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ROTATOR CUFF REPAIR

The rotator cuff is the key to elevation of the upper extremity. It functions to center the humeral head in the glenoid by providing a compressive force with active movement.

Rotator cuff tears are most prevalent in the over 40 population. The repair progression is dependent on a number of factors including the patient’s age, tissue quality, size of the tear, acute vs chronic condition, strength and ROM status pre-op, and performance/activity demands. If the patient is healthy and active, a more aggressive rehab approach can be taken. On the other hand, if the patient is sedentary, disuse of the RC decreases tendon fiber strength. Because of the poor tissue status, regardless of the size of the tear and subsequent repair, a more conservative approach must be taken.

The key following RCR is communication with the physician. It is imperative that the therapist knows the size and extent of the tear, what was done in surgery, as well as any concerns or precautions the physician may voice regarding the patient.

Rehab following RC repair must focus not only on regaining N ROM but also on regaining neuromuscular control and strength of the RC. It is imperative that coordinated firing of the RC occur and this timing of recruitment must be re-trained post-operatively. Rhythmic stabilization exercises are mandatory to achieve this goal. In regards to AROM, ER/IR strength must be regained below shoulder level before one should be expected to perform overhead activities without discomfort.

Early ROM is critical for patients post-operatively to increase circulation and promote healing of soft tissues. A CPM machine will sometimes be used at home for this purpose with the shoulder in a position of neutral rotation and elevation in the scapular plane.

Initially, the therapist must closely monitor for any signs of infection. These include significant swelling in the shoulder and surrounding areas with accompanying erythema, hypersensitivity at the joint, pain at rest, and severe limitations in ROM and/or strength.

For small tears the brace should be worn for 4 weeks post op. For medium tears it should be worn for 6 weeks post op and for large tears it should be worn for 8 weeks post op. The brace is removed to perform exercises.

1st SIX WEEKS POST-OP (8 weeks for large tear)

Size of RCT	Rehab		
	Small	Medium	Large
<i>PROM</i>			
Flexion	Progress as tolerated by pt to 145 degrees	Progress as tolerated by pt to 120 degrees	Progress as tolerated by pt to 90 degrees
ER (scaption)	Progress as tolerated by pt to 75 degrees	Progress as tolerated by pt to 60 degrees	Progress as tolerated by pt to 45 degrees
ABER	Progress as tolerated to 80 degrees	Hold until 6 weeks post-op	Hold until 8 weeks post-op
IR (scaption)	Progress as tolerated	Progress as tolerated	Progress as tolerated

1st Six Weeks, cont'd			
AAROM	Initiate at 3-4 weeks post-op, not to exceed PROM limits	Wand ER ONLY in scap-tion plane, gravity as-sisted progressing to gravity neutral	No AAROM until after 6 weeks post-op (no pulley or wand)
<i>Strengthening</i>			
Isometric ER/IR	Initiate at 4 weeks post-op	Initiate at 6 weeks post-op	Hold until 8 weeks post-op
Scapular retraction	Initiate in sling at 2 weeks post-op	Initiate in sling at 2-3 weeks post-op	Initiate in sling at 2-3 weeks post-op
Shrugs	Initiate 4 weeks post-op unresisted	Initiate at 4-6 weeks post-op unresisted	Initiate at 6 weeks post-op unre-sisted
Seated/Standing Row	Initiate at 4 weeks post-op unresisted	Hold until 6 weeks post-op	Hold until 8 weeks post-op
Prone Row (saw)	Initiate 2-3 weeks post-op, arm to be raised no higher than parallel to chest, weight of arm only	Initiate at 4 weeks post-op, arm to be raised no higher than parallel to chest, weight of arm only	Initiate at 6 weeks post-op, arm to be raised no higher than parallel to chest, weight of arm only
<i>Other Exercises</i>			
Pendulums	Initiate during 1st week post-op	Initiate during 1st week post-op	Hold if pt has CPM, show pt pen-dulum position for dressing/grooming during 1st week post-op
Putty Squeeze	Initiate during 1st week post-op	Initiate during 1st week post-op	Initiate during 1st week post-op
Wrist/Hand AROM	Initiate during 1st week post-op w/ arm supported on table	Initiate during 1st week post-op w/ arm sup-ported on table or in sling	Initiate during 1st week post-op w/ arm in sling
Elbow Flex/Ext	Initiate during 1st week post-op w/ arm at side and shoulder in IR	Initiate during 1st week post-op w/ arm in pendu-lum position	Initiate during 1st week post-op w/ arm in pendulum position, ensure pt maintains a passive shoulder

6-12 WEEKS POST-OP (14 weeks for large tear)

<i>Size of RCT</i>	Small	Medium	Large
<i>PROM</i>			
Flexion	Full ROM by 10-12 weeks post-op	Full ROM by 10-12 weeks post-op	Full ROM by 12-14 weeks post-op
ER (scaption)	Full ROM by 10-12 weeks post-op	Full ROM by 10-12 weeks post-op	Full ROM by 12-14 weeks post-op
ABER	Full ROM by 10-12 weeks post-op	Initiate after 6 weeks post-op and progress as tolerated, full ROM by 10-12 weeks post-op	Initiate after 8 weeks post-op and progress as tolerated, full ROM by 12-14 weeks post-op
IR (scaption)	Full ROM by 10-12 weeks post-op	Full ROM by 10-12 weeks post-op	Full ROM by 10-12 weeks post-op
<i>AROM</i>	Initiate at 4-6 weeks post-op or when pt is released from sling, full ROM all planes by 10-12 weeks	Hold until 6 weeks post-op, full ROM all planes by 10-12 weeks	Hold until 8 weeks post-op, full ROM all planes by 12-14 weeks
<i>Strengthening</i>			
Isotonic ER/IR	Neutral or scaption @ 6 weeks post-op progressing to 90/90 position @ 8 weeks post-op	Neutral or scaption @ 6 weeks post-op progressing to 90/90 position @ 8-10 weeks post-op	Neutral or scaption @ 10 weeks post-op progressing to 90/90 position @ 12 weeks post-op
Shrugs	Add resistance at 6 weeks post-op	Add resistance after 6 weeks post-op	Add resistance after 8 weeks post-op
Rows	Add resistance at 6 weeks post-op	Initiate at 6 weeks post-op	Initiate at 8 weeks post-op
Prone T and Y	Initiate at 6 weeks post-op progressing from unilateral prone on table to bilateral prone on table to bilateral prone over ball	Initiate at 6-8 weeks post-op progressing from unilateral prone on table to bilateral prone on table to bilateral prone over ball	Initiate at 10-12 weeks post-op progressing from unilateral prone on table to bilateral prone on table to bilateral prone over ball
Prone extension w/ ER	Initiate at 6 weeks post-op	Initiate at 6 weeks post-op	Initiate at 8 weeks post-op
Bent row or prone row	Add resistance at 6 weeks post-op	Add resistance after 6 weeks post-op	Add resistance after 8 weeks post-op
Upright row	Initiate at 6 weeks post-op	Initiate at 6 weeks post-op	Initiate at 10-12 weeks post-op
Horizontal abduction	Initiate at 6 weeks post-op	Initiate at 6 weeks post-op	Initiate at 10-12 weeks post-op
Deltoid raises	Initiate at 6 weeks post-op	Initiate at 6 weeks post-op	Initiate at 10 weeks post-op
Empty Can	Initiate at 6 weeks post-op	Initiate at 6 weeks post-op	Initiate at 10-12 weeks post-op



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Bicep curls/tricep ext	Initiate at 6 weeks post-op	Initiate at 6 weeks post-op	Initiate at 10 weeks post-op
Push up progression	Initiate at 6 weeks post-op, progress wall --> table --> knees --> floor	Initiate at 8 weeks post-op, progress wall --> table --> knees --> floor	Initiate at 10 weeks post-op, progress wall --> table --> knees --> floor
<i>Neuromuscular Re-ed</i>			
Rhythmic stabilization	Initiate at 6 weeks post-op	Initiate at 6 weeks post-op	Initiate at 8 weeks post-op
Diagonals	Initiate at 6 weeks post-op, progress from supine to standing and unresisted to resisted	Initiate at 6 weeks post-op, progress from supine to standing and unresisted to resisted	Initiate at 8-10 weeks post-op, progress from supine to standing and unresisted to resisted