maintain Mobility of Joints Surrounding Shoulder

PRECAUTIONS

- Sling is only to be removed for showering and gentle exercises (see below). Sling should be worn for sleeping. The sling should be worn for a total of 8 weeks.
- No active movement of operative shoulder (especially away from body)
- No lifting/pushing/pulling with operative arm
- No driving until cleared by surgeon (generally once sling is discharged and patient is no longer requiring prescription pain medications)
- Shoulder should not be externally rotated past neutral/0° until after 8 weeks.

EXERCISES

Neck, Wrist and Hand Range of Motion

To maintain range of motion look up/down, turn to each side and bring ear to each shoulder, actively flex and extend wrist, make a fist and extend fingers. Can also do gentle ball squeezes/grip exercises while in ball.

Elbow Range of Motion (*see cover page for any restrictions)

Bend and straighten elbow, maintain good posture. If you had a biceps tenodesis, use other hand to help you move the operative arm.

Shoulder Blade Squeezes

Gently bring shoulder blades back together towards spine. Hold each repetition for 5-10 seconds, repeat 10 times. Do this 3-5 times per day.

Postural Awareness/Correction

Frequently throughout the day when sitting or standing, make sure to check posture. Imagine a string pulling at the top of the head to ensure a tall erect posture, bring shoulder blades back together gently and tuck chin down gently.

OTHER CONSIDERATIONS

- Physiotherapy should not be initiated until sling has been discharged
- Can use ice initially for pain control. Heat can also be used as needed and prior to exercises starting 2-3 weeks after the surgery.

CRITERIA FOR PROGRESSION TO PHASE 2

- Sling discharged by surgeon
- Pain adequately controlled at rest
- Good postural awareness and able to properly set scapula with arms at side

PHASE 2 – Range of Motion

This phase starts at 8 weeks (or sling discharge) and lasts until approximately 16 weeks post operatively.

GOALS

Gradual Progressive Range of Motion of the Shoulder
Continued Protection of Repaired and Healing Tissue
Improve Static and Dynamic Scapular Control

PATIENT EDUCATION

- Sling can be discontinued after the time period indicated by the surgeon above; however, it may be beneficial to use intermittently for use when out in public.
- All exercises should be pain free and performed with proper scapular control.
- No exercises or activities involving weightbearing through the affected arm.
- Patients can begin light activities of daily living at waist level but should not lift anything heavier than a coffee cup with the affected arm.
- With surgeon clearance and sufficient AROM below shoulder level, patients can begin driving. It is recommended to start in low-risk environments (i.e. empty parking lot).
- Avoid behind the back and abduction (reaching up to the side) with the affected arm.
- Continue to ice machine / ice packs as required for pain control. You can also use heat prior to stretching if this is helpful.

EXERCISES

Patients should visit their physiotherapist to receive guidance on the progression and technique for the exercises in the protocol for Phases 2-4. Visits should be spaced at least 1-2 weeks apart to allow for time to work on home exercise program and to reserve available physiotherapy coverage for the strengthening phases.

Aim to do 3-5 sessions of range of motion exercises per day. It is best to choose a few exercises to do each session rather than doing all of the exercises in each session. Range of motion exercises should be taken to a light stretch only and not forced or pushed into pain. The key is “little bits but often”.

External Rotation Range of Motion

Sitting or standing, hold a pole with elbows bent to 90° and tucked to your side. With non-operative arm using a pole gently push the operative arm to 0° (straight in front of you), 40° or full external rotation (*see cover page). Stop once a gentle stretch or pain is felt.

Table Slides

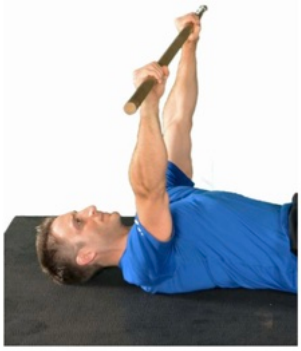
Sitting on a stool or chair, rest operative arm on the table. While keeping operative arm relaxed push chair/stool back until a comfortable stretch is felt in the shoulder. Exercise can also be performed by placing both hands on a ball and using non-operative arm to move the ball forward.

Progressive Elevation Program (PROM → AAROM → AROM)

This progressive range of motion utilizes decreasing assistance and gravity to help improve the strength and range of motion of the shoulder after surgery. Start at the level that the patient can perform with good technique and without increasing pain.

Progressive Elevation Program cont'd…

1. Lie on back, clasps hands together with elbows bent. Lift the affected arm up towards the ceiling using unaffected arm. Go until a gentle stretch is felt. If able to get arms straight up to the ceiling, gently bring arms overhead to go further into the stretch. Return slowly to the start position. As able, progress to using less support from the unaffected arm with the stick and progress to doing this without the stick.
   *TIP: it can help to place a rolled towel or pillow under the elbow so the arm does not come all the way down.

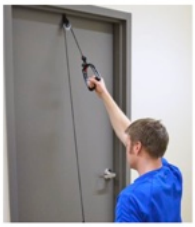
2. Once able to do 3 sets of 15 reaching operative arm up to the ceiling with no weight, progress to pressing with light weight (1-3lb) towards the ceiling. Gradually progress weight.

3. As you get stronger, this exercise can be progressed into an inclined position, starting first with assistance from a stick and then progressing to doing it on its own and then with weight.

Flexion AAROM with Stick and Pulleys

- Supine → Reclined (i.e. 30°, 45°) → Standing
- Gradually increase the range of motion and lessen the support from the non-operative arm.
- Pulleys can also be used to increase ROM in flexion/scaption. Face the wall and maintaining good posture.





Isometrics (Shoulder Flexion, Extension, Abduction, IR and ER)

- This exercise is intended to 'wake up' the rotator cuff. Amount of force is low (~30% of max contraction) so ensure gentle pressure – as if pressing into a balloon. Ensure proper scapular positioning and good overall posture.
- Hold 5 seconds, repeat each direction 5-10 times.

OTHER CONSIDERATIONS

General Fitness

- Walking, Treadmill and Stationary Bike (without weightbearing through the operative arm)

Manual Therapy - for Physiotherapist Consideration

- Soft Tissue Release/Scar Massage
- Address Cervical/Thoracic Spine Issues (Joint Mobilization and Soft Tissue Massage)
- No glenohumeral joint mobilization

CRITERIA FOR PROGRESSION TO PHASE 3

- Able to actively elevate arm to 120-140° with good control with no shoulder hiking, scapular winging or trunk side flexion/extension
- Pain well controlled at rest and with exercises/light activity
- Good scapular positioning and postural awareness at rest and with exercises

PHASE 3 – Progressive Strengthening

This phase involves progressive strengthening starting at 16 weeks and lasts until 5-6 months.

GOALS

Continued Protection of Healing/Repaired Tissues
Achievement of Full Functional Range of Motion
Initiate Targeted Rotator Cuff Strengthening
Improve Scapulohumeral Rhythm

PATIENT EDUCATION

CONTINUED PROTECTION OF THE REPAIR

- It is important to be aware that the repair is continuing to heal at this point. Here are some points to keep in mind during this phase:
    - No overhead lifting and restrict lifting to light objects (< 20lbs)
    - Avoid Long Lever/Outstretched Arm Positions (e.g. reaching for pot at back of stove)
    - Avoid Quick Movements (e.g. reaching to catch a falling object)
- Can begin to return to activities of daily living such as cooking, gardening and light cleaning (no vacuuming or raking, keep laundry baskets light) keeping in mind the considerations listed above. It is important that activities are paced throughout the day to avoid fatiguing the shoulder.

STRENGTHENING EXERCISES

- Strengthening of the rotator cuff can begin at 12 weeks (or timeline indicated on the cover page) if the recovery is progressing well and if meeting the criteria listed at the end of Phase 2.
- All resisted exercises should be performed in pain-free range of motion and below shoulder height initially.
- Strengthening exercises should be performed maximum 1-2 times per day and parameters should focus on gradually building endurance (e.g. begin with 2-3 sets of 10 and work up to 4 sets of 15). Can also consider initially performing strengthening exercises every other day. Start by breaking up your exercises into little sessions throughout the day and then gradually progress to combining them into a single 'workout'.
- Begin with light resistance or light weight initially. It is acceptable to progress to the next level of resistance once the patient can correctly perform exercise with 3-4 sets of 15 reps.
- Progression of Bands (Yellow → Red/Orange/Pink → Green → Blue/Purple)

EXERCISES

RANGE OF MOTION

If full active and passive range of motion have not been achieved it is important to continue to work on range of motion exercises listed in Phase 2. It can be beneficial to focus on range of motion first if patient is stiff and add in strengthening gradually, starting first below shoulder level.

STRENGTHENING

Shoulder Press/Elevation Program

Continue to increase weight and incline to improve AROM in flexion
Gradually increase weight used in press program.

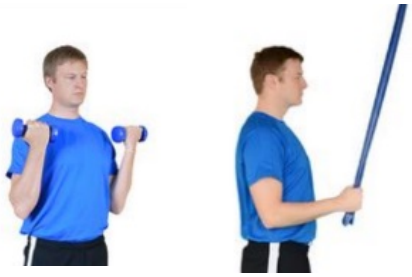
Alphabet with Band or Weight (Supine)

In supine with arm at 90° flexion, add slight scapular protraction and spell 3-5 letters of alphabet in the air, repeat 10 times. Start with light weight (1lb) or band. Gradually increase size of letters.

Side Lying External Rotation with Weight
In side lying with elbow supported (same than in Phase 2), externally rotate arm while holding light weight (soup can → 1lb → 2lb).

Rows with Light Resistance
Use a yellow or red band. Ensure good scapular maintained throughout, avoid drawing elbows back past midline.

PNF AAROM/AROM Patterns
If full functional AROM has been achieved, can begin PNF patterns below shoulder level with stick. Start in range below shoulder level and progress to overhead range and AROM as tolerated.



Biceps/Triceps Strengthening
Start with a light weight or band resistance and gradually progress as tolerated. Ensure good scapular positioning maintained throughout the movement.

Resisted Internal and External Rotation *starting at 5 months post operative
Ensure good scapular positioning. Perform resisted ER/IR in standing with small towel roll under the elbow. Initially perform to neutral and then progress into ROM as tolerated.

OTHER CONSIDERATIONS

General Fitness
- Continue cardiovascular endurance exercise and consider incorporating lower extremity, core and back strength into exercise regime.

Manual Therapy - for Physiotherapist Consideration
- Continue as per Phase 2

CRITERIA FOR PROGRESSION TO PHASE 4
- Full functional range of motion without compensation
- Demonstrates adequate endurance and correct technique with strengthening exercises (e.g. 4 sets of 15 reps with medium resistance)
- Able to perform activities of daily living and exercises with minimal pain and no compensatory patterns

PHASE 4 – Advanced Strength/Graduated Return to Activity

This phase involves functional and activity specific strengthening and starts at 6+ months after surgery.

GOALS

The goals of this phase will be specific to each patient and will relate to the specific work and recreational activities that the patient is looking to return to as well as the surgical procedures performed on their shoulder.

PATIENT EDUCATION

WEIGHT BEARING ACTIVITIES

- Activities with weight bearing need to be performed with caution as they can cause compression and aggravate the repair. When moving into weight bearing exercises, they should be progressed gradually

GYM ROUTINES

- Patients should discuss with their surgeon as to when it is appropriate to return to gym routines (~6 months post operatively).
- It is generally not recommended to perform heavy weighted exercises overhead and more specifically incline bench press, military press, triceps dips and chin-ups. Patients should also avoid exercises or movements in which their elbow/arm moves behind the plane of their body.

LONG TERM PROTECTION OF ROTATOR CUFF

- In order to protect the repair and maintain the health of the repair long term it is recommended to avoid lifting in long lever positions (e.g. arm extended) and avoid heavy lifting overhead. Patients are encouraged to continue to work on strength and range of motion exercises for 6-12 months post-operatively. Also incorporating rotator cuff strengthening exercises into a regular workout regime in the long term is important to maintain the strength that has been developed and keep the muscles and tendons strong and healthy.

EXERCISES

Exercises in this phase depend on the level of overall patient's function and expected surgical outcomes, which can vary greatly with patients with Superior Capsular Reconstruction. Expectations for overall function post operatively should be discussed with the surgeon.

Consider the following exercises within Phase 4:

- Bent over Row or Seated Rows
- PNF Patterns (begin with descending patterns, progress to ascending)
- Progressive Weightbearing Exercises
    - Wall Push Ups → 4 Point Kneel → Bird Dog → Plank on Knees → Push Up on Knees…
- Drills and exercise relevant to the functional tasks they will need to perform for recreational and occupational activities.

Exercises should be performed as part of a regular workout 3-4 times per week with exercise parameters focusing on developing muscular endurance with adequate recovery between exercise sessions. All exercises should continue to be performed in pain-free range and with proper technique. Physiotherapists will be able to assist patients with appropriate exercise prescription and the surgeon will provide guidance on timelines for return to occupational and recreational activities.

RETURN TO OCCUPATIONAL AND RECREATIONAL ACTIVITY TIMELINES

- These timelines should be used as a guide and individualized for each patient after discussion with surgeon/physiotherapist.
- Timelines for return to sport and recreational activities involving the use of the surgical arm as well as contact sports should be discussed with the surgeon.
- Returning to occupations that involve medium to heavy lifting (30+ lbs) and overhead work/lifting should also be discussed with the surgeon.

Exercise Bike	4-6 weeks (in sling), 6+ weeks no sling	Upright (no weightbearing) or Recumbent Bike
Running	Starting at 8-12 weeks	As tolerated with the jarring to the shoulder
Gardening (Light)	Starting at 12 weeks	Initially below shoulder level and no lifting
Golfing	6 months for chipping/putting 7+ months for light irons	Start at the range and then progress to a round
Gym	8-12 months	Discuss with physiotherapist/surgeon
Swimming	10 months	Can return earlier if using flutter board with no arm movements

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