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REHABILITATION PROTOCOL FOR LARGE TO MASSIVE ROTATOR CUFF TEARS

Physiotherapy Guidelines

The following is intended to guide the patient through the postoperative rehabilitation process. Each patient may still require individual modification of their program depending on the extent of the original injury, type of surgery performed, pain level, degree of stiffness and strength. Please use this as a prescription for Physiotherapy.

Patient Name: _____ **Date:** _____

Date of Surgery: _____

Surgeon: French / LeBlanc / Sabo _____

Tendons Involved: Supraspinatus Infraspinatus Subscapularis Teres Minor

Size of Tear: _____cm **Biceps:** Tenotomy Tenodesis N/A

IMMOBILIZATION/MOVEMENT RESTRICTIONS

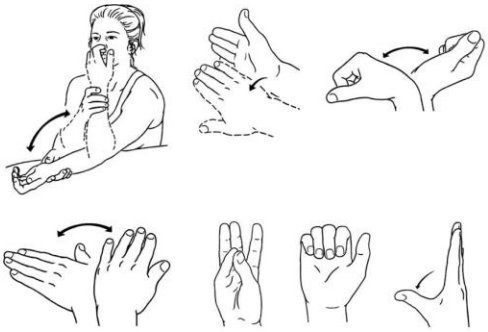
Wear Sling/Immobilizer	_____ weeks
Additional Restriction of Range of Motion Required?	☐ No ☐ Yes: _____
Protection of Biceps Tendon Required?	☐ No ☐ Yes: No active contraction of biceps for 4-6 weeks, no strengthening of elbow flexion for 12 weeks

PRECAUTIONS/DOSAGES:

- If not otherwise stated, keep your arm in immobilizer/sling for 2 weeks and perform exercises as outlined below
- Do not lift/push/pull any objects with your operated extremity
- Do not support your body weight with involved arm for bed mobility
- Range of motion exercises should be performed 3 times per day when allowed
- Range of motion and strength exercises should be slowly increased in a manner that is neither forceful or painful
- Use ice x 20 minutes every 2 hours to help control pain and swelling

0 – 2 Weeks

Come out of immobilizer/sling for exercises only.



Manual Therapy:

- Use of ice after exercises is recommended
- Gentle massage around the shoulder girdle: trigger points to supraspinatus, infraspinatus, & biceps belly

Elbow, Wrist, Hand: full active range of motion with arm at your side; perform passive elbow flexion only if biceps tenodesis performed

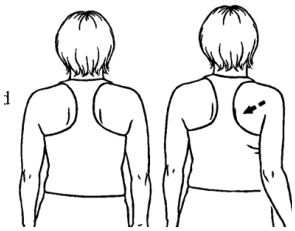
2 – 4 Weeks

Begin gentle pendular exercises; focus on scapular retraining with good posture.

Pendular Exercises: arm hanging or supported depending on comfort; pain-free range

Scapular Setting & Posture

- Elevation
- Depression
- Protraction
- Retraction



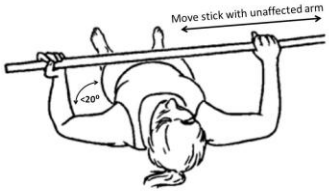
Hand Strength: gentle ball or towel squeezes

4 – 6 Weeks

Begin active-assisted shoulder range of motion as tolerated.

Active-Assisted Shoulder Range of Motion: These are movements performed with the assistance of a stick, your physiotherapist, or your non-operative arm as tolerated. **Do not force any of these movements.**

a) Internal Rotation (limit motion 0-10^{o})
   - Arm supported on towel to avoid extension
   - Arm positioned at 20-30˚ abduction

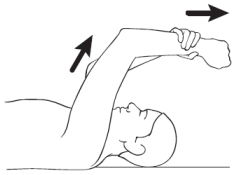


b) External Rotation (limit motion 0-10˚)
   - Arm supported on towel to avoid extension
   - Arm Positioned at 20-30˚ abduction

c) Flexion (with caution - do not force!)
   - Elbow supported on towel to avoid dropping into extension
   - Start with elbow flexed to shorten lever arm
   - Patient can use arm cradle technique (1) but if experiencing any biceps compression keep arm in neutral (2)
   - **Goal is 60-90^{o} (maximum) flexion by end of 6th week**
   - If too painful, continue with pendular exercises

1)

2)

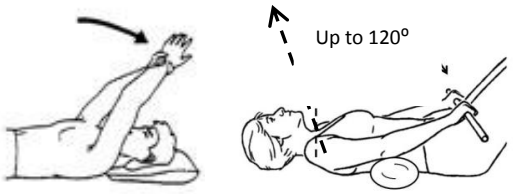


6 – 10 Weeks

Gradually progress active-assisted range of motion; never force these movements & always address impairments in scapular control. Complete exercises 3x/day, up to 20 reps, or as pain allows.

Active-Assisted Shoulder Flexion in Supine:

- **Gradually progress range of motion as tolerated up to 120˚**
- Progress to long lever arm (using stick or opposite arm) if still using arm cradle technique

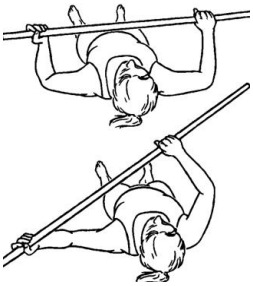


Active-Assisted Internal Rotation in Supine:

- Gradually progress to arm at 45° abduction with towel supporting arm
- **Gradually progress to full range of motion as tolerated**

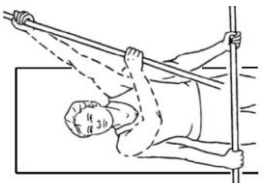
Active-Assisted External Rotation in Supine:

- Gradually progress to arm at 45° abduction with towel supporting arm
- **Gradually progress to full range of motion as tolerated**



Active-Assisted Abduction in Supine:

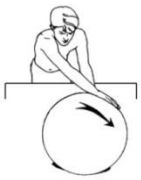
- May introduce SLOWLY as tolerated. **Never force!**
- **Give preference to functional movement in forward flexion & scaption**
- Monitor scapular control



Consider hydrotherapy in pool to improve shoulder range of motion if incision is adequately healed. <u>Do not perform any swimming motions at this stage!</u>

Proprioceptive Shoulder Exercises

- Start below 70˚ flexion
- Example: ball rolling on table top

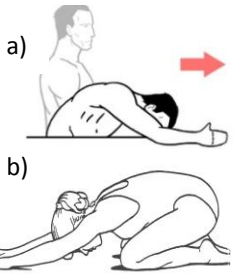


10 – 12 Weeks

Goal: start to transition from active-assisted to full, pain-free active range of motion with good scapular control by 10-12 weeks post-operatively.

Range of Motion Exercises:

- **Gradually transition towards full active range of motion with emphasis on scapular control; start in lower ranges of elevation without sustained holding. Avoid aggravation of biceps pain.**
- May progress to more advanced stretches with longer duration holds i.e. slide arm forward on table top (a) & child's pose stretch (b)
- Gradually progress internal/external rotation in greater degrees of abduction



Proprioceptive Shoulder Exercises

- Gradually progress into greater ranges of flexion as pain, scapular control, & shoulder AROM permit.
- Example: ball on wall

12+ Weeks

Gradually begin resisted strengthening exercises once range of motion goals are met & patient demonstrates good scapulohumeral & scapulothoracic control.

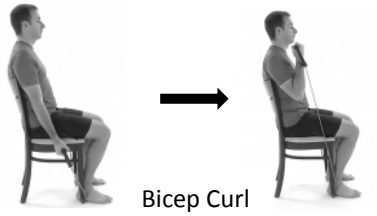
Strengthening Exercises:

- All resisted exercises are <u>below shoulder height for the first 12 weeks</u>
- Work within a pain-free range of motion initially to avoid compression of the rotator cuff
- Resistance should be applied with a light weight or Theraband (yellow or red/orange)
- Perform 1x/day until it is clear there is no aggravation to the tendon or joint; maximum 2x/day.
- Gradually build endurance to be in ½ kg to 1kg range in first 12 weeks. Do not exceed >2kg.

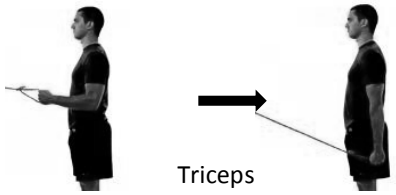
a) Shoulder Shrugs
- Add weight as tolerated

a)

b) Biceps & Triceps
- Start with theraband (seated or standing position)



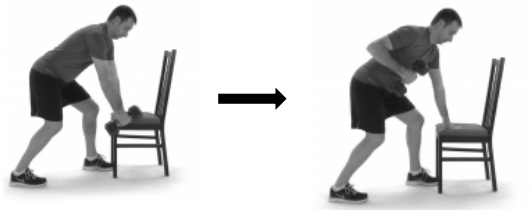
Bicep Curl



Triceps Extension

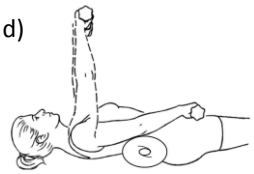
c) Bent Over Rows
- Start at neutral & progress to 30° abduction
- Do not go past level of body

c)



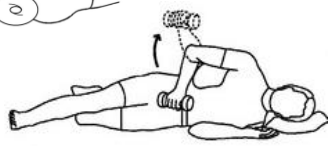
d) Supine Flexion
- Arm support on towel to prevent dropping into extension

d)



e) Side Lying External Rotation
- Arm supported on towel in 0˚ abduction
- May require support of forearm on pillow or books
- Initially limit range of motion to neutral, progress as tolerated

e)



f) Internal Rotation
- Supine: support arm on towel in 0˚ abduction
- Progress to standing with arm at 0˚ abduction & pull from 0-20˚

f)

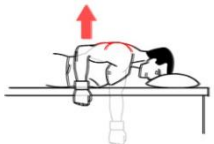
Principles of Strength Progression:

- Strengthen further into range as pain and range of motion allow. Never load the tendon into end range if shoulder is stiff.
- Be mindful of tendon biology and patient requirements. Each patient has different functional requirements, tendon quality, and healing potential.

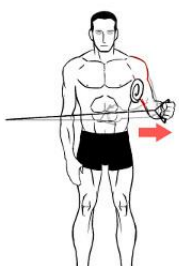
Only progress to these abducted positions if the cuff is strong in neutral, patient has adequate range of motion, and demonstrates good quality of movement with scapular control. Do not progress into end range of abduction & external rotation if there is any compression pain in the cuff – only do a partial arc of movement.

Examples of Advanced Strength Exercises:

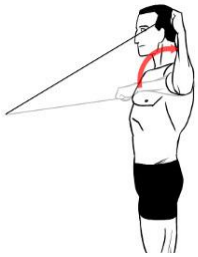
a) Prone Horizontal Extension Drills
- Start in neutral with elbow bent to shorten the lever
- Progress into higher ranges of abduction until 90° reached



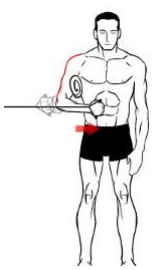
b) Standing External (ER)& Internal Rotation (IR) Strength with theraband towards 90° abduction.



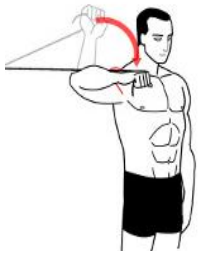
30° abduction & ER



90° abduction & ER



30° abduction & IR



90° abduction & IR

14 Weeks Onwards

Weight bearing drills may be started.

- Begin with push ups on the wall, then progress to knees. Perform with caution as weight bearing may aggravate compression of the rotator cuff.
- **Activities, such as yoga, are not recommended in the first 12 weeks** unless they are performed in a modified fashion to avoid stressing the end range of motion or weight bearing of the glenohumeral joint.
- **Progress all exercises into functional positions** for sport and occupation.
- Strength work should be done 1x/day and focus on endurance. **Starting at 6 months onwards, patient may return to gym programs and start with low load hypertrophy drills**.
- **No heavy weights are to be used, especially in overhead positions**. It is rare to exceed 4kg.
- **Generally, it is not recommended to perform incline bench press, military press, dips, or chin-ups.**
- Unless advised otherwise by surgeon or physiotherapist, patients are encouraged to **continue with stretches & strength work for 6-12 months post-operatively** in order to achieve realistic functional capacity.

Other Topics

Driving: **Minimum 6 weeks no driving. Patients should be discouraged from driving until they are weaned from any prescription medications and they are comfortable in active motion below shoulder height. Initial efforts to restart driving should be performed in low risk settings (i.e. empty parking lot, residential side streets, etc.)**

Return to Work: **Patients should discuss this with their surgeon as each person has specific needs and will progress through the protocol differently.**

Feedback/Concerns: **If the patient is struggling to progress along the protocol, has an injury or there are other concerns, please do not hesitate to send a report or have the patient contact their surgeon.**