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REHABILITATION PROTOCOL FOR ROTATOR CUFF SURGERY
MEDIUM TO LARGE TEARS

PHYSIOTHERAPY GUIDELINES

This is a guideline for your physiotherapist to help you progress your shoulder rehabilitation over the next twelve weeks so that you can achieve a functional shoulder. A *physiotherapist* who is experienced in shoulder rehabilitation should be consulted throughout the programme to teach and individually modify your programme.

Immobilisation/Movement Restrictions

Wear sling/immobiliser	During the day ____________ weeks At night ________________ weeks
Additional restriction of range of motion required	YES Motion: ______________ Restriction: ____________ NO
Protection of biceps tendon required	YES Duration ______________ NO

Consulting At:

- Melbourne Orthopaedic Group, 33 The Avenue, Windsor 3181
- Glenferrie Private Hospital, 29 Hilda Crescent, Hawthorn 3122
- Level 4, 250 Collins Street, Melbourne 3000

EXERCISES/TREATMENT FOR EACH STAGE OF REHABILITATION

1-14 DAYS

Manual Physiotherapy
Heat may be utilized prior to exercise.
Ice may be applied post exercise.
Gentle massage around the shoulder girdle, trigger points; supraspinatus, infraspinatus and biceps belly.

Range of Motion Exercises
Pendular exercises:
- Flexion, extension, circular, horizontal flexion/extension – respecting pain.
- Arms supported or hanging, whatever is most comfortable.

2-4 WEEKS

Active assisted ROM exercises:
- ER/IR still performed in supine with arm supported in slight flexion (so that arm doesn't fall into extension), in 20 degrees to 30 degrees of abduction.
- Limit arc of IR/ER motion to 0 degrees to 10 degrees initially.
- Flexion to pain tolerance. Initially therapist provides assistance by supporting arm, especially with arm lowering (**the arm may need to be in neutral rotation if internal rotation compresses the biceps).
- May commence in supine but if too painful, continue with pendular exercises only.
- Patient eventually should be able to cradle their arm with the other side, set shoulder blade back and assist arm up. Re-set shoulder blade prior to commencing lowering. May need to keep the arm in neutral rotation to avoid biceps compression.
- Aim is for 60 degree to 90 degree (maximum) flexion by the end of the fourth week. Do not force.

Elbow ROM:
- Flexion/extension exercises.
- Pronation/supination.

Wrist ROM:
- Flexion/extension.

Strengthening Exercises:
Isometric scapula setting drills only:
Scapula elevation, retraction, depression.

Hand strength:
Gripping.

Precautions/Dosages
No isometric glenohumeral exercises.
Exercises performed three times per day or as pain determines.
Usually stretches are held for a count of 5 and repeated ten times dependent on pain.

EXERCISES/TREATMENT FOR EACH STAGE OF REHABILITATION

4-6 WEEKS

Range of Motion
Active assisted exercises are performed with the assistance of the other arm or with the assistance of a stick.
Active assisted ROM exercises progressed:
- ER/IR still performed in supine with arm supported. Performed in 20 degrees to 30 degrees of abduction. Arc of motion increased as pain allows to ¾ range as pain allows and tolerated.
- Flexion to between 90 degrees and 120 degrees (maximum) as tolerated. Do not force.

6-8 WEEKS

Range of Motion Exercises
- ER/IR progressed up to 45 degrees abduction, arm supported on a towel, progress arc of motion to full as tolerated.
- Supine flexion commenced with a stick as tolerated but may still need to be performed cradling arm.
- Range of flexion overhead progressed as tolerated to 120 degrees (often elbow is required to be bent slightly).

Strengthening Exercises
Sub-maximal pain free isometric exercises:
- Extension with elbow bent (take care arm doesn't go back past body).
- ER/IR may need to perform in plane of the scapula (only performed on non-repaired rotator cuff).
- Only perform submaximal glenohumeral isometric exercises if no night pain present. If night pain is present, leave until six weeks post surgery or until night pain settles.
- Perform all exercises with elbow bent, submaximal resistance, <30 % MVC.

Dosage
- Twice daily
- Most exercises are held for a count of 5 and repeated to a maximum of twenty repetitions.
- Stretches may be held for longer durations as required up to a count of 15 seconds, usually ten repetitions.
- Whilst the assisted active EROM exercises are progressed here, expect that the range may come out gradually over the next twelve weeks and never should be forced.

EXERCISES/TREATMENT FOR EACH STAGE OF REHABILITATION

8-12 WEEKS

Range of Motion Exercises

- Continue with all exercises outlined in weeks 4-6.
- May utilize more advanced stretches such as longer duration holds, side-lying stretching over head with a stick, sliding arm out along the bed or preacher stretches (patient kneeling on ground, arms supported on chair or table while patient leans back onto their haunches) as tolerated.
- ER/IR may gradually be progressed into higher ranges of abduction.
- Supine assisted active abduction may gradually be commenced but careful not to force the motion or create any impingement pain by pushing the motion too far.

Strengthening Exercises

- Supine flexion – arm supported on towel to prevent arm dropping into extension – lift up only 30 degrees (may initially require assistance).
- Side-lying external rotation – arm supported on towel 0 degree abduction. May initially require support of forearm on pillow or books. Limit arc of motion initially.
- Shoulder shrugs – add weight as tolerated.
- Supine internal rotation (arm supported by a rolled up towel to prevent arm dropping into extension) 0 degree abduction – Theraband or standing – internal rotation at 0 degree abduction – Theraband pull from position or external rotation into internal rotation of 0 degree to 10 degrees.
- Bent over rows in neutral to 30 degrees abduction (do not go past the level of the body).
- Biceps/triceps.
- All resisted exercises are performed below shoulder height for the first eight to ten weeks post operation.
- Usually only partial arc of motion may be initially performed to avoid compression of the rotator cuff.
- Resistance is applied either through Theraband or light weights. Commence with light resistance (yellow or red) or ½ kg 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. May progress to performing twice a day.
- For most exercises, endurance repetitions are recommended, and rarely are any drills progressed past ½ kg to 2 kg maximum in the first twelve weeks and most people are ½ kg to 1kg.

EXERCISES/TREATMENT FOR EACH STAGE OF REHABILITATION

12 WEEKS ONWARDS

Range of Motion Exercises

- Full range of assisted active motion is allowed apart from horizontal flexion and HBB. These motions may be able to be initiated in lower ranges of elevation without any sustained holding by ten weeks. On others, may not be able to commence till twelve weeks or longer due to the presence of biceps pain. Always watch for any aggravation of biceps pain and cease if biceps pain increases.
- Strengthening further into range as pain and range of motion allows. Never load the tendon into end of range if shoulder stiffness is present.
- Keep in mind tendon biology and patient requirement. Obviously there are different functional requirements for younger patients than older patients.

Strengthening Exercises

- Prone horizontal extension drills are commenced into higher range of abduction till 90 degrees reached, elbow bent, short lever.
- Internal and external rotation strength may gradually progress into above 90 degrees, usually in standing against Theraband. Only commence if the rotator cuff is strong, there is 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.

14 WEEKS ONWARDS

Weight bearing drills commenced as required

- For example push-ups. Commence on the wall and then progress to knees. Care as weight bearing in the first twelve weeks may aggravate compression of the rotator cuff. Hence, activities such as yoga are not recommended for the first twelve 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 six 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 for most men and 3kg for most women. No heavy weights are to be performed, particularly overhead. 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 until six to twelve months post-surgery or when full realistic functional capacity is achieved unless advised otherwise by the surgeon or physiotherapist.