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REHABILITATION PROTOCOL FOR ROTATOR CUFF SURGERY MEDIUM TO LARGE TEARS

Physiotherapy Guidelines

The following is intended to guide your Physiotherapist through the basic post-operative rehabilitation process. Each patient may still require individualised modifications of their program by their Physiotherapist depending on the extent of their original injury, type of surgery performed, pain level, degree of stiffness and strength.

Immobilization/ Movement Restrictions:

Wear Sling	During the Day: weeks During the Night: weeks
Additional Restriction of Range of Movement required	YES Motion:_____ Restriction:_____ NO
Protection of Biceps tendon required	YES Duration:_____ NO

Ice / Heat

- Ice has been shown effective in decreasing post-operative pain, especially in the first 48 hours
- A simple icepack (covered with a clean cloth) can be bandaged over the shoulder.
- This may also be applied after exercises in the first couple of weeks
- Heat may be applied prior to exercises (especially after two weeks)
- Some patients also find heat is helpful to apply to assist with night pain

Manual Therapy

- Response to massage is very variable post-surgery – depending on the amount of swelling and reactivity in the soft tissues
- Under 4 weeks post op massage should be confined to the neck and shoulder blade region. Massage directly over the biceps belly or supraspinatus / infraspinatus or subscapularis is best commence after 4 weeks
- No passive **mobilization** techniques should be performed under 12 weeks post operation

1 – 14 days

Range of Motion
This is entirely dependent on Surgeons directions – some larger tears may not commence ROM until 2 – 4 weeks

Pendular exercises:
Flexion (to 90°), extension (return to neutral), circular – respecting pain.

- Arm supported by other arm or hanging, whatever is most comfortable.
- Must be performed slowly

Elbow / Wrist – Passive Flexion / Extension

Supine

- Passive ER to 0° with help of other arm or a stick

Precautions/Dosages

- **No** isometric glenohumeral exercises.
- Isometric scapula setting drills may be performed – usually scapula retraction +/- Upward rotation shrug – hold for 5 seconds up to 20 reps
- Stretches may be performed 5 – 10 x unless range is achieved in first couple of repetitions
- Holds of up to 5 seconds can be performed but not if pain is increasing
- Exercises performed 2 – 3 times per day or as pain determines.
- If pain is increasing with exercise then patient should cease exercises & contact their physiotherapist

2 – 4 weeks

Range of Motion Exercises

- Passive / Active assisted exercises are performed with the assistance of the other arm
- ER performed in supine with arm supported in 20° - 30° abduction
    - up to 0° initially & gradually extending out to 20° unless subscapularis is involved and then only to 0° for up to 6 weeks
- Flexion to 90° - 100° (max) as tolerated, do not force
    - Perform as a bent over pendulum drill
- Isometric scapula setting continues

4 – 6 weeks

Range of Motion Exercises

- Passive / Active assisted exercises are performed with the assistance of the other arm or with the assistance of a stick
- ER in supine with arm supported in up to 20° - 30° abduction
    - up to 20° range of ER
- Supine Flexion to 90° - 120° (max) as tolerated, do not force
    - perform cradling operated arm with non-operated arm
- Isometric scapula setting continues

6 – 8 weeks

Range of Motion Exercises

- Continue Passive / Active assisted exercises
- Supine flexion commenced with a stick if tolerated but may still need to be performed cradling arm.
- Range of flexion progressed as tolerated (often elbow is required to be bent slightly).
- ER - assisted active range of motion progressed as tolerated in supine or supported sitting

8 – 10 weeks

Range of Motion Exercises

- Continue with all exercises outlined in 6 - 8 weeks
    - Progress range as tolerated
- Commence Assisted active extension with a stick
- Sliding arm out along the bed or bench as tolerated.

10– 12 weeks

Range of Motion Exercises

- All flexion and external rotation drills may progress as tolerated
- May commence side lying assisted active flexion with a stick (if pain tolerated)
- Supine IR assisted active with support under elbow in 20°-30° abduction
- Assisted active flexion and external rotation may commence in standing or supported sitting
- Assisted active Horizontal flexion & HBB

12- 14 weeks

Range of Motion

- Full range of assisted active motion is allowed as pain tolerates.
- Always watch for any aggravation of biceps pain especially with HF and HBB and cease if biceps pain increases.

Strengthening Exercises

Strengthening Exercises Sub-maximal pain free isometric exercises:

- Extension with elbow bent (care arm doesn't go back past body).
- ER/IR may need to perform in plane of the scapula
- Perform all exercises with elbow bent, sub-maximal resistance <30% MVC.
- Only perform sub-maximal glenohumeral isometric exercises if no night pain present.

14 - 16 weeks

Strengthening Exercises

- Strengthening further into range as pain and range of motion allows.
- Never load the tendon into end of range if shoulder stiffness is present.
- Different requirements for younger patients than older patients.
- Shoulder shrugs
    - add weight as tolerated
- Theraband in standing
    - Internal rotation at 0° abduction – pull from position or external rotation into internal rotation of 0° - 10°.
    - External rotation at 0° abduction – commence partial arc
- Sidelying external rotation
    - arm supported on towel, 20° abduction. May initially require support of forearm on pillow or books, limit arc of motion initially.
- Bent over rows in neutral to 30° abduction (do not go past the level of the body).
- Biceps/triceps.
    - All resisted exercises are performed below shoulder height for the first 16 weeks.
- Resistance is applied either through Theraband or light weights.
    - Commence with light resistance (yellow or red) or ½kg and then increase as tolerated. Resistance drills should only be performed initially once a day until it is clear that no aggravation of the tendon or joint is going to occur
- For most exercises endurance repetitions are recommended, and rarely are any drills progressed past 1½kg - 2 kg maximum in the first 16 weeks

20 weeks onwards

- Prone horizontal extension drills are commenced into higher ranges of abduction till 90° reached, elbow bent, short lever.
- Internal and external rotation strength may gradually progress into above 90°, usually in standing against Theraband.
- Only commence if the rotator cuff is strong, good tissue quality and there is adequate range of motion.
- Do not progress into end of range of abd/ ER if there is any compression pain in the cuff. May only do partial arc
- Weight bearing drills commenced as required:
    - eg. Push ups. Commence on the wall and then progress to knees. Care as weight bearing in the first 16weeks may aggravate compression of the rotator cuff. Hence activities such

as yoga are not recommended for the first 16 weeks unless they are performed in a modified fashion so as to not either stress the end of range of motion or involve weight bearing of the glenohumeral joint.

- Progress all exercises into functional positions for sport and occupation.
- Strength work is performed usually once per day and still focus on endurance, if required.
- From 6 months onwards return to gym programmes may commence with some low load hypertrophy drills incorporated. In general for most exercises outlined rarely would any weight be heavier than 4kg .
- No heavy weights are to be performed, particularly overhead and in general it is preferred that incline bench, dips and chin ups are not performed.
- Patients are encouraged to continue on their stretches and strength work till 6-12 months post surgery or when full realistic functional capacity is achieved unless advised otherwise by the surgeon or the physiotherapist